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# Contents

# Perspectives of Learning Science Effectively: Comparison between Western Australian Teachers and Malaysian Teachers

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## ABSTRACT

Malaysia hopes to be a developed country which is driven by the industrial and agricultural sectors by the year 2020. This aspiration is guided by Vision 2020 and in order to achieve this, the manpower of the country must be developed and furnished with strong technological, mathematical, and science backgrounds as early as the primary level. It is important to note that effective learning influences the attitude of the students towards science, and if Malaysia is to develop in accordance with Vision 2020, this issue must be addressed. In developed countries like Australia, the learning of science is developed humanistically to attract students to science. The learning of science in Australia involves materials, environments, and activities which encourage students to actively participate in the class. Therefore, it is important to investigate teachers' perspectives towards students' learning as teachers are facilitators of learning. This paper discusses the findings of a qualitative study that was carried out to compare the perspectives of primary science teachers from Malaysia and from Western Australia, with the focus on five research questions. The first question is "what are the teachers' perspectives of learning science?", whereas the second, third and fourth are, "what are the teachers' perspectives of effective teaching methods, the importance of teaching aids and implementing science process skills in the learning of science?" and the fifth question is, "how to assess the progress of the students in learning science?" The participants of the study were twelve primary science teachers from Western Australia and from Malaysia, respectively. The data collection approaches employed included open-ended questions, non-participant observation techniques, and document collection. The findings indicated that there are four types of teachers' perspectives of learning science, three perspectives of the implementation of science process skills in learning science, and five methods in assessing students' progress in learning science.

Keywords: Learning Science, Western Australian Teachers, Malaysian Teachers

## BACKGROUND OF THE STUDY

Science is a way of explaining how things work and a means for understanding the world around us. Thus, Science education can provide the necessary experiences which will enhance children's perspectives of science. According to Turgut (2008), science educators' search for ways to help students learn science more effectively is an on-going process. Science education is seen as the idea of more authentic contexts for presenting scientific knowledge (Roth, 1995), encouraging students to take part in discussions, argumentation and social negotiation (Newton, Driver and Osborne, 1999) as well as developing their problem-solving skills (Slack and Stewart,

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1990). Therefore, Science teachers should help children develop their knowledge of Science as well as scientific knowledge (Bentley, Ebert and Ebert, 2000). Yager and McCormack (1989) stated that the learning of Science involves the five domains of Science education, which are:

a. Information: knowing and understanding
b. Process: exploring and discovery
c. Creativity: imagining and creating
d. Attitudes: feeling and valuing
e. Connection: using and applying

The learning of science in schools should be in line with the challenges and the development in Science education. The eight components of Science in School (SIS) by the SIS project team in 2003 described the characteristics of teaching and learning which effectively support student learning and engagement in Science. The eight SIS components are listed below:

a. Students are encouraged to engage actively with ideas and evidence;
b. Students are challenged to develop meaningful understandings;
c. Science is linked with students' lives and interests;
d. Students' individual learning needs and preferences are catered for;
e. Assessment is embedded within the science learning strategy;
f. The nature of Science is represented in its different aspects;
g. The classroom in linked with the broader community;
h. Learning technologies are exploited for their learning potentialities.

(SIS Project Team, 2003)

It is important to note that the Western Australia Curriculum Framework has nine outcomes for the learning of Science. Teachers are given the choice to adjust the framework accordingly so as to suit their classroom environment. Nonetheless, for the framework to be successfully implemented, the elementary Science teachers must fully understand the philosophy behind the framework and must be able to transform their perceptions of teaching and learning environments into their planning of students' learning. The teaching strategies adopted should therefore develop their students' inquiry skills, the ability to make decision, have authentic contents, and pay attention to the values and attitudes of the students who will be the scientifically literate future citizens (Turgut, 2008).

In Australia, various approaches are used in learning Science in the classrooms. An example of this is the programme, 'Primary Investigations', which is a large Australian primary school initiative (Australian Academy of Science, 1994) using the '5Es' approach. The 5E model is a simple model which encompasses several principles and is used in the primary science curriculum, as follows (Goodrum, 2004, p. 62):

a. Engage: students' interests are captured through a stimulating activity or question;
b. Explore: students explore problems or phenomena through hands-on activities.
c. Explain: explanations and scientific terms are provided to students to help them develop their ideas.
d. Elaborate: students apply to new situations and discussions to clarify their understanding.
e. Evaluate: students evaluate what they have learnt.

It is believed that children learn by constantly constructing new knowledge. What is needed, however, is an effective means of instruction that facilitates the construction of concepts identified in the curriculum. (Hubber and Tytler, 2004) discussed the different phases which are common to all conceptual change approaches. These phases are as follows:

a. Preparation and planning: involves the gathering of materials and planning of activities;
b. Exploration and clarification: focus is provided and activities are introduced to probe students' conceptions;
c. Challenge: students' intuitive views are challenged through engagement with activities which are designed by the teachers;

d.  Investigation and exploration: students carry out investigations to explore their questions and seek for evidence;
e.  Application and extension: discussion and debates to clarify the scientific view and to apply it to a range of situations;
f.  Reflection and revisiting: teacher encourages students to reflect on their learning processes and share their findings and ideas.

(Hubber and Tytler, 2004, p. 39-40)

Thomas (2000) stated that the idea of assigning projects to students is not a new one and there is a longstanding tradition in schools for "doing projects", incorporating hands-on activities, developing interdisciplinary themes, conducting field trips and implementing laboratory investigations. Grey (2004) described projects as ideal settings for developing inquiry skills which enable us to better understand our assumptions and the consequences of our actions. A challenging driving question, an investigation process, resources for search, student autonomy, student-centred design, teachers' guidance, collaborative work, and presentation of products are some guiding features of the projects.

Discovery learning is an approach to the teaching of Science that emphasizes students' personal experiences with information and materials as a foundation for conceptual development. Children are provided with materials to manipulate. The Science process skills are important parts of systematic investigations. The emphasis of such techniques is on having children to be actively involved in the manipulation of materials and the consideration of their own ideas and those of others. Hence, the underlying principle is very much similar with the five domains of Science learning approach suggested by Yager and McCormack (1989). Students must first understand the information that is related to their personal experiences, and only then they are able to manipulate the material by exploring and discovering. Students' active participations in the manipulation of materials allow them to be creative, which in turn enhance their ability to formulate connections and relationships between the material and their personal experiences. This learning environment will be more meaningful and effective to the students. It is important to support the learning of Science of all children by providing a variety of opportunities for them to learn. In addition, teachers should provide diverse learning opportunities in the situations which they set up in the classrooms. Students, through their interactions with material, teachers and peers, will construct their own purposes for the lessons, develop their own intentions in relation to the activities, and formulate their own conclusions. Even today, children are often told that the Scientific method consists of a series of steps beginning with observations or questions, proceeding to the formation of hypotheses and then tests, and ending in conclusions (Bentley *et al*., 2000).

Furthermore, teachers need to remember that science is not a collection of answers to a question, but the search for information that answers the question. Thus, Science provides an opportunity to help children make observations, explore, discover, and build knowledge bases from which they can construct their own explanations. Teachers have the opportunity to help children transform those questions into investigations. Therefore, students need skills to carry out investigations and experiments. The basic Science process skills represent the tools which enable an inquisitive mind to discover answers. This will result in the existence of an active classroom where students are engaged in activities which help to develop valuable skills while learning Science. This concept is very important in the 5E model implemented in the Australian Science classrooms, as students are encouraged to explore problems through hand-on activities where they provide explanations and develop their ideas. In other words, students need to acquire investigative skills so as to prepare them for the process of meaning making in their Science classrooms.

How teachers perceive learning is useful in understanding classroom teaching and assessment practices. It is obvious that assessments serve many purposes other than assigning grades. As classroom teachers,

assessments play a role in two important areas, namely designing effective instructions and measuring students' performance. There are three general approaches to assessments in terms of the tasks required of students. The first is when students demonstrate familiarity with a Science concept through identification of information. For example, a test that makes the use of matching or multiple-choice questions. The second is when students demonstrate awareness of information related to a particular concept by supplying discrete or specific pieces of information, such as in tests which use a fill-in-the-blank format. The third is performance-based assessment where students demonstrate understanding through the application of information and newly acquired skills.

Performance-based assessment requires students to be actively involved in solving problems rather than recalling information or guessing at correct choices. There are numerous techniques which can be employed, such as checklists, write-ups science journal, inquiry reports, portfolios, and scoring rubrics. The purpose of using a checklist is to make sure that students follow the instructions correctly. Using a checklist is an efficient way for teachers to document students' performance during classroom activities. Teachers can add comments about the quality of skills demonstrated and these comments are also a form of recorded evidence. Meanwhile, written journal entries provide physical evidence of students' progress and cognitive growth. Science writes-up are often used to collect data during investigations. This form of assessment can be used to assess students' abilities in collecting and organizing data. Inquiry (research) reports are written communications which are prepared by children to document investigations which are essentially designed and conducted by them. Each inquiry (research) project begins with a question formulated by the students. In this context, the students identify a topic of personal interest, and this is followed by a variety of possible ways to collect information.

Portfolios are representative collections of work samples over a given period of time, and they allow for a reflection of the learning that has taken place. This assessment allows continuous monitoring of a student's achievement by showing diversity of tasks and personal growth. In fact, portfolios are the most familiar form of authentic assessment. They combine various forms of alternative assessments and contain multiple and diverse examples of student-generated products. It is important to note that assessment is an important tool not only for teachers to assess the progress and their students' understanding of the contents taught, it is also an important tool for students to improve on the quality of their learning experiences. In addition, assessment is being emphasized by most of the Science teaching models highlighted in this article, which include the models suggested by Hubber and Tytler (2004), the SIS project and the 5E approach. The idea that students reflect upon their own learning is emphasized so that they can learn to assess their own learning.

Scoring rubrics provide a means for teachers to know what they expect and for children to understand what is expected of them. The rubric describes anticipated levels or standards of accomplishment. Teachers compare each student's work sample to the rubric and determine a numerical score. Kuhn (1997) discusses the importance of rubrics by explaining it in the following way:

> The point is that evaluation that involves more than a 'right answer' approach requires guidelines to govern scoring. If the criteria or focus of the evaluation are not specifically defined and made known to students, the teachers' subjectivity may be questioned.

## RESEARCH QUESTIONS

It is important to investigate the teaching approaches and methods employed by teachers, especially those who are regarded as effective teachers, in ensuring effective learning of

Science among their students. The aim of this study was two-fold. The first was to investigate the primary science teachers' perspectives on learning Science effectively, and the second was to compare the perspectives of the primary science teachers from two countries in terms of their similarities or differences. In order to achieve the aims of the study, a qualitative approach was selected as the focus was on the teachers' perspectives and views. In more specific, this study was carried out with the aim to answer these following questions:

1. What are the perspectives of the Malaysian and Western Australian teachers about learning Science?
2. What are the perspectives of the Malaysian and Western Australian teachers about effective methods in learning Science?
3. What are the perspectives of the Malaysian and Western Australian teachers about the important of teaching aids in learning Science?
4. What are the perspectives of the Malaysian and Western Australian teachers about ways to implement Science process skills in learning science?
5. How do Malaysian and Western Australian teachers assess the progress of their students in learning Science?

## RESEARCH METHODOLOGY

### Research Location and Participants

The research was conducted in two countries, namely Malaysia and Australia. The first stage of the research was carried out in Malaysia under a fundamental research grant. Meanwhile, the second stage involved conducting the study in a developed country such as Australia, and for this purpose, Western Australia was the selected location.

The participants of the study were selected through the purposive sampling because there was a necessity to choose the sample so as to allow the collection of the most relevant information about the phenomenon being studied (Merriam, 2009). The participants were 24 primary Science teachers from several schools. Twelve participants from each country made up the 24 participants of this study. The selection of the participants was also based on their willingness to participate in the study.

### Research Design

The design of this study is qualitative in nature. Three data collection techniques employed in the current study were open-ended reflection questions, non-participant observation, and document collection. The primary source of data came from the teachers' responses to the set of open-ended reflection questions which were developed by the researcher. The advantage of the open-ended questions was to allow the teachers to express in their own words and as freely as possible their perspectives of learning Science, Science process skills, and projects in Science lessons, as well as in assessing students' progress in Science lessons (Fowler, 2009). The second data source was from non-participant observation by the researchers of project presentations in the classrooms, whereas the third data source was documents such as the samples of Science activity work sheets which the teachers distributed to their students during the term. The teachers' perspectives have been reported to be crucial in promoting their willingness "to engage with all issues involved in teaching-and-learning as well as how to interact and communicate inter-culturally" (Scarino and Papademetre, 2002).

Meanwhile, the data from the open-ended reflection questions were reviewed a number of times and analysed qualitatively through a process of open coding (Strauss and Corbin, 1998) in order to identify important concepts and categories. The open-coding process involved labelling and categorizing of the data and the products generated were concepts and categories. The data obtained were divided into the following identified categories, namely the process of teaching and learning science, teaching aids, science process skills, and students' progress. Data obtained from the open-ended reflection questions were analyzed

to examine the similarities and differences in perspectives among respondents from both countries. Turgut (2008) describes categories as concepts which are basic constructs grouped under higher, more abstract levels. From the data analysis process, some assertions were generated as discussed in the section for research findings.

### Research Findings

This section deals with the discussion of three sub-themes, which include the aspects of Science learning, the use of Science process skills in the learning of Science, and the assessment of Science learning. The discussion compares the perspectives of the respondents from Western Australia and Malaysia. This study adopted a qualitative approach as the aim was to investigate the similarities and differences of the respondents' perspectives of Science. Based on this comparison, suitable and effective teaching approaches could therefore be proposed in the teaching of Science. The findings from the data are presented based on the above mentioned sub-themes.

### Learning of Science in Primary School

For the first sub-theme, the respondents were asked to provide their views on the meaning of Science learning. A variety of views were obtained on the definition of Science learning. The first perspective from a respondent in Western Australia was that Science learning involved discovery or hands-on activities. The students were required to explore and investigate so as to enhance their learning and knowledge. The respondents stated that learning Science is:

> "for them to discover through learning"

> "learning how things work"

> "learning that involves exploring, investigating, experiments and hands-on activities"

Meanwhile, a respondent from Malaysia had the following perspective of Science learning:

> "pupils get involved in the concept of Science through hands on and minds on learning"

Another perspective of Science learning is that learning involves interactions and group activities. Through group activities, students are able to share information and views in the process of completing the assignments/projects. Hence, one respondent from Western Australia states that Science learning involves:

> "interacting with others to discover something"

> "background info, experiments and group work"

> "working collaboratively"

### Method of Teaching and Learning in Science

Effective Science teachers employ a variety of teaching methods, and choose the best for each lesson. From the data analysis, a Western Australia respondent suggested a variety of teaching strategies which are suitable for the teaching of Science. Some examples of these strategies are:
a.  hands-on
b.  investigations/ exploration/ discovery/ inquiry
c.  group work
d.  experiments
e.  demonstration
f.  explanation
g.  discussion
h.  computer interactive activities

During the classroom observations, the researcher noted that the teacher carried out various activities which required active students' participation in pairs, small groups, or as individuals. An example of a class activity is

students are instructed to do individual research work and later present their work in their class. Appendix A provides a sample of the assignments/projects which are required to be done by students for the year. In total, there are 8 research assignments which the students have to complete individually.

Apart from that, there are also activities carried out in pairs. An example is this activity where students are required to investigate the factors causing a teabag to float in the air when heated. Students are supplied with materials such as tea bags, candles and matches. The following picture illustrates how this activity was carried out in the classroom.

Students were also required to involve themselves in group activities. One such group activity required the students to investigate factors influencing a parachute's flight. This group activity was carried out at a nearby park. The students were required to test their parachutes by releasing them from a tower at different heights. An egg which was placed in a basket was also attached to the parachute and on releasing the parachute, the egg had to land on the ground unbroken. Appendix B illustrates the instructions for the parachute assignment and Appendix C provides a sample of an activity worksheet used in the classroom.

A Malaysian respondent indicated various suitable techniques for Science teaching, which are:
a. exploration
b. learning through music
c. experimentation
d. discovery inquiry

Most of the respondents stated that the best technique for the teaching of Science is through the use of experiments. There were also those who felt that experiments could be carried out together with exploration and simulation. Another respondent was of the opinion that the use of music could make the teaching of Science more attractive. In more specific, the respondent stated that:

"learning through music. Use song and create the lyrics based on the topic we want to teach"

It can be seen here that the Malaysian respondents were less aware of the approach for the teaching of Science compared to the respondents from Western Australia.

*Teaching Aids*

The observations also highlighted the use of multiple forms of teaching aids in the teaching of Science in classrooms. One of the respondents from Western Australia explained that teaching aids are important aspects in the planning of Science teaching. According to the respondent, teaching aids are important because:

"they provide hands-on and shared experience to students"

"students need to have access use hands-on learning and examples"

"vital in conducting experiments"

"they manage to hold students' attention towards the lesson and to some extent, the knowledge retention is longer and better"

"keep children interested"

"very important for students to be motivated"

The respondent from Malaysia is of the opinion that the use of teaching aids helps to create a more attractive teaching and learning environment for Science. As a result, students will show more interest to learn Science. According to the respondent:

"the use of LCD and computer helps in the explanation of concepts"

"assists teachers in the explanation in teaching and learning"

"it will make my lesson more interesting. The pupils enjoy and like the lesson and make able to use their 5 senses in the class"

"students will show more interest in Science if suitable teaching aids are used"

The respondents from both countries generally share common perspectives on the required teaching aids.

## SCIENCE PROCESS SKILLS

There are respondents who associate Science learning with the use of Science process skills. The respondents explain that the learning of Science should involve processes such as making predictions, as well as establishing hypothesis and experimenting. A respondent from Western Australia stated that Science learning involves;

"predictions, hypothesis and working in groups"

Another Western Australian respondent mentioned that science learning involved;

"to be able to think creatively, abstractly and logically. Systematically make hypothesis and to gain knowledge"

A Malaysian respondent explained that Science learning is associated with the understanding of life and the environment. For example, responses from the Malaysian respondent about Science learning are given below;

"understand the students' surroundings"

"learn about life, matter, physical and nature"

"study about their syllabus and all the things surround them"

There was also a respondent from Malaysia who mentioned that Science teaching is not only about providing students with scientific knowledge but also the application of knowledge in their everyday life. According to this particular respondent;

"students get to know and apply knowledge of science in life"

In both countries, students are required to understand the surroundings in order to acquire knowledge. Hence, for the implementation of Science process skills in students learning, there are three clear perspectives from the respondents. The first perspective of the respondents from Western Australia is that the implementation of science process skills is minimal:

"minimal because of time constraints but I wish it was more"

Some respondents stated that the use of Science process skills is essential in the students' learning of Science. The respondents from Western Australia stated that the implementation of Science process skills is;

"essential because young students need to be taught step-by-step process in order for them to understand what is being explored"

Another response from the Western Australian Science teachers is that the use of Science process skills is vital because;

"they will be used in tertiary level"

Others felt that Science process skills are very important, as stated by one respondent from Western Australia;

"very important but literacy and Math skills still come first"

"highly important to understand from one activity to the next"

"children learn more by developing these skills through scientific experimentation"

Some of their Malaysian counterparts share the same views. Their responses are as follows:

"very important because without the implementation of Science process skills, learning science cannot happen"

"Science process skills is the most important for students to understand skills"

## STUDENTS' PROGRESS

The respondents were also required to list ways they used to assess their students' progress in learning Science, with reference to their definitions of Science learning and use of Science process skills. Some of the techniques mentioned by a Western Australian teacher are observations or checklist, scientific write-ups, rubrics, quizzes, and tests. Referring to observations, a respondent from Western Australia stated that:

"observation the process, the way children plan and implement and the final product"

"observation throughout lessons"

"observation of students' interest"

For assessment through scientific write-ups, teachers must prepare guide lines on how to assess the scientific tasks given to their students. Students are informed of the aspects which are emphasized in their write-ups through these guidelines.

The Malaysian Science teachers mentioned various methods of assessment they used to assess students' progress. Some of them stated:

"lots of exercises based on their individual ability"

"give many relevant exercises"

"assess through their worksheets and experiments"

Meanwhile, some respondents from Malaysia explained that students could be assessed by what the students could do. They further mentioned that:

"students can give suitable examples and explain the concept clearly"

"students give the correct responses to Science questions"

Rubrics or checklist are prepared by the respondents based on the topics or themes of the assignments. The marking or grading of projects is done based on the prepared rubric, just like the rubric given in Appendix D.

## SUMMARY

This study investigated the perspectives and experiences of primary Science teachers of Western Australia and Malaysia. There were 24 teachers involved in this study, with 12 teachers from Western Australia and 12 others from Malaysia. The study used open-ended reflection questions to probe what came to mind first for the teachers when they thought of Science teacher, teaching Science, learning Science, Science process skills, and when assessing the learning process. The purpose of this investigation was to identify the perspectives of these teachers about learning practices in Science at the primary level.

Four aspects of Science learning were examined in this study. These four aspects were teaching approaches utilized by the teachers in teaching Science, teaching aids used, Science process skills involved, and evaluation methods to monitor students' progress. As for the teaching and learning of Science, all the respondents from Western Australia and Malaysia adopted the teaching strategies which

emphasized on students' active involvements in their Science learning process. Some examples of the activities were experiments and explorations. However, the respondents from Western Australia conducted more hands-on activities, small groups or paired discussions.

As for the use of teaching aids, the respondents from both the countries stated that teaching aids are important tools in making Science teaching-learning processes more interesting. Hence, the use of teaching aids plays a crucial role in the planning of an effective instructional plan. One of the respondents from Western Australia stated that the use of teaching aids in Science classroom could motivate students to participate actively in activities conducted, such as hands-on activities. Other than that, students are able to share their experiences with others and are more motivated to learn the subject. Meanwhile, a respondent from Malaysia explained that the use of multimedia teaching aids could help in explaining scientific concepts. The respondents from Malaysia also stated that the use of teaching aids in the Science lessons could encourage students to utilize their five senses while learning.

The third aspect which had been examined was the Science process skills. Based on the findings, three similar perspectives were identified from the respondents of both countries. The perspectives included; (1) the implementation of Science process skills among primary students is still minimal, (2) Science process skills are essential in the learning of Science, and (3) the use of Science process skills is necessary for students to further their studies to higher levels. In addition, the respondents from Western Australia also stated that the use of Science process skills could enhance critical and creative thinking among the students. Meanwhile, evaluation is an important aspect in determining students' progress. The respondents from both countries agreed that the preparation of rubrics or checklists based on topics is useful in assessing students' learning progress of science projects.

It has been argued that first-hand accounts of teachers' perceptions and experiences should influence the contents and methods in any teachers development programme (Berniz, 2007). The findings of thus study have indicated that there are numerous similarities and differences between the perspectives of the respondents from both countries. The perspectives which are underlined this study viewed positive reform as being essentially generated through contextual understanding, researching first-hand accounts and individual perspective valuing changes might happen but innovation was not only dependent on individuals but also on collective will. These perspectives are apparently essential to this study's understanding of the teachers' perspectives and views.

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**APPENDIX A**



# Year 7 Research topics 2008

1. What is metamorphosis? Choose a living thing that goes through the four stages of metamorphosis. Write a detailed report of each stage. Include pictures and diagrams of its life, habitat, what it eats at each stage of it's full life cycle.

2. What happens to the food we eat? What does the body do with it? Research the fascinating digestive system. Include pictures, diagrams and a brief description of all 11 parts that are involved with digestion.

3. What are Natural Disasters? How do they occur? Choose a significant natural disaster that has occurred over the last 200 years, Research this and present your findings.

4. Design a time line that shows the development of flight over the past 400 years. Choose a particular invention or event and report on your findings in detail.

5. What is photosynthesis? Explain how it is important to the planet and mankind.

6 What are fossils? Explain how they are formed and the different types, indicate how they are important to man. Use a map to show where important fossils have been found around the world.

7. Research in detail the effects that smoking has on the body and its organs. Write about your findings. What is the government is doing to lesson the harm cigarettes are causing?

8. How is electricity generated? Research the many different way that man uses to generate energy. Report your findings using pictures and diagrams and detailed explanations.

*A sample of a set of topics in Science to be completed by students*

## APPENDIX B

# Parachutes

**Task 1**

**Aim.**  To investigate how the area of a parachute canopy effects its landing time.

## Materials and Equipment.

Plastic shopping bags
Cotton thread / string/ fishing line
Metal washers
Masking tape
Scissors
Stopwatches

## Information

- Use plastic shopping bags to build a parachute, make your design simple as you will have to build this several times. ( This is your control parachute)
- Use metal washes as your skydiver.
- Use cotton thread/ string or fishing line to attach your sky diver to the parachute.
- Decide what size parachute you will build as your control shape.( don't make it too big )
- Decide how and from what height and where you will drop your parachute each time you test it.
- Time how long it takes your parachute to reach the ground.
- Repeat this test four times, record your results and work out the average.
- Change the size of your parachute only.( make sure it is the same shape as your control chute)
- Repeat this test with four different sized chutes and record your results.

## Write up.

Predict what you think will happen and why you think this will happen.( do this before you start)

- Draw a table of your results showing all your results.
- Draw and label you diagram of your control parachute.
- Construct a graph to show your results showing size of the chute and landing time.
- Write a paragraph on how you made this a fair test.
- Write a paragraph on the things that could affect this investigation.

## Conclusion
Explain what happened during your investigation and why you think it happened.
How could you improve this investigation.

**Task 2**

To design and build a parachute that will safely deliver to the ground a raw egg in a capsule when dropped from the top of the DNA tower in Kings park.

## Requirements
- You may use any materials and design for this parachute.
- You will need to bring all your materials from home.
- You will have a 2 hour session in class to build and test your design.
- use the information you have gained from task 1 to help..

*A sample of a guided investigation worksheet for Science*

**APPENDIX C**

Yr 4 Term 2          **ICT Project**          Name: _____

**What is a Habitat?**

A habitat is the natural place where something lives. A shark's habitat is the ocean. A monkey's habitat is the rainforest. Think of a **habitat** and an animal that lives there. What special things does the animal have or do that helps it to live in that habitat?



**Challenge**

You are going to study an animal from a habitat of your choice. You will then use PowerPoint to write a story about the animal that includes both fact and fiction. Your final PowerPoint presentation will consist of story slides linked by hyperlinks to fact slides. To complete the activity, you will:

- Research an animal and its habitat (Weeks 1-2)
- Write a story and facts about the animal (Weeks 3 – 4)
- Use PowerPoint to design story slides and fact slides (Weeks 5 – 7)
- Insert action buttons and hyperlinks to connect the story slides to the fact slides (Weeks 5 – 7)

- The animal I have chosen to study is

  _____.

- I will be working with

  _____.

*A sample of a Science activity worksheet*

## APPENDIX D

### Science Write Up Parachute Experiment.

| HEADINGS | → | ∨ | ∨ ∨ |
|---|---|---|---|
| **Prediction** | • Simple prediction | • Simple prediction and reason | • Detailed prediction explanation and reasons |
| **Diagrams** | • Diagrams drawn in pencil<br>• Simple labels<br>• Labels have arrows | • Diagrams have titles<br>• Diagrams drawn neatly in pencil<br>• Colour is added to diagrams<br>• Labels are in black fine liner<br>• Labels are written horizontally<br>• Labels use uppercase letters<br>• Diagram has arrows linking to labels | • Diagrams have titles<br>• Diagrams drawn neatly in pencil<br>• Colour is added to diagrams<br>• Labels are in black fine liner<br>• Labels are written horizontally<br>• Labels use uppercase letters<br>• Diagram has arrows linking to labels<br>• Diagrams have borders<br>• Labels are very detailed with explanations. |
| **Paragraphs** | • Simple comments in paragraph form<br>• some observations noted | • Critical comments about all areas<br>• basic explanations and observations | • critical comments about all areas<br>• detailed explanations that show understanding<br>• Fair testing information<br>• Uses scientific language |
| **Results** | • Basic table with headings<br>• Graph showing results<br>• Give size of parachute | • Table and graph with headings<br>• Lines ruled<br>• Title<br>• Measurements shown<br>• 4 trails included | • Table and graph with headings<br>• Correct type of graph<br>• Lines ruled<br>• Title<br>• Colour<br>• All trials included |
| **Conclusion** | • Simple conclusion and improvements stated | • Conclusion and improvements stated and explained | • Conclusion and improvements explained in detail<br>• Conclusion shows a clear understanding of results<br>• Scientific language used in the explanation |
| | • | • | • |
| | | | |
| | | | |

### GENERAL INFORMATION
• All headings and subheadings are underlined.
• A line is missed between each major heading.
• Presented neatly on lined A4 paper or typed.
• Diagrams on blank A4 paper.
• Stapled top left corner
• Name and date

*A sample of a rubric for marking*

# Contrasting Audio-taped Feedback with Minimal Marking Feedback in EFL Writing

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## ABSTRACT

In this study, the researchers contrasted audio-taped feedback (ATF) with minimal marking (MM) among 82 EFL female pre-intermediate learners at Kish Air English Language Institute in Tehran-Iran. These 82 students were selected from among 126 pre-intermediate students according to their scores in a pre-intermediate version of Nelson English Language Test. The subjects were randomly divided into two groups of ATF and MM, each with 41 eligible subjects. In each group, they were assigned to write expository paragraphs of about 120 words during 8 sessions, one session for the pre-test, and another one for the post-test; the remaining sessions were allocated for the treatment. One of the groups received ATF and the other MM. A pre-test and a post-test were used before and after the treatment so as to contrast writing performances of the post- and pre-treatments. The results showed that the ATF subjects performed better than the MM in the post-test, while the MM subjects in post-test did not show any progress.

**Keywords: Error feedback, audio-taped feedback, holistic method, minimal marking**

## INTRODUCTION

There has been a steady argument among scholars and teachers all through the history of teaching writing to second language (L2) learners with regard to the role of error feedback in helping students learn how to write (Fathman and Whalley, 1990; Ferris, 1999; Lalande, 1982; Semke, 1984; Truscott, 1996). Although numerous studies have been conducted in this area, a lot of uncertainties remain, particularly regarding the type of error correction that helps learners to progress in the writing process. As a result, many English as a Second/ Foreign Language (ESL/EFL) writing teachers are often confused about how to help their students.

Meanwhile, many research projects have shown that corrective feedback in the classroom situation is a real need (Bitchener, Young and Cameron, 2005). Nonetheless, limited research has been undertaken to discover if error correction techniques are more effective with regard to the different cognitive styles of the language learners. Grabe and Kaplan (1996) argue that:

> *"students can be positively motivated to explore many areas of knowledge and personal creativity through supportive and constructive responses to their writing" (p. 377)*

It has been stressed that proper feedback can be very helpful in producing "a sense of reader awareness" in the learners as well as "a sense of audience" (Muncie, 2000, p. 52; Boughey, 1997, p. 131) which students seem to lack. In fact, by providing learners with appropriate and fostering feedback, teachers can play a crucial function in facilitating learners' progress.

Lalande (1982) concluded that making students aware of their errors and using guided learning as well as problem solving techniques did result in a reduced number of errors in students' writing. This system eliminates many of the unproductive aspects of typical approaches to correcting errors in compositions. Students need to realize that the purpose of marking and correcting compositions is to eliminate those errors when they write in the future.

Audio-taped feedback is defined as the teacher's tape-recorded comments and suggested changes to written drafts. Boswood and Dwyer (1995) propose that "audio-taped feedback employs technology to humanize the marking process, which can often be machinelike when technology is not used" (p. 20). Based on this suggestion, alternative methods of feedback on writing, such as audio-taped feedback, are worth examining to see the effects of this emerging feedback technique.

## THE CONCEPTS OF AUDIO-TAPED FEEDBACK AND MINIMAL MARKING

Hyland (1990) explains two efficient styles of giving feedback, namely minimal marking and taped commentary, which he advocates as two interactive feedback styles. He believes these is because "feedback must be interactive to be genuinely effective" (Hyland, 1990, p. 285).

MM manipulates a set of marking codes, some symbols and alphabet letters that are representative of the error types the students had in their pieces of writing. It is important to mention here that these symbols are quite conventional and any teacher can develop his or her version of the correction codes (Gray,

| Morphological | |
|---|---|
| Verbs<br>    Verb Tense<br>    Verb Form<br>    Subject-verb agreement<br>Nouns<br>    Articles/determiners<br>    Noun endings (plural/possessive) | vt<br>vf<br>sv<br><br>art/det<br>pl/pos |
| Lexical Errors | |
| Word choice<br>Word form<br>Informal usage<br>Idiom error<br>Pronoun error | wc<br>wf<br>inf<br>id<br>pr |
| Syntatic Errors | |
| Sentence structure<br>Run-ons<br>Fragment | ss<br>ro<br>frag |
| Mechanical | |
| Punctuation<br>    Spelling | punc<br>sp |

(*Source*: Ferris *et al*., 2000; Research corpus by Ferris, 2002, p. 53)

2000). The symbols and alphabet letters are chosen mostly in a way that can best symbolize the error types. The error types and responding symbols can be represented as follows:

The above symbols or any other correcting codes as such can be written in the margin of the students' writing or above the error. According to Zeny (2003), the benefit of using correction codes to carry out self-correction is that students tend to pay closer attention to their work, considering different possibilities for choice of lexis, for instance. In order to advocate the inspiring and productive achievement of a newly-developed method, i.e. audiotape feedback (ATF) on writing, Boswood and Dwyer (1996) state that, "the medium [and the method] that teachers choose for giving students feedback have far-reaching effects on the impact of their comments" (p. 20-21). Kroll (as cited in Celce-Marcia, 1991) points out that:

*"Some teachers provide all their feedback orally by asking students to submit a cassette tape with their draft. This method probably works best when the teacher silently reads a student's paper and makes comments directly into the tape recorder while making some accompanying numbers or symbols on the student's text. For ESL students, this method has the advantage of providing more extensive feedback than that likely to be made in writing, as well as allowing the student to replay the tape as many times as necessary to understand and benefit from the teacher's comments. Once the teacher has learned to use this technique, it probably takes less time to complete taped remarks about a paper than it would to put them in writing."* (p. 259)

As mentioned by Hyland (1990), the technique of recorded comments is helpful when learners' reactions to feedback are preferred. The significance of the ATF has been stressed by many researchers (e.g. Hays, 1978; Clark, 1981;

McAlpine, 1989; Patrie, 1989; Hyland, 1990; Boswood and Dwyer, 1996) who emphasize the efficacy and constructiveness of teachers' taped commentaries. (Note that in the present study, the focus was on comparing only two methods, namely the MM and ATF).

## RSEARCH QUESTIONS AND HYPOTHESES

This study intended to answer the following research questions:

Q1: Does the writing act of the subjects receiving ATF (audio taped feedback) on their writing assignments differ on the pre-test and post-test?

Q2: Does the writing act of the subjects receiving MM (Minimal Marking) on their writing assignments differ on the pre-test and post-test?

Q3: Is there any significant difference between the writing act of the subjects receiving ATF and that of those receiving MM on their writing assignments?

In order to examine the three aforementioned research questions empirically, the following null hypotheses were acknowledged:

H0 (1): There is no significant difference between the pre-test and post-test of the subjects who received ATF on their writing assignments.

H0 (2): There is no significant difference between the pre-test and post-test of the subjects who received MM on their writing assignments.

H0 (3): There is no significant difference between the post-test of the subjects who received ATF and of those who receive MM on their writing assignments.

## METHODS AND MATERIALS

The design of this research involved the pretest-posttest non-equivalent groups design, i.e. one of the quasi-experimental designs. After the 82 subjects were assigned into two groups (ATF

TABLE 1
Correlation of the two raters' scores on the pre-test and post-test

|  | Pre-test | Post-test |
|---|---|---|
| Raters | Holistic | Holistic |
| R1 | .76 | .82 |
| R2 | .82 | .82 |

TABLE 2
The MM and ATF groups' homogeneity test means and standard deviation

| Groups | Number of students | Mean | Standard deviation |
|---|---|---|---|
| Group A (MM) | 41 | 48.35 | 5.41 |
| Group B (AFT) | 41 | 48.90 | 5.12 |

and MM), the one-way ANOVA was carried out to ensure the homogeneity of the two groups in relation to their general English proficiency. The general descriptive statistics related to the distribution of the subjects in the two groups according to their performance in the Nelson English Language Test are presented in Table 2 .

The subjects of this research were randomly selected among pre-intermediate EFL learners studying at Kish air English Language Institute in Tehran, Iran. The type of sampling employed in this research was cluster sampling. The consequential sample consisted of classes with pre-intermediate EFL female students. Out of 126 language learners who took the test, 82 learners met the requirement and were selected as the sample of the study.

## RESEARCH INSTRUMENTS

This study used three instruments.
a. a pre-intermediate version of Nelson Engwlish Language Test which was administered to select a homogeneous group out of the available population;
b. two one-paragraph expository compositions of about 120 words each, one serving as the pre-test and the other as the post-test; and
c. a tape recorder for commenting directly students' writings and providing the subjects with feedback to give them the opportunity to revise the parts in which communication breakdown may occur.

In general, eight topics were assigned to the selected subjects. Two topics were exploited as the pre-test and the post-test topics with a time limit of 20 minutes, and the remaining six were the writing topics on which the subjects composed their paragraphs and received the appropriate feedback throughout the treatment stage.

The holistic approach to marking was applied for the pre-test and post-test in this study. Consequently, the assessment of the writings was completed by two raters. Meanwhile, the marking processes were carried out separately. The reliability for the marking of the writings through the procedure (i.e. holistic method) was computed using average correlations between the two raters in the pre-test and the post-test (*see* Table 1).

TABLE 3
F-test result - a comparison of the ATF and MM groups' means

| F observed | df | F critical |
|---|---|---|
| 1.10 | 1 & 80 | 4.00 |

TABLE 4
MANOVA - Pre-test, post-test by groups

| Source of variation | Sum of squares | DF | Mean squares | F observed | P | F critical |
|---|---|---|---|---|---|---|
| Test | 2236.80 | 1 | 2236.80 | 61.21 | .000 | 4.00 |
| Group × Tests | 1035.12 | 1 | 1035.12 | 28.19 | .000 | 4.00 |
| Within cells | 2983.70 | 80 | 36.30 | - | - | - |

## RESEARCH PROCEDURES

One hundered and twenty six female pre-intermediate students at Kish Air English Language Institute were chosen from the pre-intermediate classes. Based on the students' scores in the Nelson English Language Test, 82 students were selected out of the total number of 126 students on the basis of the normal distribution of their scores. To be more accurate, the students whose scores were between ±1.5 standard deviation were selected as the homogeneous subjects in the first phase and the other students whose scores did not fall within this range were removed.

In Table 3, the F-observed value was 1.10, which at 1 and 80 degrees of freedom was lower than the critical value of F, i.e., 4.00, at the .05 level of significance. The results of this statistical test proved that there was no statistically significant difference between the ATF and MM groups from the beginning in term of their language proficiency level.

The present study was conducted over 8 sessions in 4 weeks; one session for the pre-test, one for the post-test, and the remaining sessions were the treatment. The treatment process was carried out within the 6 sessions. Throughout the 6 sessions, the subjects in both groups wrote paragraphs on expository topics under no time limit. The only difference between the treatment of the ATF and MM groups was, essentially, in the kind of feedback they received on their writings.

The subjects in the ATF group received audio-taped feedback on their writings. This process required every member of the group to submit a blank cassette tape, together with the individual writing. After collecting the writings and the tapes, one of the researchers read the writings and gave comments directly into the tape recorder. While giving comments, the teacher made sure that the subjects were provided with cues, such as verb tense and spelling, so as to enable them to fix the parts in which communication breakdown had occurred. At the end of the term, i.e. when the subjects in both groups had already presented the modified versions of their writings on the previous topic, they took part in the post-test. In fact, the subjects wrote their paragraphs under a situation identical to the pre-test. After the post-test, the 82 writings were scored holistically by the same two raters who had marked the scripts separately.

## RESULTS AND DISCUSSION

A multivariate analysis of variance was utilized to display the possible differences between the ATF and MM groups on the pre-test and post-test scored holistically (refer to Table 4).

TABLE 5
Scheffe's test for the comparison between the pre-test and post-test by group

| No. | Comparisons | Mean | Observed difference | Critical difference | Significance |
|---|---|---|---|---|---|
| 1 | Post-ATF Vs Pre-ATF | 71.43, 59.15 | 12.28 | 6.88 | * |
| 2 | Post-ATF Vs Pre-MM | 71.43, 61.77 | 9.66 | 6.88 | * |
| 3 | Post-ATF Vs Post-MM | 71.43, 64.10 | 7.33 | 6.88 | * |
| 4 | Post-MM Vs Pre-ATF | 64.10, 59.15 | 4.97 | 6.88 | NO |
| 5 | Post-MM Vs Pre-MM | 64.10, 61.77 | 2.35 | 6.88 | NO |
| 6 | Pre-MM Vs Pre-ATF | 61.77, 59.15 | 2.66 | 6.88 | NO |

Table 4 shows the F-observed value for the effect of the tests, i.e. the pre-test and the post-test, which is 61.21. This particular value of F at 1 and 80 degrees of freedom is much greater than the critical value of F at .05 level of significance. It can be concluded that the difference between the pre-test and the post-test is significant. In other words, the subjects performed better during the post-test.

The F-observed value for the effect of the group by test factor, i.e. the interaction between the two variables, is 28.19, in which at 1 and 80 degrees of freedom is much greater than the critical value of F, i.e. 4.00 at .05 level of significance. As a result, a Scheffe's test was carried out to identify the accurate location of the differences. The results of the post-hoc Scheffe's test indicated that the subjects in the ATF group performed better than those in the MM group on the post-test (*see* Table 5).

Analysis of Null Hypothesis 1. With reference to the result of the first contrast, it is obvious that there is a significant difference between the pre-test and post-test of the subjects in the ATF group who have received audio-taped feedback on their writing assignments. Nonetheless, this judgment is not in agreement with the argument of Null Hypothesis 1. Therefore, this hypothesis is rejected. Considering the mean score of the ATF group on the pre-test and the post-test (i.e. 59.15,

and 71.43, respectively), one can see that the subjects have had much better products during the post-test. This evident significant change in the writing of the ATF group from the pre-test to the post-test can, therefore, be attributed to the type of feedback they received on their writings in the course of this study.

Analysis of Null Hypothesis 2. Considering the fifth comparison of the Scheffe's test, it can be stated that the null hypothesis 2 cannot be rejected. In other words, there is no significant difference between the pre-test and the post-test mean scores of the members in the MM group whose writing assignments were minimally marked. Hence, it can be mentioned that the MM technique does not lead to a higher writing achievement.

Analysis of Null Hypothesis 3. The third comparison of the Scheffe's test reveals the difference between the post-tests of the subjects in the ATF group (i.e. 71.43) and that of the subjects in the MM group (i.e. 64.10) which were proven to be significant. Consequently, it can be concluded that the ATF group, which had received audio-taped feedback outperformed the MM group whose writing assignments were minimally marked. This finding is against the suggestion of null hypothesis 3 which rejected the existence of any difference in the two groups on the post-test; therefore, this null hypothesis is also rejected.

The sixth comparison of the Scheffe's test (*see* Table 5) demonstrates that no significant difference exists between the two groups in their initial writing performances on the pre-test. However, a comparison made between the ATF group and the MM group on their post-test writing performance shows that there is a difference in the type of feedback the ATF group have received on their writings. In addition, it can be mentioned that the inadequacy of the MM group is probably the result of the inefficiency of the type of feedback they received.

The researchers conclude that revision should form a fundamental part of writing pedagogy. Receiving audio-taped feedback seems to have encouraged the subjects to write reader-based text (McAlpine, 1989). In early experimental article, providing feedback as a reader was suggested as beneficial to the second language writer. McAlpine (1989) describes her process of providing audio-taped feedback, or as she defines it, " a think-aloud protocol" to ESL writers. She claimed that the technique facilitates the negotiation of meaning between the writer and reader. In addition, building the ATF into the instruction of writing might be helpful since the subjects found ATF encouraging as well as a refreshing departure from traditional writing feedback methods, frequently explained throughout a symbol system.

## CONCLUSIONS

This study attempted to establish the comparison between audio-taped feedback and minimal marking feedback on the writings of Iranian EFL learners. The results of the study showed that the ATF could have significant effect on the students' ability to write, but the MM is not very efficient in this regard. Boughey (1997, p. 128) asserts that the correction carried out by the students is within a process approach. She believes that in order for this process of writing, revising, and rewriting to be developmental, "some forms of constructive feedback to the successive piece of writing are desirable, and often necessary." She goes on to say that in large mainstream classes, peer reviews may suggest itself as an obvious means of alleviation of the workload of the teacher. At any rate, the students must first be trained in taking this responsibility. Self-correction can serve as a preliminary practice for this responsibility. The explanation made throughout the study prepared the researchers to the fact that ATF could both direct a higher writing performance and could indirectly help and improve learners' listening skills as well.

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# Effect of Peer Review and Tutor Conferencing on English as a Second Language Learners' Writing Performance

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## ABSTRACT

After years of research on the effect of feedback provided by peers or teachers on learners' writing performance, there is still a need for further investigation in this area. In the present study, a group of learners were observed in the process of an English as a Second Language (ESL) writing course in order to investigate the effect of peer reviewing and tutor conferencing on learners' writing performance in their narratives. For this end, an interrupted time-series design (O-X-O-X-O) was employed. It involved an observation of the samples followed by the first treatment; that is, peer feedback followed by a second observation. Then, a second treatment, or tutor conferencing, preceded another observation. Next, two raters were trained to use the Wong Scale (Wong, 1989) to score the stories written by the samples. The scores were tested for their inter-rater reliability, and an acceptable Cronbach's Alpha was observed. The results of Repeated Measures ANOVA tests indicated even though peer-reviewing had no significant effect on the improvement of the scores in their narratives, the influence of tutor conferencing was observed to be significant.

**Keywords: ESL writing, peer review, tutor conference, feedback**

## INTRODUCTION

Proponents of the Process School consider writing a process in which the student writer plays a central and active role (Raimes, 1983). He is involved in self-discovery learning to manage the appropriate linguistic tools, while the teacher facilitates learning by interfering in the process as little as possible in a co-operative environment (Atkinson, 2003). She seeks to develop in her learners an awareness of their own writing processes through activities like drafting, revising and editing (Hyland, 2003). Writing courses in this approach are viewed as communities of learners in which a primary value is granted to collaborative learning

(Faigley, 1985). Thus, learners are encouraged to provide and seek feedback among peers and participate in conferences as they proceed in their writing process.

Interest in peer review and teacher conferencing has triggered a wealth of research on their effect on learners' writing performance for several decades (Elbow, 1973; Murray, 1982; Bruffee, 1983; White and Arndt, 1991; Bitchener, 2008). However, after years of study in the area further research still seems necessary (Fujieda, 2009).

In the area of writing instruction, feedback can be defined as any kind of input from a reader who provides information to the writer

for revision (Keh, 1990). The purpose of giving feedback is to teach skills that assist students in improving their writing and becoming "cognizant of what is expected of them as writers and are able to produce it with minimal errors and maximum clarity" (Williams, 2003, p. 1). As for peer review, it is defined as "an activity in the revising stage of writing in which students receive feedback about their writing from other students, their peers" (Richard and Schmidt, 2002, p. 390). Finally, considering conferencing a negotiated instructional event in which both the learner and the teacher regard individual learner needs, Reid (1993) views teacher conferencing as "a face-to-face conversation between the teacher and the student, usually outside the boundaries of the classroom" (p. 220).

## A REVIEW OF THE RELATED LITERATURE

Ever since they were introduced, peer review and teacher conferencing and their effect on learners' writing performance have been topics of high interest among researchers in the area of writing instruction. This trend of research has resulted in inconsistent findings, some of which will be reviewed in this section.

Research findings have indicated that teacher feedback in the form of overt correction of surface errors does not play a significant role in improving learners' overall abilities in writing. In fact, when it includes inconsistent marking of errors or vague responses on content, it may even influence their writing ability negatively making them confused, passive or frustrated (Williams, 2003). Likewise, Mentor (2004) reports teacher interventions by writing keywords on the board, providing handouts, individual conferencing, evaluating and lecturing consume a good deal of time and energy with no significant improvement in learners' writing skill. Radecki and Swales (1988) also find teacher feedback of any kind not helpful. Such findings may be due to the mismatch between the teacher feedback and the learner's actual needs (Ping, Pin, Wee and Hwee Nah, 2003).

Other research findings, however, indicate that conferencing plays a positive role in the development of learners' writing skills. Reid (1993) believes conferencing can be of particular value for English as a Second Language (ESL) learners since they are even more inexperienced as compared to Native English Speakers (NESs). As she argues, learners in ESL situations find it challenging to learn to control and to actively participate in interactions, negotiate meaning and clarify the teacher's responses. In addition, it is argued that conferencing can enhance learners' writing ability as well as their linguistic accuracy, particularly when it is provided before the students submit their final drafts in a comfortable environment (Ferris, 1995; 2002; Hyland, 1998; Hansen and Liu, 2005). In a study conducted in Malaysia, Vengadasamy (2002) found that teachers' comments were useful when they were in the form of complete sentences. Meanwhile, teachers' short comments which were written in-between sentences did not seem to help learners improve their writing. In another study in Malaysia, Mumtaz Naidu (2007) observed that conferencing with a focus on both content and form was positively effective in learners' writing performance. Finally, in the same context, Shamshad Begham Othman and Faizah Mohamad (2009) reported that teacher's one-to-one oral feedback significantly improved their students' essays.

As for the effect of peer review, several researchers have observed learners at any level of language proficiency may benefit from discussion with peers (Freedman, 1992; Nelson and Murphy, 1993; Berg, 1999; Richard-Amato, 2003; Saito and Fujita, 2004; Abbott and Bogas, 2004; Nelson and Carson, 2006). In most writing assignments, the teacher is the sole individual who reads and responds to them. When an individual other than the teacher responds to their written work, learners develop a state of audience awareness and become more sensitive to the target readers (Rosenblatt, 1988; Reid, 1993). Flower *et al*. (1990) observe that through peer review, learners become

cognizant of the fact that a single text may result in different understandings in different readers. Additionally, according to Reid (1993), peer review makes learners more aware of the variety of social and personal contexts that affect writing. Dailge and Egolf (2004) agree on the positive effect of peer review on learners' writing in that it is an activity that spurs active group learning which in turn enhances understanding and lengthens retention. Peer feedback is considered central in learners' ESL writing development (Gass and Selinker, 2001; Duomont, 2002). Additionally, peer response activities can build a classroom community (Ferris, 2003a). Rollinson (2005) and Min (2006) regard peer review as a valuable aid for its cognitive, social and linguistic, affective as well as methodological benefits. Furthermore, some research findings have indicated that feedback provided by peers can be more useful than teacher feedback (Cumming, 1985; Zhang and Jacobs, 1989).

However, there are studies that have indicated insignificant effects of peer review on learners' writing performance (Manglesdorf, 1992; Mendonca and Johnson, 1994; Sengupta, 1998; Fury, 2004; Mooney, 2004). These researchers have found that learners only selectively approach the comments that are mentioned by their peers. They argue that learners in their studies often depended on their own or their teacher's knowledge rather than their peers'. In a study on Asian learners, Manglesdorf (1992) states that because these learners usually come from teacher-centred cultures, they look down on pair-work and peer comments. Research also shows that peer review plays an insignificant role on the learners' performance in their later drafts while the comments provided by the teacher prove to be more effective (Connor and Asenavange, 1994).

From the review of literature, it is evident that there is a lack of consistency in research findings regarding the effect of the aforementioned variables on the Malaysian learners. Hence, the objective of the study was to measure the effect of peer review and tutor conferencing on the learners' writing performance. According to a scale developed by Wong (1989), the learners' writing skill was analyzed in terms of the following dimensions:

1. Overall effectiveness: This involves the quality of communication with the reader; in other words, whether the writer can communicate effectively with the reader.

2. Content: This relates to the way in which the writer treats the narrative. The quality of the content in a story can be determined by (a) purposeful choice of significant events and details, (b) mature development of the story, and (c) engaging links between the different parts of the story.

3. Language: The focus of this dimension is on the control of sentence structure and grammar, i.e. whether the learner could accurately and appropriately use the language.

4. Vocabulary: This aspect includes the learners' level of vocabulary development. It is identified by varied and accurate word choice.

5. Total: This shows the learners' overall writing performance. It is achieved by adding all the aforementioned aspects of writing skill.

The following hypotheses were tested in light of the reviewed literature:

$H_1$. Peer review has a significant effect on the learners' overall effectiveness scores.

$H_2$. Peer review has a significant effect on the learners' content scores.

$H_3$. Peer review has a significant effect on the learners' language scores.

$H_4$. Peer review has a significant effect on the learners' vocabulary scores.

$H_5$. Peer review has a significant effect on the learners' total writing performance scores.

$H_6$. Tutor conferencing has a significant effect on the learners' overall effectiveness scores.

$H_7$. Tutor conferencing has a significant effect on the learners' content scores.

$H_8$. Tutor conferencing has a significant effect on the learners' language scores.

$H_9$. Tutor conferencing has a significant effect on the learners' vocabulary scores.

$H_{10}$. Tutor conferencing has a significant effect on the learners' total writing performance scores.

As depicted in *Fig. 1*, peer feedback and tutor conferencing are the two independent variables. The dependent variables of the study included the scores that were given by the two raters to each dimension of the samples' writing performance, i.e. overall effectiveness, content, language, vocabulary, and total. The objective was to investigate if providing the learners with peer review, on the one hand, and tutor conferencing, on the other, affected learners' writing performance.

## MATERIALS AND METHODS

A quantitative method was employed and the interrupted time-series design (O-X-O-X-O) was used in the present study (Marczyk, DeMatteo and Festinger, 2005). In this design, after the participants were observed, they were given a treatment, which was followed by another observation. Another treatment was given before the final observation. A comparison between the first observation and the second observation would show the effect of the first treatment, while the second observation and the third observation could be compared to measure the

effect of the second treatment. The participants and the instrument used as well as the raters and the tutor involved in the study are described in this section.

## SAMPLE PARTICIPANTS

Teaching English as a Second Language (TESL) students (N= 30) from the Faculty of Educational Studies in Universiti Putra Malaysia (UPM), a research university in Selangor, Malaysia, served as the intact group participants of the study. These learners attended the course of 'Teaching of Writing Skills' as a part of their bachelor programme. As for the sample size of the study, according to Creswell (2002), a size of 30 would roughly be sufficient in educational research. Furthermore, a larger sample size would impose financial problems on the researchers since they needed two experienced raters to score three drafts written by each student.

## INSTRUMENT

The Qualitative Writing Scale, also known as the Wong Scale, is an analytic instrument composed of four dimensions which include overall effectiveness, content, language, and vocabulary (Wong, 1989). Wong tested her scale for its validity in the Malaysian context and also



Fig. 1: Independent and dependent variables

observed acceptable reliability scores produced by the instrument. It categorizes narratives into three levels and six band scores of *Good* (5-6), *Fair* (3-4), and *Weak* (1-2). The weight given to the dimension of *language* is twice as much as the other three dimensions; therefore, the maximum total score for a narrative is 30, which is calculated as follows:

$$6 \text{ (overall effectiveness)} + 6 \text{ (content)} + 6{\times}2 \text{ (language)} + 6 \text{ (vocabulary)}$$

As an example, if a rater assigns 4 for 'overall effectiveness', 3 for 'content', 5 for 'language', and 4 for 'vocabulary' of a story, the total score can be calculated, thus:

$$4 + 3 + (5{\times}2) + 4 = 21$$

A score of 21 upon 30 indicates a fair ability in the part of the student writer who wrote the story.

## RATERS

Two experienced raters helped in marking the stories written by the participants. These raters had been involved in correcting essay tests in university placement tests for over five years. During their training, they assigned mostly consistent scores for the participants' stories. The maximum amount of discrepancy that was observed between their scores was only 1 on Wong's 6-point scale. In this regard, Breland, Bridgeman and Fowles (1999, p. 8) argue that scores must be at least 2 points apart on a 6-point scale before they are considered discrepant. In addition, after they had scored the stories, the results of the inter-rater reliability test showed acceptable levels of consistency, as it will be discussed later in the results section. Therefore, adding a third rater to the team was not necessary.

## TUTOR

The tutor in this research was a post-graduate teaching assistant who functioned as a mediator and a facilitator. He had a 30-minute one-to-one discussion with the students on their papers.

## TREATMENT

At the beginning of the semester, the learners were instructed to write a story of 1500 words for young adult ESL learners. The students were free to choose the themes of their stories, but they were encouraged to go for themes that would engage their target audience. They spent the first four weeks of the semester on this first draft. Subsequently, they reviewed at least one of their peers' story and apart from having their own stories reviewed. They read their friends' stories and provided them with oral and written feedback. The feedback included comments on the content and the form of the stories. Some time was set aside to do initial peer review activities in class. Before they started peer response activity, students were taught to give their peers observational rather than evaluative feedback. That is, instead of direct criticism and evaluation of their friends' stories, they would describe how certain events in the story made them feel or think.

Based on the comments provided, the students revised the first drafts of their narratives. By the end of the seventh week, the second drafts of the stories were collected. Following this step, the narratives were read thoroughly by the course tutor who gave the student writers written comments in addition to listening to their stories and providing them with oral feedback during the one-to-one tutor conferencing sessions. The focus of the conferencing was both on the form and the content of the pieces. The tutor followed the guidelines below in the conferencing sessions:

1. Encourage the learners to be active during the conferences. Actively listen to their questions first.
2. Show sincere interest in the stories.
3. In addition to orally stating your comments and responses to the assignment, you may leave written comments in the assignment for future reference.
4. You are not supposed to edit the learners' stories; instead, encourage them to do it themselves.
5. Begin your comments with encouraging expressions. When giving your comments,

keep your critical views for the middle of the meeting but ensure to end it by giving positive comments.

6. Provide criticisms with tact by using expressions like, "Here is a nice story, but you can improve it by… ." If you think the learner has not clarified a point, avoid comments like, "This is vague!"; rather, give comments like, "You may have a good reason to have left this part a bit ambiguous, but I feel your reader here would like to know what makes you think/say this way."

The conferencing sessions ended by week 11, and the final drafts were submitted to be marked and ranked by the end of the twelfth week.

## RATER TRAINING

The two raters were trained to use the scale in two ninety-minute meetings (See the second phase of *Fig. 2*). The rater training meetings were held in two consecutive days. In the first meeting, the researchers purposively selected six stories that, according to the Wong Scale, roughly indicated the different performance levels of the participants. The stories were photocopied and given to the raters, who used the scale to correct them. A table leader, the second author, cross-checked the scores for discrepancies. Any case of disagreement was discussed until the raters reached an agreement. This would help the raters to better understand the instrument. It would also reduce probable disagreement between the raters in the later stages of the scoring.

On the second day, six more similar sample papers with roughly six performance levels were corrected by each rater individually. Then, the table leader and raters worked together to compare the scores given by each rater to the same samples to check for the consistency of the two sets of scores. As it was discussed earlier, the level of agreement among the resulting scores showed the raters were ready for individual scoring the samples. Out of the 12 corrected samples in the rater training period, six were selected as benchmark or anchor papers.

These samples represented the varying levels of performance. The raters could refer to these anchor papers whenever in doubt during the correction of the samples.

## DATA ANALYSIS

SPSS (Version 15.0) was applied for the inter-rater reliability test and for comparing the significance of variance between the scores. Due to the generally high degree of inter-rater reliability, the means of the scores given by each rater were calculated which were assumed as the best possible indicators of the level of these samples. Since it was intended to measure the significance of difference in the writing performance of the same group of learners in three different time intervals, Repeated Measures ANOVA was chosen as the appropriate statistical method. *Fig. 2* summarizes the framework of the study.

## RESULTS

The scores given by the two raters were tested for their inter-rater reliability prior to analysis. As it was mentioned in the description of the instrument, the Wong Scale consists of four scores for each dimension of writing. Therefore, the four different scores that the two raters had given to the overall effectiveness, content, language, and vocabulary of the sample stories, in addition to their total scores were tested for their inter-rater reliability.

Table 1 presents a summary of the inter-rater reliability test results. Reliability coefficients are interpreted in different ways, but a coefficient of below .50 is generally regarded as low, .50 to .75 as moderate and .75 to .90 as high (Farhadi, Jafarpur and Birjandi, 2001). The Cronbach Alpha scores for most of the scores were more than .75 suggesting high inter-rater reliability between the two raters. As the table indicates, only a third of these scores showed moderate reliability. Hence, it was not necessary to include a third rater. The final scores that were analysed were the means of the marks given by the two raters.

**(Treatment and Observations)**

| Week | Assignment | Process |
|---|---|---|
| 1-4 | Write a 1500-word story Submit Draft 1 | Observation 1 |
| 5-7 | Review peer's story; have your story reviewed | Treatment |
| 8 | Submit Draft 2 | Observation 2 |
| 9-11 | Participate in the tutor conference | Treatment |
| 12 | Submit Final Draft | |
| 13-14 | - | Observation 3 |

↓

**(Rater Training)**

| Monday (90 minutes) Training using 6 purposive samples | → | Tuesday (90 minutes) Cross-checking using 6 purposive samples | → | 6 anchor papers |
|---|---|---|---|---|

↓

**(Sample Correction)**

↓

**(Inter-rater Reliability Test)**

↓

**(Final Score Calculation)**

(Rater A's scores + Rater B's scores) /2 = Final Score

↓

**(Data Analysis)**

Repeated Measures ANOVA

*Fig. 2: Research framework*

Table 2 shows the descriptive statistics results of the study. As it can be observed in this table, there was an overall increase in the scores which indicated both treatments played positive roles on the learners. However, to verify the significance of the difference, it was necessary to analyse the data using the Repeated Measures ANOVA. The results are summarized and discussed below. The hypotheses of the study together with the significant values (p), decisions and conclusions are reported in the following section. The level of significance was set at ($\alpha$ = .05) for the statistical calculations.

$HO_1$. Peer review has no significant effect on the learners' overall effectiveness scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .33) is larger than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the learners' overall effectiveness scores.

TABLE 1
Cronbach's Alpha for the four dimensions scores and the total scores
of the three observations

| Dimension | Observation | | |
|---|---|---|---|
| | 1 (Draft 1) | 2 (Draft2) | 3 (Draft 3) |
| Overall effectiveness | .88 | .73 | .84 |
| Content | .85 | .63 | .74 |
| Language | .81 | .76 | .86 |
| Vocabulary | .86 | .62 | .75 |
| Total | .89 | .81 | .84 |

TABLE 2
Descriptive statistics results

| Dimension | Observation | | | | | |
|---|---|---|---|---|---|---|
| | 1 (Draft 1) | | 2 (Draft2) | | 3 (Draft 3) | |
| | Mean | Standard error | Mean | Standard error | Mean | Standard error |
| Overall effectiveness | 3.65 | .18 | 3.75 | .18 | 4.16 | .17 |
| Content | 3.77 | .17 | 4.02 | .16 | 4.47 | .15 |
| Language | 3.55 | .15 | 3.6 | .14 | 4.23 | .17 |
| Vocabulary | 3.75 | .15 | 3.88 | .15 | 4.15 | .15 |
| Total | 18.27 | .70 | 18.80 | .68 | 21.22 | .72 |

## HO2. Peer review has no significant effect on the learners' content scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .15) is larger than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the content scores of the learners' narratives.

## HO3. Peer review has no significant effect on the learners' language scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .25) is larger than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the language scores of the learners' narratives.

## HO4. Peer review has no significant effect on the learners' vocabulary scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .598) is more than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the vocabulary scores of the learners' narratives.

HO5. Peer review has no significant effect on the learners' total writing performance scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .08) is more than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the learners' total writing performance scores.

HO6. Tutor conferencing has no significant effect on the learners' overall effectiveness scores

The results indicate a test statistics value of (F = 20.47) and a significant value of (p = .000) which is less than ($\alpha$ = .05). The results of the Pairwise Comparisons test between the first and the third observations; on the one hand, and the second and the third observations; on the other, they also indicate a significant value of (p = .000) which is less than ($\alpha$ = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the overall effectiveness scores of the learners' narratives.

HO7. Tutor conferencing has no significant effect on the learners' content scores

The results indicate a test statistics value of (F = 17.82) and a significant value of (p = .000) which is less than ($\alpha$ = .05). The results of the Pairwise Comparisons test between the first and the third observations, on the one hand, and the second and the third observations; on the other, they also indicate a significant value of (p = .000) for this dimension which is less than ($\alpha$ = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the content scores of the learners' narratives.

HO8. Tutor conferencing has no significant effect on the learners' language scores

The results indicate a test statistics value of (F = 44.86) and a significant value of (p = .000)

which is less than ($\alpha$ = .05). The results of the Pairwise Comparisons test between the first and the third observations, on the one hand, and the second and the third observations, on the other, also indicate a significant value of (p = .000) which is less than ($\alpha$ = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the language scores of the learners' narratives.

HO9. Tutor conferencing has no significant effect on the learners' vocabulary scores

The results indicate a test statistics value of (F = 8.65) and a significant value of (p = .001) which is less than ($\alpha$ = .05). The results of the Pairwise Comparisons test between the first and the third observations; on the one hand, and the second and the third observations, and on the other, they also indicate a significant value of (p = .003) and (p = .009) respectively, which are both less than ($\alpha$ = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the vocabulary scores of the learners' narratives.

HO10. Tutor conferencing has no significant effect on the learners' total writing performance scores

The results indicate a test statistics value of (F = 56.66) and a significant value of (p = .000) which is less than ($\alpha$ = .05). The results of the Pairwise Comparisons test between the first and the third observations, on the one hand, and the second and the third observations, on the other, also indicate a significant value of (p = .000) which is less than ($\alpha$ = .05). This null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the learners' total writing performance scores.

Table 3 summarizes the results of the first five hypotheses which were proposed to test for the significance of the effect of peer review on the five dependent variables of the study. Meanwhile, Table 4 presents the results of hypotheses 6-10 which tested for the effect of tutor conferencing on the dependent variables.

TABLE 3
Results of the effect of peer review on writing performance

| Null hypotheses | p > | α | Decision | Conclusion |
|---|---|---|---|---|
| 1. Peer review has no significant effect on the learners' overall effectiveness scores | .33 | | | Peer review plays no significant role on overall effectiveness scores |
| 2. Peer review has no significant effect on the learners' content scores | .15 | | Since the significant p is more than α, we fail to reject all the null hypotheses | Peer review plays no significant role on content scores |
| 3. Peer review has no significant effect on the learners' language scores | .25 | .05 | | Peer review plays no significant role on language scores |
| 4. Peer review has no significant effect on the learners' vocabulary scores | .59 | | | Peer review plays no significant role on vocabulary scores |
| 5. Peer review has no significant effect on the learners' total writing performance scores | .08 | | | Peer review plays no significant role on total writing performance scores |

## DISCUSSION

The results indicate a significant effect of tutor conferencing and an insignificant effect of peer review on the learners' writing performance. Based on the review of the related literature, the previous research findings on these two variables are quite inconsistent. One possible explanation for the insignificant effect of peer review on students' writing performance in this study can be the cultural differences between the participants in different studies. Fujieda (2009) suggests culturally idiosyncratic norms of learners who take part in ESL writing courses as the culprit, asserting "cultural beliefs and assumptions have a strong impact on learners' behavior and peer feedback management" (p. 114).

Carson and Nelson (1996) conducted a study on the effect of feedback on learner's improvement in their writing skills by considering their cultural background. They investigated Chinese ESL learners' behavior in the process of their peer reviews. They reported that the learners sought to build a sense of camaraderie throughout the activity since they came from a low contact culture and valued conformity among peers. Therefore, it can be implied that learners from homogeneous cultural backgrounds tend to avoid criticizing peers and to be in agreement by establishing a harmony with them. The insignificant effect of peer review in this research could be due to such cultural differences between the participants who were to a large extent from the Malay ethnic group and those of other research who come from a vast variety of cultural backgrounds. This variable can, therefore, render investigating the effect of peer response or teacher conferencing a challenging process which calls for further research.

Besides peers' cultural backgrounds, Ferris and Hedgecock (2005) point out affective barriers as factors that lead to less successful peer feedback procedures. Meanwhile, Leki (1990) notes that learners can be unkind, sarcastic and too critical in their comments. This can raise their peers' affective filters that lead them to avoid their comments all together. As Ferris and Hedgecock (2005) argue, peer feedback may be "potentially harmful to students because of the novice writers' ineptitude in providing useful

TABLE 4
Results of the effect of tutor conferencing on writing performance

| Null hypotheses | Repeated measures ANOVA | | Pairwise comparison (p) | |
|---|---|---|---|---|
| | F | p | Ob 1 and 3 | Ob 2 and 3 |
| 6. Tutor conferencing has no significant effect on the learners' overall effectiveness scores | 20.47 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the overall effectiveness scores of the learners' narratives. | | | |
| | F | p | Ob 1 and 3 | Ob 2 and 3 |
| 7. Tutor conferencing has no significant effect on the learners' content scores | 17.82 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the content scores of the learners' narratives. | | | |
| | F | p | Ob 1 and 3 | Ob 2 and 3 |
| 8. Tutor conferencing has no significant effect on the learners' language scores | 44.86 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the language scores of the learners' narratives. | | | |
| | F | p | Ob 1 and 3 | Ob 2 and 3 |
| 9. Tutor conferencing has no significant effect on the learners' vocabulary scores | 8.65 | .001 | .003 | .009 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the vocabulary scores of the learners' narratives. | | | |
| | F | p | Ob 1 and 3 | Ob 2 and 3 |
| 10. Tutor conferencing has no significant effect on the learners' total writing performance scores | 56.66 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the total writing performance scores of the learners' narratives. | | | |

*Key*: F (test statistics); p (significant value); Ob (observation)

responses and because of L2 students' lukewarm, if not downright hostile, feelings toward peer feedback" (p. 224).

As it is also evident from the results, the students' writing capabilities were varied. This suggests that most of them might have lacked the required oral communicational skills to provide effective feedback. Learners may provide their peers with ambiguous and unhelpful feedback (Ferris, 2003b). They may be unable to comprehend their peer's accent in their oral comments (Leki, 1990). In this line, Liu and Hansen (2002) warn that learners may lack sufficient rhetorical schemata to help

them provide their peers with useful feedback concerning the structure or content of their written works. This could be another reason why peer review in this study did not affect the students' writing scores significantly although this was not the case in other similar studies reviewed earlier. Systematizing the peer review activity by introducing a checklist according to which students could provide comments on their classmates' stories might have led to different results.

The findings support the positive effect of teacher intervention in the process of learners' writing. The results seem to suggest that

teacher's overt intervention can be particularly beneficial in the case of ESL or even more importantly English as a Foreign Language (EFL) setting where learners have relatively little access to authentic language in contrast with situations where learners are in a native English speaking environment. These findings support the results of studies of learners' opinions on teacher feedback, which indicate that students regard their teacher's comments as necessary and helpful (Zhang, 1995; Ferris and Hedgecock, 2005).

The variable of learning style preferences that also varies from learner to learner could also have affected the learners in their performance. For example, some students may be too dependent on the other learners and/or the tutor and thus may reject the idea to perform peer interaction or tutor conferencing when asked to do so. This variable is undeniably worth looking into in future research by using different individuals like ESL language teachers and learners as well as curriculum designers and material developers. Finally, a more structured and systematized peer review activity could have helped the students in providing less vague and more meaningful comments to each other.

## CONCLUSIONS

The study sought to investigate the effect of peer feedback and tutor conferencing on learners' writing performance. According to the finding, peer feedback played no significant role in students' writing performance. However, as the results suggest, they benefited from tutor conferencing. As it was discussed, such findings may be due to the cultural background of the participants in the study. Since they come from a teacher-centred background, these learners value the feedback they receive from their lecturers and tutors more than the comments they get from their peers. Therefore, further research seems necessary to investigate these learners' response to the comments provided by their peers as compared to their response to the tutor comments. There is also a need to replicate the same research with a slightly larger sample size. The relatively small sample size of the study could have resulted in Type I error that entails failing to reject a null hypothesis that is, in fact, false.

As the findings of this study suggest, a positive attitude in the part of the writing tutor or teacher can positively affect learners' improvement in their writing performance. The results also emphasize ESL teachers' intervention in the writing process of their student writers. In addition, the poor results obtained from the peer review highlight the importance of a systematic modelling and treatment of this activity in order to avoid probable ambiguities. Otherwise, the learners' may not grasp a clear understanding of the process, and as a result the activity may not work as effectively as it should.

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# An Exploratory Study on "Online B2B Purchases" in India

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## ABSTRACT

The Indian B2B marketplace is going through a transformation. As a consequence, this emerging market is witnessing a noteworthy change in its growth and investment patterns. Both existing and new players are experimenting with new Buying solutions as they lack a seamless flow of information among customers, suppliers, and their employees. Due to competitive environment all businesses have to ensure accurate and timely presentation of information to their stakeholders for their survival. The way businesses purchase products is one of the most important concern for managers of today. The business buying has been shifted from offline to online Purchases to a great extent. In this fast changing global village, one should know about the Buying process influences and behaviour of their B2B clients in order to extend their desire to establish and maintain long term relationships in long run. So, this research paper investigates the online influence on B2B purchases in India, which can help the businesses to gain competitive edge in today's and futuristic marketplace.

Keywords: Online purchase, B2B purchase, internet influence, internet purchase, online procurement

## INTRODUCTION

A common man might perceive consumer market (B2C) to a great extent bigger than business-to-business (B2B) market place. In fact, B2B is much bigger than B2C markets. Whether we talk about commercial markets, trade industries, government organisations or institutions, all are involved in B2B transactions, either directly or indirectly.

Indian sub-continent is one of the major booming economies of the world and this will continue so till centuries. This is of great interest to the Fortune 1000 companies as western economies are tapering off in growth rates due to competitive forces in place. According to Reserve Bank of India, foreign exchange reserves (excluding Gold and SDR) currently stand $ 261.656 Billion on 4th September 2009. The overall growth of GDP during 2008-09 (according to Central Statistical Organization) has been placed at 7.1 %. Furthermore, the estimated growth in GDP for the service sectors during 2008-09 is placed at 10.3 per cent. Moreover, according to commodityonline.com, India's inflation rate eased again to 0.7 percent for the week ended 26th September 2009.

During the survey, the analysis was made on the respondents who were directly or indirectly attached with the buying/purchasing process of organisations in India. These respondents were

surveyed based on varied criteria. Four major roles played by the buying centre participants were also identified, namely, user, analyst/engineer, influencer, and purchaser/decision maker.

Users are the ones who actually use the purchased products/services. Their influence may range from negligible to the most important. They may at times initiate purchase actions, help develop specifications, etc. Influencer helps process information that is reviewed by buying centre members. They may provide access to some more facts and provide their expertise (if any).

Analyst/Engineer affects the buying decision by supplying information to guide the evaluation of alternatives or by setting buying specification. They may be a technical staff such as engineers, quality control specialist, R&D personnel, etc. Purchaser/Decision maker (where, decision maker is the final decision making authority, which may be a purchaser/senior management executive or a finance department executive), chooses a good or service. He/she may be the top authority or the person with authority to take purchase decisions. Also, he/she is the formal authority to select supplier/vendor and to implement the procedures for procuring the product or service.

Furthermore, the buying/purchasing cycle is divided into four phases viz. awareness, research, negotiation, and purchase for in the depth analysis of online and offline purchase influence at various stages of buying/purchasing in Business to Business Organisations. So, this research paper investigated the influence of the internet on B2B purchases in India, which could help the businesses to gain competitive edge in today's and futuristic marketplace.

## LITERATURE REVIEW

Business to Business (B2B) is a marketing strategy which involves commercial transactions of goods and services between businesses (as opposed to relations between businesses and other groups; for example, consumer or public administration). Some firms focus entirely on business markets, while others sell both to consumer and business markets. Some examples for this are Reliance, Infosys, Satyam, TATA, IBM, WIPRO, Logitech, Epson, HP, Canon, LG, and Samsung. Business-to-Business markets deal with business purchases of goods and services to support or facilitate productions of other goods & services, either to facilitate daily company operations or for resale.

According to Reeder *et al.* (1991), all marketing strategies must begin with a thorough understanding of the Organisation Buying Behaviour as this entails a different knowledge about the buying situation, process and criteria to apply when making purchasing decisions. Also, the understanding of Organisational Buying Behaviour is fundamental for the supplier of an industrial firm in order to perceive how to satisfy customer demand in an optimal way (Baptista and Forsberg, 1997).

In addition, Haas (1995) states that organisational buying is not simply the action someone takes. It is actually the outcome of interactions between purchasing professionals. Those who are involved in the process may in one way or another influence what is being purchased and supplied. The evolution of technology has changed the traditional way of business purchases. New tools have opened up a new era and new opportunities in every part of the market. The arrival of internet as a multifaceted tool continues to change the performance of the organisations (Smith, Berry and Pulford, 1998). The use of information and communication technologies (ICT) might be used in developing countries that are the most disadvantaged by poor access to information to complement economic policies, in order to boost efficiency and enhance market integration (Treaty establishing the European Community, 1957; Gibson and Ward, 2000; Everard, 2000; Dutton, 1999; Commission Directive, 2001; Cafiero, 1996; Bimber, 1999; Barber, 1998; European Commission, 2000; Arunachalam, 1999; Albarran and Goff, 2000). The literature has also indicated that many organization's procurement processes with their suppliers are organized in numerous arrangements. First, these processes have to be reengineered, uniformed,

incorporated to collaborative processes, and which will then enable successful procurement, and in turn, they will give access to all data at the time when all business partners need them (ActivMedia Research, 2000; Athabasca University, 2002; Chan and Swatman, 1999; European Commission, 2000; Lindemann and Schmid, 1998; Ody, 2001a; Ody, 2001b; Podlogar *et al.*, 2001; Pucihar, 1999; RIS, 2001; Segev *et al.*, 1998; Sterle, 2001). Furthermore, procurement is an integral part of the B2B processes and an essential part of any organization's ability to function effectively but has only recently emerged as an important topic within the fast growing B2B e-Commerce market. An e-Procurement B2B system is an open system that enables the organization to reach and transact with suppliers and customers in virtual markets (Bakos, 1992). In the commercial arena, an organization will procure goods on electronic way only if it sees enough benefits that may be gained from e-Procurement. Moreover, an organization must take very careful steps to prepare business processes for successful implementation of e-Procurement (Podlogar, 2006).

Stakeholders of Buying Centre: According to Webster and Wind (1972), members in buying centre may assume different roles throughout the organisational purchase process. The identification of the roles they play helps marketers to better understand the nature of interpersonal influences in the buying centre. These roles can be categorized as Users, Influencers, Buyers, Deciders, and Gatekeepers.

## RESEARCH METHODOLOGY

The research methodology used is exploratory in nature and this aimed to understand the influence of the internet on the B2B purchases in India, which can help the businesses to gain competitive edge in today's and futuristic marketplace. A survey questionnaire was completed by the purchase people of IT organizations in India in order to understand the determinants in the "Online B2B Purchases" in India in the IT Industry. The emphasized factors included the role of User, Analyst/Engineer, Influencer, Purchaser/Decision Maker with the buying phases as Awareness, Research, Negotiation, and Purchases.

A total of 130 questionnaires were answered, out of which 15 were rejected and 115 questionnaires were analysed, constituting to a sample size of 115 for the research. The sample was drawn from Delhi and NCR. Through the respondents' responses involved in the B2B purchases on various parameters, the authors arrived at the findings and conclusion of the research. The type of data used for the research included both the secondary and primary data. The secondary data included books, journals, internet, etc. The sampling method used was the non-probability sampling which in itself is a type of convenience sampling. Meanwhile, the tools/techniques used are SPSS, MS Word, MS Excel, Internet Explorer, etc.

## DATA ANALYSIS AND INTERPRETATION

The analysis was based on the survey which might also be used for further research by practitioners/researchers.

### General Characteristics of Participants

A wide range of organisations were covered in the survey, and these were used to see the overall scenario of the online purchase influences by B2B buyers. Now, the product/service category which participants were catering to include business services, equipment, hardware, parts/components, software, supplies. The largest contributor was the supplies (33.9%) as presented in Table 1.

TABLE 1
Product/service category of the
respondents

| Category | n (%) |
|---|---|
| Business Services | 16 (13.9) |
| Equipment | 13 (11.3) |
| Hardware | 17 (14.8) |
| Parts and Components | 11 (9.6) |
| Software | 19 (16.5) |
| Supplies | 39 (33.9) |

*Fig. 1* also shows the contribution of various types of purchases in the total purchase done by the B2B organizations.

### Category Influence Model



The above model was developed to show the influence of the offline and online purchases category wise. Moreover, the purchase sizes by the respondents are also provided in the table below, indicating that most of the purchases were below Rupees 10 Lakh (nearly 60.9 %).

TABLE 2
Purchase budget of the
respondents' organizations

| Purchase budget (Rs.) | n (%) |
|---|---|
| Up to 10 Lakh | 70 (60.9) |
| 10 to 50 Lakh | 30 (26.1) |
| 50 to 200 Lakh | 10 (8.7) |
| More than 200 Lakh | 5 (4.3) |

### Respondents' Level of Education

The survey included the respondents' highest education level which included high school, graduate, graduate with professional degree, post-graduate, post-graduate with professional Degree, with the maximum level for the category of graduate (37.4 %) or graduate with professional degree (32.2 %) as shown in Table 3.



*Fig. 1: Purchases of various categories*

*Fig. 2: The participants' highest level of education*

TABLE 3
Purchase budget of the
respondents' organizations

| Highest education level | n (%) |
|---|---|
| High School | 9 (7.8) |
| Graduate | 43 (37.4) |
| Graduate with Professional Degree | 37 (32.2) |
| Post Graduate | 23 (20.0) |
| Post Graduate with Professional Degree | 3 (2.6) |

*Fig. 2* shows the contribution of the participants' level of education in the total purchase done by the B2B organizations.

*Buying Cycle Phase and the Participants' Roles*

The researchers asked each participant to indicate their responses as per the phase and role, as described below.

Awareness    : Anticipation or recognition of a problem (need)

Research    : Determination and description of the characteristics and quantity of the needed product/service, search for and qualification of probable solutions or potential sources.

Negotiation  : Acquisition, analysis and evaluation of the proposals, negotiation of the optimal price and finalizing the vendor.

Purchase    : Approval of purchase, recommendation and authorized purchase and selection of order routine.

The four major roles played by the buying centre participants have been identified as Users, Analysts/Engineers, Influencers, Purchasers/Decision Makers. Users are the ones who actually use the purchased products/services. As noted earlier, their influence may range from negligible to the most important. They may at times initiate purchase actions, help develop specifications, etc.

Influencers help process information that is reviewed by members of the buying centre. They may provide access to some more facts and provide their expertise (if any).

Analysts/Engineers affect the buying decision by supplying information to guide evaluation of alternatives or by setting buying specification. They may be a technical staff such as engineers, quality control specialists, R&D personnel, etc.

Purchasers/decision makers choose goods or services. He/she may be the top authority or the person with authority to take purchase decision. In addition, he/she is the formal authority to select supplier/vendor and to implement the procedures for procuring the product or service.

## BUY PHASE/ROLE

Majority of the participants were in the research phase of the current buying cycle with the purchasers/decision makers and analysts/

engineers forming the largest group, with 41.7% and 30.4%, respectively.



The model above predicts the transformation from the need/problem recognition to the need/problem satisfaction through the interconnections of buy phases and buyers' roles.



TABLE 4
Buy phase versus respondents' role

| Buy phase\Role | User n (%) | Analyst/ Engineer n (%) | Influencer n (%) | Purchaser/ Decision maker n (%) | Total n (%) |
|---|---|---|---|---|---|
| Awareness | 4 (13.3) | 2 (5.7) | 0 (0) | 9 (188) | 15 (13.0) |
| Research | 14 (46.7) | 19 (54.3) | 1 (50.0) | 20 (41.7) | 54 (46.9) |
| Negotiation | 6 (20.0) | 6 (17.1) | 0 (0) | 7 (14.6) | 19 (16.5) |
| Purchase | 6 (20.0) | 8 (22.9) | 1 (50.0) | 12 (25.0) | 27 (23.5) |
| Total | 30 (26.1) | 35 (30.4) | 2 (1.7) | 48 (41.7) | 115 (100) |

*Fig. 3: The beginning of the buying cycle begin before purchase*

Based on the research, this recognition-satisfaction model which tells us about the lead buyers at various buy phases in a directional manner was developed.

## WHEN DOES BUY CYCLE BEGIN BEFORE PURCHASE?

As given below, most of the times, the buying/purchasing cycle begins around two weeks, including 1-2 weeks (40%) and within 1 month (33.9%).

TABLE 5
The beginning of the buying
cycle before purchase

| Time before purchase | Respondents (n) | Respondents (%) |
|---|---|---|
| Same Day | 10 | 8.7 |
| 1-2 Week | 46 | 40 |
| Within 1 Month | 39 | 33.9 |
| 2-3 Month | 15 | 13 |
| >3 Month | 5 | 4.3 |

*Fig. 3* shows the contribution of time period in the purchases done by B2B organizations.

## ONLINE AND OFFLINE INFLUENCES

In most cases, online information is used and the maximum contribution is done by online vendor search and purchasing offline (46.9%), with the second lead by online search and purchase (35.6%).

TABLE 6
Off-line and on-line influences

| Offline versus Online | n | % |
|---|---|---|
| Found Vendor Online & purchased Online | 41 | 35.6 |
| Found Vendor Online & purchased Offline | 51 | 46.9 |
| Found Vendor Offline & purchased Online | 6 | 5.2 |
| Found Vendor Offline & purchased Offline | 14 | 12.2 |

## Online/Offline Search Model



The model above shows the online/offline uses in the case of vendor search and purchase decisions which are taken by business organizations. Furthermore, the purchase budget analysis reveals that most of the purchases belong to the category of up to Rs.10 lakh and Rs.10-50 lakh, contributing to 64% and 54%,

*Fig. 4: Online/offline influence versus purchase budget*

respectively, in the online influence; whereas major purchases in the offline category fall in Rs.50-200 lakh and more than 200 lakh range, with 66% and 75%, respectively.

TABLE 7
Online/offline influence versus
purchase budget

| Purchase budget (Rs.) | Offline influence (%) | Online influence (%) |
|---|---|---|
| Upto 10 Lakh | 36 | 64 |
| 10 to 50 Lakh | 45.5 | 54.5 |
| 50 to 200 Lakh | 66 | 34 |
| More than 200 Lakh | 75 | 25 |

Similarly, based on the category of purchase, the offline influence was done mainly in hardware due to the involvement of price and quality as the determinants in decision making, with 56%, while major online influence was in the equipment as well as parts and components. All the other categories contribute almost equally in the offline and online influences.

TABLE 8
Online/offline influence versus
purchase category

| Category | Offline influence (%) | Online influence (%) |
|---|---|---|
| Business Services | 49 | 51 |
| Equipment | 45.4 | 54.6 |
| Hardware | 56 | 44 |
| Parts and Components | 31 | 69 |
| Software | 49.5 | 50.5 |
| Supplies | 48 | 52 |

## DETERMINANTS OF ONLINE AND OFFLINE INFLUENCING FACTORS

When looking at the determinants as a whole, the researchers determined factors such as search engine, vendor website, word of mouth, industry reference, business magazine, IITF/Trade Exhibition, and seminar/conference. The following table presents the overall rating of both the online and offline factors amongst the participants. The major influence was by the

*Fig. 5: Online/offline influence versus purchase category*



*Fig. 6: Online/offline influencing factors*

Word of Mouth and Industry Reference, with the rating of 5.8 and 5.6, respectively, followed by Vendor Website (5.4), Search Engine (5.2) and IITF/Trade Exhibition (4.7). The least influencing factors were Business Magazine and Seminar Conference, with only 3.5 and 3.2 rating, respectively.

TABLE 9
Online/offline influencing factors

| Factor | Overall rating |
|---|---|
| Search Engine | 5.2 |
| Vendor Website | 5.4 |
| Word of Mouth | 5.8 |
| Industry Reference | 5.6 |
| Business Magazine | 3.5 |
| IITF/Trade Exhibition | 4.7 |
| Seminar/Conference | 3.2 |

*Fig. 7: Online/offline influencing factors during awareness phase*

## DETERMINANTS OF BUYING / PURCHASING AT AWARENESS PHASE

The most influential factors at the time of awareness were the Word of Mouth (6.3) and Industry Reference (6.2), followed by Search Engine (5.8), IITF/Trade Exhibition (5.0), Business Magazine (3.7), and Seminar Conference (3.6), respectively.

TABLE 10
Online/offline influencing
factors during awareness phase

| Factor | Awareness |
|---|---|
| Search Engine | 5.8 |
| Vendor Website | 6.0 |
| Word of Mouth | 6.3 |
| Industry Reference | 6.2 |
| Business Magazine | 3.7 |
| IITF/Trade Exhibition | 5.0 |
| Seminar/Conference | 3.6 |

## DETERMINANTS OF BUYING/ PURCHASING AT RESEARCH PHASE

The most influential factors at the time of awareness were Industry Reference (6.5) and Search Engine (6.4), followed by Vendor Website (6.3), Word of Mouth (6.0), IITF/Trade Exhibition (4.9), Business Magazine (3.9), and Seminar Conference (3.4), respectively.

TABLE 11
Online/offline influencing
factors during research phase

| Factor | Research |
|---|---|
| Search Engine | 6.4 |
| Vendor Website | 6.3 |
| Word of Mouth | 6.0 |
| Industry Reference | 6.5 |
| Business Magazine | 3.9 |
| IITF/Trade Exhibition | 4.9 |
| Seminar/Conference | 3.4 |

## DETERMINANTS OF BUYING / PURCHASING AT NEGOTIATION PHASE

The most influential factors at the time of awareness were Industry Reference (5.7) and the Word of Mouth (5.5), followed by Vendor Website (5.4), Search Engine (4.5), IITF/Trade Exhibition (4.5), Business Magazine (3.3), and Seminar Conference (2.9), respectively.

Fig. 8: Online/offline influencing factors during research phase



Fig. 9: Online/offline factors during the negotiation phase

TABLE 12
Online/offline factors during the
negotiation phase

| Factor | Negotiation |
|---|---|
| Search Engine | 4.5 |
| Vendor Website | 5.4 |
| Word of Mouth | 5.5 |
| Industry Reference | 5.7 |
| Business Magazine | 3.3 |
| IITF/Trade Exhibition | 4.5 |
| Seminar/Conference | 2.9 |

## DETERMINANTS OF BUYING/ PURCHASING DURING THE PURCHASE PHASE

The most influential factors during the time of awareness were the Word of Mouth (5.3) and Industry Reference (4.4), followed by IITF/ Trade Exhibition (4.3), Vendor Website (4.0), Search Engine (3.9), Business Magazine (3.0), and Seminar/ Conference (2.8), respectively.

TABLE 13
Online/offline factors during the
purchase phase

| Factor | Purchase |
|---|---|
| Search Engine | 3.9 |
| Vendor Website | 4.0 |
| Word of Mouth | 5.3 |
| Industry Reference | 4.4 |
| Business Magazine | 3.0 |
| IITF/Trade Exhibition | 4.3 |
| Seminar/Conference | 2.8 |

## PARTICIPANTS GO ONLINE DURING PURCHASE

Based on the survey, it could be concluded that most of the Buying Centre participants went online during the purchasing process with a significantly high response of 77.4% as compared to others.

TABLE 14
Frequency of the participants going online
during purchasing process

| Would you go online during the purchase process | n | % |
|---|---|---|
| Yes | 89 | 77.4 |
| No | 21 | 18.3 |
| Don't want to answer | 5 | 4.3 |

## WHERE B2B PURCHASERS START ONLINE

The survey results reveal that the major online start was done through search engines with 46.9 % of contribution.

TABLE 15
Where the B2B purchasers start
online

| Where do you start online | n | % |
|---|---|---|
| Search Engine | 54 | 46.9 |
| B2B Search Engine | 16 | 13.9 |
| Vendor's Website | 25 | 21.7 |
| Industry Specific website | 17 | 14.8 |
| Other Websites | 3 | 2.6 |

This was followed by Vendor's Website (22%), Industry Specific Website (15%), B2B Search Engine (14%) and Other Websites (3%).



The model above predicts the use of various online influences which are available through the



*Fig. 10: Online/offline factors during the purchase phase*

Fig. 11: Frequency of the participants going online during the purchasing process



Fig. 12: Where the B2B purchasers start online

online influence model which helps in moving from recognition to satisfaction of the need/ problem.

### PERCEIVED INFLUENCE AND BENEFITS OF INTERNET DURING BUYING/ PURCHASE CYCLE

*Ease of Use*

• Availability of updated information

• Easy movement across and around websites

• Prompt online ordering

• Prompt query handling

*A Comparison of the Ease of Price and Product/Service*

• Get lowest price for product/service purchase

• Easy comparison of product/service from several vendors

• Easy price comparison from several vendors

• Able to obtain competitive and educational information regarding product/service

*Ease of Information Access and Exchange*

• Increase in speed of information gathering from vendor

- Increase in speed of information dissemination within organization (between and within departments/colleagues)

*Reduction in Paper, Time and Monetary Costs*

- Reduction in order processing time
- Reduced paper flow
- Reduced ordering costs

## CONCLUSIONS

In the light of above discussion, it is concluded that this research adds to our understanding of determinants in "Online B2B Purchase" in India (with a special reference to the IT Industry). Thus, the information collected from 115 respondents as per the objectives of the study has presented an overview of the current situation of the B2B purchasers and their online influences.

The product category included Business Services (13.9%), Equipment (11.3%), Hardware (14.8%), Parts and Components (9.6%), Software (16.5%), and Supplies (33.9%), with a Bugdet range of mostly up to Rs.50 Lakh (87%). The average education levels of the purchasers fell in the Graduate Category. The participants indicated the responses as per the phases of awareness, research, purchase and purchase, along with the role of users, analysts/engineers, influencers, and purchaser/decision makers. The highest contributions were from the research phase (46.9%), the analyst/engineers (54.3%), as well as the purchasers/decision makers (41.7%). In most cases, online information is used and the maximum contribution was by the online vendor search and purchasing offline (46.9%), with the second lead by online search and purchase (35.6%).

When looking at the determinants as a whole, the researchers determined the factors such as Search engine, Vendor Website, Word of mouth, Industry Reference, Business Magazine, IITF/Trade Exhibition, Seminar/Conference. The analysis revealed the overall rating of both the online and offline factors amongst the participants. The major influence was from the
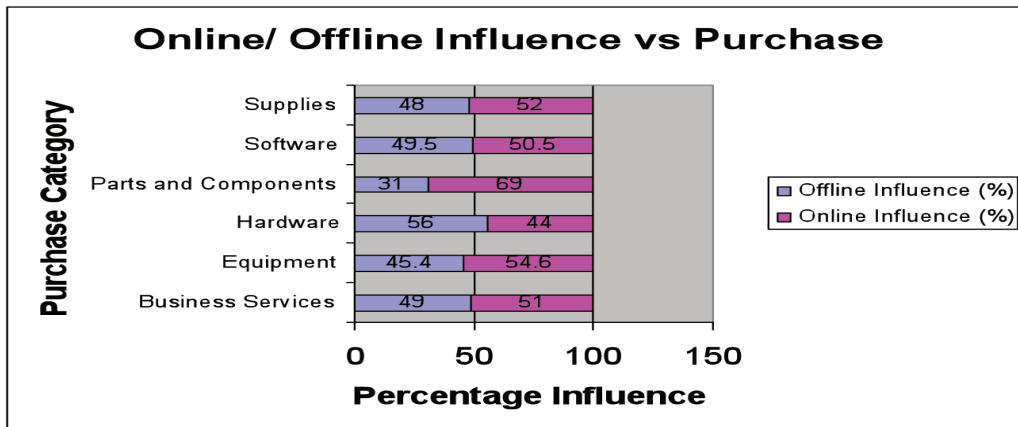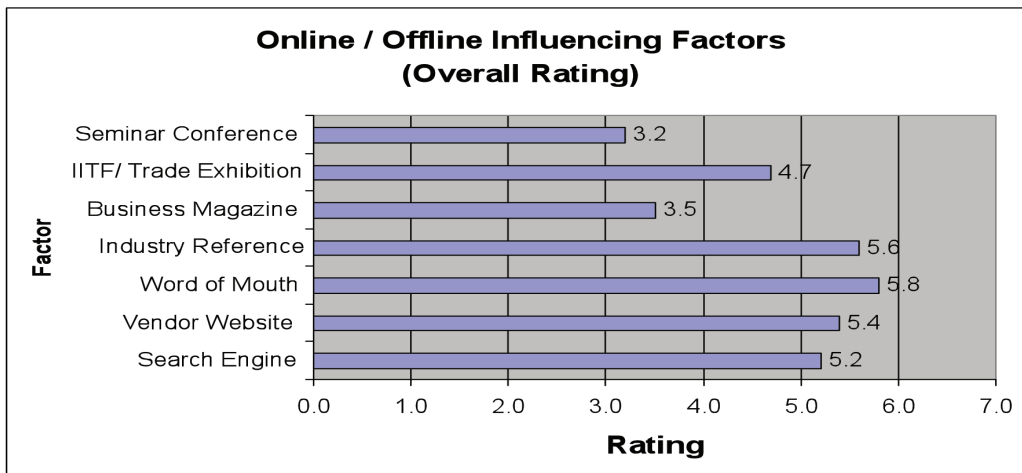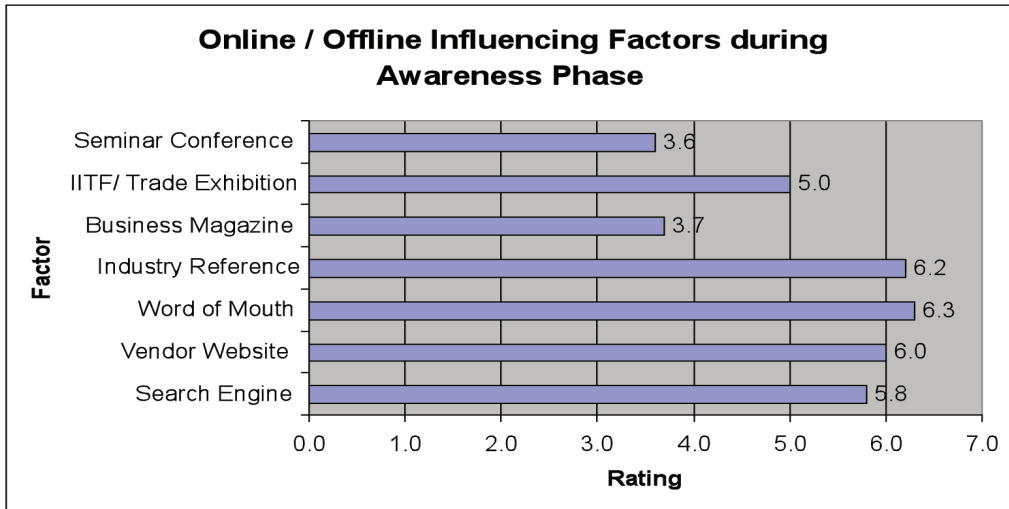
Word of Mouth and Industry Reference with the rating of 5.8 and 5.6, respectively, followed by Vendor website (5.4), Search Engine (5.2) and IITF/Trade Exhibition (4.7). The least influencing factors were Business Magazine and Seminar Conference, with 3.5 and 3.2 rating, respectively. In addition, the survey results also indicated that the major online start was done through search engines with 46.9% contribution, along with the Perceived Influence and the Benefits of Internet during Buying/Purchase Cycle as Ease of Use, Ease of Price and Product/Service Comparison, Ease of Information Access and Exchange, Reduction in Paper, Time and Monetary Costs. Therefore, managers can reduce cycle time and overall cost of the purchase/procurement process, either in terms of money, time, and in many other ways through the basic and advanced knowledge of internet use, benefits and the determinants, knowing the probable and the most effective variables and factors were to be simplified and reengineered.

Consequently, the results and conclusion of the current research paper on the online influence on the B2B purchases in India help the businesses to gain competitive edge in today's and futuristic marketplace.

## SUGGESTIONS FOR FUTURE RESEARCH

1. The study can be conducted outside India, in developed and developing countries.

2. The study can also include relevant factors such as dependability, safety of usage, maintenance, timely recall and trust, as one of the determinants for the B2B purchases.

3. The correlations between internet use and benefits can be surveyed.

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**APPENDIX**

**SURVEY QUESTIONNAIRE**

Question 1. Type of Product/Service category you and/or your organization are active in most cases.

    1. Business Services        2. Equipment        3. Hardware
    4. Parts and Components    5. Software        6. Supplies

Question 2. How the purchases are done?

    1.  Online through internet
    2.  Offline without internet
    3.  Both ways

Question 3. The value or purchase budget of product/service purchased by you.

    1. Up to 10 Lakh        2. 10 to 50 Lakh
    3. 50 to 200 Lakh      4. More than 200 Lakh

Question 4. Your Education.

    1. High School                2. Graduate
    3. Graduate with Professional Degree    4. Post Graduate
    5. Post Graduate with Professional Degree

Question 5. Which Buy/ Purchase phase you are currently working/active?

    1. Awareness           2. Research
    3. Negotiation         4. Purchase

Question 6. What is your role in the purchase process?

    1. User                  2. Analyst/Engineer
    3. Influencer          4. Purchaser/Decision Maker

Question 7. When does buying cycle begin before purchase?

    1. On the same day        2. 1-2 weeks before        3. Within 1 month
    4. Before 2-3 months      5. More than 3 months

Question 8. Specify which ever is applicable in most cases.

    1. Found vendor online and purchased online
    2. Found vendor online and purchased offline
    3. Found vendor offline and purchased online
    4. Found vendor offline and purchased offline

Question 9. In case you purchase budgets are predetermined, which mode influences you in most cases (either select offline or online influences in each budget category)

| Purchase Budget (Rs.) | Offline Influence | Online Influence |
|---|---|---|
| Up to 10 Lakh | | |
| 10 to 50 Lakh | | |
| 50 to 200 Lakh | | |
| More than 200 Lakh | | |

Question 10. In case you purchase categories are predetermined, which mode influences you in most cases (either select offline or online influences in each budget category)

| Category | Offline Influence | Online Influence |
|---|---|---|
| Business Services | | |
| Equipment | | |
| Hardware | | |
| Parts and Components | | |
| Software | | |
| Supplies | | |

Question 11. Kindly rate the purchase determinants of online and offline influencing factors on a scale of 1 (least influencing) to 7 (most influencing).

    1. Search Engine    1   2   3   4   5   6   7
    2. Vendor Website    1   2   3   4   5   6   7
    3. Word of Mouth    1   2   3   4   5   6   7
    4. Industry Reference    1   2   3   4   5   6   7
    5. Business Magazine    1   2   3   4   5   6   7
    6. IITF/Trade Exhibition    1   2   3   4   5   6   7
    7. Seminar/Conference    1   2   3   4   5   6   7

Question 12. Kindly rate the purchase determinants of online and offline influencing factors during awareness phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 13. Kindly rate the purchase determinants of online and offline influencing factors during research phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/ Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 14. Kindly rate the purchase determinants of online and offline influencing factors during negotiation phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 15. Kindly rate the purchase determinants of online and offline influencing factors during purchase phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 16. Would you go online during purchase process?

      1. Yes          2. No          3. Don't want to answer

Question 17. In case of online search, where do you start online?

      1. Search Engine          2. B2B search engine
      3. Vendor's website          4. Industry Specific website
      5. Other websites

Question 18. Any other information you would like to share regarding B2B purchases.

      _____
      _____
      _____
      _____
      _____

Thank you very much for your valuable responses and cooperation.

# Against All Odds: Factors Contributing to the Success of Students with Special Needs

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## ABSTRACT

In the Malaysian education system, students with special needs, such as the deaf, blind and those with learning difficulties, who follow the national curriculum are given the opportunity to sit for the Malaysian Standardized examinations at the end of Year 6, Form 3, and Form 5. The objective of this paper is to discuss factors contributing to the academic achievement of deaf and blind students based on the reports by their teachers, students and school administrators. More specifically, the paper highlights the psycho-social profiles of the students who excel in the examinations in terms of their motivations and the influence of their peers, parents, and teachers towards their performance, as reported by themselves and their teachers. This is a descriptive study which employed both the quantitative and qualitative approaches. Quantitative data were analysed to examine the special needs students' performance in their examinations and the administrators' perspectives on the factors relating to their performances. In general, most of the deaf and blind students scored grades E and D for the standardized exams. However, a small number did well in the standardized exams by obtaining As and Bs, indicating that they have the potentials to succeed academically. The factors which influence the achievements are internal factors (self-motivation, diligence and hard work, as well as possessing good memory) and external factors (peer influence, parental involvement, teacher encouragement, and school support).

Keywords: Specials needs students, academic achievement

## INTRODUCTION

In the Malaysian education system, students with special needs, such as the deaf, blind and those with learning difficulties, who follow the national curriculum, are given the opportunity to sit for the Malaysian Standardized examinations at the end of Year 6, Form 3, and Form 5. It is hoped that these students can be at par with the typical students and become productive members of the society. This is in line with the government's quest to achieve equality of educational opportunities. It is however not easy for these students to prepare themselves for the examinations and this is mainly due to their disabilities such as blindness and deafness. It is conceivable that their performance in these examinations is generally poor. Nonetheless, these students are allowed to pursue their studies in the secondary and upper secondary levels and sit for examinations at these levels even though they lack the basic skills crucial to perform well in these examinations. The challenges faced by their teachers are equally great. However, there are some students who have performed well in these examinations. Thus, an examination of the factors contributing to the success of these

students will shed some light on efforts which can be expanded by all those responsible for the education of students with special needs so as to help them to prepare well for these examinations. In an examination-oriented system such as ours, this is important as the students' future in terms of further education and jobs rely heavily on their examination performance.

In this paper, the focus is on the academic performance of the deaf and blind students. Vygotsky's theory of Cognitive Development (1978) was utilized as a basis of discussion. According to Omrod (2006), Vygotsky believed that adults in a society foster children's cognitive development in an intentional and systematic way. In more specific, adults continually engage children in meaningful and challenging activities and help them perform the activities successfully. Vygotsky (1978) also emphasized on the importance of society and culture in promoting cognitive growth. One of the major assumptions of this theory is that adults in every culture will pass down not only physical tools to help their children survive, but also cognitive tools such as strategies, maps, systems, and so on. These physical and cognitive tools will assist and enhance the development of children in the particular culture. Another important assumption is that children as adaptive individuals are able to accomplish more challenging tasks when they are assisted and guided by someone more advanced.

Studies have shown that there are several factors which contribute to the academic success of these students; these include parental involvement, teachers' and peer's influences, and the students themselves. The student factor can be seen as pivotal for as Vygotsky (cited in Daniels, 2001; Scheetz, 2001) had stated, the personal psychological process of the individual depends to a great extent upon the individual's exposure to social interactions which are shaped by the culture where the individual lives. Vygotsky went on to say that the social environment has been proven to be the foundation in concept attainment, thinking,

attitude, and the acquisition of skills. Therefore, the socio-cultural environment is the catalyst that forms the individual's awareness which later directs his or her attention to the stimuli.

Parents, teachers, and peer groups form the socio-cultural environment of the individuals. According to Vygotsky (cited in Daniels, 2001; Scheetz, 2001), the key to academic development is to be aware of the child's intellectual development and guide him or her to reach a more complex intellectual level. This aspect of Vygotsky's theory has been highlighted by several findings, particularly by the studies related to disabled children. Among other, Luckner and Muir (2001) and Luckner and Stewart (2003) found that deaf children had shown academic success when parents involved themselves in the children's learning. In addition, Ngeow (1999), Schargel and Smink (2001) stated that parental involvement is a major predictor of children's academic achievement in school. This is because parents provide a conducive learning environment, determine their children's ability levels with reasonable expectations and actively involve themselves in their children's learning in and out of schools (Stewart and Kluwin, 2001). Meanwhile, studies by Sandra (2000) and Miedel and Reynolds (2000) have proven that parental involvement imposes great effects on their children's academic success. They found that children performed better in their school tests, attend school regularly and complete their school works. Moreover, the children also showed positive behaviour and attitudes. Shargel and Smink (2001) also found that when parents involved themselves in their children's learning, they were more successful, achieved better grades, have good school attendance, consistently completed their school work, showed good behaviour and positive attitudes, with teachers' and parents' good expectations of them, and fewer instances of anti-social behaviour among the children. Similarly, a study by Antia, Jones, Reed and Kreimeyer (2009) on 197 deaf students also showed that parental

participation in school is significantly related to academic outcomes. In this study, the deaf children mentioned that their self-motivation was influenced much by their parents and families.

For optimum learning for the deaf and blind children, another important element in the socio-cultural environment is the support services. Teachers play a very significant role in helping these students realize their potentials. According to Cosby (1998), a true test for a healer is to heal people who need it most. Children could be altered by simple motivational factors like direct role models and forming emotional bonds with them. In other words, a teacher has to teach from the heart, and the children's biggest needs seem to be a teacher who cares about them and their individual needs. Therefore, the measure of a great teacher is working with the most raw, unrefined students and making a change. In support of Cosby's statement, Kritzer (2009) postulated that high quality mediation on deaf children could help improve Mathematical abilities, and teachers could make a big difference by encouraging these children to think and engaging them in cognitively challenging questions.

Peer support is another important influence to students' learning. There are three commonly cited benefits of peer influence on students' learning, namely, learning of academic skills, the development of social behaviours, and classroom discipline. Many young people with disabilities (deaf and blind particularly) have few friends and limited support from peers (Gottlieb and Leyser, 1981). In fact, they often report feelings of rejection and isolation. The impact of social isolation is far-reaching, affecting not only friendships, but also academic success (Hawken, Duran and Kelly, 1991). Benefits from positive relationships with others exist for everyone, including students with disabilities. Many types of relationships are important to development. One approach is to successfully integrate isolated students into academic environments so as to help create informal peer support groups and friendships. Peers can serve some of the same important functions which are generally associated with adult mentors. Peers can act as role models, offer friendship, advice and information, promote a sense of belonging, and empower one another (Byers-Lang and McCall, 1993; Kram and Isabella, 1985; Stainback, Stainback and Wilkinson, 1992). Moreover, students can discover their potential to participate in academic opportunities and careers by interacting with others with similar interests and concerns.

## OBJECTIVE

The objective of this paper is to discuss the factors which contribute to the academic achievement of deaf and blind students based on the reports by the teachers, students, and school administrators. In more specific, the paper highlights the psycho-social profiles of the students who have excelled in their examinations, in terms of their motivations and the influence of their peers, parents and teachers towards their performance, as reported by themselves and their teachers. In addition, insights from school administrators and teachers regarding ways to help students with special needs prepare for the examinations are also highlighted.

## METHODOLOGY

This is a descriptive study which employs both the quantitative and qualitative approaches. The quantitative data were analysed to examine the special needs students' performance in the examinations and administrators' perspectives on factors relating to students' performance. Special needs students are those with specific learning needs. In this study, they include students who are blind and deaf. Retrospective qualitative data were analysed from the interviews with the teachers of the students who did well in the examinations as well as with the students themselves. The teachers of these students were asked to recall their experiences with them while they were preparing for the respective examinations. Likewise, students were also asked to highlight the factors which contribute to their success in the examinations.

In this study, excellent students refer to the blind and deaf students who have scored at least 1A in the standardized examinations (UPSR/PMR/SPM). Fifty teachers and 35 excellent students were interviewed from two types of schools, the Special Education School (SKPK and SMPK) and the normal schools with special classes (Integrated) (Table 1).

The teachers were interviewed using the focused group interview technique, while the students were interviewed individually, guided by open-ended questions. These interviews were done to obtain information from various sources and to ensure validity through triangulation. Triangulation is one of the strategies to enhance internal validity by using multiple investigators, multiple sources of data or combining multiple methods to strengthen and confirm the findings (Merriam, 1998). In this study, source triangulation was applied. The data collected and generated from students were confirmed and verified with other source, involving teachers.

Schools involved in the study were Special Schools and Integrated Schools where students with special needs are integrated with students in the main stream. Students who were interviewed obtained at least one A in the respective examinations. The quantitative data were analysed using SPSS to compute descriptive statistics, including means and standard deviations. The qualitative data were analysed using NVivo software. The interviews were first transcribed and converted into RTF files. The files were then used as the source data for NVivo. This software helps manage and organize themes which were formed from the excerpts of the interview data. Using open coding, the themes were categorized accordingly.

## FINDINGS

### Achievement of Students with Special Needs in Examinations

The findings of this study show that the overall mean score for every subject in the UPSR (Primary School Assessment Test) taken at grade six between the years 2000 and 2005 was between Grade E (1) and Grade D (2). This is very low considering there are five grades altogether ranging from Grade A (5) to Grade E (1). This pattern also indicates that the blind and deaf students have problems in all the subjects. Science seems to be the most difficult subject to score for them with the mean scores falling between 1.31 and 1.85. This means that in the overall, the students can barely score D for the subject. The same is also true for their performance in the examinations taken in the secondary level. Majority of these students obtained Es for each subject taken in the Lower Secondary School Assessment (PMR) and the Malaysian Certificate of Education (SPM). However, there were some students who did well in these examinations and obtained As and Bs for some of the papers they sat for. Although the number is small, it indicates that students with special needs have the potential to succeed academically when given the support and care they need.

TABLE 1
The number of the teachers and students interviewed according to their schools

| | Number of teachers and students interviewed | | | | | |
|---|---|---|---|---|---|---|
| | Primary (UPSR) | | Total | Secondary (PMR & SPM) | | Total |
| | SKPK | Integrated | | SMPK | Integrated | |
| Teachers interviewed | 12 | 19 | 31 | 6 | 13 | 50 |
| Students interviewed | - | - | - | 15 | 20 | 35 |

*Psychosocial Profile of the Students who Excel in the Examinations*

This study utilized the interview method to gather information on the psychosocial profile and the characteristics of the students who excelled. The psychosocial profile refers to the internal and surrounding external characteristics of these students, to which their success can be attributed. The characteristics were compiled from the interviews conducted with the teachers and the students themselves. The findings show that there are several internal and external factors influencing their learning and achievement. All the factors individually and collectively influence the motivation and effort of the students to learn and excel in their studies.

*Theme 1: Internal Factors*

**Self-motivation**

Students with special needs who excelled in the examinations were able to self-motivate themselves towards achieving their academic goals. This was clearly stated by R1, who said;

> *"If there's effort, you can succeed. I try to motivate (myself), work harder".* (R1 Form 4 is a visually impaired student from the integrated school)

Another respondent, R16 (Form 4 is a visually impaired student from the integrated school) had her own strategies for self-motivation;

> *"I like to write, sometimes I wrote letters to myself, and then I read them back to motivate myself. At home, I keep a lot of motivational posters".* (R16)

In addition, they are also aware of the importance of education for their future and continuously use this to tell themselves to work harder;

> *"I normally (when I learn) think of what I want to become in the future.*

> *Are there (for people with disability) job opportunities? So I have to study harder to get a better job. Put more effort. God willing, (I have) a better future if I put more effort…"* (R12 Form 6 is a visually impaired student from the integrated school).

Another respondent, R11 (a Form 1 learning disabled student from the integrated school) also admitted that thinking about the future helped motivate himself. He wants "bright future and a not difficult life", and because of that he was "enthusiastic and hardworking" in his studies. Some respondents used the success of others, especially family members to increase their motivation. For example, R15 (a Form 4 visually impaired student from the integrated school) said that;

> *"One more thing….all my brothers are in the university. I'm the only daughter. If I don't make it to the university, I will really feel ashamed of myself. If people see the only daughter does not succeed (in going to the university), I feel like (I am) no use. I want to be like them (the brothers). My eldest brother has gone overseas. My father also used to say that if I want people (to look up to) for motivation, I don't have to search far, I have my own brothers."* (R15)

**Hardworking and diligent**

Many of the teachers interviewed said that the excellent students possess a high level of diligence and perseverance. According to T1;

> *"…..He is very disciplined in studying……although he doesn't know, (he answer sheet was torn away from the exercise book), he will do himself. Then he will check his answers. If he is not satisfied, he will ask, why is his answer like this…and not like this?"* (T1)

The teachers interviewed used the expressions such as, "put all his effort", "wants to really understand", "can apply", "very hardworking" and "very obedient" to describe the students. The excellent students were also perceived as;

> "always want (to know) more...I teach them in like 80%...but their effort is more than 100%." (T12)

These positive attributes were also highlighted by the other teachers. Among other, T5 said that;

> "She puts a lot of effort and works hard. That's important. She'll never give up. She'll always want additional information. What is taught in the class is never sufficient for her. She wants more. More than other students." (T5)

T5 also added in two terms "*active and proactive*" in describing the excellent students.

### Strong memory

Among the special characteristic of the excellent students, especially those who are visually impaired was having "strong memory". These teachers repeatedly highlighted the attributes among the students, which apparently helped them relate and transfer previous knowledge to new situations. The teachers mentioned the ability to "get very quickly (what was taught)" and "can apply". According to T12;

> "...can remember...what was thought in March (months before), they can still remember. Their memory is strong". (T12)

*Theme 2: External Factors*

### Peer influence and help

The respondents also said that friends greatly influenced their achievement in the examinations.

According to R1 (a Form 4, visually impaired student from the integrated school);

> "I like to study with friends. Because they have (knowledge) that we don't know, we can ask and share experience." (R1)

Studying with friends apparently created a healthy competition among the students to excel in their academic tasks. This was found to be a strong motivator for the students in their learning. According to R13 (a Form 6 visually impaired student from the integrated school);

> "I compete a lot with my friends. If my friends score high, I normally will try to get the same. My friends gave me a lot of encouragement". (R13)

### Family encouragement and support

Many teachers and students interviewed mentioned "*supportive family*" as one of the most important factors influencing their academic achievements. For instance, R15 (a visually impaired Form 4 student from the integrated school) elaborated on how his family had helped him;

> "When I come back (from the hostel) father prepared timetable for me.... asked me to learn in the morning. He said to study hard...so that I can get a good job. Mama is also like him....like to tell stories of how it was when she was poor. My brother...he likes to challenge me ... if I get (what he challenged me), he gives me (a present)". (R15)

Families were also reported to have given continuous encouragement to avoid them from giving up. R16 (a visually impaired Form 4 student from the integrated school) elaborated on how his father had motivated him;

*"I am close to my dad; I have a younger brother who is blind. Dad says study hard be a teacher to students like me..." (R16)*

The teachers cited the same thing, including parents communicating and working with the school "no matter what time it is". Parents of excellent students also "teach and guide them at home", "do exercises with them' and "shower them with love". The parents also give reinforcements to the students when they manage to achieve something. For example, T10 (UPSR teacher for the blind, integrated school) observed that;

*"Their parents are highly committed and work well with teachers…" (T10)*

Two teachers (T12 and T11, UPSR teachers for the deaf) reported that the parents of one of their excellent students hired tutors for their child during the weekends, and the mother of this child would do exercises meant for her child first and checked her answers with the teachers so that she could understand the concepts properly to be able to help her child with her home work.

**Teacher encouragement and support**

Among the influential surrounding factors which have contributed to the success of these students are the teachers' encouragement and support. The students reported that their teachers have always told them to;

*"not stop learning. Must prove ...must move forward" (R4, a Form 1, visually impaired student from integration school).*

This is supported by R12 (a visually impaired Form 6 student from the integrated school) who said that;

*"Teachers help me by giving me tuition classes and (exercises with) past years questions".*

Overall, many of the respondents who had been interviewed attributed their success to helpful and supportive teachers. Furthermore, the teachers also reported that they had gone the extra mile to help their students prepare well for the examinations. Giving extra classes, having drills in answering past examination questions, teaching them using various approaches, giving continuous motivations, and monitoring their progress carefully were some of their efforts to help their students do well in the examinations. In addition, the teachers are also sensitive to the fact that their students need to work extra hard and the stress that they are facing. Humour and fun were often imbued in their teaching to encourage students who are tired or bored. Commenting on one of their excellent students, T1 (UPSR teacher for the deaf, Special Elementary School) said that;

*"we know her too well, just like our own child, she is too focused and does not know how to have fun, when we put some humour to our teaching she seems surprised and responded well….." (T1)*

**Other factors**

The teachers and the administrators from the special and integrated schools also suggested some crucial factors to increase the achievement of students with special needs in the examinations. Among them are the quality of teachers' skills, workshops and programmes for the students to increase their motivation and learning skills, improvement of the infrastructure, and strengthening teaching and learning efforts. The teachers added that the awareness and sensitivity of the school administration of the special needs of the students contributed significantly towards the success of these students. This is because the

school administrators will be more focused to the special programmes conducted in the school and become actively involved in the planning, monitoring, and evaluating the progress of the programmes. As financial constraint could be a limiting factor for the programmes and the students themselves, the school administrators play a great role in ensuring that a substantial amount of fund is allocated for the programmes and the students.

## DISCUSSION AND CONCLUSIONS

In general, most of the deaf and blind students scored grades E and D for the standardized exams. However, a small number did well in the standardized exams by obtaining As and Bs, and this indicates that they have potentials to succeed academically. The factors influencing their achievement include internal factors (self-motivation, diligence and hard work as well as possessing good memory) and external factors (peer influence, parental involvement, teacher encouragement, and school support).

As compared with typical students, the students with special needs who have excelled in their studies show that they have characteristics which can lead to academic excellence. Nevertheless, they need more support from the significant others to succeed. If the significant people around them (family, friends, teachers, and school administrators) give them good support, these students can actually perform well despite all their limitations. As this study has found out, the deaf and blind students perform well when they compete with other students. In fact, they become self-driven towards achievement and strive to achieve the goal they have set. Therefore, parents, teachers, and school administrators should support them by giving corresponding encouragement. This view is supported by the studies such as Miedel and Reynolds (2000) who have concluded that parental involvement has a positive effect on special needs students' success in school, and the Strathclyde Research Centre regarding teachers' roles in helping these students achieve their potentials.

Meanwhile, climate of the school and classrooms must be conducive enough to offer productive and enjoyable learning, along with extra efforts at teaching these students, go a long way in helping more deaf and blind students to succeed academically. These students need their schools to help their parents to be more involved in their education and ensure a conducive environment for their learning. They need the relevant authorities to be more sensitive to their needs in terms of the format of the examination questions as well as the implementation of the examinations. This is important as these students should not face problems which are not due to their cognitive handicap during the examinations, but rather to their physical handicap. They also need teachers who are well-trained to understand their needs and act accordingly.

This study has shown that Vygotsky's Cognitive Development Theory is also applicable to children with physical disabilities. The role of supportive adults, as well as the cognitive and non-physical tools provided by the culture (such as Braille writing and sign language) have been proven to help these children achieve their maximum potentials.

It is therefore crucial that all those responsible for the education of students with special needs, namely the parents, teachers, schools, and the Ministry of Education, recognize the fact that although these students are mentally retarded and have multiple handicaps, they have the potentials to succeed academically. Hence, teaching them to excel academically is not a 'lost cause', provided that contributory factors discussed above are creatively enhanced.

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# Consumption of Local News in Television and Newspapers and National Pride among Malaysian Youth

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## ABSTRACT

Drawing from the development journalism theoretical perspective, consumption of local news is posited to correlate with national pride. However, empirical evidence on the theoretical relationship between local news consumption and national pride among youth in Malaysia is lacking. Hence, a survey was undertaken to determine the relationships of exposure and attention to local news in television and newspapers with national pride and whether the relationships vary by ethnicity. A total of 625 Malay, 416 Chinese, and 112 Indian youths voluntarily participated in the survey. Controlling age, gender and self-identification, the results of multiple regression analysis showed that exposure and attention to local television news significantly predicted national pride, and the relationships were shown to be true for all the three major ethnic samples but these varied in strength. Exposure and attention to local news in the newspapers was a significant predictor of national pride only for the Chinese sample. Implications of the findings were also discussed.

**Keywords: News media, news consumption, national pride, youth, Malaysia**

## INTRODUCTION

According to Cohen (2008), much has been studied about the influence of mass media on various social outcomes, such as social capital, political participation, civic engagement, and nationalism. However, there exists an important gap in the literature on the relationships of exposure and attention to news of public and national affairs with national pride, and whether the relationships vary as a function of ethnicity. In the pages that follow, the paper describes the rationale and the relevant literature, and reports the method and results of a survey designed to determine whether exposure and attention to local news in television and newspaper are related to national pride among 15 to 25 year old Malay, Chinese, and Indian youths in Malaysia, and whether the relationships vary by ethnicity.

## NATIONAL PRIDE

The sense of pride of being a Malaysian and towards the nation, an important social outcome, serves a number of different purposes. Mobilization of the population, promotion of solidarity and integration (Henderson and McEwen, 2005), and enhancement of collective self-esteem of the nation (Muller-Peters, 1998) are among them. Identification with the nation and national identity, if it is to be meaningful, has to be accompanied not only by a shared understanding of what that nation presents but also the feeling of pride with the positive

characters of the country (Cohen, 2008). According to Muller-Peters (1998), national pride refers to the emotions toward the national collective, emotions which vary with societal and individual processes. Smith and Jarkko (1998) describe national pride as the positive feelings citizens have towards their country, which are derived from one's sense of national identity. They further argue that national pride involves both the feeling that one has some kind of share in an achievement or an admirable quality.

In discussing the domain of the concept national pride, Muller-Peters (1998) argues that pride in one's nation can be seen in general or overall terms (e.g. I am proud of my nation) and with specific contents (e.g., I am proud of our history), and points out that national pride can express itself; first, in terms of cultural-historical pride, and second, in terms of economic-political pride. In the current study, national pride is used to designate the positive affective bond to national characters, symbols, and achievement.

## DEVELOPMENT JOURNALISM THEORY OF NEWS MEDIA ROLE

Development journalism has been advocated and practiced in Asian countries including Malaysia, where nation building remains a priority (Ramano, 2005; Xu, 2008). Within a nation-building approach perspective, the core idea of development journalism theory is that journalists and the news media, as agents of change, are news-information disseminators and interpreters, advocating and supporting national development policies and programmes, and portraying a positive image of the country (Ramano, 2005). In line with this premise, dissemination and interpretation of positive national news should instil national pride. This pride is derived from a sense of national identity, senses of confidence and self-efficacy, and fortified collective self-esteem as a result of news consumption (Shah, McLeod and Yoon, 2001). It is reasonable to expect national news media to continuously engage in reproduction and reinforcement of national narratives that promote and enhance national pride (Guo, Cheong and Chen, 2007).

Given the important development role played by the news media, the issue of media use and effects has been extensively studied. Past studies on mass media effects, mostly in the west, have demonstrated positive as well as negative effects of mass media use on many social outcomes. While the past studies have contributed significantly in understanding the role of the mass media, many (e.g. McLeod, Kosicki and McLeod, 2002) have commented that the mixed findings of the mass media effect studies could be attributed by the fact that different types of media form and content produce different effects. Hence, there is a consensus in the literature arguing for the need to be specific in the type of media and the type of information in the studies on media use and effects (McLeod, 2000).

News use has been found to correlate with a number of social outcomes, such as social capital (e.g. Beaudoin and Thorson, 2006; Fleming, Thorson and Peng, 2005), political participation (e.g. Zhang and Chia, 2006), civic engagement (e.g. Brehm and Rahn, 1977), nationalism (e.g. Guo, Cheong and Chen, 2007), and national pride (Cohen, 2008), to mention a few. Overall, the line of literature in general suggests that people who have high level of newspaper readership and television news viewing have higher levels of social capital, political participation, civic engagement, and social trust.

Of particular interest in the present study is the relationship between national news media consumption and national pride. The study extends the assumption of the positive role of news media in helping spread nationalism, solidify and strengthen national identity and patriotism (e.g. Anderson, 1983; Guo, Cheong and Chen, 2007) to national pride. Studies that specifically examined the relationship of news media use and national pride are scanty, with the exception of Cohen's (2008) study which found that local television viewing is associated with national pride, but the relationship is rather small.

Past studies on mass media effects have also factored in the role of ethnicity in examining the relationship between media use and effects. Beaudoin and Thorson (2006), for instance, found significant differences between Blacks and Whites in terms of media use and its effects on social capital. The explanation for the different media responses and effects has been tied to distinctiveness theory, which posits that media effects are stronger for the minority because ethnicity is expected to be more salient to people of a minority than to those of majority. In addition, bias in media portrayal of ethnic groups could also lead to different media responses and effects, as suggested in the literature (e.g. Appiah, 2001; Beaudoin and Thorson, 2006). Thus, an examination on the relationship between news media use and national pride should also consider the role of ethnicity in the relationship.

### RESEARCH CONTEXT

Malaysia, a multi-ethnic and multi-religion country, and its media system offer an interesting place to test the relationship between the local news consumption and national pride and to determine whether the relationship varies by ethnicity. While there are many ethnic groups, the three main groups are the Malays, Chinese, and Indians. The mainstream news media are readily accessible to the people. Television and newspapers are major sources of news and information for the people (Media Planning Guide Malaysia, 2007). While news media accessibility is high, the news media are highly regulated and controlled by the government. In view of the developmental role of the news media and as part of the nation building agenda, editors and journalists are expected to advocate the objective of building a Malaysian society that is characterized with strong attachment and pride to the country by informing and reinforcing positive national narratives and symbols. The national narratives of national interest in the mainstream news media are a good instrument to cultivate collective consciousness and sense of pride being Malaysians (Tamam *et al.*, 2005).

A review of past studies on the role of the mass media in Malaysia, Hassan (2008) noted that the news media carry a lot of messages on unity and integration, as well as messages that promote nationalism. While there are studies that have found a positive relationship between news media use and a number of social outcomes such as multiculturalism attitude (e.g. Tamam *et al.*, 2008), studies that specifically examined the contribution of exposure and attention to local news in television and newspaper on national pride have been overlooked. Based on the above discussion, the present study tested the hypothesized relationships of exposure and attention to news of public and national affairs in television and newspapers and national pride, and to determine if the relationships vary by ethnicity. The analysis focused on the 15-25 years youth since they made up a substantial and important segment of the Malaysian population, i.e. 28.6 percent of the population (Media Planning Guide, 2007). The findings of the present study will not only contribute to the literature on the linkages of news consumption with national pride but also provide insights into the efficacy of the news media in enhancing national pride among the youths in Malaysia.

### METHODS

*Sample*

The sample was composed of 625 Malays, 416 Chinese, and 112 Indians youths. The mean age was 19.5 year (SD = 2.83). Overall, the sample seemed representative in terms of ethnic ratio in the country, with males and females quite evenly represented. The sample also represented youths from all four regions in the Peninsula Malaysia — 23.5% was from the northern, 33.6% from the central, 21.0% from the southern, and 21.9% from eastern region.

*Procedure*

The data analyzed were part of a larger data set from the youth attitude and media use survey conducted between October 2007 and January 2008. A section of the youth attitude and

media used survey questionnaire containing questions pertaining to national pride. The self-administered questionnaires, written in Bahasa Malaysia, were administered on individual or group basis and in different social settings—residential areas, schools, and universities/colleges. The secondary school and college/university respondents were recruited from randomly selected schools and institutions of higher learning after approval from the relevant authorities was obtained. With a written permission from the State Education Department of the selected study area, the researcher contacted the randomly selected secondary schools to conduct the survey. For this group of respondents, the questionnaires were administered in group, ranging from 15 to 30 students per group and their participation was on voluntary basis. For the university student samples, two science-based and one Social Science/Humanities faculties were randomly selected from one private and three public universities. The questionnaires were administered during classes with the consent of the instructors of the selected courses. In addition to this, a substantial portion of the survey sample was recruited from residential area. They were invited to, or found at socially acceptable gatherings. Their participation was also on voluntary basis, and the questionnaire was administered on individual basis. The respondents were given ample time to fill in the questionnaire and encouraged to ask if they had any questions for clarification. The time taken to fill the questionnaire ranged from 20 to 40 minutes. The secondary school students took a longer time to fill the questionnaire compared to university/college students and working youth. All the respondents worked on the questionnaire independently after they had been given instruction on how to fill the questionnaire.

*Measures*

A measure of national pride consisted of twelve 5-point Likert items. The respondents were asked to indicate how strongly agreed/disagreed they were with the items. The scale essentially measured the strength of pride in socio-political achievement and pride in culture and history. Some examples of the items are "I am proud to be referred as a Malaysian," "I am proud of the country which is made up of various race and ethnic groups," "I am proud of the cooperative spirit achieved among the various ethnic groups," "I feel proud when the national anthem is played at official functions," "I fully accept Vision 2020," "I am proud of the national cultural policy aimed at fostering national identity," "power sharing among the various ethnic groups is a core national attribute that has ensured political stability in the country." All the items loaded on one factor. The Eigen value of the scale was 6.14 and the variance explained by the factor was found to be 51.36. Thus, the scale was reliable with a reliability coefficient of .91.

The respondents were asked to respond to four-category items by estimating how frequently they watched national and public affairs news in the following three television programmes, namely news programme (0= none, 1= less than 30 minutes; 2= 31-60 minutes, 3= more than 60 minutes a day), televised leader speeches (0= "never" to 3= "regularly"), and news magazine-format programme (0= none, 1= less than 30 minutes; 2= 31-60 minutes, 3= more than 60 minutes a day). For each exposure question above, the respondents were also asked to indicate how much attention they paid to the news on a four-point scale (0= no attention at all, 1= little attention, 2= some attention, 3= much attention, 4= very much attention). The exposure score was multiplied to the attention score to create an index of exposure and the attention to news of public and national affairs. The overall mean scores provide the overall measure of exposure and attention to the local television news. Likewise, the respondents were asked to self-report how much time they spent reading newspapers for national and public affairs news (0= none, 1= less than 30 minutes; 2= 31-60 minutes, 3= more than 60 minutes a day) and how much attention they paid (0= no attention at all, 1= little attention, 2= some attention, 3= much attention, 4= very much attention). It is important to note that a higher composite score

indicates higher exposure and attention to news of national and public affairs in the newspaper.

The respondents were asked to report their gender, year of birth, and how they would like to identify themselves with the response options of Malay, Chinese, Indian, Malaysian Malay, Malaysian Chinese, Malaysian Indian, or Malaysian.

*Analysis Strategies*

Data analysis for this study proceeded in three steps. First, the data exploratory analysis was performed to check for data entry error and normality in distribution. A factor analysis and reliability test was performed on the national pride scale constructed for the study. Second, a Pearson correlation analysis was conducted to examine the zero-order correlations between age, gender, self-identification, exposure and attention to public and national affairs news, and national pride. Finally, hierarchical regression analyses were performed to examine the relationship and contribution of the news media exposure and

attention in predicting national. The regression analysis was done in two steps. In the first step, the independent variables were age, gender, and self-identification. In the second step, exposure and attention to television and newspaper news were added to the regression analysis. The data were disaggregated by ethnicity.

## RESULTS

To better understand the findings, the descriptive statistics for gender, age, self-identification, national pride, and news exposure and attention variables were produced, as presented in Table 1. In terms of gender distribution, the Malay sample was quite balanced in the proportion of males (52.1%) to females (47.9%). However, there were slightly more females (59.5%) in the Chinese sample, and more males (59.5%) in the Indian sample. Meanwhile, the proportions of the males and females in the three groups were adequate for comparative analysis. In terms of age, the Malay, Chinese and Indian samples were comparable. Interestingly, more of the Malay

TABLE 1
Descriptive statistics of gender, age, self-identification, exposure and attention to news
of public and national affairs and national pride

| Variables | Malay (n=625) | Chinese (n=416) | Indian (n=112) |
|---|---|---|---|
| Gender | | | |
| Male | 52.1% | 40.5% | 59.5% |
| Female | 47.9% | 59.5% | 40.5% |
| Mean age (year) | 19.3 (2.90) | 19.7 (2.64) | 20.1 (2.84) |
| Self-identification | | | |
| Malay | 54.0% | - | - |
| Chinese | - | 58.0% | - |
| Indian | - | - | 35.1% |
| Malaysian Malay | 32.7% | - | - |
| Malaysian Chinese | - | 33.7% | - |
| Malaysian Indian | - | - | 48.1% |
| Malaysian | 13.0% | 7.9% | 14.5% |
| Mean national pride score | 4.31a (.537) | 3.78b (.639) | 4.16c (.767) |
| Mean news exposure and attention score | | | |
| TV | 4.27a (2.123) | 1.73b (1.496) | 3.89c (2.570) |
| Newspaper | 3.47a (2.906) | 2.84b (2.434) | 3.75a,c (3.319) |

*Note*: Different subscripted means are significantly different at $\rho < .01$

and Chinese respondents were found to identify themselves in term of ethnicity first, i.e. 54.0% and 58.0% respectively. Only 35.1% of the Indians identified themselves in term of ethnicity first. The number of the respondents identifying themselves as Malaysians was rather small, less than 15.0%.

The mean scores on the national pride were on the high side of a maximum score of 5, suggesting that the respondents generally are proud of the country and of being a Malaysian. The Malay sample scored significantly higher (M= 4.31) than that of the Indian and Chinese samples (M= 4.16 and M= 3.78, respectively), [F= 519.5, $\rho$ < .01].

With regard to exposure and attention to public and national affairs, news in television and newspaper, it seems that exposure and attention to local news were on the low side of the range of possible scores. All the means were below the theoretical mid score, suggesting low exposure and attention to local news. While exposure and attention to the local news were rather low, the Malay sample had a significantly higher mean (M= 4.27) as compared to that of the Indian (M= 3.89) and Chinese (M= 1.73) samples [F= 239.4, $\rho$ < .01]. A similar pattern of the results was observed for the newspaper reading [F= 9.31, $\rho$ < .01].

The results of the zero-order correlations are presented in Table 2. Age is positively correlated with exposure and attention to news of public and national affairs in the television (r= .147, $\rho$ < .01) and newspapers (r= .253, $\rho$ < .01), indicating that news consumption increases with age. The data also showed that exposure and attention to television news are positively correlated with newspaper use (r= .458, $\rho$ < .01). Meanwhile, self-identification (identify self in terms of ethnicity first) is negatively correlated with television news consumption (r= -.130, $\rho$ < .01) and national pride (r= -.113, $\rho$ < .01), but not with newspapers news consumption. Age, however, is not correlated with national pride. The findings indicate that age, self-identification, and gender need to be controlled for a possible confounding influence in examining the relationships and contribution of news media exposure and attention on national pride.

The analysis in this study focused on the relationships and contribution of exposure and attention to news of public and national affairs in television and newspaper on national pride. The regression analysis was done separately for the three samples and the results are summarized in Table 3. Taking into account the possible confounding influence of age, gender, and self-

TABLE 2
Zero-order correlations of gender, age, self-identification, exposure and attention to local news and national pride

|  | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|
| (1) Gender (Dummy=male) | -.087* | -.109* | .039 | -.016 | .034 |
| (2) Age | - | .016 | .147* | .253* | .007 |
| (3) Self-identification (dummy= ethnicity first) |  | - | -.130* | -.056 | -.113* |
| (4) Exposure and attention to public and national affairs news in television |  |  | - | .485* | .492* |
| (5) Exposure and attention to public and national affairs news in newspaper |  |  |  | - | .179* |
| (6) National pride |  |  |  |  | - |

*Note*: One-tailed test of significant, * $\rho$ < .01

TABLE 3
Exposure and attention to local news in television and newspaper as predictors of
national pride

|  | Malay (n=625) | Chinese (n=416) | Indian (n=112) |
| --- | --- | --- | --- |
| Variables | Std. Beta | Std. Beta | Std. Beta |
| Step 1. Demographic and control variable |  |  |  |
| Gender (1=male) | .163* | .135* | .009 |
| Age | -.123* | -.175* | .225* |
| Self-identification (1=ethnicity) | -.206* | -.223* | -.328* |
| R-square | .082* | .100* | .166* |
| F value | 13.778* | 11.329* | 5.323* |
| Step 2. Exposure and attention to local news |  |  |  |
| Television news | .243* | .135* | .295* |
| Newspaper | .018 | .161* | .086 |
| R-Square | .139* | .157* | .258* |
| F value | 16.669* | 12.644 | 6.075* |
| R-Square change | .057 | .057 | .092 |

*Note*:  * ρ < .01

identification, the results in the Table 3 clearly show that exposure and attention to television news correlate positively and significantly with national pride, at ρ < .01. The relationships hold true in all the three samples, and the relationships seems to be stronger in the Indian (β= .295, ρ < .01) and Malay (β= .243, ρ < .01) samples than that of the Chinese (β= .135, ρ < .01). However, no significant correlation was observed between exposure and attention to news of public and national affairs in the newspaper with national pride for the Malay and Indian samples, except for the Chinese sample (β= .161, ρ < .01). Overall, the findings show that exposure and attention to television news are the only significant predictors of national pride. Exposure and attention to news of public and national affairs in television and newspapers collectively explained about 5.7 % of the variance in both the Malay sample and the Chinese sample. The variance accounted by these two factors is slightly higher (about 9.2%) for the Indian sample.

Interestingly, the results of the regression analysis also show that self-identification is significantly negatively correlate with national pride for all the three samples (β= -.206, ρ < .01 for the Malay, β= -.223, ρ < .01 for the Chinese; β= -.328, ρ < .01 for the Indian). The results imply that the Malay, Chinese and Indian respondents, who identify more in nationality term, seem to have higher pride toward the nation and of being Malaysians as compared to those who identify self more in ethnicity term.

## DISCUSSION AND CONCLUSIONS

While generalizing the descriptive findings to a larger youth population must be done cautiously, the present analysis seems to suggest that youths in the country, aged between 15-25 years, have favourable attitude and feelings towards the country and being Malaysians. Despite of this positive note, it seems that local news consumption among the youth is a bit low. The reason for this is not clear. A lack of interest, low

news information need, and a poor perception of media credibility are possible explanations. Although this study has overlooked questions on antecedents of news media use, it found that older youths seek and consume more local news than the younger ones. This finding is compatible with the findings of a past study (e.g. Zhang and Chia, 2006). Another issue worth pondering is more Malaysian youths asserting themselves more in ethnicity than nationality. The finding, suggesting that ethnicity is an important and core element of social identity among the respondents, is consistent with that of Liu, Lawrence and Ward (2005) who found that ethnicity is an important attribute of social identity among Malaysians. It is important to highlight that this ethnicity emphasis could pose problem in managing interethnic relation issues in the country.

The present study was designed to determine whether exposure and attention to local news in television and newspaper correlate with national pride among 15-25 year youths. At the same time, ethnicity is factored in examining the connection of news consumption with national pride. The contention is the mainstream news media, which are regulated by the government and being an agent of development and nation building, provide narratives that should enhance shared understanding of what that nation presents and feeling of pride with the positive characters of the country and being a Malaysian. The study found mixed supports for the contention. Only television was found positively and significantly correlated with national pride for all the three ethnic groups studied. The positive association between television news consumption and national pride implies that television news to some extent have an impact on the youths in instilling national pride among the youth, despite the relatively low consumption of television news among them. In addition, the association between television news consumption and national pride was much weaker for the Chinese than for the Malay and Indian samples. This indicates that the impact of television news consumption in instilling national pride is relatively greater on the Malay and Indian samples than on the Chinese. The finding is compatible with previous research that has demonstrated that media responses and effects vary by ethnicity (e.g. Beaudoin and Thorson, 2005).

While television news seems to have a role in instilling national pride among youths, the same cannot be assumed for newspaper. Contrary to the contention, exposure and attention to news in the newspaper were found to have no association with national pride for the Malays and the Indians. If this is the case, it then implies that the mainstream newspaper in the country has failed in its role in instilling national pride among the youths. However, a significant finding was observed for the Chinese sample only. It is important to consider explanations for the mixed findings. A possible explanation could be the differential in perception of newspaper credibility. Meanwhile, low involvement, an attribute of newspaper consumption, could be another explanation for the non-existing relationship between newspaper reading and national pride. It makes sense that television news consumption has a greater impact than the newspaper consumption because television viewing is a high involvement information processing activity as compared to that of newspaper reading (Cohen, 2008).

The findings generally show that exposure and attention to news of public and national affairs in television and newspaper contributed about 5.7%, 5.7%, and 9.2% in the variance in national pride for the Malay, Chinese and Indian samples, respectively, with television news as a significant determinant. Despite the small contribution, the news media (particularly the television) should be strategically used in citizenship education. It is also important to take note that the news media effect vary by ethnicity, and therefore it should be considered in employing the news media as an agent of nation building.

Nonetheless, several limitations need to be acknowledged. First, the measurement of national pride may be inadequate if it is viewed

as a multidimensional construct. Moreover, the measure may have not adequately captured the theoretical domain of the construct of national pride. Second, a self-report measure of exposure and attention to news in news media is not the best method to measure news consumption. In addition, the study has not ascertained which news types and narratives are actually consumed and contribute to national pride. Thus, the study should be replicated to adult samples to improve generalizability of the findings. In addition to improve measurements, future research should also extend the study of how news media effects on national pride and other social outcomes may differ according to ethnicity.

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# Strengthening Muslim Family Institution: A Management Perspective

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## ABSTRACT

Today, the Muslim society is embroiled with many problems and there are reasons for this. It is the view of many Muslim scholars that presently the Muslim family institution is not as strong as it is supposed to be. The objective of the present research was to apply Quality Function Deployment (QFD) and Analytic Hierarchy Process (AHP) to strengthen Muslim family institution. According to the QFD framework, two types of information are required, namely the 'what' and 'how'. The 'what' includes the requirements for having a strong Muslim family institution, while the 'how' involves the ways to fulfil those requirements. Data are collected from 40 Muslim scholars on a personal contact basis. AHP has been applied to prioritize the requirements ('what'). The QFD exercise provides the prioritized 'technical' requirements ('how'). The findings are expected to provide guidelines for having a strong family institution that can contribute towards developing a healthy society.

Keywords: Analytic hierarchy process, Muslim family management, quality function deployment, priorities

## INTRODUCTION

In the recent time, the Muslim societies all over the world are experiencing problems which have emanated internally as well as externally. In a survey conducted in 1996, under the auspices of United Nation Development Program (UNDP), the Muslim society was depicted as backward (Farooqi, 2007). There are manifold of causes for this backwardness, which include low literacy rate, corruption, lack of motivation to work hard, poverty, unemployment, indifference toward modern knowledge and poor leadership, to mention a few.

In general, education is regarded as the key to solve many of the problems that a society faces. It is for this reason that an utmost emphasis has been placed in Islam to educate its people and the search for knowledge. In fact, the very first verse revealed by Allah (*swt*) to the holy Prophet (*pbuh*) starts with "Read". However, when the literacy rates in many Muslim countries are analyzed, only disappointments surround us. For example, the literacy rates in some Muslim countries are as follows: Afghanistan (36%), Bangladesh (43%), Pakistan (45.7%), Iraq (40.4%), and Yemen (50.2%) (Khan, 2004). According to Spengler (2007), one in five Arabs lives on less than $2 per day, fifteen percent of the Arab workforce is unemployed (this number could be double by

2010), only 1% of the population has a personal computer and half of the Arab women cannot read.

Why is the Muslim society facing all the problems mentioned above? The Muslim society is not supposed to have all these. The views of the authors are drawn from the reports of various mass media, that a large number of Muslims are not practicing Islam. In order to verify this, Muslims need to go back to the family institution, where a child can learn the basic principles of Islam and know the importance of leading a good religious life. If a child is brought up in a proper Islamic atmosphere, the chance of not practicing Islam in his or her later life is minimal and it is hoped that in this way, a healthy society can be created. It is to be noted that no specific problem is addressed in the present study, but a strong family institution is viewed as vital to contain the manifold of problems in the society. Meanwhile, the physical exercise does not address any specific disease as it can prevent many ailments in a human body. The same can be ascribed about the Muslim family institution.

## LITERATURE REVIEW

### Muslim Family Institution

The authors' search for referred journal articles on Muslim family institution did not yield sufficient number of hits. Therefore, they had to rely mainly on the Internet resources.

In order to strengthen a Muslim family, one of the most important matters is the Islamic orientation when a child is in his/her early age. At this time, the parents, especially the mother remains very close to the child (Hussain, 2007). Parents should have a "kangaroo hold" where they can watch their children closely.

Mababaya (2007) mentioned that all Muslim families should practice the rules and regulations of Islam. He further recommended a number of ways to strengthen the Islamic family institution: 1) attending Islamic lectures, forums and seminars, 2) reading books and other materials on Islam, 3) listening to the radio and watching television programmes on Islam, 4)

buying books, booklets, magazines and other reading materials on Islam, 5) learning from the other media (e.g. CDs, videos and cassette tapes) on Islam and family, and 6) using all the opportunities to acquire knowledge about Islam.

According to Hamdan (2007), building self-esteem is one of the important elements in the Islamic family. Children with high self-esteem are capable of making good decisions; they are proud of their accomplishments, willing to take responsibility and ready to cope with frustrations. Thus, parents and the family environment obviously play a crucial role in the development of children's high self-esteem. Her suggestions to improve self-esteem include communicating positively with the children as well as fostering the culture of responsibility and accountability.

According to Aways (2007), *tarbiyah* plays a great role in a Muslim family. He suggested the following steps in bringing up the family: seeking righteous children, setting a good example, placing importance upon *deen*, showing love and kindness towards one's children, teaching good manners, and exercising justice all the time.

Goddard (1999) states that a child development specialist discusses six ways to improve a family institution: 1) caring and appreciation, 2) commitment, 3) communication, 4) community and family ties, 5) working together, as well as 6) flexibility and openness to change.

Lea (1999) emphasizes on "discipline" to strengthen family institution. The author has also mentioned the benefits of discipline, which include successful family, protection of family from being undercut by short-sighted demands, systematic and orderly management, and holding family members to the standards of excellence, etc.

Datuk Syed Othman Alhabshi (1997) reported a survey conducted on 250 youths, out of which, the majority came from lower and middle income families. Some of them revealed that they had sex quite freely, did not perform their prayers and preferred to loaf around than doing anything productive! Ironically, these

youths put the blame on their parents for all these activities and misbehaviours. They complained that they did not experience parental love as much as they would like, they did not see their parents perform prayers and also did not find anything that would attract them to stay in their own homes. Alhabshi (1997, p. 1) further stated that:

> It would not be fair to leave the problem to the government alone. After all, these youths do not come from the government. They are our own products. We are the first to raise and influence them. We provide the first ever education for them. They have been moulded by us to be what they are. ... To be practical, I feel that we can all attempt to look after our own families to make sure that our own children will not indulge in any of the undesirable activities. One of the ways of doing this is to create a home out of our house.

He also points out that people are very careful about location, design, façade, colour, style and size of the house. He reminded that one should not just be so obsessed with the physical aspects of the house and forget about the individuals who reside in it.

A strong Muslim family institution can significantly contribute in developing a healthy society. A society can be considered as healthy when its people possess good moral and manners, respect for each other, help and cooperate among themselves, as well as maintain unity and harmony in the entire society. A society devoid of these is vulnerable to fragmentation, and fraught with all kinds of evil. A strong Muslim family may not be a panacea for all the diseases of a society may have, but it can be considered as a multi-vitamin for the body of a society.

The present research focused on how to strengthen a Muslim family institution so that it helps to become good Muslims and develop a healthy society where everybody can live in peace and prosperity. In more specific, the objectives of the present study were:

- To identify the requirements for having a strong Muslim family institution
- To apply Analytic Hierarchy Process (AHP) to prioritize those requirements
- To identify and prioritize technical requirements[1] by applying Quality Function Deployment

*Quality Function Deployment (QFD)*

Quality Function Deployment (Akao, 1990; Bossert, 1991) is a quality management tool that helps design a product/service in response to customer needs and expectations. It is important to note that the QFD requires three kinds of inputs, namely the (1) customer requirements, (2) the technical requirements that address the customer requirements, and (3) the relationships between the customer and technical requirements.

The QFD has been applied in numerous settings. Among other, Pitman *et al*. (1996) showed how the QFD could be used to measure customer satisfaction. They reviewed the MBA programme at Grand Valley State University by utilizing the QFD principles. In general, as a process, the QFD is highly successful in satisfying customer requirements. Evidence has shown that a complex process can be managed using the QFD method and it is a very useful tool in ascertaining customer needs, prioritizing them, and directing organizational resources toward fulfilling those needs.

Zhao and Lam (1998) proposed and tested a methodology for identifying different teaching techniques and their effectiveness in achieving educational objectives from students' perspective. Their paper demonstrates how the QFD and Analytic Hierarchy Process (a multi-criteria decision making tool that is briefly described later) are used in identifying the teaching methods and in evaluating their effectiveness in achieving educational objectives. The study also showed the applications of the AHP and QFD in evaluating the effectiveness of teaching in achieving educational objectives

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[1] Technical requirements are the ways to fulfil the needs of a strong family institution.

at the Department of Applied Statistics and Operational Research of the City University of Hong Kong. With the help of the AHP software Expert Choice, a hierarchy was constructed for the purpose of selecting alternative teaching techniques to achieve teaching excellence. Using pairwise comparisons of subjective judgments from teaching staff, the software package calculated the effectiveness ratings for each of the seven teaching techniques.

Shaffer and Pfeiffer (1995) described the application of QFD in the design of nurse training module. A design team used the QFD approach to identify customer needs and develop teaching module to satisfy customer needs. The module they designed was tested in four large healthcare facilities in the USA, and the design proved very successful.

Though satisfaction of customer needs is the primary objective of applying QFD, the method has been applied in a wide variety of areas due to its generic nature. Apart from the foregoing, some more applications are found in the areas of manufacturing strategic planning (Crowe and Chao, 1996), curriculum and course design (Denton *et al*., 2005), concurrent engineering (Kao *et al*., 2002), and strategic capital budgeting (Partovi, 1999). It is crucial to note that in the present work, the researchers were interested to collect information on the requirements of having a strong family institution (considering family members as customers, and the requirements of strong family institution can be treated as customer requirements) and how these requirements could be fulfilled. This makes the QFD a suitable choice to pursue the objectives of the present study.

*Analytic Hierarchy Process*

Analytic Hierarchy Process (AHP) (Saaty, 1977), a popular multi-criteria decision making tool, was developed by Prof. Thomas L. Saaty at the Wharton School of Business in 1977. This was designed to aid in the solution of complex, multiple criteria decision making problems in a number of application domains. The method enables the people to work with both tangible and intangible factors which employ a 1 to 9 weighting scheme for paired comparisons (Saaty, 2000). According to the originator, a hierarchy can be constructed by creative thinking, imagination and using people's understandings. This method has been found to be effective and practical in making many kinds of complex and unstructured decisions (Vargas, 1990; Vaidya and Kumar, 2006). The method has also been widely used for ranking of a set of factors.

## RESEARCH METHODOLOGY

The present research was conducted based on the interviews of 40 Muslims, of whom some are well-known Islamic scholars. The main criteria for choosing the respondents were high level of education (at least master's degree holders), sound knowledge on Islam, and thoughtfulness on the Islamic civilization. The majority of the respondents comprised four levels of academicians working in various departments of International Islamic University Malaysia, namely professors, associate professors, assistant professors and lecturers. They were asked about the requirements for having strong Muslim family institution and the possible ways to fulfil those stated requirements. A recorder was used to tape record their statements, and the researchers also wrote down their articulated salient points at the same time.

In the first phase of data collection, 25 interviews were conducted to find out Muslim family institution requirements ('what') and the possible ways to fulfil those stated requirements ('how'). In the second phase, the objective was to prioritize the Muslim family requirements. For this purpose, once again, 15 respondents were contacted. They were shown a compiled list of "what" and were asked to prioritize them using the Analytic Hierarchy Process (AHP). Since the AHP is a technical method, its working procedure was briefly described to each of the 15 respondents. They were also requested to fill in the QFD matrix that related the customer requirements with the technical requirements. They were designated as the respondents because

they responded to the researchers' queries, although no formal questionnaire was prepared for them.

After the collection of data in both Phases 1 and 2, the Quality Function Deployment (QFD) was used to finally rank the technical requirements. The QFD uses a specially constructed matrix comprising customer and technical requirements. All the inputs were aggregated and then fed into a sketch that is known as the house of quality (see *Fig. 1*).

The customer requirements or the "what" were listed in the left-hand side of the matrix and the technical requirements were arranged on the top of the house. A proper implementation of the technical requirements was expected to satisfy the customer requirements. After determining the weights of the customer requirements, using some suitable techniques (in this paper the AHP was employed), the next step was to find out the relationship between the customer and technical requirements. It is important to note that one single customer requirement may be related to more than one technical requirement and vice versa. Usually, four symbols are used to represent the relationships (*see* Table 1).

TABLE 1
Various symbols used in the QFD matrix

| Symbol | Meaning | Weight |
|--------|---------|--------|
| ◉ | Very strong relationship | 9 |
| ● | Strong relationship | 6 |
| ○ | Medium relationship | 3 |
| ° | Weak relationship | 1 |

If there is any technical requirement that is not related, the corresponding cell in the grid matrix is left blank. When all the possible relationships between every pair of customer and technical requirements have been identified, one can determine the weights of all these technical requirements. This is done using the following formula:

$$t_j = \sum_{i=1}^{m} c_i r_{ij}, j=1,2,...,n \qquad (1)$$

where

$t_j$ = weight of the jth technical requirement
$c_i$ = weight of the ith family requirement (in the present study this is determined by AHP)
$r_{ij}$ = weight of the relationship between i$^{th}$ customer requirement and j$^{th}$ technical requirement ($r_{ij}$ = 0 or 1or 3 or 6 or 9)
m = number of customer requirements
n = number of technical requirements



Fig. 1: House of quality framework

## DATA COLLECTION AND ANALYSIS

As mentioned previously, altogether there were 40 respondents contacted for the data collection on the proposed topic and all of them belonged to various departments and divisions of the International Islamic University Malaysia (*see* Table 2).

TABLE 2
Affiliations of the respondents

| No. | Department | No. of respondents |
|-----|-----------|--------------------|
| 1 | Islamic Revelled Knowledge (IRK) | 9 |
| 2 | History | 2 |
| 3 | Economics | 9 |
| 4 | Qur'an and Sunnah | 5 |
| 5 | Fiqh and Usul al-deen | 5 |
| 6 | General Studies | 2 |
| 7 | Political Science | 2 |
| 8 | Sociology | 1 |
| 9 | Laws | 1 |
| 10 | Others* | 4 |
| Total | | 40 |

The category "others" comprises of four administrative officers working in various divisions of the university.

A list pertaining to the requirements for having a strong family was generated when they answered the open-ended question, "what are the requirements for having strong Muslim family institution?" The words were tape-recorded as well as written down as articulated by the interviewees. From these detailed accounts, a synthesized list was obtained by considering the common and seemingly more important requirements. This synthesized list is shown in Table 3. It is also crucial to noted that there is a bit of overlapping between the requirements; however, no pair of requirements is exactly the same.

TABLE 3
Synthesized list of family requirements

| Code | Requirements |
|------|-------------|
| C1 | Islamic education and manner |
| C2 | Trust among family members |
| C3 | Moral character |
| C4 | Knowledge on basic principles of Islam |
| C5 | Respect each other |
| C6 | Social awareness |
| C7 | Fairness and justice |
| C8 | Transparency |
| C9 | Love and affection |
| C10 | Mutual understanding & cooperation |
| C11 | Patience |
| C12 | Discipline in the family |
| C13 | Good and positive values |
| C14 | Self-esteem and spiritual enhancement |

In the next phase, 15 respondents were contacted to prioritize the above synthesized list of requirements. Since the AHP was used for the prioritization process and this is a technical method, each respondent was briefed about the working process of the AHP. After collecting and combining all the individual pairwise comparison matrices, a synthesized pairwise comparison matrix (PCM) was formed using geometric mean rule of Analytic Hierarchy Process (AHP) (Aczél and Saaty, 1983; Condon *et al*., 2003). *Fig. 2* shows the synthesized pairwise comparison matrix.

Expert Choice (EC) is a one of the Windows-based software that has implemented Analytic Hierarchy Process to make decisions involving multiple criteria. The software is also used to rank a set of factors according to their level of importance. For the present problem, EC 2000 was used to derive the priorities of the requirements, as shown in *Fig. 3* and Table 4.

*Fig. 2: Synthesized pairwise comparison matrix for family requirements using geometric mean rule of AHP*



*Fig. 3: Individual weights of family requirements determined by Expert Choice 2000 software*

The five most important requirements were observed as:

- Moral character

- Knowledge on basic principles of Islam

- Fairness and justice

- Discipline in the family

- Islamic education and manner

After collecting the family requirements, the same respondents were asked another open-ended question, "what are the possible ways to fulfil those requirements?" As expected, the respondents articulated their responses in a much unstructured manner. The responses were unstructured not because of the unstructured question was asked, but it was rather due to the very nature of the question itself. On the basis of their responses, a list of technical requirements was generated and synthesized, as shown in Table 5.

TABLE 4
Prioritized family requirements

| Code | Requirements | Weight | Rank |
|------|--------------|--------|------|
| C1 | Islamic education and manner | 0.096 | 5 |
| C2 | Trust among family members | 0.037 | 11 |
| C3 | Moral character | 0.135 | 1 |
| C4 | Knowledge on basic principles of Islam | 0.121 | 2 |
| C5 | Respect each other | 0.030 | 13 |
| C6 | Social awareness | 0.029 | 14 |
| C7 | Fairness and justice | 0.102 | 3 |
| C8 | Transparency | 0.034 | 12 |
| C9 | Love and affection | 0.078 | 6 |
| C10 | Mutual understanding and cooperation | 0.059 | 8 |
| C11 | Patience | 0.069 | 7 |
| C12 | Discipline in the family | 0.097 | 4 |
| C13 | Good and positive values | 0.059 | 9 |
| C14 | Self-esteem and spiritual enhancement | 0.055 | 10 |

TABLE 5
Synthesized technical requirements

| No. | Technical requirements |
|-----|------------------------|
| 1 | Role of parents |
| 2 | Ta'lim and tarbiyah based on divine knowledge |
| 3 | Spouse selection |
| 4 | Gain knowledge about society |
| 5 | Effective communication |
| 6 | Role of government |
| 7 | Family library |
| 8 | Awareness of negative elements of media |
| 9 | Practice Islamic culture |
| 10 | Role of neighbours and relatives |
| 11 | Empowerment |
| 12 | Family meeting |
| 13 | Role of teacher as guardian |
| 14 | Effective leadership |
| 15 | Role of media (national & global) |
| 16 | Role of religious leadership |
| 17 | Role of NGO (Non governmental organization) |

After obtaining the technical requirements, the construction of the House of Quality (HOQ) was started and the relationships between the family requirements and the technical requirements were also established. By using four different categories of relationships, as stated previously, the main matrix of House of Quality diagram was filled up (see *Fig. 4*). Afterwards, the weights of all the technical requirements were calculated using formula (1) which was provided in Research Methodology section.

For example, the weight for the "role of parents" is $(9 \times 0.135) + (9 \times 0.121) + (9 \times 0.102) + (9 \times 0.097) + (9 \times 0.096) + (9 \times 0.078) + (9 \times 0.069) + (9 \times 0.059) + (9 \times 0.059) + (6 \times 0.055) + (9 \times 0.037) + (3 \times 0.034) + (9 \times 0.030 + (9 \times 0.029) = 8.64$.

The weights of all the technical requirements are shown in the 3$^{rd}$ row from the bottom in *Fig. 4*. From the weights of the technical requirements, one can determine their ranks. In Table 6, the technical requirements are arranged according to their ranks. If these technical requirements are properly implemented, it is hoped that the

**Standard 9-6-3-1**

| | | |
|---|---|---|
| Very strong | ◉ | 9 |
| Strong | ● | 6 |
| Moderate | ○ | 3 |
| Weak | ∘ | 1 |

| | Technical requirement | Role of parents (1) | Ta'lim and tarbiyah based on divine knowledge (2) | Spouse selection (3) | Gain knowledge about society (4) | Effective communication (5) | Role of government (6) | Family library (7) | Awareness of negative elements of media (8) | Practice Islamic culture (9) | Role of neighbours and relatives (10) | Empowerment (11) | Family meeting (12) | Role of teacher as guardian (13) | Effective leadership (14) | Role of media (15) | Role of religious leadership (16) | Role of NGO's (17) | Weight | Rank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C1 | Moral character | | | | | | | | | | | | | | | | | | .135 | 1 |
| C2 | Knowledge on the basic principles of Islam | | | | | | | | | | | | | | | | | | .121 | 2 |
| C3 | Fairness and justice | | | | | | | | | | | | | | | | | | .102 | 3 |
| C4 | Discipline in the family | | | | | | | | | | | | | | | | | | .097 | 4 |
| C5 | Islamic education and manner | | | | | | | | | | | | | | | | | | .096 | 5 |
| C6 | Love and affection | | | | | | | | | | | | | | | | | | .078 | 6 |
| C7 | Patience | | | | | | | | | | | | | | | | | | .069 | 7 |
| C8 | Mutual understanding & cooperation | | | | | | | | | | | | | | | | | | .059 | 8 |
| C9 | Good and positive values | | | | | | | | | | | | | | | | | | .059 | 9 |
| C10 | Self-esteem and spiritual enhancement | | | | | | | | | | | | | | | | | | .055 | 10 |
| C11 | Trust among family members | | | | | | | | | | | | | | | | | | .037 | 11 |
| C12 | Transparency | | | | | | | | | | | | | | | | | | .034 | 12 |
| C13 | Respect each other | | | | | | | | | | | | | | | | | | .030 | 13 |
| C14 | Social awareness | | | | | | | | | | | | | | | | | | .029 | 14 |
| | Weight | 8.64 | 7.80 | 6.34 | 3.31 | 6.29 | 4.24 | 3.10 | 2.80 | 7.88 | 5.34 | 2.17 | 6.47 | 6.63 | 6.89 | 4.11 | 5.85 | 2.53 | | |
| | Column Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | | |
| | Ranking of the technical requirements | 1 | 3 | 7 | 13 | 8 | 11 | 14 | 15 | 2 | 10 | 17 | 6 | 5 | 4 | 12 | 9 | 16 | | |

*Fig. 4: House of quality for strengthening Muslim family institution*

Muslim family institution will be strengthened, and consequently a society that is with moral, peaceful, and progressive, will be developed.

TABLE 6
The ten most important technical
requirements

| No. | Technical requirements | Rank | Weights |
|-----|------------------------|------|---------|
| 1 | Role of parents | 1 | 8.64 |
| 2 | Practice Islamic culture | 2 | 7.88 |
| 3 | Ta'lim and tarbiyah based on divine knowledge | 3 | 7.80 |
| 4 | Effective leadership | 4 | 6.89 |
| 5 | Role of teacher as guardian | 5 | 6.63 |
| 6 | Family meeting | 6 | 6.47 |
| 7 | Spouse selection | 7 | 6.34 |
| 8 | Effective communication | 8 | 6.29 |
| 9 | Role of religious leader | 9 | 5.85 |
| 10 | Role of neighbours and relatives | 10 | 5.34 |

## DISCUSSION OF THE FINDINGS

In the following, the ten most important factors identified for strengthening Muslim family institution are further elaborated in this study.

**Role of parents:** If Muslim parents hope to succeed in their pursuit to raise children Islamically, they must develop a better understanding of how children grow and learn; they need to understand the processes of moral development and the methods of effective teaching and learning. Children will not become moral individuals simply because we want or tell them to do so. They will become moral individuals *by cultivating their minds and hearts*, and by having opportunities to actually see and apply Islamic values in practice (Tauhidi, 2007). To a large extent, the future will depend on how well we educate our children today and to what extent we are successful in transferring the sacred vision of life to them. Attention on the following matters is also drawn:

*Teaching moral behaviour*: The most important part of parents' role in the family is teaching moral behaviour to their children. It is the sublime responsibility of the parents to be morally upright all the time and teach children to be so all the time.

*Cognitive development*: Parents can influence their children's cognitive development in a number of ways. This influence may be in terms of the amount of stimulation and attention a child receives. Parents should identify the specific ways of cognitive development for their children.

*Personality*: Children may learn some aspects of their personality through selective reinforcement and imitation of their parents' behaviour. In order to build the children's personality in the family, parents are the best example.

**Practicing the Islamic culture:** As a part of the Islamic culture, there are some issues which Muslims are required to adhere to. These are pertaining to the names, religious practices, holidays and festivals, marriage, public ceremonies, Islamic clothing, etc.

*Names*: When a baby is born in a Muslim family, it is considered Allah's great blessing for the family. Children bring happiness and joy, and also great responsibilities on the parts of the parents. One of the very first duties parents have toward new born, besides physical care and love, is to give a meaningful Islamic name that carries honour and dignity. It is reported that the Prophet (*pbuh*) said: "*On the Day of Resurrection, you will be called by your names and by your fathers' names, so give yourselves good names*" (*Abu Dawud*).

*Religious practices*: Muslim culture generally includes the essential practices prescribed in Islam. The five formal acts of worship which help strengthen a Muslim's faith and obedience are often called the "Five Pillars of Islam", namely the declaration of faith, daily prayer, almsgiving, fasting, and pilgrimage.

*Muslim's daily life*: Muslims are expected to be the best in morals and manners. Islam forbids any action which infringes the rights of others or harms oneself. Furthermore, Muslims need to make a balance in dealing with life and remaining mindful of their duties to Allah (swt) and to others.

*Holidays and festivals*: Muslims celebrate many festivals including *Eid-ul-Fitr, Eid-ul-Adha, Muharram, Milad-un-Nabi, etc*. In some Muslims countries, people do not perform these festivals keeping the proper decorum, especially *Muharram*. It is important to observe the festivals in a proper manner.

*Marriage*: Marriage is an important element in family institution. The final Prophet of Islam, Muhammad (*pbuh*) stated that 'marriage is half of religion' (Al-Bayhaqi); there are numerous *hadiths* which underscore the importance of marriage and family. In Islam, marriage is a legal bond and social contract between a man and a woman as prompted by the *Shari'ah*. Unfortunately, in many Muslim families, many un-Islamic practices, e.g. dowry, relating to marriage are observed. In order to have a strong Islamic family, it is extremely important to strictly follow the Islamic guidelines of marriage.

*Clothing*: The Islamic dress code is mentioned in the *Qur'ān* and amplified through Prophet Muhammad's (*pbuh*) teachings and practices. A Muslim woman is required to cover all her body with the exception of the front part of the face and hands. Islam has also prescribed a dress code for Muslim males. Allah (swt) says:

> *"Say to the believing man that they should lower their gaze and guard their modesty; that will make for greater purity for them, and God is well acquainted with all they do. And say to the believing women that they should lower their gaze and guard their modesty; that they should not display their beauty and ornaments except what must ordinarily appear thereof"* *(Al-Noor 24:30-31).*

**Ta'lim and tarbiyah:** *Ta'lim* (education) and *tarbiyah* (training) for children should begin very early. The purpose of this is to transform a child's life into a sound Islamic personality, with a good character and moral, strong Islamic principles, sound Islamic knowledge, proper Islamic behaviour, and the wisdom to handle the demands of life in a responsible and matured fashion. Such training should not consist merely of a set of directives, but far more importantly, the parents' unfailing submission to God through a sincere and conscientious practice of the Islamic teachings. An essential part of this training, beginning very early in life, is obedience, respect and consideration for the parents themselves. A well-known Muslim proverb is, "the pleasure of God is the pleasure of the parents."

The Islamic training aims, first, at giving the Muslim child a correct understanding of and the relationship to reality. He is taught very early that it does not consist merely of the material world which we observe and experience but of an unseen dimension as well, at the centre of which is God, the Most High. God's absolute power and sovereignty, man's total dependence on Him and his place in the scheme of things, the existence of Angels and also of Satan and his forces, are all essential parts of this reality. A child is able to understand all these, and a clear understanding of the purpose of his life, the certainty of death and of returning to God when he or others die, and the future Life in the Garden or the Fire forms a vital part of his consciousness and comprehension of reality as he grows up. At the same time, he is taught to love God, the Source of the innumerable blessings, which fill his life, above everything, and that love and thankfulness to Him are best expressed in obedience to His commands.

**Effective leadership:** Basically, leadership is the ability to inspire others to contribute toward the effectiveness and success of the organizations of which they are members (Mcshane and Vongallnow, 2005). The lessons of leadership apply not only to our organizations and community associations, but also to a family unit. Each family has its own ways of deciding

who has the power and authority within the family environment, and which rights, privileges, obligations and roles are assigned to each family member. In most Muslim families, parents are expected to be the leaders or executives of the family, and children are expected to follow the leadership of their parents. As children grow older, they will ask for, and should be allowed, more autonomy, while their opinions should be considered when decisions are made; however, parents are the final authorities. According to the findings, effective leadership is one of the most important factors for having strong family institution. It will be easier for the family members to carry out any job if effective leadership is in place in the family.

It is observed that the families of all kinds tend to do better when they are spurred by some purpose greater than themselves, without sacrificing their own essential growth needs. A family can run very well when their relationships are exemplified by some common purposes, set of values or shared enterprise and those families fare better when the children are raised with some set of values which transcend mere self-interest. More often, these "wider missions" can emerge organically from the relationship of the partners and children. Value statements like a good mission statement for a family should be relevant enough to add meaning and context in specific situations, while broad enough to remain applicable through changing times and circumstances. In the following, few important leadership roles in the context of a family are discussed.

*Communication*: It is very important for the parents as leaders to be a good communicator within the family in order to have a strong family institution. The benefit of communication is a sound relationship between parents and their children. If parents communicate openly and effectively, children will benefit from in their entire lives. Thus, in order to strengthen Muslim family institution, good communication skills should be taken care of by the parents.

*Organization*: Leaders who have to direct and motivate others are generally expected to possess good organization skills. By building

structure and order, a leader will be able to assign a clear vision or goal to those he leads. In a family, this skill can be demonstrated in a number of ways. One way is to have the child get into the habit of using a simple checklist. This can be done by the use of a notebook in which the child can write a list of chores or homework assignments. The child can then cross out the items from the list upon completing the tasks, thereby gaining both a sense of accomplishment and organization.

*Problem solving*: Helping a child to develop good problem solving skills can also go a long way towards helping them grow as leaders. There are various ways to help the child develop this particular skill. One easy way to do it is to role-play with the child. In this role-play, present the child with a difficult situation he may encounter when playing with another child or sibling. Challenge the child to come up with solutions which will solve the situation. Encourage and help him come up with as many solutions as possible. Then, discuss the pros and cons of each solution. This will help structure how a child thinks about solving problems which he may encounter.

*Healthy self-esteem*: Even a child with good leadership potential can be derailed by a bout with low self-esteem. Therefore, it is essential for the child to be able to develop a healthy view of him. There are many different ways in which a child can be helped to achieve good self-esteem. Medical research has shown that one basic factor that contributes to the development of good self-esteem in a child is the presence of an adult who helps the child to feel appreciated and special. In order to help accomplish this, one should set aside some 'special time' for the child. During the time that is set aside, it is best to focus on things which the child enjoys doing, or on areas which he displays strengths in. By doing this, parents will give the child the needed positive reinforcement to develop a healthy self-esteem.

**Role of teacher as a guardian:** Obviously, teachers can play a very significant role to nurture and develop a child's personality. Even though there are beautiful teachings of the

Holy *Qur'ān* and Prophet's (pbuh) *Sunnah*, and existence of many Islamic schools and organizations, many Muslims today do not live in accordance with the principles and values of their faith. This is where, teachers and educators can play significant roles. The teachers, through the Islamic educational system, have crucial roles to play in imparting the Islamic teachings to the students.

In order to strengthen the Islamic family, Muslim educators must restructure the Islamic studies curriculum, i.e. *what* is taught and *how* it is taught. In other words, if our children are to develop the 'spiritual skills' needed to survive as Muslims in the twenty-first century, an academic curriculum based on the Islamic concepts of education is strongly recommended. An Islamic educational system, that is capable of producing Muslim youths with a level of understanding, commitment and social responsibility which will both motivate and enable them to effectively serve Islam and humanity, is needed. Islamic education must be able to produce Muslim youths who are able to identify, understand and work cooperatively to solve the problems which they face in their community and the world in which they are living in (Tauhidi, 2007).

Effective Islamic teaching and learning must be *meaningful* and *integrated*. It must encompass and engage the whole child spiritually, emotionally, socially, intellectually, and physically. Most important of all, effective Islamic teaching and learning must be *value-based*. By focusing on values and by considering the ethical dimensions of topics, Islamic education becomes a powerful vehicle for character and moral development, and thus achieving its real purpose. Educators must realize that every aspect of the teaching-learning experience conveys values to students and provides opportunities for them to learn about values. Teachers must therefore develop a better awareness of their own values and how those values influence their behaviour as role-models and what students ultimately learn from these experiences about themselves, about others, and about Islam.

**Regular family meeting:** Building a successful family is like building a home. Both need a plan. A successful family based on unity and love takes careful planning. One of the best ways to organize a family is to hold weekly family meetings. By doing this, families enjoy special closeness and stability. Memories gathered together during the meeting will bond and sustain the family through the years. The family meeting should be an important part of every family's activity. In relation to family meetings, a few items are discussed below:

*Schedule activities*: Coordinating schedules and planning family activities need to be done weekly. When everyone is present, discuss activities in each day of the week. Try to plan a daily schedule that allows the family to eat at least one meal together each day, even if meal time is a little later or earlier than most convenient time for every person. Sometimes, individual schedules need to be adjusted for the good of the family.

*Talk about upcoming events*: Decide when family members can support one another by attending their activities. Then, plan for one family activity. Remember to talk about all the details of the activity. This will include the date, time, meeting place, food, special clothes to be worn, etc.

*Talk about family matters*: Discuss household tasks, family problems, and anything family members want to talk about. This is a valuable opportunity each week to gather around and share feelings about the family. Anything that needs to be discussed can be shared at this time. It is important that family members speak only positively, and allow the person talking to share his or her feelings in an atmosphere of empathy and caring. This is a time to voice concerns and suggestions for the good of the family.

*Plan next week's family meeting*: In order to make sure that the next family meeting will be a success and each family member is involved, decide about the topics for discussion, especially who will give the lessons from the religious literature.

*Have fun*: Families need to have fun together. The activity should be something that everyone enjoys. It could be as simple as a family walk in the neighbourhood, or playing a board game. The activity could be watching a movie as a family, going to a sporting event, or doing a service for a friend or neighbour. The most important thing is the involvement of all family members in the activities.

It is viewed that the weekly family meeting is an excellent opportunity to learn lessons. As mentioned above, there can be a discussion on correct behaviour, good manners, or one of the important moral values which helps shape children's character. This is because the opportunity to meet together regularly as a family to learn 'life lessons' is priceless.

**Spouse selection:** In Islam, marriage is not a sacrament but rather a legal, binding contract between a man and a woman which establishes the licitness, permanence and responsibleness of their relationship, an acceptance of one another as spouse with a mutual commitment to live together according to the teachings of Islam. Both are to be mindful of their duties to God and their responsibilities to one another in all aspects of their interaction. In selecting spouse, a man should find a bride to be a life partner who will be a companion and helpmate of husband, who is, together with him, responsible for the affairs of the household, the physical and emotional well-being of its members, and the training of the children.

While the mother is generally the primary means of training the children, Islam neither expects nor wants her to carry out this extremely important task alone. It is the joint responsibility of the husband and the wife to bring up their children properly. Although the greater part of the daily work with the children generally falls to the wife, the husband is the principal authority in the home and is responsible not only for the welfare but also for the behaviour of all members of the family. Together, husband and wife must provide an Islamic ambience in their home and a consistent approach to training in which they reinforce and support one another. There are some important qualities which a man should

seek in the woman whom he wants to be his life-partner and the mother of his children.

*Righteousness***:** The first and foremost quality for a wife is righteousness. The Prophet *(pbuh)* urged a man to seek a woman of faith and piety, and indicated that a man attains happiness by marrying her. One of the *hadiths* narrated by Abu Hurayrah *(ra)* reported that the Messenger *(pbuh)* said: "A woman is sought in marriage for four reasons: wealth, social status, beauty, and *deen*. So seek the one with *deen* – may you then be successful" (Sahih Al-Bukhari, Sahih Muslim).

*Good moral character***:** One should seek a wife who is known to possess good moral character or who has been raised in a good moral atmosphere. According to a *hadith* that is similar to the one given above, a woman of low morals should be avoided, even though she has other qualities, such as wealth and beauty.

*Loving attitude***:** One should seek to marry a woman who is expected to have a loving and caring attitude toward her husband. This is normally possible to sense from the environment in which she lives and her family's background. This quality is indicated in a *hadith* narrated by Ibn 'Abbas *(ra)* that Allah's Messenger *(pbuh)* said: "Your women who will be of the people of *Jannah* are those who are loving to their husbands, bearer of many children, and concerned about their husbands" (Ibn Asakir).

*Naivety***:** Naivety, simplicity, and innocence of heart are commendable qualities to be sought in a wife.

*Compatibility:* A man should seek a wife who is compatible with him, and a woman should seek a husband compatible with her. Aishah *(ra)* reported that Allah's Messenger *(pbuh)* said, "Make a choice for your sperm (i.e. offspring), marry those who are compatible" (Ibn Majah).

*Beauty*: This is another quality in the selection of the spouse.

**Effective Communication:** The relationships between parents and their children are greatly improved when there is effective communication in the family. Children begin to form their ideas and beliefs about themselves

and show their respect based on how their parents communicate with them. At the same time, they begin to feel that they are heard and understood by their parents, which boost their self-esteem. On the other hand, ineffective or negative communication between parents and children can lead children to believe that they are unimportant, unheard, or misunderstood. Below are some of the ways to communicate positively with the children and other family members (Jusoh and Jusoh, 2007).

*Communicating effectively while children are young*: Parents should start the stage of open, effective communication when the children are very young. Parents can do this by making themselves available to their children when they just want to talk. Children who feel loved and understood by their parents are more likely to open up and share their thoughts, feelings, and concerns with their parents.

*Communicate as per children's level*: It is very important for the parents to know the levels of their children when they communicate with their children. Parents should try to ask open-ended questions in their conversations with their children. Questions should be matched with children's ability and they need to be creative to answer those.

*Be a good listener*: Listening is a skill that must be learned and practiced, because it is an important part of effective communication. When parents listen to their children, they send the message that they are interested and they care about what their children are saying. When children express a desire to talk, parents should give them their undivided attention. They should put aside whatever they are doing at that time, face their children and give them their complete attention.

*Express your own feelings and ideas during communication*: For communication to be effective, it must be a 2-way phenomenon. Not only must parents be available to and listen to their children for effective communication to take place, they must also be willing to share their own thoughts and feelings with their children. Parents can teach their children moral and values by expressing their thoughts and feelings.

Unfortunately, many parents are not aware of just how often they use negative forms of communication with their children. As a result, these parents may be planting the seeds of mistrust and low self-esteem in their children's mind. This is why it is important for parents to be aware of and correct any negative forms of communication they may be using with their children.

**Role of neighbours and relatives:** Neighbours and the relatives also play important roles in terms of strengthening Muslim family institution. They can play role in spiritual, moral, intellectual, physical and social preservation, and development of the individual person in a family, with the view of establishing a sound Islamic family as well as a righteous society (Ansari, 2001).

The Holy *Qur'ān* proclaims "Exhortation to Truth" as one of the essential conditions of human success (Al-'Asr 103: 4). Hence, it is the duty of the neighbours and relatives as the vicegerents of God, successor to the Holy Prophet (*pbuh*), and representative of the people, to uphold, propagate and ensure the functioning of truth, and consequently, the spiritual values, which form the basic content of truth in the lives of Muslims. Neighbours and relatives can take all positive steps, including the enactment and enforcement of laws so as to ensure a proper practice of Islamic morals with a view to preserve and promote moral values. In addition, they can also organize and institute the moral education of the people in the society.

One component of duties and responsibilities of neighbours and relatives in order to strengthen the family institution is social welfare for establishment of happiness, peace and order for ensuring healthy existence and development of the individuals. They can also ensure justice without discrimination and without any extraneous consideration, for the preservation of life, honour and property of the individuals, defence of Islam and Muslims against internal disruption and external aggression.

**Role of a religious leader:** A religious leader is an exemplary and respectable person in any society. A Muslim religious leader teaches the society about the role of Muslims, and how one can follow the rules and regulations of Islam, which activities are allowed and which is prohibited. With their vast knowledge about Islam, they can play a crucial role in shaping the society. A significant role they can play through their *Jumma Khutba* to promote and practice Islam in family environment may help strengthen the Muslim family institution.

## CONCLUSIONS

A strong family institution is vital in developing a healthy society. It is in the family children learn the basic of moral and manners. Strong Islamic values infuse family to help shape the character of children and this, in turn, transform those becoming good Muslims in their later life. The paper identifies the ways through which the Muslim family institution can be revitalized. The research findings were based on the interviews with Muslim scholars. Though many articles have been written on the topic, this study is analytical and based upon empirical data. Thus, it is hoped that if the findings are implemented by Muslim families, a society can then be developed wherein everybody can live amidst peace and prosperity.

The sample size considered for the present research was rather small vis-à-vis the topic researched. Furthermore, all the respondents were chosen from the International Islamic University Malaysia. Therefore, for the sake of generalizability of the findings, not only the sample size should be increased, the respondents should also have varied backgrounds. Sufficient literature on the application of management tools in managing Islamic families is also not found. In a nutshell, future research should be directed towards this and with increased sample size involving respondents with wider and diverse backgrounds.

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# Factors Contributing to Financial Stability of Urban and Rural Families

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## ABSTRACT

Personality and behavioural aspects may shape the perception on the financial stability of families. Depending on their residential areas, factors contributing to their financial stability might differ. This study attempted to determine factors that have impacts on the financial stability of urban and rural families in Malaysia. Micro-data were obtained through questionnaire form and self-administered by the family financial manager. A ratio of 60 to 40 for the urban and rural areas was used in the quota sampling resulting in responses from 800 family financial managers in Peninsular Malaysia. Meanwhile, the results of binary logistic regression on the separate samples of urban and rural residences revealed significant factors. Financial risk tolerance, future time orientation, self-worth, household income, and cash-flow activities were significantly predictive of perceived financial stability. For urban families, financial risk tolerance, future time orientation and self-worth were less likely to predict financial stability. Household income was positively predicting financial stability of rural families. Budgeting aspect of cash-flow positively influenced financial stability of urban families and record-keeping was positively significant in predicting the financial stability of rural families. Thus, urban and rural families differ in terms of the factors which predict families' financial stability. Being informed about the factors contributing to financial well-being for the urban and rural families was found to result in better achieving the goals of financial education programme.

**Keywords: Risk tolerance, time orientation, self-worth, urban, rural**

## INTRODUCTION

A growing national economy and an increase in real family income is being experienced by Malaysia, however, available evidence suggests that more families are suffering from problems in managing their finances. Among other, increases in non-performing loan, credit card debt, and bankruptcy among individuals in Malaysia reflected these problems. Non-performing loan for the consumer product category for finance companies increased from RM14.5 million in 2002 to RM 16.7 million in March 2003 (Bank Negara Malaysia, 2003). Consumers are living on a life style of postponing their payments of purchases of goods and services, hence leading them towards financial difficulties or serious financial problems later.

According to the statistic of Bank Negara Malaysia (2009), 13,852 individuals in Malaysia were declared bankrupt in the year 2008. This was an increase of more than two times in a period of one decade. The total of unpaid balance for credit cards also increased from RM1,924 million to RM12,329 million from 1994 to April 2005 (Bank Negara Malaysia, 2005). The scenario indicated that there might

be a mismanagement of their financial resources. With limited financial resources, it is important for families to manage their financial resources effectively.

Meanwhile, mixed results were found from several studies examining the relationship between financial management behaviour of families with the objective financial well-being and the subjective financial well-being of families. However, this study focused only on the subjective well-being of families. Their attitude and personality, apart from behavioural aspects, may also shape the perception on the financial well-being of families. Depending on their residential areas, factors contributing to the financial stability of families would differ according to their locality. This study was designed to seek answers to the following research questions:

1. Do urban and rural families experience different financial stability?

2. What are the socioeconomic characteristics and personality variables that have the likelihood of predicting financial stability of urban and rural families?

3. Which of the financial management practices dimension contribute more to financial stability of urban and rural families?

Thus, the objectives of the study were as follows:

1. To determine the difference in the financial stability between urban and rural families.

2. To ascertain the influence of the socioeconomic characteristics and personality variables in predicting financial stability of urban and rural families.

3. To identify the relative contribution of financial management practices dimension to financial stability of urban and rural families.

## MEASUREMENT OF FINANCIAL STABILITY

Joo (1998), in her review of past research, noted that financial wellness or financial stability is dependent not only on the family's objective

financial status but also on the subjective aspect of financial status. On the subjective measurement of financial stability, financial satisfaction was used by Hira and Mugenda (1999) in a study carried out among the residents of USA to represent their financial well-being or financial stability. As stated by Zimmerman (1995), financial satisfaction involves a state of being healthy, happy, and free from financial worry.

Satisfaction with financial stability of dairy farm families in seven aspects of financial satisfaction was studied by Scannell (1990). Those aspects were satisfaction with the present standard of living, emergency savings, past investment and savings, present financial situation, in five years, last year and next year. Meanwhile, Sumarwan and Hira (1992) focused on only one aspect of financial satisfaction concerning the preparation for financial emergencies. Financial satisfaction was used later by Hira and Mugenda (2000) involving five aspects of satisfaction, namely the satisfaction with savings level, debt level, current financial situation, ability to meet long-term goals, and preparedness to meet emergencies. Other researchers who had utilized financial satisfaction to measure financial stability were Hogarth and Anguelov (2004), Joo and Grable (2004), Kim, Garman and Sorhaindo (2003), and Xiao, Sorhaindo and Garman (2004).

## FACTORS CONTRIBUTING TO FINANCIAL STABILITY

### Socioeconomic Characteristics

Families' background has an impact on their financial stability. Joo and Grable (2004) reported that socioeconomic characteristics were significantly correlated with financial stability. The results from the path analysis suggested that older consumers, live longer in certain residence, has lower credit card debt, perceive a more secured retirement, and have a better family relationship were found to be associated with financial satisfaction. However, income was not found to be significantly related with financial satisfaction.

A local study on the savings behaviour by Ariffin, Wook, Ismadi, Mohd Saladin and Nor Ghani (2002), using household micro-data in the state of Malacca, revealed that consumer savings were positively related with age, disposable income and ethnicity group. In particular, the Malay respondents had mean savings that were significantly higher than that of other ethnics. Meanwhile, household size, level of education, and residential area were found to be negatively associated with the level of savings. The mean savings of households were significantly higher for the rural areas as compared to those in the urban.

*Personality and Behavioural Variables*

Risk-tolerance, as an attitudinal construct, was studied by Hariharan, Chapman and Domian (2000). Risk tolerant individuals preferred investing in high risk retirement investments as compared to those who were risk averse. Thus, they would more likely to remain financially independent when once they retire. Joo and Grable (2004) determined that financial risk tolerance, along with education, financial knowledge, financial solvency, financial behaviours, and financial stress level, had direct effects on financial satisfaction. As for the negative relationship of financial risk tolerance, they argued that individuals with higher levels of financial risk tolerance might have increased their financial expectations. Thus, these highly risk tolerant persons would find that their current level of living was inadequate as compared to their standard of living. That brings to a lower level of financial satisfaction among them.

A few studies have demonstrated that personality variables, such as future orientation, predicted the tendency to plan and save. For instance, Hershey and Mowen (2000) found that among individuals aged 35 to 88 years old, future time orientation was positively associated with self-reported financial preparedness for retirement. Lusardi (1999) reported that pre-retirees, with a short planning horizon or more current-oriented, had not only a lower average net worth, but they alos expected to receive less

in the way of income from personal savings in retirement.

Future time orientation refers to individuals' psychological attribute regarding their perception of the future and the flow of time (Cottle, 1976; Das, 1993). It was a measure of the extent to which individuals focused on the future, rather than the present or past. Jacobs-Lawson and Hershey (2005) explored the extent to which individuals' future-time perspective influences retirement savings practices. The study on young working adults revealed that future time perspective was associated with more aggressive savings profiles.

Another personality variable, that is self-worth, was defined by Hira and Mugenda (1999) as an evaluation one makes of the self-concept descriptions and the degree to which one is satisfied. A few studies conducted in the financial management field have focused on self-worth. Among other, the studies on self-worth by Grable and Joo (2001) and Hira and Mugenda (1999) found that self-worth had significant relationships with financial belief, financial behaviour and financial satisfaction.

Financial management practices were found consistently in past research to be affecting perceived financial stability of families. For instance, Mugenda, Hira and Fanslow (1990), in assessing the causal relationship among money management practices and satisfaction with financial status, concluded that net worth, savings, monthly debt payments, and absence of financial difficulties were the main determinants of managers' satisfaction with financial status. Meanwhile, stressor events associated with high levels of credit card debt and poor financial behaviours can increase financial stress. High levels of financial stress would negatively affect perceived financial well-being and health (Weisman, 2002).

Kim, Garman, and Sorhaindo (2003) pointed out that financial stressor events and financial behaviours were significant variables in explaining financial well-being. Those who experienced more financial stressor events had lower levels of financial well-being than others. Those who practiced more positive financial

behaviours had higher levels of financial well-being than others. Sumarwan and Hira (1992), who focused on the satisfaction with the preparation for financial emergencies, found that financial well-being was affected by monthly saving, and the number of insurance types apart from the household income and managerial behaviour index. These practices involved the savings and risk practices dimensions.

A study looking at the effect of financial planning on financial satisfaction by MacEwen, Barling, Kelloway, and Higginbottom (1995) revealed that participants' own financial planning for retirement had a specific effect on their expectations for financial well-being. Similarly, parents' financial planning affected their satisfaction with finances. In determining the effect of financial management practices on subjective financial well-being, Joo and Grable (2004) found that financial knowledge, financial solvency, and financial behaviours exhibited positive direct effects on financial satisfaction. Higher levels of financial knowledge, solvency, and the practice of better financial behaviours led to higher levels of financial satisfaction. Financial behaviours thus had a positive indirect effect on financial satisfaction. The single most influential determinant of financial satisfaction was an individual's financial behaviour.

Xiao, Sorhaindo, and Garman (2004) revealed that three financial behaviours increased financial satisfaction, and these were: 1) having developed a plan for my financial future, 2) started or increased my savings, and 3) reduced some of my personal debts. They also found that two financial behaviours, namely having participated in flexible spending program and contributed to my employer's retirement plan were negatively associated with financial satisfaction. Hence, financial behaviours were significant variables in explaining financial well-being. Meanwhile, those who practiced more positive financial behaviours had higher levels of financial well-being than others. The positive significant practices covered dimensions such as financial planning, savings, and credit. Practices

found to be negatively associated with subjective financial stability fall under the cash-flow and savings dimensions.

Keeping written records for farm families was the only financial management practice that was significantly related to financial well-being as found by Scannel (1990). The result indicated that record-keeping done by rural families was associated with financial stability.

In summary, this section presented results of past research that are related to the influence of socioeconomic characteristics such as age, income, household size, and ethnicity on financial stability of families. Other factors studied were personality and behavioural variables that were found to contribute significantly to financial stability of families. However, most of the past research reviewed revealed the influence of financial behaviour as a whole. However, studies focusing on the effects of the financial behaviour components, namely credit, investment, and risk management, are scarce. Hence, this study was looking at the effects of the financial behaviour components, instead of using the composite index of financial behaviour.

## METHODOLOGY

### Sampling and Data Collection

Self-administered questionnaire form was responded by the family financial manager of the families. A family financial manager was identified as those who were involved in the financial management of the family either the wife or the husband or both. The respondents need to be currently married with at least a child. Quota sampling was selected for the sampling since the study involved the urban and rural areas that have certain proportions and could thus increase the representativeness of the population. A ratio of 60 to 40 for the residential areas of urban and rural, respectively (Economic Planning Unit, 2006), was employed. Thus, four regions in Peninsular Malaysia that comprised of the northern, central, eastern, and southern regions were included in the 2007 study

having the responses from 800 family financial managers. For the sampling in each region, one state was chosen, resulted in selecting four states namely Perak, Selangor, Negeri Sembilan, and Pahang.

Urban families were identified from their residential areas that were managed by municipal and city councils. Rural families were determined by their residential areas that were managed by the district council (Population and Housing Census of Malaysia, 2001). For each of the states selected, public and private sector offices were identified from the telephone directory. The government departments and private companies identified were sent letters requesting for the permission to collect data at their premises. The permissions sought through letters handed personally to the officer in charge were followed by phone calls. The departments and companies in each state were targeted a total of 200 respondents with a break-down of 60 to 40 representing the urban and rural residential areas. The questionnaire forms were sent to officers in charge in distributing the self-administered forms to the respondents.

## Measurement of the Variables

The financial stability of the families as the dependent variable was measured by subjective financial well-being, namely the Malaysian Personal Financial Well-being (MPFW) scale, developed by Garman and Jariah in 2006 (Jariah, 2007). This scale was based the Personal Financial Well-being Scale by on Garman *et al.* (2004). The twelve questions were on attitude, behaviour, control and confidence, with a 10-point scale of measurement. The higher scale reflects a better financial stability.

The independent variables were socioeconomic characteristics, attitudinal and personality variables, and financial management practices. Information on the socioeconomic characteristics of the respondents and the families were gathered, such as the residential area, ethnicity, as well as household income, length of marriage, working experience, and home ownership. The attitudinal variable, that

was financial risk tolerance, was adopted a six-item measurement by Grable (2000).

Personality variable, i.e. the future time orientation of the respondents, was measured using the adapted Future Time Perspective Scale developed by Hershey and Mowen (2000). The construct that consisted of four items was a general measure of the personality dimension which measured the extent to which individuals enjoy and thinking about and planning for the future. Hira and Mugenda's (1999) scale was used for measuring self-worth of the financial manager. The four-item scale looked into the perception of the respondents on themselves in general.

The financial management practices were measured using the items from several authors and researchers. Several aspects of financial practices were included, and these include financial planning, cash-flow management, credit management, investment and savings, and risk management. The specific financial planning items were gathered from the financial goals described by Kapoor, Dlabay and Hughes (2001). Meanwhile, the eleven items of cash-flow management were adapted from Hilgert and Hogarth (2003), O'Neill (2002) and Xiao *et al.* (2004). Credit management used modified items from Hogarth and Anguelov (2004), and Porter and Garman (2003) that resulted in three items.

Investment and savings measurement of eight items were adapted from Hilgert and Hogarth (2003), Hogarth and Anguelov (2004) and Porter and Garman (2003). For the risk management aspect, the four items were adapted from Porter and Garman (2003). The measurement of the above constructs used a 7-point scale, ranging from 1 = "Never" to 7 = "Very often".

## Analysis of Data

The data were analysed descriptively to obtain the socioeconomic background of the families. The factor analysis and reliability test were applied to the scale measurements. Cross-tabulation was carried out to determine the associations of the groups of families based

on their financial stability with regard to their residential areas.

Binary logistic regressions were applied to determine the factors contributing to the financial stability of the urban and rural families. Families having scored more than the mean of the samples (mean = 6.21) for the average score of the Malaysian Personal Financial Well-being and those who fulfilled any one of the three selected financial ratios were classified as financially stable. Those who scored otherwise were classified as less financially stable. This similar identification of financially well group was used by Baek and DeVaney (2004).

## RESULTS AND DISCUSSION

### *Profile of the Respondents*

The socioeconomic profiles of the total sample and the urban and rural sub-samples are presented in Table 1. Most of the urban and rural respondents aged between 30 to 40 years old, with an average of 37.3 years old. Meanwhile, the urban respondents were younger on the average as compared to rural respondents. More of the rural respondents as compared to urban respondents were found to be older than 40 years.

Slightly more than half of the respondents were males and possessed education at the secondary level. The rural male respondents slightly exceeded the urban male respondents. Most of the urban respondents achieved the tertiary level of education and the rural family financial managers obtained secondary level of education. Almost two-third of the rural respondents had secondary level of education as compared to the urban respondents of less than half. Nearly half of the urban respondents possessed tertiary education as compared to only one third of the rural respondents. Thus, most of the urban respondents achieved higher education level than rural respondents.

On the average, the rural family financial managers' working experience was slightly higher than the urban family financial managers. More of the rural financial managers have been

working for over ten years as compared to the urban financial managers. Only one-third of the urban respondents exceeded the ten years working experience as compared to half of the rural respondents. As for their marriage, on the average, the rural families have been married for a longer duration of time as compared to the urban families in the samples. Only one-third of the urban families have been married for more than ten years as compared to rural families that were almost half of them.

In terms of the monthly household income, almost half of the respondents were earning more than the national average household income of RM3, 965 for the urban area (Economic Planning Unit, 2006). The average household income for the sample was RM5, 705, that was higher than the average income of the Malaysian population. Almost two-third of the urban samples had an above average household income as compared to the rural samples with only one-third of the rural families. Thus, more of the urban families obtained higher than average household income as compared to rural families. All the families had a household income above the poverty line of RM687 for the urban area and RM698 for the rural area (Economic Planning Unit, 2006). Hence, none of the families in the samples were living in poverty.

The average household size of the samples was 4.6 and was representative of the population. About half of the samples were above the average household size of 4.5 (Economic Planning Unit, 2006). More than half of the rural families exceeded the average household size as compared to the urban families that were slightly less than half of the samples. Almost three quarter of the families in the samples owned at least a house. Slightly more of the urban families were homeowners as compared to the rural families.

In conclusion, the findings on the profiles of respondents revealed that more urban respondents were younger males, possessed tertiary education level, had working a experience of less than ten years, and have bee married for less than ten years. More of the respondents' families earned household income higher than RM4, 000, with

TABLE 1
Profile of the respondents

| Socioeconomic characteristics | | Full sample frequency (%) (n = 800) | Urban frequency (%) (n = 480) | Rural frequency (%) (n = 320) |
|---|---|---|---|---|
| Age (years old) | Less than 30 | 148 (18.5) | 100 (20.8) | 48 (15.0) |
| | 30 to less than 40 | 343 (42.9) | 218 (45.4) | 125 (39.1) |
| | 40 to less than 50 | 242 (30.3) | 128 (26.7) | 114 (35.6) |
| | More and equal to 50 | 67 (8.4) | 34 (7.1) | 33 (10.3) |
| | Mean age | 37.3 | 36.3 | 38.3 |
| Sex | Male | 465 (58.1) | 276 (57.5) | 189 (59.1) |
| | Female | 335 (41.9) | 204 (42.5) | 131 (40.9) |
| Educational level | Primary | 29 (3.6) | 8 (1.7) | 31 (6.6) |
| | Certificate | 434 (54.3) | 736 (49.1) | 188 (61.8) |
| | Diploma | 144 (18.0) | 94 (19.6) | 50 (15.6) |
| | Degree/Professional | 193 (24.2) | 142 (29.6) | 51 (16.0) |
| | Mean education years | 16.6 | 19.9 | 13.2 |
| Working experience (years) | 0 to 5 | 142 (17.8) | 102 (21.3) | 40 (12.5) |
| | 6 to 10 | 280 (35.0) | 165 (34.4) | 115 (35.9) |
| | 11 to 15 | 149 (18.6) | 84 (17.5) | 65 (20.3) |
| | 16 to 20 | 118 (14.8) | 67 (14.0) | 51 (15.9) |
| | More than 20 | 111 (13.9) | 62 (12.9) | 49 (15.3) |
| | Mean working years | 12.6 | 12.0 | 13.2 |
| Length of marriage (years) | 0 to 5 | 261 (32.6) | 172 (35.8) | 89 (27.8) |
| | 6 to 10 | 236 (29.5) | 150 (31.3) | 86 (26.9) |
| | 11 to 15 | 136 (17.0) | 78 (16.3) | 58 (18.1) |
| | More than 15 | 167 (29.0) | 80 (16.6) | 87 (27.2) |
| | Mean years of marriage | 10.6 | 9.6 | 11.5 |
| Household income (RM) | Less than RM2,000 | 95 (11.9) | 40 (8.3) | 55 (17.2) |
| | RM2,000 to less than RM4,000 | 316 (39.5) | 167 (34.8) | 149 (46.6) |
| | RM4,000 to less than RM6,000 | 159 (19.9) | 109 (22.7) | 50 (15.6) |
| | RM6,000 to less than RM8,000 | 91 (11.4) | 59 (12.3) | 32 (10.0) |
| | More and equal to RM8,000 | 139 (17.4) | 105 (21.9) | 34 (10.6) |
| | Mean household income | 5,705 | 6,297 | 4,816 |
| Household size | Less than 5 persons | 396 (49.5) | 260 (54.2) | 136 (42.5) |
| | More and equal to 5 persons | 404 (50.5) | 220 (45.8) | 184 (57.5) |
| | Mean household size | 4.6 | 4.2 | 4.8 |
| Home ownership | Owner | 571 (71.4) | 347 (72.3) | 224 (70.0) |

lower household size and owning a house. As for the rural respondents, more of them were younger males, possessed secondary level of education, had working experience of more than ten years, but being married for less than ten years. More of them had household income lower than RM4, 000, with higher household size and had home ownership.

*Construct Validity and Reliability*

**Financial management practices**

Financial management practices construct was developed by combining selected items from the previous research (Hilgert and Hogarth, 2003; Hogarth and Anguelov, 2004; Kapoor *et al*., 2001; O'Neill, 2002; Xiao *et al*., 2004;

Porter and Garman, 2003) resulted in 36 items. The construct composed of six conceptual dimensions, including financial planning, cash-flow, credit, savings, investment, and risk. Construct validity, was determined for the financial management practices construct. Meanwhile, the factor analysis was performed to verify the conceptual dimensions of the construct and resulted in seven factors having eigenvalues greater than 1, with factor loadings between 0.423 and 0.872. The Kaiser Meyer-Olkin (KMO) analysis resulted in an adequate measure of sampling, with a high value of 0.944. The Bartlett's test was significant ($\chi^2 = 19012.0$, df = 630, p = 0.000), suggesting that the items were appropriate for the factor analysis. The result from the factor analysis on the financial management practices construct portrayed the importance of the dimensions extracted in managing financial matters. The seven factors extracted from the factor analysis for the financial management practices were financial planning, cash-flow 'record-keeping', cash-flow 'budgeting', credit, investment, and risk.

**Malaysian Personal Financial Well-being**

The Malaysian Personal Financial Well-being scale was applied the exploratory factor analysis and this resulted in only one clean factor structure with an eigenvalue of more than 1.0. The items for the factor extracted through the principal component analysis had high factor loadings between 0.746 and 0.888. The KMO for this construct was 0.958, indicating the sampling adequacy and items in this construct were appropriate for the factor analysis as the Bartlett's test was significant (approximate $\chi^2 = 8612.325$, df = 66, p = 0.000). This twelve-item factor represented 68 percent of the total variance explained and all the items were retained as the corrected item-total correlations between 0.702 and 0.860.

**Reliability of the constructs**

The reliability test results with the Cronbach's alpha values for the constructs were high, as shown in Table 2. The alpha values for the future time orientation, financial risk tolerance and self-worth constructs were between 0.802 and 0.896. The seven dimensions of the financial

TABLE 2
Reliability coefficients for constructs

| Constructs | Number of items | Cronbach's alpha |
|---|---|---|
| **Personality** | | |
| Future time orientation | 4 | 0.802 |
| Financial risk tolerance | 6 | 0.808 |
| Self-worth | 4 | 0.896 |
| **Financial Management Practices** | | |
| Financial planning | 10 | 0.909 |
| Cash-flow 'record-keeping' | 4 | 0.813 |
| Cash-flow 'budgeting' | 7 | 0.917 |
| Credit | 3 | 0.825 |
| Savings | 4 | 0.817 |
| Investment | 4 | 0.834 |
| Risk | 4 | 0.841 |
| **Financial Well-being** | | |
| Malaysian personal financial well-being | 12 | 0.956 |

TABLE 3
Malaysian personal financial well-being

| Malaysian personal financial well-being | Full sample Frequency (%) N = 800 | Urban Frequency (%) N = 480 | Rural Frequency (%) N = 320 |
|---|---|---|---|
| 1 to 4 (lowest to poor) | 160 (20.0) | 81 (16.9) | 79 (24.7) |
| 5 to 10 (average to highest) | 640 (80.0) | 399 (83.1) | 241 (75.3) |

management practices extracted from the factor analysis showed high Cronbach's alpha values between 0.813 and 0.917. The Malaysian Personal Financial Well-being also had high alpha value of 0.956. Thus, high reliability was displayed by each of the constructs including the financial management practices dimensions.

**Financial stability of urban and rural families**

Table 3 displays the Malaysian Personal Financial Well-being for the sample and also for the urban and rural families. Most of the urban families had average to highest financial well-being state as compared to the rural families and most of the rural families had lower financial well-being state as compared to the urban families. This subjective evaluation of financial stability showed that the urban families were more financially stable as compared to the rural families.

**Factors contributing to financial stability**

Table 4 gives the results from the binary logistic regression with selected socioeconomic characteristics, financial risk tolerance, future time orientation, self-worth, and financial management practices as the independent variables in determining their contribution to financial stability. The model for the urban families was found to be fit (Omnibus test, Chi-square = 141.903; sig. = 0.000; Nagelkerke $R^2$ = 0.342; classification = 69.8%), and this was similar for the model for the rural families (Omnibus test, Chi-square = 116.754; sig. = 0.000; Nagelkerke $R^2$ = 0.408; classification

= 74.7%). Meanwhile, the variances in the financial well-being of the urban and rural families were 34.2 percent and 40.8 percent, as explained by the factors in the respective models.

For the urban residence, none of the socio-economic characteristics was found to be significantly predicting financial stability of family. For the rural residence, however, significant effect was found for the household income. Families earning high household income were four times more likely to perceive themselves as financially stable as compared to those with low household income. Hence, after controlling for psychological variables and financial management practices, only one socioeconomic characteristic namely household income was found to be significant predictor of rural families' financial stability. This is in contrast with the result found in a study by Joo and Grable (2004).

The cost of living for the urban families was apparently higher than the rural families, thus earning high income by the urban families might not result in good financial well-being as compared to the rural families. This scenario explains the difference in the likelihood of predicting financial stability by the household income of the families.

Among the psychological constructs, financial risk tolerance, future time orientation, and self-worth of family financial manager emerged as significant predictors for financial stability of urban families. However, these variables were negatively predicting financial stability. The results for the financial risk tolerance are consistent with the findings by Joo and Grable (2004). However, for future time orientation and self-worth, the results

TABLE 4
Binary logistic regression for financial stability

| Constructs | Urban | | | Rural | | |
|---|---|---|---|---|---|---|
| | B (S. E.) | Wald (Sig.) | Odd Ratio | B (S. E.) | Wald (Sig.) | Odd Ratio |
| Ethnicity | | 3.622 (0.164) | | | 1.056 (0.590) | |
| Ethnicity (Chinese) | 0.366 (0.285) | 1.665 (0.198) | 1.442 | 0.146 (0.344) | 0.180 (0.672) | 1.157 |
| Ethnicity (Indian) | -0.410 (0.375) | 1.199 (0.274) | 0.664 | -0.409 (0.511) | 0.641 (0.423) | 0.664 |
| Respondent's education level | 0.044 (0.050) | 0.774 (0.379) | 1.045 | 0.000 (0.068)) | 0.000 (0.995) | 1.000 |
| Respondent's working experience | -0.012 (0.026) | 0.221 (0.638) | 0.988 | -0.003 (0.032) | 0.008 (0.930) | 0.997 |
| Household income | 0.644 (0.473) | 1.850 (0.174) | 1.904 | 1.436 (0.650) | 4.884* (0.027) | 4.202 |
| Home ownership | 0.070 (0.256) | 0.075 (0.785) | 1.072 | -0.267 (0.329) | 0.658 (0.417) | 0.766 |
| Respondent's age | 0.011 (0.027) | 0.171 (0.679) | 1.011 | -0.039 (0.033) | 1.437 (0.231) | 0.962 |
| Family financial manager | 0.288 (0.220) | 1.722 (0.189) | 1.334 | 0.149 (0.286) | 0.269 (0.604) | 1.160 |
| Financial risk tolerance | -0.053 (0.021) | 6.732** (0.009) | 0.948 | 0.017 (0.024) | 0.524 (0.469) | 1.017 |
| Future time orientation | -0.062 (0.025) | 5.960* (0.015) | 0.940 | -0.008 (0.030) | 0.073 (0.787) | 0.992 |
| Self-worth | -0.646 (0.143) | 20.433** (0.000) | 0.524 | -0.566 (0.187) | 9.160** (0.002) | 0.568 |
| Financial planning | -0.004 (0.015) | 0.085 (0.771) | 0.996 | 0.017 (0.022) | 0.632 (0.427) | 1.017 |
| Cash-flow 'Record-keeping' | 0.027 (0.033) | 0.687 (0.407) | 1.028 | 0.103 (0.044) | 5.480* (0.019) | 1.108 |
| Cash-flow 'Budgeting' | 0.082 (0.023) | 12.842** (0.000) | 1.085 | 0.042 (0.032) | 1.697 (0.193) | 1.043 |
| Credit | -0.033 (0.040) | 0.706 (0.401) | 0.967 | -0.027 (0.056) | 0.233 (0.629) | 0.973 |
| Savings | -0.294 (0.214) | 1.895 (0.169) | 0.745 | 0.081 (0.270) | 0.091 (0.763) | 1.085 |
| Investment | 0.339 (0.612) | 0.307 (0.579) | 1.404 | 1.110 (0.765) | 2.102 (0.147) | 3.033 |
| Risk | 0.035 (0.025) | 2.023 (0.155) | 1.036 | 0.032 (0.028) | 1.281 (0.258) | 1.033 |
| Constant | -1.264 (2.305) | 0.301 (0.583) | 0.283 | -7.366 (2.857) | 6.649 (0.010) | 0.001 |

Categorical variables: ethnicity (relative to Malay), home ownership (relative to no ownership)

contradict with the study by Jacobs-Lawson and Hershey (2005) and, Hira and Mugenda (1999), respectively.

Family financial managers with high financial risk tolerance were five percent less likely to predict financial stability than those having low financial risk tolerance, while future time orientated financial manager predicted six percent less likely to be financially stable than those current-oriented financial manager. Self-worth was also predicted in the same direction, but with higher probability, i.e. 48 percent less likely to be financially stable as compared to the families with low self-worth financial managers. Thus, with more financial risk tolerant, future-oriented, and high self-worth family financial manager, the likelihood to be financially instable is higher.

As for the rural families, only self-worth was significantly predicting financial stability. It was also negatively predicting financial stability as found for the urban families. In other words, families with high self-worth family financial manager were 43 percent less likely to predict financial stability as compared to those with low self-worth family financial managers.

Since financial risk tolerant individuals were those who were able to accept high risks in financial matters, they tended to be involved in high risk financial activities, such as investing in risky investment. Therefore, they would perceive themselves as financially instable due to the risks faced. On the contrary, future-oriented individuals tended to make long-term investments. They were faced with uncertainties of the return and safety of the principal or capital they invested. Due to these risks, they would also perceive themselves as financially instable.

As stated by Hira and Mugenda (1999), self-worth is an evaluation that one makes of the self-concept descriptions and the degree to which one is satisfied. Thus, for higher self-worth financial managers, the satisfaction degree related to self-concept was also higher. A certain level of financial stability was perceived differently by high self-worth financial manager as

compared to low self-worth financial managers. Consequently, high self-worth individual would perceive their financial stability as low whilst low self-worth individual would perceive the same situation as high.

To conclude, the significant predictors for the financial stability of the urban families were financial risk tolerance, future time orientation, and self-worth of family financial manager whilst for rural families, whereas only one significant predictor was found that was self-worth, after controlling for socioeconomic characteristics and financial management practices.

The dimensions of the financial management practices that contributed significantly to financial stability of urban families after controlling for socioeconomic characteristics, psychological variables, and other financial practices was cash-flow 'budgeting'. Engaging in this financial activity emerged as activities that would predict good financial stability for the urban families. This dimension of financial practice predicted 11 percent more likely for the urban families to be financially stable as compared to those who were not doing any budgeting. Other financial management practices such as financial planning, cash-flow 'record-keeping', savings, investment, credit practices and risk practices were not found to be significantly associated to financial stability of urban families.

As for the rural families, cash-flow 'record-keeping' was the only financial management practices that predicted the likelihood to be financially stable with 8 percent more than those who did not do record-keeping. The results are consistent with that by Scannel (1990) who carried out a study on rural families. Other financial management practices were not significantly predicting the financial stability of the families.

In comparison, only cash-flow practices, such as budgeting, had the tendency to predict financial stability of the urban families, while cash-flow 'record-keeping' could predict the financial stability of the rural families.

These results suggest that after controlling the socioeconomic characteristics and psychological variables, financially stable urban families did budgeting while the rural families, on the other hand, did record-keeping.

Thus, the findings from the binary logistic regression revealed factors contributing to the financial stability of the urban and rural families. Such significant factors were household income, financial risk tolerance, future time orientation, and self-worth of the family financial manager, and cash-flow practice. In particular, household income was the significant positive factor predicting financial stability of rural families only. Financial risk tolerance and future time orientation were the significant negative factors predicting the financial stability of the urban families only.

Meanwhile, the factor contributing significantly to the financial instability of families that was found for both urban and rural families was self-worth of the family financial manager. Budgeting by the urban families contributed to their financial stability as compared to the rural families. With more complex choices of goods and services, as compared to the rural families, doing budgeting enabled them to make sufficient allocation to the goods and services needed. The rural families, on the other hand, did record-keeping regarding their financial affairs. In particular, record-keeping enabled the rural families to keep track of their income and expenses, and thus they closely followed their expenditure. This would assist in controlling the rural families' expenses. Looking across residential areas, record-keeping practice was a stronger predictor of the families' financial stability as compared to budgeting.

## LIMITATIONS AND RECOMMENDATIONS

The survey was based on the self-reported responses by the family financial managers. As a result, these could result in bias responses, especially in families having both husband and wife equally taking care of the financial matters. Moreover, the measurement of the financial well-being looked at the perception of the responded family financial managers on their family's financial stability. Thus, the perception may vary between husband and wife.

Objective measure of financial stability, such as financial ratios and comparison of the results with the subjective measures should be used for any future studies on financial stability of families. Meanwhile, a comparison of perception on financial stability could also be done between the different cultures, preferably with a larger sample to determine consistency with the results obtained in this study.

## CONCLUSIONS

The financial stability of families determined from subjective measure of Malaysian Personal Financial Well-being indicated that urban families had better financial situation than rural families. Based on the results from the binary logistic regression on separate samples of the urban and rural residences, several significant factors predicting financial stability of urban and rural families were revealed.

In addition, different significant factors were also obtained for the urban and rural residences. Household income of the rural families predicted their financial stability. On the contrary, financial risk tolerance, future time orientation, and self-worth of financial manager were more likely to predict the urban families' financial instability, whereas this was only financial managers' self-worth for the rural families.

Financially stable urban families were those doing budgeting whereas financially stable rural families were those who frequently involved in cash-flow activities specifically doing record-keeping. Record-keeping practice predicted the families to be more financially stable as compared to budgeting.

Being informed about the factors contributing to the financial well-being of different residential areas might help certain families to be financially stable. In particular, financial educators would benefit from the factors identified as this would assist them in developing better financial education programmes based

on the residential areas of families. The results would also enhance the financial planners' ability on how to serve their clients better. As a whole, financially stable families contributed to good well-being of the families and a better community in the long run.

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# The Shift of Policy on Language of Instruction in Schools in Three Southernmost Provinces of Thailand

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## ABSTRACT

The three southernmost provinces of Thailand, namely Pattani, Yala, and Naratiwat, are unique in many ways. First and foremost, the three provinces comprise the largest Muslim populations in the country. In terms of language, the Pattani dialect of Malay is a mother tongue for most people in the area, differing from other parts of the country, where Thai language is used. For long, the differences in language used have been an issue of concern for the Thai government. Earlier, under the strong nationalistic and assimilation policy, not knowing Thai language was a threat to national sovereignty, the strategies used to promote Thai language were coercive and uncompromising. Meanwhile, the use of Malay language in schools was prohibited. However, the situation has changed. Recently, there has been an increasing use of Malay language as a medium of instruction in several government-initiated projects. What are the reasons behind this change? This article aims at examining the policy on language of instruction in schools in three southernmost provinces of Thailand from 1932 to present. The data used for this article are based on the examination of documents and interviews with officers in the region. Compared to the strict prohibition on the use of Malay language in schools in the past, the recent shift of policy which accepts the use of Malay language as a medium of instruction in schools seems to recognize the cultural identity of Muslim students as parts of the education system in the country. However, the article argues that the real impetus for such policy is rather for security purposes, just like it was in the past. Thus, the permission to use Malay language in schools may be temporary.

**Keywords: Education, Muslim students, policy, Southernmost Provinces of Thailand, Thai language**

## INTRODUCTION

This article traces the policy on language of instruction in schools in three southernmost provinces of Thailand from 1932 to present. It illustrates the change in the policies and the strategies concerning the language of instruction in schools for Muslim students. The data of this article were based on the examination of documents and interviews with officers in the region.

*The Distinctiveness of the Three Southernmost Provinces of Thailand[1]*

Pattani, Yala and Naratiwat are located on the furthest south of Thailand adjacent to the Malaysian border (*see* Map 1). Altogether, the three provinces have the largest Muslim populations in the country. Within the three provinces, the Muslims are the majority; they constitute approximately 90 percent of the entire Muslim population. However, as 95 percent of

Thailand's overall population are Buddhists, the Muslims in the three provinces are regarded as a minority group of less than 5 percent of the country's population (Suwannathat-Pian, 2008). This makes them a distinctive case from other minority groups. Muslims in the southernmost provinces have cultivated very strong Muslim and Malay cultures. They speak the Pattani dialect of Malay language as their mother tongue. Their ways of life are strictly regulated by the Islamic codes from birth to death. This contrasts sharply with the majority of other Thais whose lives are premised on the Buddhist culture. Moreover, due to the cultural, religious, and ethnic similarities, the people in the three provinces usually identify themselves with Malays more than Thais. The self-identification as "Malay-Muslims" contrasts with the classification of the "Thai-Muslims" for them by the Thai government (Herriman, 2005).

## MAP 1

For the Thai state, the identification of Malays for the Muslims in the three southernmost provinces has been a threat to the stability and the sovereignty of the country. Thus, the government has been struggling with assimilating Muslims in the southernmost provinces to be "Thai-Muslims" for a long period of time. One strategy that the Thai government has used is through education and language. By attending Thai schools, the government hoped that Muslims would be acquainted with Thai values, Thai culture, and Thai language. However, persuading Muslims in the three provinces to attend Thai schools and to speak Thai language is not an easy task. Since the stipulation of Compulsory Education Act in 1921, the enrollment rate in schools in the three southernmost provinces was very low. This was due to the fact that in the three provinces, attending Thai schools and speaking Thai language are associated with being Buddhists as most government schools are located within temple boundaries and monks serving as teachers. Thus, instead of attending Thai schools, Muslim parents in

the three southernmost provinces usually send their children to *Pondok*, which is an Islamic institution that teaches Islamic codes and Arabic script. For the people in the three southernmost provinces, reading and writing Thai are not seen as merely the act of mastering the language, it is the act of being Buddhist altogether. Thai language is associated with Buddhism the same way as the Malay language is associated with Islam. Thus, one of the biggest challenges for the Thai government, concerning the policy in the three southernmost provinces, is to make people in the three provinces speak the Thai language. The strategies used by the government varied from time to time.

From 1932 until present, the strategies to teach Thai language and to use the language as a medium of instruction in schools have shifted back and forth from strong prohibition of Malay language to the acceptance of the use of that particular language as a medium of instruction in schools. The policy on the language of instruction in schools in the three southernmost provinces from the year 1932 to the present day is discussed in this section.

### *The Policy on Language of Instruction in Schools in the Three Southernmost Provinces of Thailand*

The discussion was based on the examination of documents and the interviews that were conducted with officers who worked and are working in the area, both from the earlier period and at present. The discussion is divided into three timeframes, namely, the language policy between 1932 and 1973, the language policy between 1973 and 2004, and the language policy for 2004 until the present day.

### *Language Policy During 1932 to 1973*

**Teaching Thai language in government schools**

After the 1932 coup, which marks the end of the absolute monarchy regime and the beginning of the constitutional monarchy system, the education policy for the three southernmost

provinces did not change much from the earlier period. The aim of education for the Muslims in the south continued to emphasize the mastering of Thai language in order to unify heterogeneous groups in the country. The problems also remained that Muslim parents preferred sending their children to religious institutions than to government schools, even with the stipulation of the Compulsory Primary Education Act. Thus, the government at that time was careful with the policy to avoid provoking of any dissension to solve this problem. The government of General Phot Phraholyothin agreed to let the Malay language to be used along with Thai language in schools, where all or most of the students were Muslims. However, the situation changed in 1939 when Laung Pibul Songkram was appointed Prime Minister. He dominated the country with his strong nationalistic policies. He announced 12 "Rattaniyoms" or cultural mandates to assimilate the cultural and ethnic minorities to have unified "Thai Culture". The cultural mandates denied the existence of diverse culture and languages and connoted that being Thai meant speaking and using only Thai language with only the dialect of the central region (Baker and Phongpaichit, 2005). In other words, these forced assimilations and nationalistic policies further alienated Muslims in the three southernmost provinces and heightened the bad impression that Muslims already had towards the Thai government. After the resignation of Pibul in 1944, political instability continued in Thailand.

In 1947, about one hundred Muslims, led by Haji Sulong, convened at the Islamic Committee Office in Pattani province to draft demands concerning religious and self-governing rights. The demands were that primary education (Grades 1 to 7) be conducted in Malay language and that the language be established as official language along with the Thai language (Panklao, 1998). In addition, they also requested that the administrative positions in the southernmost provinces be filled by Muslims. The government gave a positive response to the demands concerning language by allowing Malay language to be taught in schools for five hours per week. However, before the demands could take effect, the government of Luang Thamrongnawasawat was overthrown. When Pibul Songkram returned to power as a Prime Minister in 1947, he ordered the arrest of several Muslim leaders including Haji Sulong, the leader who had earlier made demands to the government. This aroused resentment among the Muslims in the southernmost provinces. In 1948, i.e. 17 days after Pibul took up the Prime Minister post, the Dusun Nyior protest took place in Narathiwat province due to the accumulating resentment. Right after the Dusun Nyior protest, Pibul's government announced Friday as an official weekly holiday in the four southernmost provinces. In education, the earlier policy of teaching Malay language in primary schools was reinstalled in 1948. The Ministry of Education endorsed a special curriculum which allotted equal time for Thai language and Malay language instructions (including religious study) in the government schools in the southernmost provinces. Finally, Pibul Songkram's reign of 10 years ended with the coup d'etat in 1957. Pibul was overthrown by Field Marshal Sarit Thanarat.

The political change has brought about the change in policies toward the minorities, including the Muslims in the southernmost provinces. Pibul Songkram's strong assimilation and nationalistic policies were replaced by a milder policy of political integration (Forbes, 1989). The earlier stringent cultural codes, such as the prohibition of the use of dialect, were lifted. Apart from the change within the country, the world at that time was torn between the two camps of communism and "democracy". The fear of communism was more severe in the areas at the borders of the country, including the southernmost provinces. As a good ally of Thailand, the U.S. government provided financial and technical supports for the Thai government to fight against communism. Development plans and projects were introduced as ways to improve the lives of the people in the rural areas so that they would not be drawn towards communism. Furthermore, the government stressed the

importance of Thai language as a tool to unite the people who were living in different areas. Consequently, the government ordered that the Malay names of roads, streets, bridges and canals be changed to Thai names.

In education, M.L. Pin Malakul, the Minister of Education at that time, proposed new educational administrative areas which divided the country into 12 regions, based on their educational problems. The four southern border provinces of Yala, Pattani, Narathiwat and Satun were put together as the Educational Region 2 due to their similar problems (Pitsuwan, 1985). "The Regional Education Development Project", which aimed at improving the quality of education in several parts of the country, was also implemented. In the Educational Region 2, the focus was to solve the problems of low rates of enrollment and literacy, and the high dropout rate. In 1957, the illiteracy rates among the people in Region 2, particularly in the three provinces of Yala, Pattani, and Naratiwat, were remarkably high. While the illiteracy rate of Thai people on average was at 28 percent, the illiteracy rate in Yala, Pattani, and Naratiwat was 62, 67, and 72 percent, respectively, and these were three times higher than the national average illiteracy rate (Bureau of National Consensus, 1960). Apparently, this was seen as a threat to the solidarity of the country.

While the officers in the Educational Region 2 were searching for effective methods to teach Thai language to Muslim children, one incident rushed the process into execution. In March 1959, King Bhumipol Adulyadej (Rama IX), along with queen Sirikit, paid a royal visit to the office of Educational Region 2 which was located in Yala province. During the visit, the King gave a historical remark about the inability to effectively communicate in Thai by the people in the southern border provinces:

> *"The education here is very important. We have to pay special attention to educate people here to speak Thai. Although not fluently, people here should at least be able to communicate in Thai. During this visit we had to*
> *use interpreter. It would be more convenient if we could communicate in Thai."*
>
> (Educational Region 2, 1984, p.3)

This remark was a powerful impetus for the officers in the southernmost provinces to take the matter of teaching Thai language to Muslims as their first priority and imperative mission. Right after the King returned to Bangkok, the regional education development committee convened to find the best way to teach Thai language to the people in the area.

During this period, some officers went to visit schools in the U.S. and observed the bilingual education method that American teachers employed with minority students. Influenced by such method, the head of Educational Region 2 proposed that before starting school, students whose first language was not Thai should be prepared with Thai language for one year. During this one year, the Pattani dialect of Malay language was allowed to be used as a bridge to Thai vocabulary through songs, games, and other extracurricular activities. After that period, however, the students were mainstreamed into normal classrooms and they must use only Thai language. The strategy to teach Thai language was gradually introduced to the schools in Yala, Pattani, Naratiwat, and Satun. Books and instructional materials were also produced. For example, professors at Yala Normal College (currently Yala Rajabhat University) were invited to write a book on the pronunciation of Thai language for the people whose mother tongue is Malay language. In addition, words that were difficult for the Malay-speaking students were also listed and gathered into a book and distributed to teachers (Educational Region 2, 1984). This method focused on preschool students, with the assumption that language is best learned during younger ages.

The method of preschool bilingual programme was used from 1957 to 1983. Based on the evaluation research conducted by the Educational Region 2, students were found to be happier with this method; they had a better impression of schools and teachers felt less

alienated by the classroom atmosphere. This was due to the fact that they were allowed to communicate in their mother tongue. As for the academic performance, however, there was no evidence of significant difference between students who attended the one-year preschool bilingual programme and those who did not. Based on the interviews with the officers who were responsible for the programme, the reason behind this might be that the one-year gain in Thai language proficiency might wane out as students progressed through schools.

At first glance, the language policy during this period looked progressive as compared to the strict prohibition of dialects in schools during the earlier period. Nevertheless, when looking at other levels of education, it was apparent that only Thai language was allowed. Thus, the use of Malay language during students' preschool year could be interpreted as a strategy to make students learn Thai language more effectively. The aim of the government was definitely to emphasize "Thai-ness" through the mastering of Thai language into Muslim students. The real intention aside, this method was effective in pacifying the tension among the Muslims, which was caused by the stringent nationalistic policy during the earlier administration. Students, as well as their parents, were contented that Malay language was recognized in schools, even for one year (Educational Region 2, 1984). Furthermore, in 1971 and 1972, Educational Region 2 also piloted a "Head Start" programme which taught Thai language to 1st grade students during the two-month summer vacation before the start of the school term. The result was also favourable. The preschool bilingual programme was continued until 1983, but was later terminated because of the change in the administrative structure and the school system.

## Teaching Thai language in *Pondok*

For a long time, the government had been using government schools as bases to promote "Thai-ness" in the forms of Thai language and Thai culture to Muslim children. They had tried to increase the popularity of government schools among Muslim parents by allowing Malay language to be taught in schools. They also used strategies, such as preschool bilingual programme, to enable preschool students to be familiar with Thai language. Despite all these efforts, the enrollment rate in the government schools remained unchanged. Muslims parents still preferred sending their children to religious schools or *Pondok* rather than the government schools. From 1932, when the absolute monarchy was changed to constitutional monarchy, the *Pondoks* remained relatively unaffected due to their status as "religious institutions" not "schools" (Pitsuwan, 1985). In 1961, however, with the claim of the foundation of a separatist organization in the *Pondok* (Panklao, 1998), the government began to keep an eye on the *Pondoks* by ordering them to be registered with the government. The registered *Pondoks* would have to include Thai language and secular education as parts of their curriculum. The *Pondoks* that accepted this agreement would be financially subsidized. From 1961 to 1966, a total of 287 *Pondoks* were registered (Pitsuwan, 1985). The registered *Pondoks* later had the status of "private schools" and they were to follow the regularities established in the Private Institution Act. The traditionally flexible organization of classes was replaced with systematic arrangement of classes and examinations that are similar to those of the government schools. For the government, this was a brilliant plan to instil a sense of Thai-ness among Muslim children. However, for Muslims in the southernmost provinces, this plan backfired. It was seen as a direct attack on their religion because the Thai language and secular studies introduced in the *Pondoks* were based on the Buddhist ideology (Pitsuwan, 1985; Suhrke, 1989). Moreover, the dispatched teachers were ignorant of the Muslim cultures. Female teachers wore short skirts or dresses that exposed most parts of their bodies (Kaewdaeng, 1968). After 1971, there was a recommendation that Thai language be used as a medium of instruction in *Pondoks* and the time allotted for the Islamic studies had to be used for the secular education (Chaipranee and Suwantat, 1981).

The period from 1957 to the beginning of 1990s was based on the ideology of "development" in order to counteract separatist and communist movements. The development projects in several aspects, including education, emerged at that period. As parts of the Regional Education Development Project, several strategies were used to teach Thai language in government schools. At the same time, the government began to reform *Pondoks* to include Thai language and the secular education. Both attempts were parts of the process of "Thai-icisation" (Suthasasna, 1989, p. 101) of the Muslims to make them identify themselves as "Thai" and feel a sense or responsibility as Thai citizens. The strategies to teach the Thai language in government schools received positive response among the Muslims because of the flexible strategies, such as the use of Malay language as a medium of instruction. On the other hand, the attempt to regulate and teach Thai language in *Pondoks* resulted in an unfavorable outcome as some *Pondoks* did not comply with this policy.

Notwithstanding the resentment against the government's intrusion into *Pondoks* by the year 1983, with the attempts of these projects and several others[2], the illiteracy rate in the southernmost provinces was lower in 1980 compared to the year 1960 (*see* Table 1). The ability of school age Muslim children to speak Thai language also increased (Smalley, 1994).

## TABLE 1

*Language Policy During 1973 to 2004*

In 1973, students revolted against the government of Thanom Kittikarjorn and demanded more democratic constitution. However, with the military coup of 1976, Thailand once again swung back to military rule. After the revolution, several governments took turn to rule. The political pendulum swaying between military and civilian government followed. In 1975, the Education Reform, which included several progressive reform agenda, was announced. However, before reaching its full implementation,

the military coup of 1976 revamped most of its reform spirit. As for education of Muslims in the southernmost provinces of Thailand, the policies which emphasized stability, security and anti-communism were continued. The government still stressed that, Thai citizens, including Muslims, must be proficient in the Thai language. Under this policy, the preschool bilingual programme, that was aimed at strengthening the proficiency in the Thai language before students started schooling, was also continued and expanded to cover more than 100 schools every year (Panklao, 1998).

In 1980, General Prem Tinlasulanon succeeded General Kriangsak Chomanan. The major policy concerning education in the southernmost provinces was similar to those of the earlier governments, where Thai language and Thai culture were emphasized. The major strategies or methods to teach Thai language included the continuing implementation of a one-year preschool bilingual programme, a Radio programme to teach Thai language, and the promotion of informal education to reach wider clients. One prominent change also occurred during this period. In 1973, there was a petition from Narathiwat to the King that Buddhism was taught to Muslim students in a primary school, where textbooks with Buddha images were used (Dema, 2008). Consequently, the Educational Region 2 took charge of formulating a curriculum on the Islamic religion studies to be used in government primary and secondary schools.

Apart from the change in political leadership, the change in educational administration had also influenced the policies and strategies concerning the education of Muslims in the southernmost provinces. In 1983, the preschool system was changed into a 3-year kindergarten system. This naturally made the one-year preschool bilingual programme removed from the system due to the fact that the aim of the kindergarten programme was character building and not academic preparation. Moreover, because the preschool bilingual programme was in the form of a "project" and not a permanent policy, it was easier to be discontinued. Thus, the preschool

bilingual programme which had been offered for twenty years had to be discontinued to give way to an "innovative" teaching method imported from Australia, namely the Concentrated Language Encounters (CLE). This method, introduced by officers from the central office, emphasized the comprehension of whole sentences, or whole contexts rather than the correct pronunciation and comprehension of each word. According to an interview, people who had worked with the preschool bilingual programme in the Educational Region 2 for ten years opposed this new method on the ground that it was imposed upon them by the central office who knew little about the problems of language learning in the southernmost provinces. Regardless of the resentment, the method had replaced the preschool bilingual programme and has been widely used since 1983.

In 1999, there was another tremendous change that affected the policy on Thai language in the three southernmost provinces. The 1999 National Education Act was promulgated. This act brought about radical change in the administrative structure, instructional approaches, and curriculum. The change that particularly affected the language instruction in the southernmost provinces was the change in administrative system. Before the education reform, the Educational Region 2 was the organization that overlooked the language instruction strategies for the whole southernmost provinces encompassing the four provinces of Pattani, Yala, Naratiwat and Satun. Therefore, similar strategies were employed for the language instruction in the four provinces based on their similar problems. However, as the 1999 National Education Act emphasized decentralization of administrative power and encouraged that each province worked on their own to solve problems, the idea of having Educational Region 2 to oversee education for the southernmost provinces seemed to be redundant. After the reform, in each province, 2-3 Educational Service Areas[3] were set up to work autonomously to find unique ways to solve educational problems in their areas. This decentralization of the administrative

system might work elsewhere in the country, but not in the southernmost provinces. In particular, the educational problems such as low student achievement due to the lack of language proficiency and the different cultures between students' home cultures and school culture overwhelmed the officers in each Educational Service Area[4]. The state of confusion, which resulted from the introduction of a new educational administrative structure, continued until 2004, only to undergo another tremendous change once again.

In conclusion, the proficiency in Thai language from 1973 to 2004 was expected from the Muslims in the southernmost provinces. The strategies to reach this goal include the one-year preschool bilingual programme, the Radio broadcast, and the use of non-formal education. However, the change in the educational administrative structure affected the language policies. The twenty-year preschool bilingual programme was terminated due to the change in the structure of preschool education. In more specific, the introduction of the Educational Service Areas in each southernmost province decreased the importance of the Educational Region 2. The cohesive teaching methods and materials of the Thai language in the southernmost provinces changed to the individualized, area-based practices, which brought the feeling of confusion to education officers.

Another noticeable change concerning the language policy during this period occurred in the Chuan Leekpai administration. When Chuan Leekpai took the Prime Minister's office in 1992, it was the first time that "cultural difference" was perceived as a cause for educational problems, such as the language incompetence and the low enrolment rate in government schools. These problems were due to the mismatch between the "cultures" and therefore, not because of the intention of the people to rebel or to secede as framed by the earlier governments. This reconciliation stance of the government resulted in the use of strategies to promote a mutual understanding between the Malay-speaking citizens and Thai-speaking officers.

## The Language Policy from 2004

The outbreak of the violent incident, i.e. the army post raid in January 2004, signaled the resurgence of violence in the south. Chains of violent incidents such as killing and bombing followed after that incident. While the causes of the insurgency were unclear, many were concerned with the education of the Muslim students in the three southernmost provinces. Although literacy rates had been increased, the students in the three southernmost provinces were not fluent in reading and writing in the Thai language. This language barrier was attributed as a major cause for the low academic achievement. One question was raised, "What is the best strategy to teach Thai language to Muslim students?" As a result, the preschool bilingual programme was revitalized. The very people who had worked in the Educational Region 2 and directly involved in the former one-year preschool bilingual programme, who are now in their 60s, were brought back into light. They proposed that this programme should be extended to include students in higher grades apart from kindergartens. While this proposal was in the process of collecting more supportive research findings, the government simultaneously implemented a pilot project on kindergarten bilingual programmes in several schools in the three provinces. Malay language was openly allowed to be used as a medium of instruction. Kindergarten students learn the collection of Thai vocabulary through songs, games and other activities that are similar to the preschool bilingual program forty years ago. While the project was still in the steps of piloting, still other researchers went further to propose that Malay language be used throughout the primary school. This group of researchers had also carried out pilot projects of the bilingual programme in some primary schools. The aim of using Malay language is not only to help students learn Thai language better, but also to preserve the Malay language (Premsrirat, 2008).

Differing in their emphasis and details, all of the bilingual projects focus on the Malay language, both as a medium of instruction and in maintaining the respectful identity of Muslim students. The insurgency was undeniably the reason behind this shift of strategies. With violence occurring in the area, the government could not retain or even propose any form of nationalistic policy, such as the strict mandate of Thai language in schools as before. However, looking at it more closely, these strategies were all in the form of programmes or projects, not policy. This means that their life spans are rather uncertain. Some researchers who support a bilingual primary programme have lobbied the government to issue a National Language Policy which allows Thai language, as well as other dialects, to be regarded as national language (Premsrirat, 2008).

From this, it can be interpreted that the intention of the government, regardless of the strategies and policies they have adopted, was the integration of the Muslims in the three southernmost provinces into mainstream Thai culture. The use of Malay language, thus, is used as a bridge for students to learn Thai language, not the full recognition of Malay language as the language to be used throughout the area.

## CONCLUSIONS

Upon reviewing the language policy in the three southernmost provinces from 1932 to the present day, the following conclusions can be drawn:

## Language is Used as an Appeasement Tool to Calm Down the Enraged Muslims

From 1932, whenever there was a tension or a threat of separatist movements among the Muslims in the southernmost provinces, the permission to use Malay language as a medium of instruction or to be taught in schools was one of the policy choices several governments had opted for. For example, during his second term as a Prime Minister, Pibul Songkram allowed Malay language to be taught in primary schools to pacify the outrages after the Dusun Nyior protest. Recently, after the resurgence of violence in the southernmost provinces, pilot projects using Malay language as a medium of

instruction in government schools have been implemented, ranging from two kindergarten years to the whole six years of primary school.

Allowing Malay language to be taught in schools and declaring Friday to be the weekly holiday have long been the two popular policy choices to counter the tension created by the separatist movement. At first glance, it seems that language and the day of rest are cultural identity that could be allowed to trade off to retain security of the country. Based on the policy on language of instruction in schools, however, this was not the case. While the government allowed Malay language to be concurrently taught with Thai language in government schools, it stressed the importance of Thai language as an important cultural identity of Thai citizens. Malay language is used in government schools for Muslim students to make connection to the contents of the subject matters in Thai language, such as in the case of the preschool bilingual programme. In other cases, Malay language was used to pacify the resentment of Muslims toward the government, as mentioned earlier. In conclusion, the permission to use Malay language in government schools was for both political and instructional purposes.

### The Importance of Thai Language Has Been Framed Differently According to the Sociopolitical Context of the Time

In the 1940s, 1950s and the beginning of 1960s, being illiterate in Thai language equals to being "un-Thai", "others", and suspiciously, the enemy of the country. However, by the end of 1960s, when the "development" ideology encroached into Thailand, not knowing Thai was linked to low academic achievement, and this was a hindrance to the development of the country. In today's era of globalization, a country's survival depends largely on its productivity and the ability to compete. High quality human resources, which are largely determined by the quality of education, are essential in order for a country to compete in the global market. Benchmarks, such as scores on the national and international tests, literacy rate, years of schooling, are used to judge the quality of human resources of a country. Thus, the population's incompetence of Thai language was one of the big challenges to be overcome in order to increase its competitiveness in the global market. The promotion Thai language among the Muslim students in the southernmost provinces is based on this premise.

Similarly, in today's globalization era, the Malay language is now celebrated as an asset, the same way as Chinese is celebrated as a marketable ability. Thus, we have heard a proposal that Malay language be taught in schools in the southernmost provinces as an elective subject, the same way as French, German, Japanese and Chinese.

Instead of using language as a political tool, it is recommended that the government looks at language as an important cultural identity of students. This cultural identity should be used in schools to create an equal educational opportunity. The programme, such as bilingual education and its impact, should be thoroughly studied. Meanwhile, the permanence of the programme should also be considered.

### ENDNOTES

[1]Sometimes the term "the four southernmost provinces" is used to refer to Yala, Pattani, Naratiwat and Satun. However, this paper focuses only on the three provinces, excluding Satun, because the situation in Satun is different. Most of the Muslim population in Satun speak Thai as their mother tongue, or they speak the language as fluent as their mother tongues. Thus, the researchers did not see much struggle to teach Thai in Satun as it is in the other three provinces.

[2]Other projects include the development of non-formal education, the granting of scholarship to Muslim students, the expansion of the government primary schools.

[3]The Educational Service Areas were similar to the school district in the U.S.

[4]The interview with an educational officer in Yala.

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# Causal Effects of World Crude Oil Prices on the Prices of Rice and Soybean Oil: An ARDL Approach

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## ABSTRACT

This study was undertaken to examine the impact of world crude oil prices on the prices of rice and soybean oil. Autoregressive Distribution Lag (ARDL) method was employed to investigate both the short-run dynamic and long-run relationship. All of the data were the time series annual basis from 1970 to 2008. The results revealed that the long-run relationship between world crude oil prices and rice prices did exist. In addition, the analysis also suggested that crude oil prices formed a major factor in the operation cost for the rice production in Malaysia. Nevertheless, the impact of crude oil prices did not only affect the direct cost in rice production but it also influenced the price of other materials required for rice production such as fertilizers.

**Keywords: World crude oil prices, rice prices, soybean oil prices**

## INTRODUCTION

Due to the sharp rise of the world crude oil prices beginning 2004, the issue of commodity prices has once again become researchers' concern (see *Fig. 1*). In more specific, they have focused on the effect of oil prices on other commodity prices (Yu, Bessler and Fuller, 2006; Baffes, 2007; Amna and Fatimah, 2008). Baffes (2007) conducted a study on the effects of the world crude oil prices changes on 35 other commodities using the annual data from the year 1960 to 2005. The results revealed that if the crude oil prices remained high, the recent commodity prices boom would likely last longer, particularly in the food commodities, fertiliser and precious metal. This is consistent with the study by Amna and Fatimah (2008) who focused on the effect of petroleum prices instead of world crude oil prices on several vegetable oil prices (including soybean oil). The results of the latest study provided strong evidence of a long run equilibrium relation between the prices of the two major commodities. Furthermore, the error correction model estimation indicated a unidirectional long run causality flowing from petroleum to each of the vegetable oil prices under their study.

*Fig. 1* plots the world crude oil prices in US dollar from 1970 to 2008. The world crude oil prices had been sufficiently low in the past two decades. In 2004, however, the world crude oil prices increased sharply and eventually reached US$98.89 per barrel in 2008 (it touched USD136.32 per barrel in July 2008). The world crude oil prices will continue to affect the prices of other commodities in many

*Fig. 1: Price of world crude oil for the year 1970 to 2008*

ways. For example, on the supply side, the world crude oil enters the aggregate production functions of most primary commodities through various energy intensive inputs (e.g. fertilizer and fuel for agricultural commodities) and on transportation expenditures for long distances.

A rapid economic growth in developing countries has resulted in high demand for energy on electricity and industrial uses as well as for transportation fuel. Thus, increases in the world crude oil prices consequently lead to the rise in the prices of the final products. According to the World Bank (2007), global food prices have climbed by 83% since 2005 due to the increase in the prices of food commodity. It is noted that there was a dramatic increase in world crude oil prices at the end of 2008 (see *Fig. 1*). This has affected the cost of producing and transporting fertilizers and many other products which are crucial for the rice production activities. According to Doane Advisory Services (2008), high energy costs would impact the production cost in a variety of ways. Farmers use fuels to operate equipment and run irrigation wells. High energy prices, specifically the price of world crude oil, will indirectly drive up production costs through the increase in the prices of fertilizers and chemicals used in routine operations.

As shown in *Fig. 2*, the prices of rice in Malaysia and soybean oil in the Rotterdam market rose from 1970 to 2008. The prices of rice had continuously increased since 1970, from RM 265 per tonne to reach RM 823 per tonne in 2008. In addition, the prices of soybean oil also showed an upward trend from 1970 to 2008. Apparently, the increase in the world crude oil prices mentioned earlier was concurrent with the rise in the prices of rice and soybean oil in Malaysia and Rotterdam market, respectively.

The high correlation between the price of world crude oil and the prices of food commodities, such as rice and soybean oil, raises the question as to the nature of the relationship between the world crude oil prices and the prices of both commodities. Hence, this paper attempted to investigate the relationship between the world crude oil prices and the prices of both food commodities. This study was expected to provide more empirical evidences on the effects of the world crude oil prices as different approaches were used, and for this purpose, the study period was further extended to 2008, where the world crude oil prices reached a peak level as compared to the studies conducted by Yu *et al*. (2006), Baffes (2007) and Amna and Fatimah (2008).

*Source*: The Ministry of Plantation Industries and Commodities (various issues)

*Fig. 2: The price of Malaysian rice and soybean oil in Rotterdam market for the year 1970 to 2008*

## MATERIALS AND METHODS

This study used the data of the world crude oil prices, and the prices of rice in Malaysia and soybean oil in the Rotterdam market; these data were gathered over the period from 1970 to 2008. The published data on these variables are available from the publications of the Ministry of Plantation Industries and Commodities (MPIC), the Department of Statistics, Malaysia, and the International Financial Statistics (IFS) online service. In more specific, this study evaluated the long-run elasticity and short-run causality as well as examined the impacts of the world crude oil prices on the prices of rice and soybean oil.

The co-integration techniques, such as by Engle and Granger (1987) or Johansen (1988) and Johansen and Juselius (1990), have commonly been used in the empirical economics to study the existence of long-run equilibrium relationship levels between the variables. These methods involve a pre-testing step for unit roots to determine the order of the integration of the variables in the model. In particular, the methods required that all the variables undertaken in the study to be integrated in the same order of one, that is, I(1). In practice, however, not all the variables have a unit root. Some variables are stationary in level I(0), while others may have two unit roots, I(2), or are stationary in second differences. If the orders of integration of the variables undertaken the study are different, it will cast doubt on the accuracy and validity of the estimation results obtained from the co-integration testing procedures.

However, Engle and Granger (1987) pointed out that if the time series was non-stationary, one could then include lagged dependent and independent variables using a sufficiently complex dynamic specification, such as an Autoregressive Distributed Lag (ARDL) model to allow the regressors to have different orders of integration. As such, in this study, the ARDL bound testing approach proposed by Pesaran *et al*. (2001) was used to allow the regressors to have different orders of integration, either I(1) or I(0), in estimating the functions. The bound test, which is based on the estimation of an Unrestricted Error Correction Model (UECM), is applicable irrespective of whether the underlying regressors are purely I(0), I(1) or is mutually co-integrated. Furthermore, the ARDL model is more robust and performs better with a small sample size compared to the standard co-integration methods (Pesaran and Shin, 1999).

The variables used in this study include world crude oil prices (lnCOP), prices of rice (lnRP) and prices of soybean oil (lnSBOP) in the natural logarithmic form. Meanwhile, the dependent variables are the prices of rice and soybean oil. There are two ARDL functions, as follows:

a. The ARDL model for the function of rice prices

$$\Delta \ln RP_t = \beta_0 + \beta_1 \ln RP_{t-1} + \beta_2 \ln COP_{t-1} + \sum_{i=0}^{p} \alpha_3 \Delta \ln RP_{t-i} + \sum_{i=0}^{p} \theta_4 \Delta \ln COP_{t-i} + \varepsilon_t \quad (1)$$

b. The ARDL model for the function of soybean oil prices

$$\Delta \ln SBOP_t = \beta_0 + \beta_1 \ln SBOP_{t-1} + \beta_2 \ln COP_{t-1} + \sum_{i=0}^{p} \alpha_3 \Delta \ln SBOP_{t-i} + \sum_{i=0}^{p} \theta_4 \Delta \ln COP_{t-i} + \varepsilon_t \quad (2)$$

Where, $\ln RP_t$, $\ln SBOP_t$, and $\ln COP_t$ are as mentioned above, and $\Delta$ denotes the first difference operator, $ln$ represents natural logarithmic transformation, $\beta_0$ is the intercept and $\varepsilon_t$ is a white noise error term.

There are two steps involved in testing the co-integration relationship for both equations. First, the two models were estimated using Ordinary Least Square (OLS) technique. Second, the null hypothesis of the no-cointegration $H_0$: $\beta_1 = \beta_2 = 0$ was tested against the alternative of $H_1$: $\beta_1 \neq \beta_2 \neq 0$ by means of $F$-test. Two sets of critical value bound for the $F$-statistics were generated by Narayan (2005). If the computed $F$-statistic fell below the power bound critical value, the null hypothesis of the no-cointegration could be rejected. On the contrary, if the computed $F$-statistic was above the upper bound critical value, the null hypothesis was therefore rejected, implying that there was a long-run co-integration relationship between the variables in the model. Nevertheless, if the calculated value was within the bound, the inference was therefore inconclusive.

## RESULTS AND DISCUSSION

This section presents and discusses the empirical analysis of the relationship between both the ARDL models as mentioned in the methodology part. The complete analysis involved the bound test to analyse the short-run and long-run relationships. The methods which were adopted in the previous literature mainly concentrated on cases where the underlying variables were integrated of order I(1) (Pesaran *et al*., 2001). Meanwhile, the ARDL approach has some advantages over the other approaches. First, the series used do not have to be I(1) (Pesaran and Pesaran, 1997). Second, even with a small sample, more efficient co-integration relationships can be determined (Ghatak and Siddiki, 2001). Finally, Laurenceson and Chai (2003) stated that the ARDL approach could overcome the problems which resulted from non-stationary time series data. If non-stationary problem was not properly handled, it would lead to spurious regression coefficients which are biased towards zero.

Both models for the bound test co-integration relationships are revealed in Table 1. The bound test is important to test the existence of the relationship level between a dependent variable and a set of regressors, particularly when it is not known with certainty whether the underlying regressor are trend or first-difference stationary (Pesaran *et al*., 2001). There is evidence of co-integrating relationship in model number one, i.e. between the prices of world crude oil and prices of rice. This is proven by the computed $F$-statistic (5.58) which lies above the upper bound critical value at 5% level of significance. However, the model for the relationship between the prices of world crude oil and the prices of soybean oil provides no evidence of co-integration. In other words, the increase in world crude oil prices has significantly impacted the prices of rice in Malaysia but not the prices of soybean oil in Rotterdam. This could probably be due to the difference in the trends of the prices for both the commodities (*Fig. 2*). The rice prices continuously increased during the period of the study, whereas the prices of soybean oil decreased several times.

TABLE 1
The bound test results for long-run relationship

| The critical value of the F-statistic: intercept and no trend | | | | | | |
|---|---|---|---|---|---|---|
| | 90% level | | 95% level | | 99%level | |
| T40 | I(0) | I(1) | I(0) | I(1) | I(0) | I(1) |
| | 3.21 | 3.73 | 3.94 | 4.52 | 5.59 | 6.33 |
| Types of commodity | | | Calculated F-statistic | | | |
| Rice prices | | | 5.58** | | | |
| Soya bean oil prices | | | 3.23 | | | |

*Notes*: ** Significant at 5 percent.  The critical values were taken from Narayan (2005)

After analysing the bound test for co-integration, the next step was to estimate the coefficient for the long-run relationships.  The lagged length ($\rho$) in Eq. (1) and Eq. (2) were determined by Schwartz Bayesian Criteria (SBC) following the suggestion of Pesaran and Pesaran (1997).  The SBC indicated $\rho = 2$ as the most appropriate lagged length for both the equations.  The results of the long-run test revealed that only the prices of rice were positive (0.16) and significantly (at 10 percent level) affected by the prices of world crude oil (Table 2).  This is consistent with the finding of the study by Chaudhuri (2001) whereby the prices of the primary commodity and the prices of world crude oil will co-integrate in the long run.  The result also implies that as the price of world crude oil increase, the prices of rice will also increase.  When this occurs, Malaysia has to face not only the price hike in the local crude oil due to the rise in the prices of world crude oil but also in the price of staple food, i.e. the price of rice.  Unlike the prices of rice, however, the price of world crude oil do not significantly impact the price of soybean oil in the long run. This is consistent with the finding of the study by Yu *et al*. (2006).  Even when the price of world crude oil reached its highest peak in 2008, the impact on the price of soybean oil remained insignificant.  One may argue that this could be attributed to the sample period used by Yu *et al*. (2006), which was only until 2006.  In the present study, nevertheless, the data were collected up to 2008.  Hence, this shows that the result is robust as the present study made use of different methods or approaches and sample period as compared to that of Yu *et al*. (2006).  As mentioned earlier, this study used the ARDL method to perform the regression analysis.  On the contrary, Yu *et al*. (2006) used the Johansen and Juselius co-integration method.

Finally, the results presented in Table 3 reveal the error correction representation for the selected ARDL model for the prices of rice and soybean oil.  This is also known as the short-run dynamic coefficient estimation.  Both models indicated that there are insignificant relationships (at 10 percent level) between the price of world crude oil and the price of rice, as well as between the price of world crude oil and the price of soybean oil in the short-run, despite the sign effect for both models are positively correlated, with coefficient 0.02 and 0.08, respectively.  One possible explanation for this is that short-term changes in world crude oil prices could be absorbed by the Malaysian Government.  This is due to its position as one of the crude oil producers in the world.  Thus, if there are any changes in the world crude oil prices in the short-term period, the transportation cost will be marginally affected but it will not impact the prices of commodity.

The error correction model, denoted as ECM (-1) in Table 3, was found to be negatively and statistically significant for both the prices of rice and soybean oil models.  The ECM

TABLE 2
The estimates for the long-run elasticities

| Prices of rice | | | |
|---|---|---|---|
| Regressor | Coefficient | Standard error | P-value |
| Intercept | 6.16*** | 0.31 | 0.00 |
| Crude oil prices | 0.16* | 0.09 | 0.09 |
| Prices of soybean | | | |
| | Coefficient | Standard error | P-value |
| Intercept | 6.39*** | 0.57 | 0.00 |
| Crude oil prices | 0.32 | 0.19 | 0.11 |

*Notes*: *** Significant at 1 percent, * Significant at 10 percent

TABLE 3
The estimates for the short-run elasticities

| Rice prices | | | |
|---|---|---|---|
| Regressor | Coefficient | Standard error | P-value |
| Intercept | 0.92*** | 0.22 | 0.00 |
| Crude oil prices | 0.02 | 0.02 | 0.18 |
| Error correction model (-1) | -0.15*** | 0.04 | 0.00 |
| Soybean oil prices | | | |
| | Coefficient | Standard error | P-value |
| Intercept | 1.61* | 0.88 | 0.08 |
| Crude oil prices | 0.08 | 0.05 | 0.11 |
| Error correction model (-1) | -0.25* | 0.13 | 0.06 |

*Notes*: * Significant at 10 percent, *** Significant at 1 percent

indicates the speed of adjustment process to restore the equilibrium following a disturbance in the long-run equilibrium relationship. A negative and significant error correction term implies how quickly the variables will return to the equilibrium. For instance, the model for the price of rice implies that 15% (ECM coefficient = -0.15) of the disequilibrium of the previous year's shocks are able to readjust to the long-run equilibrium in the current year. Similarly, the model for the price of soybean oil

implies that 25% (ECM coefficient = -0.25) of the disequilibrium of the previous year's shocks are able to readjust to the long-run equilibrium in the current year. It is important to note that the model of the price of soybean oil is better than the model of the price of rice. This is because the model for the price of rice would take 7 years to readjust to the long-run equilibrium. However, the model for the prices of soybean oil only took 4 years to readjust to the long-run equilibrium.

## CONCLUSIONS

In this paper, two models which focused on the impacts of the price of world crude oil on the prices of both rice and soybean oil were examined. The first model analysed the relationship between the price world crude oil and the price of rice in Malaysia. The second model investigated the relationship between the price of world crude oil and the price of soybean oil in the Rotterdam market. Due to the growing interest on the rise and fluctuation of the world crude oil prices, it would potentially increase the need for policy makers to remodel the agriculture-related policies. Therefore, this paper aimed to investigate the presence of the long-run relationship between the price of crude oil and the prices of the commodity, particularly on the prices of rice and soybean oil.

Both models used the ARDL approach which had been developed by Pesaran and Pesaran (1997) and Pesaran et al. (2001). The results of the ARDL bound testing confirmed the presence of co-integration in the model for the price of rice, but not in the price of soybean oil. Over the long-run, it is noted that only the price of rice is affected. This also means that the linear combinations of the variables are stationary and therefore, the prices tend to move towards this equilibrium relationship in the long-run. This finding is supported by the study of Chaudhuri (2001) who demonstrated that the prices of the real primary commodity and the prices of the real crude oil are indeed co-integrated. Nevertheless, in line with the study by Yu et al. (2006), the findings of the present study do not provide a strong evidence for the long-run relationship between the price of world crude oil and the price of soybean oil. This may reflect the robustness of the results obtained in this study. Even though different analysis approaches were used compared to the study conducted by Yu et al. (2006), the results remain similar. This suggests that the present prices of world crude oil have no influence on the price of soybean oil. In addition, the results also reveal that the prices of world crude oil do not affect the prices of rice and soybean oil in the short run.

These findings clearly demonstrate the implications of the world crude oil prices on the agriculture sector, particularly for the production of rice. Since Malaysian rice producers are price takers, high production costs which are resulted from the increase in the world crude oil prices would significantly reduce their profit margin. These situations will become worse if they do not receive any subsidies or incentives from the government. On the other hand, no implication was observed for the world crude oil prices on the price of soybean oil. This finding suggests that soybean oil producers do not have to worry about the fluctuation of world crude oil prices. In addition, it is known that palm oil could influence the price of soybean oil as it is a substitute for soybean oil (Amna and Fatimah, 2008).

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# Efficiency Measurement of a Malaysian Hotel Chain Using DEA

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## ABSTRACT

Efficiency evaluation has become an important improvement tool for hotels to sustain in today's highly competitive environment. This study used DEA approach to evaluate the relative efficiency of a Malaysian hotel chain during the period of 2004 to 2008 in terms of Total Factor Productivity (TFP) change. TFP change is measured using DEA-Malmquist productivity index. DEA is a pragmatic tool which combines multiple inputs and outputs objectively onto an overall measure of organizational efficiency. The Malmquist TFP index measures are decomposed into technical efficiency change and technological change. The decomposition of technical efficiency change into two sub-components, pure technical efficiency change, and scale efficiency change is also discussed in this paper. The actual operating data of five inputs and five outputs were collected from 10 hotels under the chain. Empirical results revealed that the TFP of the hotel chain slightly increased by 0.7% over the time period. Six of the hotels in the chain experienced positive TFP change while the others experienced TFP decline. The quadrant of efficiency was proposed to give a two-dimensional view of the hotel efficiency. Meanwhile, technological change was found to be more important factor of TFP growth as compared to technical efficiency change. Therefore, hotels which faced negative growths of technological change are recommended to improve their efficiency through investment in new technology or by upgrading the necessary skills. Additionally, the paper has also identified the best performing hotel within the chain which can be benchmarked by others who are seeking for performance improvement.

**Keywords: Data envelopment analysis, hotel efficiency, Malmquist index, total factor productivity**

## INTRODUCTION

Tourism is defined as a unique product as it is composite in nature, a combination of the tangible and intangible that includes everything that tourists experience (Kandampully, 2000). Tourism has become a major element of the economic prosperity for almost all countries of the world and Malaysia is of no exceptions. Being one of Asia's most popular tourist destinations, Malaysia attracted 22.0 million tourists with tourist receipts of RM 49.5 billion in 2008 (Ministry of Tourism Malaysia, 2009). The statistics has shown that the tourism industry has emerged as an important sector of the Malaysian economy by virtue of the amount of receipts collected from its activities.

The tourism industry in Malaysia comprises of hotels, resorts, lodging, tour services, travel

agencies, restaurants as well as catering services, and transport companies. The scope of the tourism service has progressed from supplying services or mass products and markets to more innovative tourism packages. These include eco-tourism, edu-tourism, health tourism, sports tourism and event organization (MICE). In the Ninth Malaysia Plan, the tourism industry has been identified as having potential to increase its contribution to the service sector in particular and the economy in general. Indeed, under the Third Industrial Master Plan (IMP3, 2006-2020), the tourism services have been identified as one of the eight service sub-sectors to be focused for further development during the IMP3 period. With the implementation of the Ninth Malaysia Plan and IMP3, tourist arrivals to Malaysia were expected to reach 24.6 million by 2010 and correspondingly, tourist receipts were also estimated to reach RM59.4 billion in 2010 (Ninth Malaysia Plan, 2006-2010).

The expansion of the tourism industry, through its linkages, has contributed to growth in other related activities, such as accommodation. With the aim of enhancing Malaysia as one of the global tourism destinations, the hotel sector, being one of the sectors in the tourism industry, plays an important role in maintaining and improving its performance in order to contribute to the growth of the tourism industry. Meanwhile, the hotel sector has also been identified as the potential area having competitive advantage for the development of the Small and Medium Enterprises (SMEs) in IMP3.

In order to sustain and further boost the tourism industry, the hotel sector needs to operate efficiently and provide comfortable accommodations for tourists. It is important for hotels to formulate marketing competitive strategy, strengthen corporate operations and upgrade its quality of service. In formulating these strategies, hotels must first measure their performance. Performance evaluation serves as an important reference for strategic planning and construction policies. Thus, the top management of hotels needs to find ways to evaluate and improve the efficiency and performance of their establishments.

Existing studies on efficiency in Malaysia have primarily focused on the whole economy or the manufacturing industry, yet little has been done in the services industry at firm level. Similarly, there has been extensive literature examining the efficiency of US, UK, Taiwan and Portugal hotels over the recent years, but similar empirical work on Malaysian hotels is still lacking. Much research on the hotel industry in Malaysia has been devoted to the aspects of service quality and customer satisfaction, but very little is known about the efficiency of hotels. Therefore, this paper aims to evaluate the efficiency of a Malaysian hotel chain using the Data Envelopment Analysis (DEA) approach. Consequently, this paper embarks on the following objectives:

- To analyze the relative efficiency of a Malaysian hotel chain in terms of the Total Factor Productivity (TFP) change.

- To identify the best practices hotel with regards to efficiency.

- To determine the factors contributing to efficiency of the hotels.

## LITERATURE REVIEW

### Data Envelopment Analysis (DEA)

Data envelopment analysis (DEA) has become an increasingly popular efficiency analysis tool. DEA is a non-parametric multiple linear programming technique that utilizes multiple input and output measurements in evaluating relative efficiency of individual units within a given population. DEA constructs a production frontier and measures the efficiency of the developed frontiers in the mathematical programming approach. Charnes *et al*. (1978) were the first to invent data envelopment analysis and proposed the DEA-CCR model (which was named after the authors, namely, Charnes, Cooper and Rhodes). The DEA-CCR model had an input orientation and assumed constant returns-to-scale (CRS). However, the model was later extended by Banker *et al*. (1984) who considered alternative set of assumption. The

model is known as the DEA-BCC model with the assumption of variable returns-to-scale (VRS).

In addition to the DEA-CCR and DEA-BCC models, other developments of DEA include the Malmquist Total Factor Productivity (TFP) index. The Malmquist TFP index measures changes in the total output relative to the changes in the usage of the total inputs by obtaining an output-to-input ratio value that takes into account all significant inputs and outputs. The idea was developed by the Swedish statistician Malmquist (1953). The TFP approach is useful both theoretically and empirically. TFP indices can be derived from the theory of production functions and bring a strong theoretical basis in economic to its analysis. Practically, TFP indices are easier to understand as compared to other non-parametric indices (Nyshadham and Rao, 2000). Thus, the Malmquist TFP index gains importance and is frequently used mainly because it can be calculated using quantity information without price data, so problems regarding unavailable or distorted price information are avoided.

Generally, there are two ways to quantitatively analyze efficiency, i.e. the parametric (stochastic frontier analysis, SFA) and non-parametric (DEA) methods. The method adopted by most efficiency studies in the context of hotel industry belongs to the latter. However, both methods have their own advantages and drawbacks. The SFA approach (Anderson *et al*., 1999) is an econometric estimation of a specific model and it is based on the statistical properties of the error terms. For SFA, the choice of the functional form is crucial to model the data as different model specifications can give rise to very different results. Unlike the SFA approach, the DEA does not impose any functional form on the data, or makes distributional assumptions for the inefficiency term. Instead, DEA is easy to apply and it allows the use of multiple inputs and outputs (Bell and Morey, 1995; Morey and Dittman, 1995).

Both SFA and DEA methods assume that the production function of the fully efficient decision unit is known. In practice, however,

the efficient isoquant must be estimated from the sample data. Therefore, the production frontier is relative to the sample considered in the analysis. DEA is applied to unit assessment of homogenous units which are normally referred to as decision making unit (DMU). The aim of DEA is to estimate relative efficiency among DMUs which perform the same task using similar technology (processing procedure) to pursue similar objectives (outputs) using similar resources (inputs), such as banks, hospitals, hotels and restaurants. Thus, the identification of DMUs, inputs and outputs in an assessment is as difficult as it is crucial (Barros, 2005a).

The DEA method is able to handle non-commensurate, conflicting multiple output measures and multiple inputs factors of the organizations being evaluated. It provides a comprehensive efficiency evaluation by combining multiple inputs and outputs objectively onto an overall measure of organizational efficiency. DEA is also a benchmarking technique that assesses the relative efficiency of decision making units and analytically identifies the best practices and benchmarks for poor performing DMUs. Applications using DEA for efficiency and performance benchmarking have been numerous. DEA studies have been extensively applied to various industries, such as banking (Debasish, 2006; Lin *et al*., 2007), education (Avkiran, 2001), hospitals (Sarkis and Talluri, 2002; Wei and Liao, 2008; Radam *et al*., 2009) manufacturing (Mahadevan, 2002) and restaurants (Sigala, 2004; Reynolds and Thompson, 2007).

*DEA-Based Studies in the Hotel Industry*

An extensive literature review on 35 DEA applications in the tourism and hospitality sectors between 1986 and 2006 was conducted by Wober (2007). The study concluded that DEA has just raised a lot of attention among tourism researchers recently. Majority of the DEA applications are in the hotel industry. Among the earliest, Morey and Dittman (1995) applied data envelopment analysis to evaluate

the general-manager performance of 54 owner-managed hotels of a national chain in the United States for the year 1993. This study provided the owners of single properties with the ability to benchmark a manager's performance. Bell and Morey (1995) also employed DEA to evaluate the relative efficiency and to discover the best practice solutions of 31 travel departments. The study suggested an extension to the basic DEA which is allocative data envelopment analysis as the benchmarking tool. The authors were the first who highlighted the strengths of DEA for the selection of comparison partners.

In the late 90s, there were several DEA studies in the hotel industry. For example, Johns *et al*. (1997) and Tsaur *et al*. (1999) used DEA to measure efficiency of hotels in the United Kingdom and Taiwan, respectively. Johns *et al*. (1997) implemented DEA to monitor and benchmark productivity in a chain of 15 hotels using data for a 12 month's period. The authors found that DEA is very useful for diagnosing and identifying outstanding behaviour in terms of their measured productivity and gross profit. By using a new efficiency measure (EAM) in their data envelopment analysis, Tsaur *et al*. (1999) estimated efficiency the levels of international tourist hotels of Taiwan. The study showed that the EAM could provide a strong discriminating power as compared to traditional DEA, whereby 10% of the 47 hotels studied were relatively efficient in the EAM model while 17% were relatively efficient in the DEA-CCR model.

More studies to gauge the efficiency of the hotels using DEA were carried out in the recent years. For instance, Anderson *et al*. (2000) estimated managerial efficiency in the US hotel industry using linear programming procedure, DEA. Their findings revealed efficiency levels in various forms (namely, overall, allocative, technical, pure technical, and scale efficiency) and showed that the US hotel industry is highly inefficient with a mean overall efficiency measure of approximately 42%. In Taiwan, Chiang *et al*. (2004) with the interest to compare the performance of hotels under different operational styles, using the DEA-CCR and BCC models, to measure the efficiency of 25 Taipei hotels under three types of management (namely, independently owned and operated, franchise licensed, and managed by international hotel operators). The authors found that not all hotels franchised or managed by international hotel operators performed more efficiently than the independent ones. Instead of using the basic DEA model, Barros (2005b) evaluated the determinants of efficiency of Portugal's public-owned hotel chain, Enatur, using the Malmquist productivity index and the Tobit econometric model for the period between 1999 and 2001. The study contemplated four combinations of technical efficiency and technological change and also explained the determinants of the TFP change.

*Inputs and Outputs Identification*

There are three main categories of measurement units of inputs and outputs, namely financial, physical and a combination of both (Ball *et al*., 1986). Both the financial and physical units have been used in previous studies. Simple inputs and outputs which have no ratio or composite data were used by Johns *et al*. (1997). The authors preferred non-financial data to be used in developing their DEA model and analysis. Thus, the following four inputs and three outputs were employed: (1) the number of room nights available, (2) total labour hours, (3) total food and beverage costs, (4) total utilities cost; and (1) number room nights sold, (2) total covers served and (3) total beverage revenue. Meanwhile, the use of the financial data, such as beverage revenue, food and beverage material costs and utility costs, was inescapable but their uses were justified on the basis that they were constant across the country and constant with respect to time.

By applying the DEA-CCR model and the Malmquist productivity index, Hwang and Chang (2003) considered indicators used by the Taiwan Tourism Bureau for input-output factors. In measuring the performance and the efficiency change of 45 hotels in Taiwan, four inputs and three outputs were used: (1) number of full time employees, (2) number of guest rooms, (3) total

area of meal department, (4) operating expenses; and (1) room revenue, (2) food and beverage revenue and (3) other revenue. Similarly, Barros and Alves (2004) looked at hotel efficiency, evaluated a Portuguese public-owned hotel chain and estimated their total factor productivity (TFP) change using the DEA-Malmquist TFP index. The authors used five inputs: (1) number of full-time workers, (2) cost of labour, (3) book value of property, (4) operating costs, and (5) external costs. The sales, number of guests and number of nights spent in the hotel were used as outputs.

On the other hand, Sun and Lu (2005) chose slack-based measure (SBM) Malmquist approach as the appropriate version of DEA to measure the hotel performance of 55 international tourist hotels in Taiwan. The four inputs and four outputs used include (1) total operating expenses, (2) number of employees, (3) number of guest rooms, (4) total area of catering department; and (1) total operating revenues, (2) average occupancy rate, (3) average daily rate, and (4) average production value per employee in the catering department. Despite the inputs and outputs discussed, relevant inputs and outputs should be used depending on the focus of the analysis.

## METHODOLOGY

This study applied the Malmquist TFP productivity index, i.e. a non-parametric approach to measure the productive efficiency of a Malaysian hotel chain. This index represents the TFP growth of a DMU, in which it reflects (1) progress or regress in efficiency along with the (2) progress or regress of the frontier technology between two periods of time under the multiple inputs and multiple outputs framework (Cooper *et al.*, 2007). This study employed the output-based approach where the question "by how much can the output quantities be proportionally expanded without altering the input quantities used?" could be asked. In this paper, the productivity change is decomposes into two components namely, technological change (TECHch) and technical efficiency change (EFFch). The

decomposition of TFP into technical efficiency change and technological changes shall provide useful information in the productivity analysis. Technical efficiency change shows that the hotel can be more productive by utilizing the existing technology and economic inputs more efficiently. Meanwhile, technological change refers to the growth in the total factor productivity (TFP) as a result of the technological advancements and innovations in the hotel system.

The Malmquist TFP index measures the TFP change between two data points (e.g. those of a particular firm in two adjacent time periods) by calculating the ratio of the distances of each data point relative to a common technology. Fare *et al.* (1994) specified an output-based Malmquist productivity change index between period *t* (the base period) and the period *t+1* is given by:

$$M_0\left(y_{t+1}, x_{t+1}, y_t, x_t\right) = \left[\frac{d_0^t\left(x_{t+1}, y_{t+1}\right)}{d_0^t\left(x_t, y_t\right)} \times \frac{d_0^{t+1}\left(x_{t+1}, y_{t+1}\right)}{d_0^{t+1}\left(x_t, y_t\right)}\right]_{1/2}$$

[1]

where $d_o^t\left(x_{t+1}, y_{t+1}\right)$ represents the distance from the period *t+1* observation to the period *t* technology. A value greater than one indicates a positive TFP growth from period t to period *t+1*, while a value less than one indicates a TFP decline. The decomposition is as follows:

$$\text{Technical efficiency change} = \frac{d_0^{t+1}\left(x_{t+1}, y_{t+1}\right)}{d_0^t\left(x_t, y_t\right)} \quad [2]$$

$$\text{Technological change} = \left[\frac{d_0^t(x_{t+1}, y_{t+1}) \times d_0^t x_t, y_t}{d_0^{t+1}(x_{t+1}, y_{t+1}) \times d_0^{t+1}(x_t, y_t)}\right]_{1/2} \quad [3]$$

Thus, the Malmquist TFP index can be written as:

$$TFP = EFFch \times TECHch \quad [4]$$

However, improvement in TFP growth does not mean enhancement in both technical efficiency and technological change. Technical efficiency change measures the change in efficiency between current (*t*) and

next ($t+1$) periods, while the technological change (innovation) captures the shift in the frontier technology. By differentiating technical efficiency and technological change, policy actions can be expected to bring about improvement in TFP growth directly.

Furthermore, technical efficiency change can be further decomposed into sub-components, namely, pure technical efficiency change (PEch) and scale efficiency change (SEch), as follows:

$$EFFch = PEch \times SEch \qquad [5]$$

Pure technical efficiency change which is calculated relative to the variable returns-to-scale (VRS) technology measures the relative ability of DMUs to convert inputs into outputs. It shows the investments in the organizational factors related to hotel operation. Meanwhile, scale efficiency change captures changes in the deviation between the VRS and CRS (constant returns-to-scale) technology and measures to what extent DMUs can take advantage of returns to scale by altering its size towards optimal scale (Fare *et al*., 1994).

*Input and Output Measures*

Careful identification of the inputs and outputs is very important for a successful application of the DEA. The assessment of comparative efficiency using DEA should begin with the selection of appropriate input and output measures which can be aggregated into a composite index of overall performance standards. Although any resources used by DMU can be included as inputs, five inputs were selected for this study. The identified inputs were the number of room nights available, the number of employees, employment costs, food and beverage costs, and total operating costs, whereas the five selected outputs included the number of room nights occupied, the number of guests, average occupancy rate, food and beverage revenues, and total operating revenues.

The variables were selected based on the reviewed literature and the availability of the data. For example, total operating expenses including room costs, utilities and maintenance fees whcih affected the profitability of hotels were viewed as inputs. As for the outputs, the total operating revenues which significantly influenced the financial efficiency of hotels were included. As the profit measure alone might not be a good indicator of how efficiently resources were used to provide customer services, the average occupancy rate was also included as an output, because it reflected how efficiently room capacity was utilized as a result of the invested expenses.

Panel data covering the observations on the input and output variables for all decision making units in for year 2004 to year 2008 were collected through mail survey. The questionnaires, which were accompanied with an explanatory letter, were mailed to the managers of the 10 hotels under the chain. The questionnaire contained five input and five output variables with definition and unit. The managers were asked to complete the questionnaire with the operational data of their hotels. After the collection of data, the cost and economic data (e.g. employment costs, food and beverage costs, etc.) were deflated into a constant value (base year 2000) using deflators such as consumer price index (CPI) and added value deflator which were obtained from the Department of Statistics, Malaysia. After deflation, the panel data were analyzed using the Data Envelopment Analysis Programme 2.1 (DEAP 2.1) Software (Coelli, 1996) to compute the Malmquist productivity index of the hotel chain.

Table 1 shows the descriptive statistics of the inputs and outputs of 10 hotels under the chain incorporated in this study.

**RESULTS AND DISCUSSION**

Based on the output-oriented DEA-Malmquist productivity index, the efficiency of the Malaysian hotel chain was measured for the period 2004 to 2008. The performance of the Malmquist productivity index of the 10 hotels under the chain is displayed in Table 2. On the

TABLE 1
Descriptive statistics of the inputs and outputs of the hotel chain, 2004-2008

| Variables | Minimum | Maximum | Mean | Std. dev. |
|---|---|---|---|---|
| Input | | | | |
| Number of room nights available | 17155 | 54900 | 33120.46 | 12310.80 |
| Number of full-time equivalent employees | 28 | 69 | 48.64 | 14.22 |
| Employment costs (RM) | 56883.72 | 1185121.11 | 569247.91 | 275032.74 |
| Food and beverage costs (RM) | 93166.67 | 879471.65 | 360587.01 | 173619.80 |
| Total operating costs (RM) | 66624.55 | 4251303.25 | 1103950.41 | 1048039.13 |
| Output | | | | |
| Number of room nights occupied | 7704 | 36424 | 22418.06 | 8848.21 |
| Number of guests | 16911 | 79774 | 45747.88 | 17944.14 |
| Average occupancy rate (%) | 44.79 | 82.92 | 66.77 | 9.79 |
| Food and beverage revenues (RM) | 17394.64 | 1830227.74 | 885923.86 | 454694.82 |
| Total operating revenues (RM) | 52515.96 | 4074534.16 | 2350302.10 | 1163878.27 |

average, Hotel J recorded the highest growth in term of the TFP with 5.1%, followed by Hotel A (4.2%), and Hotel F (1.8%). Meanwhile, Hotel B recorded the lowest growth in the TFP with negative 2.5%. Overall, the results revealed that the mean score of the TFP change was 1.007, indicating that the TFP of the hotel chain had slightly increased by 0.7% over the time period. Within the chain, 6 of the hotels experienced positive TFP change while the others faced TFP decline.

Table 2 also presents the decomposition of the TFP changes into two components, namely, technical efficiency change and technological change. There was lower technical efficiency change and higher technological change for all hotels. This might be due to the short-run cost-minimizing behaviour in the face of quasi-fixed vintage of capital. All hotels recorded the same level of technical efficiency change (1.000) suggesting no change in technical efficiency during the time period. Meanwhile, all the hotels experienced different levels of technological changes. Six hotels registered increased technological changes of more than 1.000, while the other four registered decreased in the technological change of less than 1.000.

Technical changes can be associated with the diffusion of best-practice technology in the management of hotel activity, such as investment planning, technical experience, and the management and organization in the hotel. On the other hand, technological change is related to the consequence of innovation, such as the adoption of new technologies in the hotel system. On the average, the improvement in the TFP of the Malaysian hotel chain was attributed by technological change (0.7%). Thus, technological change was found to be more important factor of TFP growth as compared to technical efficiency change.

Based on the four combinations of technical efficiency change and technological change introduced by Barros (2005b), this study also contemplated the combinations of technical efficiency change and technological change of the Malaysian hotel chain into a quadrant of efficiency. *Fig. 1* depicts the quadrant of efficiency of the 10 hotels under the chain examined in this study.

There were six hotels included in the first quadrant (Q1), namely, Hotel J, Hotel A, Hotel F, Hotel H, Hotel D, and Hotel E. This quadrant illustrated the hotels with improvements in the

TABLE 2
Malmquist productivity index of Malaysian hotel chain means, 2004-2008

| DMU | TFP change (TFPch) | Technical efficiency change (EFFch) | Technological change (TECHch) |
|---|---|---|---|
| Hotel A | 1.042 | 1.000 | 1.042 |
| Hotel B | 0.975 | 1.000 | 0.975 |
| Hotel C | 0.982 | 1.000 | 0.982 |
| Hotel D | 1.007 | 1.000 | 1.007 |
| Hotel E | 1.003 | 1.000 | 1.003 |
| Hotel F | 1.018 | 1.000 | 1.018 |
| Hotel G | 0.998 | 1.000 | 0.998 |
| Hotel H | 1.014 | 1.000 | 1.014 |
| Hotel I | 0.979 | 1.000 | 0.979 |
| Hotel J | 1.051 | 1.000 | 1.051 |
| Mean | 1.007 | 1.000 | 1.007 |



Fig. 1: Quadrant of efficiency for a Malaysian hotel chain, 2004-2008

technical efficiency change co-existed with the improvements in technological change. These hotels were found to be the best-performing hotels during the period because they had upgraded the organizational factors related to the uses of inputs and outputs and showed innovations related to new technology. As for Hotel J, which was the hotel with the best practices within the chain, it showed

improvement in resource allocation by using less inputs (the number of employees maintained and a decrease in the total operating costs during the period), increasing its outputs (the number of room night occupied, number of guests, and total operating revenues). This hotel was able to fully utilize resources available and obtained better revenues. In addition, Hotel J also had a better implementation on the multi-skilling concept

and more effective staffing and scheduling which helped to reduce the dependency on additional employees and consequently contributed to the efficiency of the hotel. The second quadrant (Q2) illustrates hotels with improvements in the technical efficiency change that co-existed with a decline in the technological change. Four hotels, namely, Hotel G, Hotel C, Hotel I, and Hotel B fell into this particular quadrant. These hotels faced a decline in technological change because they upgraded their organizational factors without introducing any new technology that could help them in improving their organizational factors. These hotels are recommended for an induction in technological innovation. In other words, they may need to acquire new technology or innovations and upgrade necessary skills in order to improve the performance.

Hotels which experienced a decline in the technical efficiency change co-existed with improvements in technological change were categorized in the third quadrant (Q3). However, the results in this study showed that none of the hotels fell into this quadrant. Falling into this quadrant would mean that the hotels might have invested in new technologies but were not able to balance the use of inputs versus outputs.

They might need to upgrade their organizational factors, such as marketing initiatives, improvement in quality and achievement of a better balance between the inputs and outputs. Finally, the fourth quadrant (Q4) displays hotels which experienced a decline in both the technical efficiency change and technological change simultaneously. Nevertheless, none of the hotels in the chain fell into this quadrant. If they were classified into this quadrant, the hotels would be categorized as inefficient. Hence, the policy has to accelerate the efficiency through the application of the latest technology, learning-by-doing processes and managerial practices. Corrective actions such as improving the organizational factors related to the balanced use of inputs versus outputs and adopting new technologies or innovations associated with the upgrading of organizational skills are therefore necessary.

The decomposition of the technical efficiency change was further divided into two sub-components, namely pure technical efficiency change and scale efficiency change, as presented in Table 3. All the hotels experienced no changes in both pure technical efficiency change and scale efficiency change (1.000)

TABLE 3
Technical efficiency components of a Malaysian hotel chain, 2004-2008

| DMU | Technical efficiency change (EFFch) | Pure technical efficiency change (PEch) | Scale efficiency change (SEch) |
|---|---|---|---|
| Hotel A | 1.000 | 1.000 | 1.000 |
| Hotel B | 1.000 | 1.000 | 1.000 |
| Hotel C | 1.000 | 1.000 | 1.000 |
| Hotel D | 1.000 | 1.000 | 1.000 |
| Hotel E | 1.000 | 1.000 | 1.000 |
| Hotel F | 1.000 | 1.000 | 1.000 |
| Hotel G | 1.000 | 1.000 | 1.000 |
| Hotel H | 1.000 | 1.000 | 1.000 |
| Hotel I | 1.000 | 1.000 | 1.000 |
| Hotel J | 1.000 | 1.000 | 1.000 |
| Mean | 1.000 | 1.000 | 1.000 |

during the time period. The results showed that both the subcomponents appeared to be equally important to the technical efficiency change. However, there was no improvement in both the sub-components. The improvement in pure technical efficiency change would also mean that the hotels might have invested in organizational factors related to hotel operation and achieved better balance between inputs and outputs. On the other hand, the growth in the scale efficiency change would mean that the size of hotels did matter in affecting their efficiency changes and obtaining economies of scale.

This study also analyzed the productivity changes of 10 hotels under the chain for the period from 2004-2008 using the output-oriented Malmquist approach. The results are presented in Table 4.

As shown in Table 4, none of the hotels had a clear-cut positive or negative productivity change from 2004-2008. Two hotels, namely Hotel A and Hotel G, revealed a better achievement, whereby they achieved positive productivity changes for 3 out of the 4 period intervals. This

might be due to the reason that these two hotels are located at famous tourist destinations and they had also performed better and allocated resources effectively. Conversely, Hotel C and Hotel I recorded negative productivity changes for 3 out of the 4 period intervals. These hotels may need to improve in their performances and resource allocation in order to achieve positive productivity change.

Table 4 also suggests that 7 out of 10 hotels had positive productivity changes between 2005 and 2006. This might be due to the contribution of the promotional efforts by the Malaysian Tourism Promotion Board (MTPB) and Malaysia's increasingly strong reputation as a centre for international events. Besides, this might be the results of the implementation of strategic measures by the Malaysian Government during the Eight Malaysia Plan (2001-2005) to attain rapid tourism growth on a sustainable basis. These strategic measures have benefited the tourism and hotel industry in particular. In contrast, 7 out of 10 hotels had negative productivity changes between 2007 and 2008.

TABLE 4
Productivity changes of a Malaysian hotel chain, 2004-2008

| DMU | 2004-2005 | 2005-2006 | 2006-2007 | 2007-2008 | Firm means | Positive changes | Negative changes |
|---|---|---|---|---|---|---|---|
| Hotel A | 1.119 | 1.023 | 0.828 | 1.246 | 1.042 | 3/4 | 1/4 |
| Hotel B | 0.958 | 0.909 | 1.034 | 1.005 | 0.975 | 2/4 | 2/4 |
| Hotel C | 0.958 | 1.040 | 0.949 | 0.981 | 0.982 | 1/4 | 3/4 |
| Hotel D | 0.983 | 1.058 | 1.012 | 0.977 | 1.007 | 2/4 | 2/4 |
| Hotel E | 0.908 | 1.117 | 1.012 | 0.985 | 1.003 | 2/4 | 2/4 |
| Hotel F | 1.155 | 0.890 | 0.959 | 1.090 | 1.018 | 2/4 | 2/4 |
| Hotel G | 1.008 | 1.035 | 1.003 | 0.948 | 0.998 | 3/4 | 1/4 |
| Hotel H | 0.985 | 1.081 | 1.009 | 0.985 | 1.014 | 2/4 | 2/4 |
| Hotel I | 1.028 | 0.993 | 0.934 | 0.961 | 0.979 | 1/4 | 3/4 |
| Hotel J | 0.999 | 1.105 | 1.168 | 0.947 | 1.051 | 2/4 | 2/4 |
| Annual means | 1.008 | 1.023 | 0.987 | 1.009 | 1.007 | 3/4 | 1/4 |
| Positive changes | 4/10 | 7/10 | 6/10 | 3/10 | 6/10 | 20/40 | 20/40 |
| Negative changes | 6/10 | 3/10 | 4/10 | 7/10 | 4/10 | 20/40 | 20/40 |

The increase in the negative productivity changes in the hotel chain during this period was possibly caused by the global financial crisis (2007–2008). In more specific, this crisis had adversely affected many businesses related to the tourism sector, such as the hotels, tour agents, airlines, retail trade, restaurants, as well as other businesses in other sectors.

## CONCLUSIONS

This paper has examined the efficiency of a Malaysian hotel chain in terms of their TFP growth. A DEA model with five inputs and five outputs was specified and used to estimate hotel efficiency. The analysis was based on the DEA-Malmquist productivity index, which could be decomposed into technical efficiency change and technological change. Additionally, the technical efficiency changes were further divided into subcomponents, namely pure technical efficiency change and scale efficiency change. The Malmquist TFP index is important in performance measurement as it helps in the determination of the factors contributing to the efficiency of hotels.

The findings of this study can briefly be concluded as follows. Hotels J, A, F, H, D, and E were relatively efficient as compared to other hotels within the chain, with Hotel J being the top performer in the hotel chain. TFP was found to have increased by 0.7% throughout the period between 2004 and 2008 for the whole chain. The years from 2005 to 2006 recorded the highest TFP growth (2.3%) whereas the lowest growth (-1.3%) was recorded for the period from 2006 to 2007. The TFP growth in the hotel chain was mainly due to the technological change (0.7%). The results of the analysis have important implications to the Malaysian hotels chain. In more specific, the results indicate that the hotel chain has the potential to further increase its TFP growth through improvement in technological advancement and innovations, along with a constant upgrade of organizational factors. The technological advancement can also be associated with the investment in new methods,

procedures and techniques in the hotel operation. The findings can benefit hotel managers who are seeking for performance improvement in which they can benchmark practices being adopted by the best performing hotels. Finally, the findings also serve as an index for hotel management to further improve their establishment's efficiency.

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# Application of Vernacular Architectural Ideas in New Saffein Village of Kish Island

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## ABSTRACT

The vernacular architecture of Iran is a result of a long time process of both social and cultural developments which have expanded all over the country. The hot and humid region of Iran is situated in a long and thin coastal strip on the northern side of the Persian Gulf. Kish Island, with more than 1000 years of history, is located in this region with the same social and climatic factors. Kish was selected as the first Free Tourist Zone of the country in 1971. Following this, Masheh, the most flourishing village on the Island at that time, was relocated in an area adjacent to Old Saffein village, on the north-west coast. This new village is called New Saffein. It has a mixture of traditional and modern architecture. This study sought to emphasize the architectural concepts and ideas which are applied in the houses of New Saffein. The study also reviewed the background of the island in field of vernacular architecture through documental and observational studies. It also investigated the architecture of New Saffein in Kish as a case study in comparison with the vernacular architecture in Old Saffein. It will review the design and construction processes of the houses in New Saffein in relation to the traditional methods used in Kish Island. The article finally attempts to analyse the application of vernacular knowledge in designing New Saffein village to find strategies for guiding the process of developing contemporary housing appropriate for Kish Island and other similar places.

*Keywords:* Iranian vernacular architecture, Persian Gulf Region, Kish Island, Old Saffein, New Saffein

## INTRODUCTION

Kish Island is one of the most important islands on the northern side of the Persian Gulf. The southern Iranian province of *Hormozgan* governs the Island. During the recent decades, this island, which was once considered a special place to live by the Iranians, has undergone dramatic changes. Kish was selected as a Free Tourist Zone in 1971. Following this, the residents of *Masheh* village, i.e. the most flourishing village on Kish Island at that time, were moved to an area adjacent to *Old Saffein*, on the north-west cost. It is now called New Saffein. The new development has

a mixture of traditional and modern architecture. *Mahmood Monsef*, the first General Director of the Kish Free Zone Organization (KFZO) and the principal architect of New Saffien, mentioned that the effects of the project would make positive impacts to the indigenous local people's living (Monsef, 1978). In contrast, 18 years later in an official report by the same organization, it was found that the people were not interested in leaving their family homes and moving to a new place. Consequently, this show of indifference towards some cultural and social aspects is blamed for some changes in the following years.

Now, after three decades, the questions about the appropriateness of this redevelopment are still being pondered upon. This study attempted to explain the socio-economic values which are evident in the original vernacular architecture on Kish Island. It also investigated the architecture of New Saffein in Kish as a case study in comparison with the vernacular architecture in Old Saffein. In addition, it also reviewed the process of design and constructions of the houses in New Saffein in relation to the traditional methods used in Kish Island.

## VERNACULAR ARCHITECTURE ON KISH ISLAND IN THE NORTHERN EDGE OF THE PERSIAN GULF

The vernacular architecture of Iran is a result of a long time process of social, cultural and environmental developments which are extended all over the country. The hot and humid region of Iran is situated in long and thin coastal strip on the northern side of the Persian Gulf (see *Figs. 1* and *2*). Kish Island is located in this region with the same social and climatic factors.



*Fig. 1: Map of Iran*



*Fig. 2: Hot and humid region, the north side of Persian Gulf*

The Iranian vernacular architecture is based on five fundamental characteristics (Pirnia and Memarian, 1992), namely, the compatibility with needs of people (*Mardom-vari*), inward-looking (*Daroon-geraei*), avoiding un-necessities (*Parhiz az bihoodegi*), self-efficiency (*Khod-basandegi*), and structural rigidity (*Niaresh*). These codes are related to building quality from two aspects (Vakili-Ardebili and Boussabaine, 2006); firstly, concepts and ideas, and secondly, construction and technology. *Mardom-vari*, *Daroon-geraei* and *Parhiz az bihoodegi* address the quality of concept and idea (socio-economical aspects) which the article focuses on, whereas *Khod-basandegi* and *Niaresh* point out the issues related to construction and technology (physical aspects).

In this region, long summers are hot and humid and winters are short and mild. Humidity in all seasons is high (more than 60%) throughout the year. Its annual precipitation is very low, most of which is in the fall and winter. The yearly average rainfall is 145 mm. The mean temperature is between 30 - 34°C during the spring and summer. Sub-ground waters are saline in much of the region and vegetation all around this region is limited. The most important features of the vernacular architecture in this area are the adaptation to the environment and the consideration of economic factors through energy saving techniques (Babakrad, 1985; Pourjafar, 1996).

In general, the characteristics of the vernacular architecture of the region are reflected by one-storey dwelling units with courtyards, high surrounding walls, large windows (towards the courtyard) (Azari-Najafabadi *et al.*, 2006). In the houses, most of the bedrooms face east and small rooms are located on the other sides. In addition, due to the high humidity, there are no basements in the buildings. Natural ventilation and breeze are the main ways to reduce the high temperatures and to cool the spaces (Babakrad, 1985). The roofs, which are usually flat, are used as sleeping areas during summer nights. The houses typically do not have any windows on the external walls to prevent indoor activities from being viewed from the outside. Additionally, it creates a better thermal exchange. Natural ventilation takes place through the main entrance door of the houses. Adaptation to the environment and the use of natural energy are fundamental beliefs in their vernacular architecture (Pourjafar, 1996; Babakrad, 1985). Furthermore, the wind tower is the dominant feature in these coastal cities. The size and height are directly related to their distance from the sea. Furthermore, limestone and adobe are commonly used in the house. Both provide a good solar reflection; adobe due to its form and limestone because of its light colour (Azari-Najafabadi *et al.*, 2006). All of the settlements in the region have similar local cultural and living aspects as well as traditional house construction methods. Kish Island which is located in the region has similar climatic factors as discussed above.

## NEW SAFFEIN VILLAGE VS. OLD SAFFEIN VILLAGE

Kish Island has more than 1,000 years of history. It reached its zenith of progress between the 12th and 15th A.D. century. In the late 1970s, Kish Island gained prominence again due to its natural and geographical features. During that time, the island had around 10 small villages, out of which *Masheh* and *Saffein* were the two most flourishing ones.



*Fig. 3: To replace Masheh village with New Saffein village*

Due to Kish's new status as a Free Tourist Zone, the traditional lifestyle gave way to dramatic and modern changes. The north-east coast of the Island was selected as the main tourist area at the same location as *Masheh* village. Following this, all the residents of *Masheh* village moved to a new village adjacent to *Saffein*, on the north-west coast in 1975 (*Figs. 3* and *4*). It was called New Saffein. Wooden windows, plain mortar-covered facades disguising, modern concrete structures, and narrow winding paths have formed New Saffein into a contrast of old and new. The government built the houses for all of the residents of *Masheh* at appropriate places as compared to their original lands. The village was built to represent the traditional lifestyle and the typical vernacular architecture of the northern edge of the Persian Gulf for tourists to see. *Monsef*, the principal architect of the village, believes that these buildings present a transformation from old to new. He also mentioned that this project would have positive effects on the local people's living style (Monsef, 1978).

According to one of the KFZO's official reports, the residents of *Masheh* had moved to their new living and working places in New Saffein with interest and eagerness (Monsef, 1978). Nonetheless, based on the recent reports by KFZO[1] and also by Mokhtarpour, the residents of *Masheh* had not been interested to

[1]Kish Free Zone Organization.

*Fig. 4: New Saffein in the neighbouring Old Saffein*

move from their ancestral houses (Mokhtarpour, 2002). The government had changed their large lots to some new smaller lots. As a result, they did not have any place for their traditional vegetable and animal rearing practices at the new houses. Moreover, they lost much of their tradition and their historical culture through these changes. Today, the population of New Saffein is around 800 people who are living in 129 residential units and in a total area of 26,487 square meters.

Vernacular houses are the best examples of the harmony between humans, construction and nature. Hence, this article attempts to analyse the applications of vernacular knowledge in designing New Saffein village to find the strategies for guiding the process of developing contemporary housing appropriate for Kish Island and other similar places. For this purpose, this article presents a comparative study on site planning, specific building elements for the evaluation of the features of the vernacular architecture of Kish Island as used in New Saffein.

## CONCEPTS AND IDEAS

This part of the article compares two general characteristics used in the vernacular architecture of Old Saffein and in the design of New Saffein village. This paper also covers site planning and specific building elements which are covered as sub-topics.

## RESEARCH METHODOLOGY

This study employed two stages to find the characteristics of the vernacular architecture of Old Saffein and assess the application of the same characters in New Saffein on Kish Island. The first stage overviewed the background of the architecture for the hot and humid region of Iran as a part of the Iranian architecture, and also the island in the fields of vernacular architecture through archival and observation study. For this purpose, the principle definitions of the Iranian architecture by *Pirnia* [2] were used as the basis of this study. As a result, all of the elements, which were studied in this research, refer to *pirnia's* definitions. The study also attempted to identify the socio-cultural characteristics of the local people of Kish Island and to understand the occupants of these houses. Moreover, it also reviewed several government publications, particularly the anthropological studies by *Mokhtarpour*, which included maps, photographs and statistics and information about Kish from 1960 to the present day. In this paper, the architectural study of the authors completed the investigation on *Mokhtarpour* for both the villages. In the second stage, there was also a study on the appearance of the vernacular houses through physical observation using photographs and free-hand drawings. In addition, some spatial dimensions were measured in detail for more clarifications. Moreover, the corresponding author was living and working on the Island for

[2]Dr Mohammad Karim Pirnia is known as father of Iranian architecture in the country.

more than six years. Therefore, he not only had access to the first-hand information, but also direct contact with the residents. Living in the research location could open up tremendous opportunities for observation and interactive data collection.

## SITE PLANNING

Four factors related to the site planning of the vernacular houses were studied; these were orientation, organization, layout, and vegetation. The orientation of all the houses was the first factor to be considered in hot regions and it must be carefully determined. This is because a correct orientation can maximize the good effects of cool breeze and minimize the bad effects of the hot sunshine (Ardalan, 1976). In addition, the direction of Kiblah is also another important factor in the orientation of the Muslim settlements. The second factor is site organization which is affected by social, economical and environmental values of the community. The region's vernacular architecture normally consists of a series of spaces which are grouped around a courtyard. The third factor is the layout which clarifies the functions of the different parts of the houses. The old large houses include three different courtyards, each with different functions, namely the main yard, the guest yard and the back yard. Finally, the last factor is vegetation which has a very important role in creating valuable shade.

In this region, vernacular houses have short facades on the west and east sides to reduce the affects of strong solar radiation. In contrast, facades on the north side, and particularly on the south side, are long (Azari-Najafabadi *et al*., 2006). For this reason, the vernacular houses of the old Saffein have been created with summer and winter sections. The summer spaces look towards the gulf and the winter spaces are on the opposite side. On the contrary to the regional orientation of the houses which face southward, the vernacular houses in the old Saffein face northward in order to catch the valuable breeze coming from that direction. Moreover, the Kiblah plays an important role in the orientation

of these traditional dwellings. *Jame Mosque* is the heart of the village and all the buildings are built around it (*Fig. 5*).



*Fig. 5: Fabric of Old Saffein*



*Fig. 6: Fabric of New Saffein*

In New Saffein, the designers considered the use of modern air conditioning systems. Due to this, they paid less attention to climatic features and the wind direction at the Island (Mokhtarpour, 1999). Moreover, the direction of the houses also varies. For some houses, the living area is located on the south side of the house and facing the gulf, and this is a climatic solution to decrease the high temperature and humidity. On the contrary, some other houses in the neighbourhood face the sun on the east and west sides (see *Figs. 6* and *10*). It was not found in other vernacular settlements of the region. As a result, during the first 10 years of the revolution in Iran, the residents of the village faced a lot

of problems involving power cut off because of some technical and economical reasons. In more specific, they needed electricity to cool off their houses but did not have the supply (Mokhtarpour, 2002).

The urban form of the Muslim environment is greatly contributed by the Islamic principles of the strong social interaction and neighbourly relationships. This foundation is supported by the compact urban form of the residential areas in the traditional Islamic environment of the hot regions (Mortada, 2003). In addition, compactness is another technique of minimizing the direct radiation of the sun on the outside facades of the houses (Ardalan, 1976). In the village, shadow network is formed by a number of different techniques. The most common component of the shadow network is a path, or *kucheh*. The shade is created by its narrow width and high walls which form its edge.

In New Saffein, although, the principle of compactness is applied in the design of most sections of the village (*Fig. 7*), but less attention is paid to this matter for the external part of the house. The traditional courtyard form is not commonly used in the houses. In addition, some of the houses have short external walls to present the residents' traditional lifestyle to the tourists (Monsef, 1978). However, this is not accepted by the local people because it allows outsiders to see internal part of the house, which is in contrast with their beliefs. As a result, the entire short walls were made higher by the owners in the recent years (*Fig. 8*).



*Fig. 8: Short wall has become taller, New Saffein*

The region's vernacular architecture normally consists of a series of spaces which are grouped around a courtyard. These create a semi-enclosed building which reduces the impacts of the outside hot air on the buildings (Azari-Najafabadi *et al.*, 2006), as the warm courtyard floor and the flat roof give out heat at night. In Old Saffein, the vernacular architecture is generally inward-looking. The majority of the houses are organized to have three sections, namely the main yard, the guest's yard, and the back yard (traditional privacy model) (*Fig. 9*). There are two different entrances in the houses, with the main entrance opens to the main yard and the guest entrance opens to the guest's yard.



*Fig. 7: A wide street, New Saffein*



*Fig. 9: Traditional privacy model*

*Fig. 10: Site organization, New Saffein*

It is important to note that New Saffein is a Muslim settlement. Islam does not absolutely specify the size of the family. Due to this reason, most of the houses have expanded on their sites because the family size has increased during the recent years. The original houses are designed in two sections. The first section includes the rooms and the second section includes the kitchen, bath and toilet which are built on the other side (*Fig. 10*). *Figs. 11a* and *11b* present a typical house in New Saffein before and after the expansion. This house was designed as a one-family unit but it was changed to support two families in one house.

As mentioned above, the old large houses of Old Saffein include three different courtyards with different functions[3] namely *Hoy_al_beyt* (the main yard), *Hoy_al_majles* (the guest yard) and *zaribe_al_saghirah* (the back yard). The living room (*moraba'eh*), bedrooms (*otagh*), kitchen (*matbakh*) and toilet surround the main yard. Adjacent to all the bedrooms is a place for bathing and this is known as *qati'eh* (*Fig. 12*). *Qati'eh* is separated from the *otagh* with a wall that is increased to the height of 70 cm below the ceiling. *Otaghs* is accessed through a corridor called *Sabat*. At a corner of the yard, there is a place for storing fishing tools and crops (Mokhtarpour, 1999). In the vernacular architecture of Kish Island, the male visitors never enter the main yard. They are brought inside through a special door that opens to the guest's yard. The *mozif* (a special room for the guests) is located in this yard (*Fig. 13*). If the site is too small for a guest's yard, there is a direct door to the *mozif* from the street. Indigenous people keep animals in the backyard. It is separated from the main yard by some low walls. The houses are also flexible to allow for expansion when the families increase in size.

[3]All the local (Arabic) words in this article are borrowed from the book entitled, "Two Years with Indigenous in Kish Island: The Anthropological Study" written by Rajabali Mokhtarpour.



*Figs. 11 a and b: A typical house (Mr. Sedaghat's house) in New Saffein, before and after the expansion*

Fig. 12: Vernacular house, Old Saffein



Fig. 13: A mozif in a vernacular house

In New Saffein, on the other hand, the houses only have one courtyard. Most of the spaces are located on two sides of it, and directly open to this courtyard. Rooms are located on one side, whereas the kitchen and bath are on the opposite side. These houses do not have functional spaces, such as *majlesi* and *qati'eh*, which are necessary for the usual lifestyle of the local people. Moreover, Islam encourages an extended form of family in order to maintain strong family ties. Taking all measures to prevent the splitting up of the family and a preference for the extended family living in a single house are two important principles of the Muslim communities (Mortada, 2003). The people of the village follow these beliefs. As a result, any increase in the family members brings

about problems to them. Therefore, many of the owners have expanded their buildings inside their land although they do not have enough area for to do so (*Fig. 14*). Based on an official report, more than 70% of the owners have extended their buildings in their house. Today, 159 families are living in 98 family-units in this village.

Vegetation plays an important role in the vernacular architecture of Kish Island because of its valuable shading properties. *Kahoor* (Prosopis Cineraria) and *Loor* (Ficus benghalensis) are two tree types which are not common to the region but are indigenous to the island. In addition, in the houses of Old Saffein, the backyards are used to cultivate summer crops.

Some local trees in New Saffein, such as *loor*, *kahoor*, and *nakhl'e khorma* (Phoenia dactylifera), are cultivated although there is not enough space. Local trees give some particular visions of the local architecture as well as improving the tourist's visual understanding of the local environmental features (*Figs. 15a*, *b* and *c*). However, the residents do not have any backyard to cultivate these crops, as in their previous houses.

## SPECIFIC BUILDING ELEMENTS

In this part, the article looks at some building elements in the villages. These elements have common functions in all the settlements in the hot and humid region, based on their similar environment and culture. In particular, the openings, transitional spaces, special shading devices, and architectural elements are specific to the vernacular architecture of the region. In the hot and arid region of Iran, most of the openings are oriented towards the courtyard, due to the harsh climate of the outdoor environment. Furthermore, this is a principle idea in the vernacular architecture of Kish Island, in which visitors should never view directly into the house. This shows the importance of the transitional spaces in the vernacular houses. In addition, maximizing shading is another significant feature of the local architecture of the Island. Due to this, the sunshades prevent

*Figs. 14a ,b, c and d: The transformation of a typical house (Mr. Jafar Waez's house),
New Saffein*



a)  b)  c)

*Fig. 15: (a) Nakhl'e Khorma;  (b) Kahoor;  (c) Loor*

the penetration of solar radiation into the house.  Finally, wind-catchers are one of the most important elements in the vernacular architecture.  It is important to note that this is a significant climatic solution to bring the cool sea breeze into the houses.

In this region, cross ventilation for internal spaces is used to reduce the heat using small openings which are built on the street-side walls, whereas windows on the courtyard-side walls are often built opposite each other.  Moreover, rooms usually have openings on the sides with positive and negative pressures.  Meanwhile, windows or porticos are mostly not on the street side but are open to the main yards (Azari-Najafabadi *et al*., 2006).  Houses in Old Saffein follow these fundamental features (*Fig. 16*).

*Fig. 16: A house without any outside opening, Old Saffein*

of the main entrance, and it is about 2 meters in height (*Fig. 18*). The length of the *estar* is dependent on the width of the door, and this is to prevent the internal part of the house from being viewed from the outside. In some cases, small halls are used to enter the residence.

In New Saffein, on the contrary, most of the central yards have direct connection to the streets without any transitional space (*Fig. 19*). This is a principle idea in the vernacular architecture of Kish Island, and this is done to prevent visitors from viewing or looking directly into the house (Mokhtarpour, 1999). In term of transitional space, the design of the houses in New Saffein has not adapted to the local beliefs and culture.



*Fig. 17: Wider openings built at New Saffein*



*Fig. 18: An estar, Old Saffein*

The houses in New Saffein were designed using the new technologies which are meant to cool off the internal part of the rooms. For this reason, the architects have not provided enough openings on the street-side walls to adapt to the appropriate environmental conditions. Furthermore, natural lighting that comes from the central yards is frequently not from acceptable directions and cab cause discomforting solar radiation to the rooms. Hence, small windows were made wider and some new openings were created on the north side or facing the Persian Gulf (*Fig. 17*).

In most houses of Old Saffein, a short divider known as an *estar* is erected in front



*Fig. 19: A direct connection to inside of a house in New Saffein*

Maximizing shading is one main objective of the significant features in the local architecture of the Island. In Old Saffein, most of the entrance doors have sunshades (*Fig. 20*). This shading device prevents solar radiation from penetrating into the house. In fact, a large number of the traditional houses have corridors which prevent solar radiation from entering the rooms. Additionally, it is a connector between the yards and the rooms. The use of large windows for natural ventilation, on the yard side of the spaces, can also receive a great amount of sunlight, and thus, it can increase discomfort. However, using large overhangs which are supported on columns is a common method to solve this problem. In this region, the porticos are another solution to protect the building against solar radiation.



*Fig. 20: A typical entrance, Old Saffein*



*Fig. 21: A typical entrance, New Saffein*

The houses in New Saffein have rooms which are typically protected against sunshine through a small covered space. It represents the traditional techniques of maximizing shadow. Moreover, there is no shading device used for the openings on the outside facades of the houses in the village. Most of main entrances open to the yards directly without any sunshade (*Fig. 21*).

Wind-catchers or *bad-gir* are among the most important architectural elements in the vernacular architecture of the island. This is a traditional method used to bring the cool gulf breeze into the houses. The shape and size of the wind-catchers in Old Saffein are different from the wind-catchers which are built in other places of the country. In the houses of this village, they have *bad-gir* which is a recess on the facades, with a split on its floor (*Fig. 22*). Strong winds will stream through this split into the rooms.

In addition, Kish Island is also a coral island. Therefore, 'coral stone' is a main building material which gives a very special feature to the vernacular architecture of Old Saffein. For this reason, the colour of the facades of the buildings is particularly bright white (coral's colour).



*Fig. 22: Bad-gir, Old Saffein*

Fig. 23: Bad-gir, New Saffein

In New Saffein, the form, facades shapes, and some climatic elements of the Kish's rural fabrics are used to make the village similar to its original place, namely Masheh and Old Saffein. The facades are covered with white mortar-cement that is similar to the vernacular facades. Moreover, some regional architectural elements (such as the usual Iranian bad-gir) are repeated in New Saffein to remind us of the original form (*Fig. 23*).

## SUMMARY

Table 1 shows that in the socio-economic aspect, there is a significant contrast between the architecture in Old Saffein and New Saffein although the residents of both are the same.

TABLE 1
Vernacular architecture characters in Old Saffein and New Saffein

| Vernacular Architecture of Iran | | | Kish Island | |
|---|---|---|---|---|
| | | | Old Saffein | New Saffein |
| Vakili Ardebili, Boussabaine (2006) | Proposed categories by the authors based on Pirnia (1992) | | Self observation by the authors, Mokhtarpur (1992, 1996) | Self observation by the authors |
| **Socio-economic Aspect (Concepts and Ideas)** | Site Planning | Orientation | ▪ Mostly on north-south direction ▪ Importance of attention to Kiblah direction ▪ Summer section faces to the gulf | ▪Different direction ▪Do not paying attention to Kiblah direction |
| | | Organization | ▪ Compact urban form ▪ Shadowing network with tall walls ▪ Summer and winter sections ▪ Different spaces around main yard | ▪Less pay attention to compactness ▪Wide streets with short walls ▪Living and services sections ▪living section on the back of front yard |
| | | Lay Out | ▪Concept of traditional privacy model ▪Separated function with specific entrances ▪Expandable plan based on family size | ▪Less consideration to family privacy ▪Only one entrance into the front yard ▪Non-expandable plan |
| | | Vegetation | ▪Important role of trees in the houses ▪Local trees *Loor, Kahoor, Nakhl-e khorma* ▪Crops cultivation in back yards | ▪Not enough space for vegetation ▪Local trees in some of the houses |
| | Building Elements | Openings | ▪ Mostly no windows on street side ▪ Cross ventilation to reduce the heat | ▪Less natural ventilation because windows are mostly open only to inside yard |
| | | Transitional Spaces | ▪ *Estar*: (short divider) prevent inside from outsider | ▪Main entrances open to the central yards directly |
| | | Shading Devices | ▪ Main entrances have sunshade ▪ Most of the spaces connect to yard through a corridor | ▪No shading device on main entrances ▪A small cover space for entering to rooms |
| | | Architectural Elements | ▪ Specific wind-catcher which is a dent on the facades ▪ specific bright colour of coral as basic local material | ▪There is no wind-catcher ▪Facades are covered with white mortar-cement similar to the vernacular facades |

(Characteristics of Vernacular Architecture)

As mentioned previously, the vernacular architecture of Iran is a result of the long-time processes of the social, cultural, and environmental developments which have been extended all over the country. Due to this, the people and the environment are two bases for every design based on vernacular architecture. Misunderstanding about the people's needs in the design process of New Saffein has caused some difficulties for the people. The following examples further clarify this issue.

The principle idea of the design is to design a village to represent the local lifestyle for tourists (Monsef, 1978). It is significantly different from the traditional and religious values of the Arab Muslim community. Furthermore, the new houses were not adapted to the local's social ranking. The House of *Sheikh*, i.e. the most important person in the community, was not adapted with his social level in the village, and his big family. It is because of this fact that his house has become dilapidated and the *Sheikh* and his family have migrated from the island to other country (Mokhtarpour, 2002).

In addition, the strength of the local community has also changed due to the new design. Housing lots do not support the household members' needs. The local people are living in a patriarchal society. Most fathers still try to play their traditional roles in the society, and they have extended their houses after the marriage of their sons, but limitations in the lot areas do not permit this (see *Fig. 14a, b, c, d*). However, traditional values are meaningful values. The people have created a place in their house like an *estar* or all the short walls have been increased in height to prevent outsiders from seeing or peeping into their homes because the main entrances enable the outsiders to see the internal parts of the houses (see *Fig. 8*). They also made some sunshades on the wide streets of the village, as shown in *Fig. 7*). Furthermore, in the vernacular houses, stores for fishing tools and ovens for traditional cooking are very important elements which there were also not included in the houses. The bathrooms in their new houses are also attached to toilets, the concept which contradicts with their religious beliefs (see *Figs.*

*11a, b*). These examples show that the people have not completely understood the design of New Saffein.

## DISCUSSION AND CONCLUSIONS

The Iranian vernacular architecture is based on five fundamental characteristics (Pirnia and Memarian, 1992). Three of them (namely, the compatibility with the needs of the people, inward-looking, and avoiding un-necessities) concern building quality from concepts and ideas (Vakili-Ardebili and Boussabaine, 2006). Kish Island is one of the most important islands in the northern part of the Persian Gulf. It is located in the hot and humid region of Iran, with the same social factors. In general, the characteristics of its vernacular architecture reflect the Iranian vernacular architecture. Kish was selected as the first Free Tourist Zone of the country in 1971. Following this, *Masheh* village, the most flourishing village on Kish Island at that time was moved to an area adjacent to *Old Saffein*, on the north-west coast. The new village is called *New Saffein*. It has a mixture of the traditional and modern architecture.

In the above discussions, the architecture of Old Saffein and New Saffein has been elaborated in relation to site planning and building elements. In the light of the above discussion, it can be stated that the basis of the vernacular architectural has been ignored in the design of New Saffein. Moreover, it has been reported that the government, scholars and the residents have recognized the social and climatic problems by this ignorance.

In conclusion, Manzoor (1989) stated that "the prevailing traditional architectural forms, community and urban settlement patterns have followed the same evolutionary process, creating a distinct environmental system, i.e. a process of rural-urban evolution during which local and human factors have transformed the built environments into integrated living community". An architectural identity can be founded by understanding the people. For this reason, all the social, cultural, and environmental variables must be understood before applying

of any architectural characteristic. Moreover, traditional values are meaningful values which are the products of long and complex social and cultural evolutionary processes with environmental adaptation. The architectural patterns and systems have evolved to meet certain needs of the people, and they rooted in certain elements of the environment. The application of the vernacular architectural values should not mean a simple copying of the monumental traditional forms and features. The underlying vernacular characteristics and their relationships with the people and their surrounding environments should be carefully understood. More importantly, it is important to highlight the fact that modifying the local images without understanding their values can cause a tragic result as has happen in New Saffein.

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# Effects of Motivation and Gender on the Choice of Language Learning Strategies by Iranian Postgraduate Students

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## ABSTRACT

This study examined the influence of motivation and gender on the choice of language learning strategies by Iranian post-graduate students. One hundred and fifty six Iranian post-graduate students in Kerman province were selected based on a two-step cluster sampling. A translated version of Oxford's strategy inventory for language learning was administered to the participants to determine their use of strategies. Attitude/motivation test battery was also employed to identify the participants' type of motivation. Data analysis showed the following results: a) the participants reported the use of compensation, social, metacognitive, and affective strategies at a high level, whereas memory and cognitive strategies were reported at a medium level; b) integratively-motivated students showed higher overall strategies mean score than instrumentally-motivated ones but it was not statistically significant. Instrumentally-motivated students employed memory strategy more frequently than integratively-motivated students; c) female students employed strategies more frequently than male students. However, this difference was found to be not statistically significant. The findings also showed that the teachers should encourage the learners to actively employ all the strategies in their learning process. Future research may focus on the sub-categories of the strategies and other factors, such as attitude, age, major, personality types, and testing methods.

**Keywords: Strategies, vocabulary, motivation, gender, foreign language**

## INTRODUCTION

Since the late 60's and early 70's, there has been a significant shift within the field of language learning and teaching, with greater emphasis on learners and learning rather than on teachers and teaching (Chamot, 2001; Grenfell and Macaro, 2008). In this view, learners are no longer passive and are viewed as the active participants in the teaching-learning act. It seems to be a reasonable goal for language teachers to make their students become less dependent on the teachers and reach a level of autonomy (O'Malley and Chamot, 1995). Learners need to keep on learning even if the formal classroom setting is not available. Learner autonomy is in line with the current views on the active involvement of learners, popularity of learner-centred approaches, and learners' independence of teachers (Littlewood, 1994; Little, 2000). As a result of the increased attention to the learners and learner-centred approaches, much emphasis has been laid on the learner's active cognitive

processes referred to as learning strategies which have been recognized as a key component of an autonomous approach to language learning and teaching (Littlewood, 1999). In much of the literature concerned with the development of learner autonomy, a lot of importance has been attached to the training of the learners in terms of strategy development and learning skills (O'Malley and Chamot, 1995; Oxford, 1990).

In line with this new shift of interest, how learning strategies influence the success of language learners has been the primary concern of researchers. Rubin and Thompson (1994) state that the main underlying assumption behind learning strategies research in foreign language education is concerned with the idea that one of the factors that make good learners good is their use of learning strategies.

*Objectives of the Study*

The present study intended to investigate the effects of factors, such as motivation (instrumental and integrative) and gender, on the choice of language learning strategies by Iranian post-graduate students. Specifically, the objectives of the current study can briefly be stated as: a) to identify the overall degree of the strategy use by Iranian post-graduate students; b) to identify the most and least frequently used strategies by Iranian post-graduate students; c) to identify any differences between integratively-motivated and instrumentally-motivated Iranian post-graduate students concerning their strategy choice; and d) to identify any differences in strategy use between male and female Iranian post-graduate students.

*Significance of the Study*

The current study was conducted with Iranian post-graduate students learning English in an environment which offers relatively limited windows of opportunity to hear, speak, and write, either outside or inside the classroom (input-poor environment), as well as less opportunity to speak English with native speakers. As stated before, most of the studies

on learning strategies have been conducted in the second language environment. Thus, second language learners' strategy patterns may be different from those of the learners learning English as a foreign language since second language learners normally have easy access to input-rich environments in which they have more opportunities to speak, hear, read, and write. This proves that the assessment of the learning strategy patterns in the EFL context as an input-poor environment deserves much attention.

This study is significant for both theoretical and practical reasons. First, from a theoretical viewpoint, the study provides empirical evidence of the connection between language learning strategies and a number of variables, such as attitude and motivation, as well as the fact that it has been conducted in a context that has not been previously examined in this area of inquiry.

Second, this study has practical significance for language pedagogy. The study of the strategy use by Iranian post-graduate students, in the context of other variables such as attitude and motivation, can provide lecturers with a better understanding of how language learning occurs. Therefore, the findings of this study may serve as a guide that enables educators to know the most and least common strategies which students use and how these strategies affect their learning. The pragmatic implications of studying these strategies include pedagogical intervention, i.e. the more is known about strategies, the more such strategies can be taught to learners and therefore increase post-graduate students' learning. Oxford (2001) stated that a good language learner is a learner who utilizes the strategies in the maximum possible extent. Thus, knowing more about strategies utilized by students will help the lecturers to identify which strategies are to be utilized more. Moreover, an awareness of individual differences in learning makes EFL educators and programme designers more sensitive to their roles in teaching and learning. Furthermore, it will permit them to match English lecturers' teaching and post-graduate students' learning so as to develop students' potentials in the EFL learning, as well as to assist students to become cognizant of the

ways they learn most effectively. It also helps the post-graduate students to develop strategies and ways to become more motivated and independent learners.

## REVIEW OF LITERATURE

Since 1975, various theorists have contributed to the definition of language learning strategies (Grenfell and Macaro, 2008). Language learning strategies, as determinant factors in the facilitation of learning a new language, have been defined in different ways. Among other, strategies are "the thoughts and actions that learners use to accomplish a learning goal" (Chamot, 2004, p. 14). Cohen (1998) broadly defines second language learner strategies as encompassing both second language learning and second language use strategies. In his terms, language learning and language use strategies are any actions or techniques which are employed by the learners to improve the process of foreign language learning.

Furthermore, Cohen (2007) adds a new aspect to the definition of language learning strategies. He proposes that language learning strategies be defined as a conscious mental activity that must contain not only an action but also a goal (or an intention) and a learning situation. He further states that while a mental action might be subconscious, an action with a goal/intention and related to a learning situation can only be conscious. In this study, the definition of LSs was adopted from Oxford (1994). She believes that LSs are the actions or techniques which are selected consciously by the learners in order to internalize L2 rules and improve their language learning. She introduced these techniques and actions in her language learning classification system.

Oxford's classification as the framework of the current study will be explained in more detail. Oxford (1997: 2001) defines language learning strategies as "specific actions taken by the leaner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (p. 8). Her strategy taxonomy includes six categories:

(a) memory strategies; (b) cognitive strategies; (c) metacognitive strategies; (d) compensation strategies; (e) social strategies; and (f) affective strategies. In particular, memory strategies help learners to store and retrieve new information. Some specific examples of these include remembering new words by creating mental linkages and making associations between what is known and what is new. Meanwhile, cognitive strategies facilitate the understanding and the production of new language. English language learners, for instance, may practice the sounds of English or they could infer the meaning of a new English word by segmenting it into known roots, prefixes, and suffixes. Compensation strategies allow learners to bridge over large knowledge gaps to make meaning. Some examples of this include using circumlocution and making guesses. Metacognitive strategies, social strategies, and affective strategies, on the other hand, help regulate the learning process and learners' emotional responses. Metacognitive strategies are used by the learners to coordinate the learning process, such as planning and evaluating their own learning. Affective strategies help the learners to regulate their emotions, motivations, and attitudes. Some instances of these strategies include anxiety reduction and self-encouragement. Social strategies facilitate learning through learner interaction with others. Learners, for instance, may form study groups to learn a new language or seek help from proficient users of that language.

### Motivation and Language Learning Strategies

As one of the main determinants of foreign language learning achievement, motivation has attracted the attention of many investigators. Different definitions of motivation have been posited by researchers. Motivation theories endeavour to identify what encourage the students to do something specific and what encourage them to select a specific activity and task among all available activities (Pintrich and Schunk, 2002). In second language learning, motivation plays an important role in the process of foreign

language learning. In more specific, it helps the learners to continue their learning in the future, even in the absence of teacher and classroom environment. Furthermore, all factors which may influence the process of language learning are in somehow affected by motivation (Dornyei, 2005). Gardner's social psychological model of second language motivation distinguishes between two motivational orientations, namely, integrative versus instrumental orientation, a distinction highly that is acclaimed among second language researchers and practitioners (Dornyei, 2005).

Integrative orientation reflects a positive attitude toward the second language group and the desire to interact and identify with the second language community. On the other hand, learners with an integrative orientation are interested in the culture of the target language; they want to acquaint themselves with the target community and become an integral part of it. Instrumental orientation relates to the potential practicality of second language proficiency, such as employment and international travel. Thus, learners with an instrumental motivation view the foreign language as a means of finding a good job; in other words, the target language acts as a monetary motive (Gardner and MacIntyre, 1993).

## Gender and Language Learning Strategies

According to Ellis (1994) model for variables which affect language learning strategies, gender is an individual difference among learners which may affect their choice of strategies. Oxford and Burry (1995) believe that the frequency of strategy use is linked to EFL or ESL setting, career interests, cultural background, and gender. However, Ehrman and Oxford (1995) state that gender differences may often be a mask for deeper differences of personality type and career choice. A number of researchers have investigated the effects of gender on the choice of language learning strategies (e.g. Politzer, 1993; Hojjati, 1998).

## METHODOLOGY

### Participants

One hundred and fifty six Iranian postgraduate students, majoring in art and science, were selected for the present study based on the two-step cluster sampling. All the participants were in the second semester of their studies in Kerman Bahonar University and Rafsanjan Valiasr University.

### Instruments

For the present study, two sets of instruments were used. The first instrument is the original Strategy Inventory for Language Learning or SILL (Oxford, 1990: 2001). The SILL was chosen for use in this study because it was specifically designed for assessing foreign language learning strategies and it provides a comprehensive, systematic inventory of language learning strategies (Lu, 2007). In addition, the SILL has been used in many language learning strategy studies (Griffiths, 2003; Hsiao and Oxford, 2003). It is a 50-item version for learners of English as a foreign language.

The second instrument for collecting data was the Attitude and Motivation Test Battery (AMTB) which is a Likert-type scale with 59 statements. The AMTB was chosen for use in this study because it was specifically designed for assessing foreign language learning motivations (Lu, 2007) and it has been used in many learning motivation studies (Masgoret, Bernaus and Gardner, 2001; Rueda and Chen, 2005).

### Procedure

In the current study, two questionnaires were administered to the participants of the first semester of 2009. All students had to sit for the mandatory course-General English - which is offered in the second semester. This class was selected for this study to have the access to all students who were learning English in this class. Two questionnaires were administered

and completed in an hour or one session. The researcher explained to the students that they would not be judged based on their answers and that it would not affect their grade. Questions asked were answered by the researcher to make it crystal clear for the respondents.

To analyze the data, the total strategy mean scores of the students as well as that of each strategy category were first calculated by adding up the chosen frequencies of its items and dividing the obtained sum by the number of the items in that strategy group. Meanwhile, the mean score for instrumental and integrative motivation of the students were also calculated to determine the motivation mean scores of the students. The strongest mean score showed the type of motivation the participants have in the current study. Finally, the gathered data were subjected to descriptive statistics (mean and standard deviation) and independent sample t-test to find the answer for research questions.

## RESULTS

The data analysis (Table 1) revealed the overall mean score of 3.67 was obtained for Iranian post-graduate students' strategy use. Meanwhile, the mean scores of 3.5 and above show high use of strategies. Thus, it can be concluded that Iranian post-graduates are high strategy users.

TABLE 1
Descriptive statistics related to
the strategy questionnaire

| Mean | SD | Min. | Max. | Frequency |
|------|------|------|------|-----------|
| 3.67 | 0.39 | 2.77 | 4.54 | High |

The descriptive statistics for the scores of the three strategy groups is presented in Table 2 below.

TABLE 2
Frequency for the scores of high,
medium and low strategy groups

| Strategy groups | Frequency | Percent |
|-----------------|-----------|---------|
| High strategy user | 104 | 66.2 |
| Medium strategy user | 52 | 33.8 |
| Low strategy user | 0 | 0 |

As demonstrated in Table 2, the participants were classified into three strategy groups based on Oxford's (1990) scale for subjects' division into strategy users considering above 3.5, below 2.5 as the high and low strategy groups, respectively. The scores of 2.5-3.5 were considered as the medium strategy group. In this study, the number of participants in the high strategy group (n = 104) is double than that of the medium strategy group (n = 52). However, none of the participants was found to be in low strategy group. To find the most and least frequently used strategies, the mean score for each group of strategies was calculated as it appears in the following table.

TABLE 3
Rank order of the favoured strategies

| Strategies | Mean | Rank | Frequency |
|------------|------|------|-----------|
| Metacognitive | 4.08 | 1 | High |
| Affective | 4.01 | 2 | High |
| Compensation | 3.67 | 3 | High |
| Social | 3.55 | 4 | High |
| Cognitive | 3.44 | 5 | Medium |
| Memory | 3.22 | 6 | Medium |

According to Table 3, metacognitive strategy was found to be the most frequently used strategy (M = 4.8), while memory strategy was found as the least frequently used strategy (M = 3.22), affective, compensation, social, and cognitive strategies stood between the most and least frequently strategies, respectively. Moreover, the table also shows that Iranian post-graduate students used metacognitive, affective, compensation, and social strategies at a high level of frequency while cognitive and memory strategies were found to be employed at a medium level of frequency.

To determine the influence of motivation on the choice of language learning strategies, an analysis was done for instrumental and integrative motivation. First, the mean strategy score for instrumentally-motivated and integratively-motivated students were calculated and reflected in the following table.

TABLE 4
Mean strategy scores for the participants' instrumental/integrative motivation

| Strategy<br>Motivation | Mem | Cog | Comp | Aff. | Soc | Meta | Total |
|---|---|---|---|---|---|---|---|
| Instrumental | 3.25 | 3.40 | 3.66 | 4.07 | 3.52 | 4.07 | 3.66 |
| Integrative | 3.17 | 3.51 | 3.67 | 4.10 | 3.60 | 4.10 | 3.69 |

*Note*: Mem= Memory, Cog= Cognitive, Meta= Metacognitive, Aff= Affective, Soc= Social, Comp= Compensation

According to the total strategy mean scores in Table 4, integratively-motivated students used strategies more frequently than instrumentally-motivated students. Moreover, all categories of strategies (except for memory strategies) were used more frequently by integratively-motivated students as compared to instrumentally-motivated students. In order to determine if the differences between these mean scores are significant, independent sample t-test was conducted and the following t-values table was obtained.

TABLE 5
T-values for the difference between instrumental and integrative mean scores on the strategy questionnaire

| Comparisons | d.f. | t-value | Significance |
|---|---|---|---|
| Memory | 154 | 0.672* | 0.032 |
| Cognitive | 154 | 0.838* | 0.011 |
| Compensation | 154 | 0.032 | 0.975 |
| Affective | 154 | 0.295 | 0.769 |
| Social | 154 | 0.425 | 0.672 |
| Metacognitive | 154 | 0.295 | 0.769 |
| Total | 154 | 0.317 | 0.752 |

Table 5 shows that the only two statistically significant differences were obtained for the memory (t-value = 0.672, p = 0.03) and cognitive (t-value = 0.838, p = 0.01) strategies. It also indicates that integratively-motivated students significantly used cognitive strategies more frequently than instrumentally-motivated ones, while memory strategies were significantly used more frequently by instrumentally-motivated students.

Meanwhile, to identify the differences between the male and female students on the choice of strategy use, the strategy mean score for each strategy category and that of the total strategy use were calculated. Table 6 summarizes the mean strategy scores for students of art and science.

The total strategy mean scores report that male students (M = 3.65) used strategies less frequently than female students (M = 3.63). The only strategy categories which were used more frequently by male students were metacognitive and affective strategies. This also means that other strategy categories were used more frequently by female students. To see if the differences among the strategy means were statistically significant, an independent sample t-test was carried out. The related findings are reported in Table 7 below.

TABLE 7
T-values for the difference between male and female students' mean scores on the strategy questionnaire

| Comparison | d.f. | t-value | Significance |
|---|---|---|---|
| Memory | 154 | 0.553 | 0.582 |
| Cognitive | 154 | 0.055 | 0.956 |
| Compensation | 154 | 1.445 | 0.153 |
| Affective | 154 | 0.069 | 0.946 |
| Social | 154 | 0.059 | 0.953 |
| Metacognitive | 154 | 0.069 | 0.946 |
| Total | 154 | 0.480 | 0.630 |

TABLE 6
Mean strategy scores for male and female students

| Strategy<br>Major | Mem. | Cog. | Meta. | Aff. | Soc. | Comp. | Total |
|---|---|---|---|---|---|---|---|
| Male | 3.19 | 3.44 | 4.08 | 4.08 | 3.54 | 3.57 | 3.65 |
| Female | 3.25 | 3.45 | 4.07 | 4.07 | 3.55 | 3.77 | 3.69 |

*Note*: Mem= Memory, Cog= Cognitive, Meta= Metacognitive, Aff= Affective, Soc= Social, Comp= Compensation

Table 7 shows there was no statistical significant difference between male and female students in the choice of language learning strategies. The results presented for each research question are discussed in the following section.

### *Level of Frequency of Strategy Use*

Based on the findings presented in Tables 1, 2 and 3, the participants in the current study were found to be high strategy users (3.67). This finding is not congruent with most of the studies done on language learning strategies of Iranians or Asian EFL students (Zarafshan, 2002; Sedaghat, 2001; Mokhtari, 2007; Hojjati, 1998; Hong, 2006). These studies mostly found the learners as medium strategy users. One reason to find the participants of this study as high strategy users may be due to the participants' level of education, i.e. as post-graduate EFL learners. Kafipour (2006) compared the undergraduate and post-graduate education in Iran, and found that the undergraduate education system in Iran is teacher-centred, i.e. the teacher is the person who lectures, presents and instructs the learning materials. The students should just listen and take note and memorize what the teachers instruct in the classroom. In such situation, the students remain passive without any role in the learning and teaching processes. However, the situation in post-graduate education system is completely different from undergraduate education system. In other words, the post-graduate education system is student-centred. The students are required to actively participate in the learning and teaching processes by presenting lectures, holding conferences and discussion forums.

The teachers' role is merely as leaders and organizers. They try to correct the students' mistakes when the students try to teach their classmates through lectures and conferences. Thus, this student-centred learning approach forces the students to be more autonomous and teacher-independent in learning. Oxford (2001) states that language learning strategies are one of the most important factors which help students to become independent in their learning. This may be the reason why post-graduate students in the current study used language learning strategies in a high level of frequency.

### *Frequently Used Language Learning Strategies*

Four categories of strategies were reported to be used at a high level of frequency, including metacognitive (4.08), affective (4.01), compensation (3.67), and social (3.55). The last two categories, namely cognitive (3.44) and memory (3.22) were reported to be used at a medium level. Concerning the overall use of language learning strategies, the results of this study showed that no strategy was applied with a low frequency of use (lower than 2.5) by Iranian EFL post-graduate learners. This finding is identical to the results obtained in the study by Mokhtari (2007), who had investigated language learning strategies of Iranians who were studying in USA. The researcher found that none of the six strategy types was used at a low level of frequency.

Therefore, Iranian post-graduate students reported to have utilized metacognitive strategies most and memory strategies least frequently. Metacognitive strategies involve thinking about

the learning process and evaluating how well one has learned (Oxford, 2001). The reason for more frequent use of these strategies can be the EFL context of learning English in Iran. Metacognitive strategies provide control over the learning process and because EFL students are more conscious about their foreign language development, they apply those strategies which help them to have control over their learning. The participants in the current study, namely Iranian post-graduate students, used metacognitive strategies in the same level of frequency as those students in Oxford (1990) and Philips' (1991) studies.

The high scores in the social and affective areas, as compared with the lower results in cognitive strategy use, suggest that Iranian post-graduate learners are more feeling-oriented rather than thinking-oriented. According to Oxford (2001), a feeling-focused student is concerned with social and emotional factors but does not make decisions based on logic and analysis. In the current study, the participants used social strategies at a high level of frequency. It is a likely explanation that social strategies were used to compensate for the lack of meaningful English language input. Social strategies may also be used in order to make up for learners, with deficiencies in listening comprehension. Therefore, social strategies essentially function as compensation strategies for this population.

The high use of compensation strategies among the participants was similar to that observed in learners from other Asian countries. For example, Bremner (1999) and Park (2005) reported the use of this strategy in a high level of frequency. Compensation strategies enable learners to comprehend or produce new language despite learners' limitations in their knowledge of the target language. Learners use compensation strategies, such as making guesses and using gestures in order to make progress in communication in the absence of a complete knowledge of vocabulary, grammar, idioms, and other language elements. In addition, emphasis on compensation strategies may reflect the students' lack of exposure when learning foreign

languages; therefore, they employ such strategies in Iran's input poor environment (Hojjati, 1998).

Cognitive and memory strategies were the least frequently used strategies among the participants. They were reported to be used at a medium level of frequency, whereas all other strategies were used at a high level of frequency. Oxford (1990) suggested that cognitive strategies are essential in learning a new language because these strategies operate directly on incoming information. However, the current study showed that cognitive strategies, along with memory strategies, were the least frequently used strategies. This result implies that insufficient use of cognitive strategies might be due to these learners' inability or unwillingness to practice, analyze, and reason in the target language. These are essential and popular skills in a traditional language classroom. Results also show that cognitive strategies are among the least frequent used strategies among this population, which provide more evidence of Iranian postgraduate students' lack of knowledge about how to learn a foreign language.

In addition to cognitive strategies, memory strategies were also reported as the least used strategies among the participants. Meanwhile, quite a number of studies have found that Asian learners use memory strategies as their least frequent used strategy (Lee, 2001; Chou 2002, Park, 2005). A likely explanation, therefore, is the traditional rote memorization strategies that Asian learners once were reported to have preferred might differ from the specific memory techniques reported in the SILL. These techniques included making a mental picture of a situation in which the word might be used, using rhymes to remember new words, and grouping new words into synonyms, antonyms, nouns, and verbs. The specificity of the SILL helps to quantify memory strategies. However, it is possible to speculate that the participants in the current study were not familiar with systematic mnemonics or specific techniques in the memory strategies. Thus, these students reported using fewer memory strategies on the SILL.

## The Differences in the Strategy Use between Integratively-Motivated and Instrumentally-Motivated Students

Mean score for integratively-motivated and instrumentally-motivated students showed that integratively-motivated students used strategies more frequently than instrumentally-motivated students. All categories of strategies except memory strategies were more frequently reported by integratively-motivated. T-test displayed that differences between strategies mean scores of memory and cognitive strategies were statistically significant.

Integrative motivation was the most significant factor and strongly related to language learning strategy use in the previous studies (*see* Schmidt and Watanabe, 2001; Zarafshan, 2002). The results of this study also support the findings of the earlier research. The findings implied that integratively-motivated students, who acquire language for their daily life or for social purpose, use all strategy types more often than instrumentally-motivated ones who learn a language for getting a better job or for pursuing knowledge in their specific fields of study. Integrative motivation strongly enhances the learners' willingness to use learning strategies, because this motivation involves learners' positive attitudes toward the target language group and language learning, as well as their intention to communicate and integrate with members of the group (Dornyei, 1994).

In the present study, the only significant differences were found for memory strategies (p = 0.03) and for cognitive strategies (p = 0.01). This shows that integratively-motivated students reported to use significantly more cognitive strategies than instrumentally-motivated ones, while memory strategies were significantly used more frequently by instrumentally-motivated students. In line with Chang and Huang's research (1999), integrative motivation is significantly associated with cognitive strategies. Cognitive strategies involve deep-processing strategies such as analyzing and reasoning. Okada *et al*. (1996) asserted that the learners who are eager to follow their goals will become autonomous learners and try to control and monitor their own language learning. Besides, integrative motivation is correlated with conceptual learning but not rote learning. Some considerable studies proposed that integrative motivation is associated with active involvement (Harter, 1992), persistence, participation (Miserandino, 1996), pleasure (Patrick *et al*., 1993), and more learning activities outside of school (Stipek, 1998). Accordingly, these may support the findings of the present research whereby cognitive strategies were significantly used by integratively-motivated students than those of instrumentally-motivated students. Furthermore, Chang and Huang (1999) explained that EFL learners with instrumental goals possibly prefer memory strategies which cost them minimum time and effort. It seems true for the participants of the current study.

## Differences in Strategy Use between Male and Female Students

In order to find the answer, mean strategy scores for the male and female students were calculated. Subsequently, independent sample t-test was carried out to find whether or not the differences were significant. Table 4.6 shows that female students used strategies more frequently than male students. Moreover, all strategy categories (except for metacognitive and affective) were used more frequently by female students. T-value in Table 7 reveals that there is no difference between the mean scores of male and female students in utilization of language learning strategies.

The results supported the earlier studies by Oxford and Nyikos (1989) as well as Ehrman and Oxford (1995) who found that women generally used more strategies than men. They suggested that females tended to use a much wider, or at least a very different range of strategies than males for language learning. The present study corresponds with these findings. In spite of the sex differences, the researchers claimed that there was no significant difference between male and female subjects at the 0.05 level. This study did not match Hojjati's (1998) who found that men obtained a higher overall strategy mean than women.

# CONCLUSIONS

A number of conclusions can be drawn based on the results gathered in the current study. Below is a summary of the conclusions based on the analysis of the data gathered.

a.  The participants in this study were found to be high strategy users. They reported to employ metacognitive, affective, compensation, and social strategies more frequently than cognitive and memory strategies. They also reported to use metacognitive strategies most frequently and memory strategies least frequently.

b.  Motivation was found to have a significant effect on memory and cognitive strategies. In other words, integratively-motivated students employed more cognitive strategies than instrumentally-motivated learners while instrumentally-motivated students employed more memory strategies than integratively-motivated students. All the other strategies were used more frequently by integratively-motivated learners but these differences were not found to be significant.

c.  Although gender was found to have no significant effect on the choice of strategies, female students used strategies more frequently than male students.

## Implications

Based on the above-mentioned findings of the current study, the following implications can be drawn:

a.  Learning about and using any strategy, efficient or otherwise are by-product of practicing in the language learning classroom. The implication of this assertion is that learning about strategies should not be understood only in terms of direct instruction. Rather, they were developed in actual practice where individuals, initially inexperienced and unaware, practice completely and actively in natural settings.

b.  How individuals approach language learning strategies in the classroom should be investigated by language teachers. Developing an awareness concerning one's own language learning strategy use begs the opportunities to provide for students to self-assess, set goals, plan course of action to fulfil these goals, and identify themselves in their own process of learning.

c.  The participants did not use cognitive and memory strategies at a high level of frequency. It seemed that the students were not quite familiar with these strategies. According to the theory of good language learner, a good language learner uses all strategies at a high level of frequency (Oxford, 2001). Therefore, teachers and administrators should be aware of the students' familiarity with language learning strategies. Meanwhile, teachers should be encouraged to motivate their students to use all of the strategies during their learning process.

## Suggestions for Further Studies

The following suggestions are recommended to be further investigated:

a.  This study has focused on the six major categories of strategies according to Oxford's (1990) framework. The sub-categories of the six major groups of strategies can be further investigated.

b.  In this study, factors such as motivation and gender were examined. Continued studies should be carried out to determine other factors, such as language teaching methods, age, attitude, language learning goals, testing methods, new computer-assisted language learning technologies, learning styles, personality type, and so on.

c.  The present study was carried out at the university level. Replicated studies are recommended using elementary and high school students as participants.

d. No mention has been made in the report of language learning strategies as related to the characteristics of good language learners. It should be investigated to see whether certain learning strategies are factors of good language learners. Pre-test, post-test assessments are recommended in this area.

e. The participants in this study used metacognitive strategies most frequently and memory strategies least frequently. Nonetheless, further research can be carried out to verify the data.

f. The participants who took part in the current investigation did not have sufficient familiarity with some of the language learning strategies. Teaching language learning strategies would demand a considerable investment of time for practice and discussion activities. Similar studies could be conducted to involve regular classroom teachers over a semester or year in the teaching of learning strategies to obtain a better and clearer result.

g. In this study, language learning strategies were taken into account. Similar investigation can be performed on the learning strategies of language sub-skills such as listening, speaking, reading, and writing.

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# Grammatical Gender Misselection and Related Errors in French Writing by Malaysian Students

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## ABSTRACT

This study aimed to identify grammatical gender misselection errors made by Malaysian students in learning French as a foreign language with regard to writing skills. The study utilized quantitative and qualitative methods of data collection. Data analysis was done by applying the definition of misselection errors by Dulay, Burt and Krashen (1982). A total of 40 subjects participated in this study after 100 hours of learning French. The task consisted of writing two short essays by the subjects, in which they contained different elements of grammatical gender. The results showed that students made misselection errors of French prepositions, verbs, adjectives, articles, and lexis.

**Keywords: Misselection errors, writing, French as a foreign language, grammatical gender**

## INTRODUCTION

The language produced by foreign language (FL) learners almost inevitably contains errors of various types (Hemchua and Schmitt, 2006). This is a part of the language learning process. Thus, using error analysis in language learning can predict the learners' type of errors, as this is useful for developing teaching materials and selecting teaching methods (Kitao and Kitao, 2000). Furthermore, the results of such analysis could be used as indicators of the learners' achievement. Most learners view error correction as part and parcel of acquiring competency in the language learnt. Leki (1991) in her study on second language written production found that 93% of her first year college students felt that it was very important

that grammatical errors be pointed out so that they could try to correct the non-native language in their production.

According to Yarmohammadi (2002), learners may make errors rooted in their mother tongues in the writing process. Richards (1974) defined this type of error as interlingual errors. As indicated by Swan (1997, p. 161), if an English L1 learner of French confuses *fenêtre*, *vitre*, *vitrine*, and *vitrail* (words for different types of window), it is questionable whether this is due to interlingual causes since the English system does not offer so many forms, or intralingual, because the French lexical system is complicated and there is in fact no English term to transfer.

Whether it is interlingual or intralingual, one of the errors is misformation, which Dulay,

Burt and Krashen (1982, p. 108-109) categorized as the use of wrong form of the morpheme or structure. James (1998) called this type of error misselection, since the error was caused by selecting the wrong words, and not by using the wrong form of words. Duškova (1969) refers to this type of error as 'distortions', while Ringbom (1987) calls such errors 'hybrids'. This type of error was made by learners when they tailored the L1 words to suit the syntactic requirements and/or rules of the L2.

Errors in various forms are important sources of information about second language acquisition, because they demonstrate conclusively that learners do not simply memorize the target language rules and then reproduce them in their utterances. They indicate that learners construct their own rules on the basis of input data, and that in some instances at least, these rules differ from those of the target language learners (Ellis, 1985a, p. 9).

## PROBLEM STATEMENT

The French language is linguistically different from most of the main languages in Malaysia, namely Malay, English, Chinese and Tamil, and among the striking differences are the grammar and pronunciation (Hazlina Abdul Halim *et al*., 2009a). Thus, "due to the incomplete knowledge", learners will make errors which is "the use of a linguistic item (a word, a grammatical item, a speech act, etc.) in a way a native speaker regards as showing faulty or incomplete learning" (Richards *et al*., 1992, p. 127).

It is important to note that grammatical gender is the most difficult part of French language to be learnt and taught for Malaysians, since in their mother tongues and dominant languages, the structure is limited to either animate nouns or none at all. Thus, the incomprehension of the French grammatical gender rules has led them to make errors in French.

## RESEARCH OBJECTIVE

The objective of this study was to identify and analyse the misselection errors (also called misformation errors) made by Malaysian non-native speakers of French as a foreign language with regard to expressing grammatical gender in their writing.

## LIMITATION OF THE STUDY

This study only focused on the misselection errors of the application of grammatical genders by Malaysian students as well as the misselections errors of choosing grammatical gender elements. It did not include other types of errors, such as additional errors and omission errors. In addition, this study did not take into consideration how the differences and similarities affected the choice of the writing strategies used.

## MATERIALS AND PROCEDURES

This study utilized both the quantitative and qualitative methods of data collection. The subjects consisted of 2nd and 3rd year foreign language students from different fields of humanities and social sciences at Universiti Putra Malaysia. A total of 40 subjects aged between 20 and 24 participated in this study after having 100 hours of learning French. Note that factors such as gender and race were not controlled in this study. The instrument used in the study was the completion of two writing tasks by the subjects. The first essay consisted of writing activities in the past, and in the writing, the students were to be a male. For the second essay, the same topic was given, but this time, the students were to be a female. The purpose was to see whether the students correctly use grammatical gender in the adjectives and past tenses. It was also due to the initial observations by the researcher that the two topics (which was the utilisation of adjectives in French and past tenses) were the main areas where Malaysian students made a considerable number of misselection errors in applying the French grammatical gender.

## FINDINGS OF THE STUDY

Overall, 800 sentences were analyzed and these represented 400 sentences from Essay 1 and 400 sentences from Essay 2 (a rough estimation on the minimum sentences for the two essays (20 sentences) multiplied by the number of respondents, i.e. 40). The researcher observed that 90% of the sentences made by the students in the two tasks were sentences with simple gender application (which involved nouns and adjectives but with only one application of grammatical gender) and only 10% were sentences with complex grammatical applications (which involved nouns, adjectives, prepositions etc. and with more than one application of grammatical gender to be considered).

Listed in *Fig. 1* are the results of the two writing tasks given.

The study found 17.1% of misselection errors of grammatical gender application. These were the most dominant errors in this study. The misselection errors involved were the errors involving the use of nouns, preposition and adjectives.

*Misselection Errors on French Prepositions*

Table 1 shows few examples of the misselection errors of the French prepositions made by Malaysian students.

Most of the misselection errors were in the forms of French prepositions, the noun articles of a country and the mode of transport in French. The errors occurred when the students generalised the utilisation of prepositions for the countries in the same manner as they applied them to other places (for example the name of the roads, building names, etc.).

From the study, it was found that the errors were due to the influence of the students' mother tongue (Malay) or their second language (English). In both languages, we could observe that the prepositions *to* (in English) and *ke* (in Malay) are the same for countries and places. For example, in English, the preposition *to* is used as follows:

1. I went *to* Italy last week

2. I went *to* Petaling Street last week

In French, for names of countries, one has to take into account the grammatical gender



Fig. 1: The overall results for Writing Tasks 1 and 2 by Malaysian students

TABLE 1
Examples of misselection errors on French prepositions

| French sentences by Malaysian students | Appropriate phrases in French |
|---|---|
| 1. Je vais à l'école *au* velo. *(I went to school by bicycle)* | Je vais à l'école *à* vélo. |
| 2. Je suis allé *au* train. *(I went by train)* | Je suis allé *en* train. |
| 3. J'habite *à* Thaïlande. *(I live in Thailand)* | J'habite *en* Thaïlande. |
| 4. Je suis allé *à* Indonésie en décembre. *(I went to Indonesia in December)* | Je suis allé *en* Indonésie en décembre |
| 5. Après, nous ont mangés à restaurant *dans la KLCC* *(Later, we ate at a restaurant in KLCC).* | Après, nous ont mangés *au* restaurant *à KLCC* |
| 6. Nous allons *à* marché. *(We go to the market)* | Nous allons **au** marché. |

of the countries in order to determine which preposition to be used. A feminine country (e.g. Malaysia) will use the preposition *en* to indicate *to*, similarly for the masculine countries, in which the preposition *au* is used. For proper names such as the names of buildings and roads (in most cases), the gender will not be taken into account. As such, the prepositions *en, au, aux* and *à* are used to indicate *to*. Below are some examples of this usage:

From the examples shown in Table 2, we can see that in both Malay and English languages, the same prepositions (**to** and **ke**) were used to indicate 'to'. This was the reason why Malaysian students made misselection errors in French prepositions, i.e. they reverted to their knowledge of the English or Malay language.

TABLE 2
Some examples of the prepositions of places in French, Malay and English

| French | English | Malay |
|---|---|---|
| Je suis **allée** *en* Italie la semaine dernière (feminine) | I went *to* Italy last week | Saya pergi *ke* Itali pada minggu lepas |
| J'irai *au* Portugal demain (masculine) | I will go *to* Portugal | Saya akan pergi *ke* Portugal esok |
| J'ai voyagé *aux* Etats-Unis la semaine dernière (plural, no gender form) | I travelled *to* the States last week | Saya melancong *ke* Amerika pada minggu lepas |
| Je suis allé(e) *à* Petaling Street la semaine dernière (masculine/ feminine) | I went *to* Petaling Street last week | Saya pergi *ke* Petaling Street pada minggu lepas |

*Misselection Errors of the French Verbs*

Table 3 shows a few samples of the misselection errors of verbs in French.

The misselection errors of the French verbs made by Malaysian students were closely related to the usage of the French simple past tense or *passé composé*. In more specific, the errors made by the students involved choosing the right auxilary to go with the second component of the *passé composé*. In the first error example, the choice of auxilary *être* for the verb *passer* in the sentence "Je *suis passée* un bonne journée" makes the sentence grammatically wrong. In French, the meaning of the verb *passer* in past tense is dependent on the choice of the auxilary used. If it is combined with the auxilary *être,* the meaning would be the action of *passing-by* an area, whereas if it is combined with the auxilary *avoir*, it brings the meaning *to spend* (as in Example 1).

Meanwhile, the errors for the verb *aller* (to go) in the French simple past tense mainly involve the incomprehension of the rule of applying the past participle to the verbs which need *être* as an auxilary. In French, the application of the auxilary *être* in the simple past tense (*passé composé*) involves 14 verbs (excluding the reflective verbs), including the verb *aller* as used by the respondent in the sentence. In the application of this verb, whenever the verb *être* is used, one will have to take into consideration the grammatical gender that is related with the subject pronoun used.

Example:

> Il *est allé* au magasin hier (he *went* to the shop yesterday)

> Elle *est allée* au magasin hier (she *went* to the shop yesterday)

From the example given, if the subject pronoun is masculine (in this case *il*), the past participle used will have be the masculine participle (*allé*). Likewise, if the subject pronoun is feminine (here, it is *elle*), the past participle will follow the feminine form, and thus, one will have to add *e* to the participle (*allé → allée*).

In Sentence 2 (Table 3), the error made by the student was the misselection of the auxilary *avoir* combined with the verb *aller* and not the auxilary *être*, as it was supposed to be. The application of the auxilary *avoir* (where the grammatical gender of the subject pronoun was not considered) was the reason for the misselection error of the grammatical gender for the participle used.

Based on the error produced, the researcher concluded that the respondents understood the concept of grammatical gender attribution for the 14 verbs which used the auxilary *être* for the past tense. Nevertheless, this comprehension was not applied to the choice of the auxilary for those verbs. The error was due to the "ignorance of rules restrictions" and also an "incomplete application of rules" as elaborated by Dulay, Burt and Krashen (1982, p. 156).

TABLE 3
Some example of the misselection errors of French prepositions

| **French sentences by Malaysian students** | **Appropriate phrases in French** |
|---|---|
| 1.  Je *suis passée* un bonne journée. *(I spent a good day)* | J'ai *passé* une bonne journée |
| 2.  Pendant les dernières vacances, *j'ai allée* à Terengganu. *(During the last holidays, I went to Terengganu)* | Pendant les dernières vacances, *je suis allée* à Terengganu. |
| *3.*  *J'ai allé* Kuala Lumpur la dernière semain *(I went to Kuala Lumpur last week)* | *Je suis allé* à Kuala Lumpur la semaine dernière |

*Misselection Errors of the French Adjectives*

Table 4 presents some of the French adjective misselection errors made by Malaysian students in their writing.

In the sentence "Kuala Lumpur est **_beau_** ville", it was observed that to get the message across, the student used interlanguage. The misselection error of the adjective is also traceable to the influence of their second language (English). In this sentence, the student adapted the adjective **beautiful** in English, without being aware that the adjective was associated to the noun **ville** (town) which is feminine. The correct adjective to be used should be **belle** which is the feminine of the adjective **beau**. The researcher felt that it might be due to the fact that the student did not know that the noun **ville** is actually feminine, and therefore, the feminine form should be used. It may also be due to the approximation of the noun form to English, and in this case **beau** is closer to beautiful than the adjective **belle**.

The error on the adjective *jolie* (pretty) was due to English language or the respondent's mother tongue influence, which associates the adjective **pretty** with a feminine noun. With this in mind, the additional –e to the adjective '**jolie'** by the respondent did not take into account the gender of the noun it is associated with. In both

languages, the said adjective is associated, and in most cases, with a noun that is feminine.

*The Misselection Errors of the Articles and Prepositions*

Table 5 shows a few examples of the errors of the French articles and prepositions by Malaysian students.

The misselection errors of the French articles by Malaysian students were mainly due to over-generalisation of the rules from their L1 and L2, for which Yarmohammadi (2002: 27) pointed out that "under the influence of the mother tongue the differences between L1 and L2 are transferred into the learner's language – i.e. interlanguage – hence, interference is created and certain deviant structures are generated."

Another misselection error observed by the researcher was the misselection of the French article. The researcher observed that this was due to the respondents' dominant language, and their daily discourse. In the sentence, "*J'ai mangée un gateaux*", the respondent might be translating the sentence "*I have eaten a cake*" or in Malay "*saya telah makan satu kuih*", which was a common Malaysian discourse, even though what they were trying to say was "*I ate some cake*" or in Malay "*saya telah*

TABLE 4
Example of misselection errors of French adjectives

| **French sentences by Malaysian students** | **Appropriate phrases in French** |
|---|---|
| 1. La cuisine au restaurant est très **_délicieux_**. *(The food at the restaurant is very delicous)* | La cuisine au restaurant est très **_délicieuse_**. |
| 2. Le pull est très **_jolie._** *(The sweater is very beautiful)* | Le pull est très **_joli._** |
| 3. L'hôtel est très **_jolie_**. *(The hotel is very beautiful)* | L'hôtel est très **_joli_**. |
| 4. London est **_grande_**. *(London is big)* | London est **_grand_**. |
| 5. Kuala Lumpur est **_belle_**. *(Kuala Lumpur is beautiful)* | Kuala Lumpur est **_beau_**. |
| 6. Kuala Lumpur est < > **_beau_** ville. *(Kuala Lumpur is a beautiful town)* | Kuala Lumpur est une **_belle_** ville. |

TABLE 5
Some example of the misselection errors of the French articles and prepositions

| French sentences by Malaysian students | Appropriate phrases in French |
|---|---|
| 1. J'ai allé à Kuala Lumpur *le dernière* semain. *(I went to Kuala Lumpur <> last week)* | Je suis allé à Kuala Lumpur *la semaine dernière*. |
| 2. Pendant *le* dernières vacances, j'ai allée voyager à Singapore. *(During the school holidays, I travelled to Singapore)* | Pendant *les* dernières vacances, je suis allée voyager à Singapour. |
| 3. Je suis passée *un* bonne journée *(I have spent a good day)* | J'ai passé *une* bonne journée |
| 4. Après, nous ont mangés *à* restaurant dans la KLCC *(Later, we ate at the restaurant in KLCC)* | Après, nous avons mangé *au* restaurant à KLCC |
| 5. Je suis allé *à la* cinéma avec ma sœur. *(I went to the cinema with my sister)* | Je suis allé *au* cinéma avec ma sœur. |
| 6. J'ai mangée *un gateaux* et bois *l'eau de minérale*. *(I ate some cake and drank some mineral water)* | J'ai mangé *du gâteau* et bois **de l'eau minérale.** |
| 7. La cuisine de *cet* restaurant est excellent. *(The food in this restaurant is excellent.)* | La cuisine de *ce* restaurant est excellent. |

TABLE 6
An example of the misselection errors of the French lexis

| French sentences by Malaysian students | Appropriate phrase in French |
|---|---|
| J'aime *le location* de ma maison *(I like the location of my house)* | J'aime *l'endroit* où j'habite. |

*makan **sedikit** kuih*". In the French language, partitive **du** would be more suitable to be used for translating the sentence, "J'ai mangée *un gateaux* [the appropriate phrase in French is *j'ai mange un gâteau*], to convey the same meaning in English or Malay. When the respondent wrote *J'ai mangée un gateaux* [the appropriate phrase in French is *j'ai mange un gâteau*], the meaning was 'I have eaten the whole cake' or in Malay "*saya telah makan keseluruhan kek itu*", and the researcher believed that it was not what the respondent intended to say.

*Misselection Errors of Lexis*

For the misselection error of the lexis, the selection of the noun *location* was actually a direct translation from English by the students in adapting the noun by inserting the definite article **le**. In this case, it was an interlingual error illustrating "when the required TL item is unknown and the learner borrows an L1 substitute, the consequence is an L1 transfer error" (James, 1998, p. 175). The students did not realise that the noun *location* was *faux-ami* in French. It is important to note that although

the spelling is the same in French and in English, it does not bring the same meaning in the two languages. In English, the meaning is the location of a place, but in French, it means "***hiring something***". Therefore, the sentence "*j'aime le location de ma maison*" meant "I like the act of hiring my house" instead of the intended meaning, "*I like the location of my house*".

## OVERALL FINDINGS

This study explored the grammatical gender misselection errors made by Malaysian students in their French proficiency writing course. The study revealed that the misselection errors were the dominant errors made by the students. Apart from the "ignorance of rules restrictions" and also an "incomplete application of rules*",* the errors were also interlingual errors which were influenced by their mother tongue (Malay) and second language (English).

Lastly, the errors committed were also due to the fact that the students foreignized the lexical items from English, when a word in English was familiar or close to a French word. Hence, the students took it for granted that the meaning should be the same without any further check.

## CONCLUSIONS

Overall, this study, which adopted the misselection error definition by Dulay, Burt and Krashen (1982), attempted to find the errors made by Malaysian non-native speakers of French in their writing. This exploratory study on error analysis is useful for both learners and teachers of French as a second or foreign language. The result of this study can assist the learners to acquire a better understanding of the target language and future studies by identifying specific errors made learners and how they should correct them by knowing, understanding and avoiding such errors. Similarly, this exploratory study is useful for teachers, as it can help them identify which point and why learners committed the specific errors. This study can also help teachers who are involved in the important task of curriculum development as error analysis can be helpful for syllabus design and teaching (Hongquan and Kikuko, 2007). Finally, an understanding of the causes of errors will help teachers emphasize grammatical points so as to reduce chances of students making such errors.

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# Negotiating Meaning in the EFL Context

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## ABSTRACT

Language learning is a very complex process. It usually takes place inside classrooms and learners might not have the opportunity to sufficiently practice it in real life contexts. Since the main purpose of language learning is communication, most language teachers and researchers have asserted that learners should engage in meaningful interaction and negotiation of meaning through communicative language tasks to improve their communicative competence (Branden, 2000; Morell, 2004; Yuan and Wang, 2006). This paper aims to thoroughly examine the concept of negotiation of meaning and to address its relationship to learners' communicative competence. It examines both theory and research and argues that negotiation of meaning is essential in foreign language classrooms as it provides learners with the opportunity to produce language in a non-threatening atmosphere (Yuan and Wang, 2006) and helps them generate comprehensible input and output (Pica, 1985, Pica *et al.*, 1989). Through negotiation of meaning, learners are pushed to produce language and to make their points clear to achieve comprehensibility. Thus, the paper lends support to the concept of negotiation of meaning and its use in EFL classrooms.

**Keywords: Language, acquisition, learning, communication, negotiation of meaning**

## INTRODUCTION

Human language is a very complex phenomenon, which has always boggled the minds of those who have sought to explain how it is acquired or learned. Although mind boggling, language can be defined, albeit not very expressively, as an automatic, unconscious interplay between content and form (symbols representing sounds and meaning standing for or reflecting cultural, social, perceptual, and cognitive knowledge), which is carried out with the purpose of sharing or negotiating meaning for the sake of communication. This communication is aimed at furthering understanding that will lead to the accomplishment of a certain task which, in turn, will contribute to the welfare of the individual or community.

The fact that language is an automatic, unconscious process means that it happens involuntarily, without conscious thought or consideration from the speakers. Automaticity is applicable to the process of language acquisition, as well as the process of its production after it is acquired. This statement has two important implications. The first is that human children will pick up the language spoken in the surroundings where they grow up without their conscious effort and without any attempt from those around them to teach them the language. This picked up or acquired language will be the mother tongue or native language of these children. The second implication is that when producing the language, people do it automatically without having to think about the words, or sounds or rules that will

make up the comprehensible message. In fact, if a native speaker is asked to analyze and explain the grammatical structure of his own speech and his choice of words, he may not be able to do that, unless he is a linguist or a language teacher by profession.

According to Chaika (1994), "Human language is multilayered. It is composed of a system of meaningless elements that combine by rules into meaningful structures. Sounds, meaningless in themselves form meaningful words or parts of words. These words combine by rules into sentences, and sentences combine into discourses, which include conversation, books, speeches, essays, and other connected sentences. Each level has its own elements and rules for use and each also relates to other levels, also by rule" (p. 7). Since there is no one element that carries full communicative meaning by itself, it follows then that "human language is not isomorphic with its message," which in turn means that "there is no necessary one-to-one correspondence between message and meaning at any level" (ibid, p. 7).

Being multilayered and lacking isomorphism make language potentially complex in terms of "message production and sociological significance" (ibid, p. 8). This complexity, however, is not without benefits; in fact, it is crucial to the creative act of meaning making through language. Each element composing language is meaningless, but can combine with other meaningless elements to produce meaningful messages, and different combinations can produce different messages which convey different meanings. This means that by making different combinations using different rules, humans can produce an infinite number of messages that carry new meanings and new thoughts. These thoughts and meanings can multiply when communicated and shared with other humans who understand them and add their own meaning to them, hence building the edifice of thought and ideas, which explains Chomsky's assertion that language is the tool of thought (Chomsky, 1993). In the words of Chaika (1994, p. 9), "Because elements of language, notably individual sounds, have no

meaning in and of themselves, they can be divorced from meaning. Thus, human language can multiply meanings far beyond those of other communication systems [e.g. animal language]. The essentially meaningless elements of sound and syntax can be combined by rules into a multitude of words, sentences, and discourses… humans can create new sentences, sentences that they have never heard before, sentences that can be understood by others who know the same language."

The built-in rules in all human languages are crucial to creating an infinite number of new words and sentences. These rules are the rules of grammar, structure form or word formation. The acquisition of these rules among native speakers is automatic. As Chaika (1994) puts it, "We certainly cannot articulate the complex sets of rules we use for pronunciation, for sentence construction, and for discourse production. Nor can we explain what we actually do when we understand another speaker. In fact, this knowledge lies below the level of conscious awareness. If it did not, if we were conscious of everything that goes into speaking, oral communication would be considerably slowed down" (p. 6).

The above applies only to the process of acquiring the native language or mother tongue, a process that is effortless, automatic, and natural. However, learning a foreign language is far from being effortless, automatic or natural. The learning process occurs in a context where the language is not spoken as a native language in the community, where exposure to the language is limited and where the methods of learning that language are not natural, but contrived in educational settings that aim to teach it. The foreign language is not the first language that the learner learns for s/he has already acquired his own native language with its sounds, words, and rules. Thus, s/he has a frame of reference occupied by certain sets of sounds and rules which could be quite different from those of the foreign language. The learner of the foreign language comes from a culture that could be different from the target language in terms of norms, values, traditions and experiences. Since

these all shape and determine meaning in the learners' world, any mismatch between them and those of the target language will result in some comprehension and communication difficulties.

How would a learner, then, reconcile the differences without having them overlap to cause negative transfer from the mother tongue to the newly learnt foreign language? If we acknowledge that the purpose of language learning is communication, how can teachers of foreign languages foster communicative competence among their learners? Is it through negotiating form (e.g. structure, grammar, word formation, etc.), or is it through negotiating the meaning of the message? Thus, the aim of this paper is to address these critical questions by focusing on the concept of negotiation of meaning and its relationship with communicative competence and communicative language teaching in the foreign language classroom.

## THE CONCEPT OF NEGOTIATION OF MEANING

The phrase 'negotiation of meaning' has been a subject of much research and discussions among second language researchers and practitioners (Branden, 2000). This phrase was first used in the field of first language acquisition research. Its use then evolved in second language acquisition contexts due to the different developments in the field. The recognition of the active and essential role of interaction in the acquisition of a second or foreign language (Morell, 2004), the role of comprehensible input and output, the effect of conversational modifications or modified interactions and the call for more communicative language approaches are major causes that have led to the emphasis placed on negotiation of meaning. The prevailing hypothesis in current theory is that the more learners struggle to get their messages through or across to their interlocutors, the greater the amount of interaction and therefore the greater the acquisition.

> *The phrase negotiation of meaning, as Pica (1994) defines it, "focuses on the comprehensibility of the message's meaning*

*and on the message's form in so far as that can contribute to its comprehensibility" (p. 518). Thus, negotiation is linked to both the lexical as well as the structural aspects of language. Negotiation is first triggered by lexical difficulties (Ellis, Tanaka and Yamazaki, 1994) that cause breakdowns in communication and non-comprehension. Therefore, attention should be devoted first to difficulties impeding comprehension. Attention to and analysis of form can come later. Stressing its interactive nature, Morell (2004, p. 329) defines negotiation of meaning as " an aspect of interaction that occurs when at least two interlocutors work together to arrive at mutual comprehension of their utterances. It is characterized by modifications and restructuring of interactions when instructors and their students anticipate or perceive difficulty in understanding each other's messages."*

Negotiation takes place in communicative and interactional contexts between learners of a foreign language or between native speakers and learners. The differences between the interactions of non-native and native speakers (NNSs/NSs) and those of native speakers and other natives have been the subject of a lot of research. The investigation of the effect of negotiation on acquisition and whether a direct relationship can be traced between negotiation and comprehension on the one hand and negotiation and acquisition on the other is still debated and is still far from being settled (Perllowe, 2000). Meanwhile, variables affecting negotiation, such as learner factors, modes of communication, type of interaction (whether it is in groups, pairs or the classroom), and types of tasks have also been researched by many studies documented in the literature. Research studies on learner variables are reviewed and reported on in the upcoming sections of this paper. The following section reports on three main hypotheses, namely Krashen's input hypothesis, Swain's output hypothesis, and Long's interactional hypothesis, the explanation of which is essential to establish a theoretical framework for the concept of negotiation of meaning.

## THE INPUT HYPOTHESIS

Krashen's input hypothesis (1980, 1983 and 1985) is one of the most influential hypotheses in second language acquisition. This hypothesis states that in order for language acquisition to occur, learners need to be provided with comprehensible input that is one stage beyond their current level of language proficiency (i+1). In order to understand that input, the learners have to struggle to meet that challenge (McGuire, 1992).

Pica (1994) also asserts that input of three types is essential for SLA to take place. The first type is positive input, which she describes as grammatically and syntactically accurate language. Such input must be available to serve the learning process for it resembles data that learners draw on for their learning. Meanwhile, enhanced input is the second type of input necessary for language acquisition. Enhanced input helps learners identify which forms can and which cannot occur in the target language. The last type, which Pica calls negative input and feedback, provides the learners with metalinguistic information on the clarity, accuracy and comprehensibility of the utterances they produce. It is during the negotiation of meaning that all these types of input can be generated.

While Gass (1989) contends that input of some sort is necessary for language acquisition to take place, she expresses some concerns regarding the sort of input necessary saying that this is not yet clear until now. Kagan (1995) characterizes input that fosters language acquisition as comprehensible, developmentally appropriate, redundant, and accurate. However, Kagan admits that input alone is not sufficient for language acquisition to take place. Therefore, he adds output and context variables that interact to determine acquisition. In this way, Kagan agrees with Swain's (1985) hypothesis about comprehensible output.

## SWAIN'S OUTPUT HYPOTHESIS

Since receiving input may not involve any type of interaction among learners, Swain has advocated that though input is essential to language learning, it is not sufficient. Language production, or as she calls it comprehensible output, is another necessity for successful acquisition to occur. She gained this insight through her experience with Canadian immersion students whose oral production lagged behind their listening skills due to the fact that they were never pushed to produce language comprehensible to others.

In her hypothesis, Swain claims that the role of comprehensible input is to "provide the learner with opportunities for contextualized, meaningful use to test out hypotheses about the target language and to move the learners from a purely semantic analysis of the language to a syntactic analysis of it (Swain, 1985, p. 252). Thus, when learners are pushed to produce language, they struggle to make themselves understood by others. In the process, learners come to realize the gap in their interlanguage, or between what they want to say and what they really say. To make themselves clear, the learners move from a semantic focus, where the meaning is the target, to a syntactic analysis of the language, where form comes into consciousness. The grammatical analysis in which the learner engages is vital in language development as it helps learners move from being recipients of input to being active participants who can process the input, turn it into intake and attempt to produce it themselves (Shahadeh, 1999).

Other researchers came after Swain and added several other characteristics of comprehensible output. For example, Kagan (1995) describes such output as functional, communicative, frequent, redundant, and consistent with the identity of the speaker. Comprehensible output could be produced under a variety of conditions such as in interactions and negotiations between natives and non-natives or among non-natives themselves (Shahadeh,

1999), or between a teacher and her students. The output could be modified, premodified or unmodified. Types of tasks and arrangements (e.g. group work, pair work, or individual production) all affect the type of output and input generated. An extended discussion of factors affecting negotiation and output production will be provided later in the paper.

## LONG'S INTERACTIONAL HYPOTHESIS

Until the late 1970s, the role of interaction in language acquisition was taken for granted until Hatch (1978, cited in Shahadeh, 1999) brought it to the attention of teachers and educators. Among the researchers and theorists who followed the path that Hatch had sparked interest in is Long, who devised the interaction hypothesis. During the 1980s, Long started investigating the interactions of NNSs and NSs and saw that speakers modify their output using certain strategies in order to make it comprehensible to their interlocutors. He first called these modifications interactional modifications, but later referred to them as "negotiation." Of course the modified output of one speaker becomes the input of another (ibid).

Long (1980) focused on modified input and distinguished it from modified interaction. In his view, modified input is foreigner talk directed to the learner while modified interaction is related to the structure of the conversation. Topic shifts, comprehension checks and clarification requests are conversational modifications that permeate the interactions of NNSs more often than NSs interactions. Such strategies help speakers to achieve comprehensibility, avoid breakdown in communication and repair the discourse when trouble occurs, in order to ensure continuity of the conversation. Long deduced from the above that conversational adjustments promote acquisition since they ensure better comprehension.

Many studies have found that learners benefit most from interactionally modified input. Loschky (1994) conducted a study that aimed to test aspects of Krashen's input

hypothesis and Long's interactional hypothesis and the possibility that these could facilitate language acquisition. Learners of Japanese were the subjects. They were divided into three groups that received three different treatments, namely unmodified input with no interaction, premodified input with no interaction and interactionally modified input (input modified during interaction). The last group achieved the most in terms of moment-to-moment comprehension, but retention was not affected by the difference in treatment. Long holds that input will not be turned into intake unless the learner is developmentally ready to attend to the structures present in the input (Long, 1983b) and that could explain the reason that no differences between groups were found with regard to retention. Here, learner factors come into play in the process of negotiating meaning.

Gass and Veronis (1985) hold that a great deal is now known about interactions between NNSs and NSs or among NNSs themselves, but little is known about the lasting effect of these interactions on the learners' language development. Longitudinal studies are needed to prove the effect of interaction and negotiation of meaning that take place in conversational interactions.

Loschky (1994) cites Parker and Chaudron (1987), who reviewed 12 studies that compared NNSs' comprehension of unmodified and premodified input for both reading and reading skills. The findings of these studies indicate that premodified input increased NNSs' comprehension. However, Loschky does not say under what conditions the findings were true, something that is deemed essential if the results are to be taken seriously.

## COMMUNICATIVE COMPETENCE AND COMMUNICATIVE LANGUAGE TEACHING

Negotiation of meaning occurs in conversational interactions, which are communicative in nature as speakers and interlocutors try to arrive at a mutual understanding of the messages exchanged by both parties in a social context or

semi-social or simulated social contexts. Many theorists view negotiation as the context for interaction, an activity that has the potential to develop not only social skills but also cognitive and linguistic skills.

Larsen-Freeman (1986) defines communicative competence, as:

> *"Being able to use the language appropriate to a given social context. To do this, students need knowledge of the linguistic forms, meanings and functions. They need to know that many different forms can be used to perform a function and also that a single form can often serve a variety of functions. They must be able to choose from among these the most appropriate form, given the social context and the roles of the interlocutors. They must also be able to manage the process of negotiating meaning with their interlocutors" (p.131).*

Thus, negotiation of meaning is an essential part of the communicative competence of a language learner. Ensuring the continuity of a conversation and the comprehensibility of the conveyed massage take more than a mere knowledge of form and structures: it takes the ability to use strategic competence to avoid breakdowns in communication and repair incomprehensibility when it occurs. Knowledge of style and register, as well as the roles of people involves sociolinguistic knowledge which Canale and Swain term sociolinguistic competence. McGuire (1992) says "communicative competence encompass within it not only the knowledge of structure and vocabulary, but also the ability to negotiate meaning through interaction in a variety of situations which are authentic and realistic" (p.4).

Communicative language teaching perceives language as interaction, as an interpersonal activity that has a clear relationship with the society. Therefore, language use, linguistic, social and situational contexts are to be considered in the language classroom (Burns, 1984; cited in Galloway, 1993). To increase interaction and language use inside the classroom, students are encouraged to speak more, and teacher talk is minimized because the teacher's role is that of a facilitator rather than as a controller or dictator. In order to maximize the time allotted to every student and to increase the opportunities students have to practice the language structures they have been taught and to negotiate meaning, the teacher can use group and pair work, which has long been an integral part of the communicative language classroom (McGuire, 1992). When working in pairs or small groups, learners experience an increased responsibility to participate, and in participating they gain confidence in using the target language in general and they become responsible managers of their own learning (Galloway, 1994).

Recent research has not been consistent with regard to the benefits of group work despite the wealth of theoretical literature supporting and advocating small group work in the classroom. Dyads and groups that work really cooperatively were found to produce more language in speaking and writing (Hery, 2001). To illustrate that clearly, students were found to talk more when put into groups than when just interacting with the teacher. Their language production in groups was not found to be less accurate or careless than when they spoke to the teacher. In addition, students tended to engage in more speech acts in groups than when individually speaking to the teacher. Empirical evidence also shows that group work provides an atmosphere conducive to learning, and encourages the production of comprehensible input and output through the process of negotiating (McGuire, 1992). When negotiating in groups, students develop problem solving techniques that help them overcome the breakdowns in communication that render their messages incomprehensible. Problem solving techniques, in turn, facilitate fluency of language use, which is a major concern in communicative language teaching (Brumfit, 1980; cited in Aston1986).

Cooperation among students working together in a group is a factor that was found to differentiate the language production of cooperative groups from independent ones

(groups that do not really work collaboratively). In his study, McGuire (1992) found that groups which worked cooperatively tended to write longer skits. Cooperative groups, in comparison with independent groups, were found to do more turn taking for the characters in the skits, and the number of interactions was more for the cooperative groups. McGuire (1992) cites Hirose and Kobayashi (1991) who found similar results for group work. They observed that discussion groups incorporating cooperative learning principles could provide more opportunities for the generation of comprehensible input inside the classroom, especially for those who find it difficult to improve their oral skills by practicing outside the classroom.

When comparing the interaction between NNSs in groups and whole-class activities in the classroom, Rulon and MucCreary (1986, cited in Pica, 1994) found that NNSs produced sentences that were at the same level of syntactic difficulty in both contexts. Meanwhile, confirmation checks were more frequent in groups. The conclusion the researchers drew was that group interactions are at least as good as whole-class interactions held in the classroom.

However, contradicting results were found by Doughty and Pica (1986) who concluded that group work might be inappropriate for eliciting modified interaction due to many reasons, among which they mentioned the way the task is structured, students going along with the majority of the group or class, and the dominance of the more proficient students in the discussion. Foster (1998) found no significant difference between working in small groups and working in dyads. Many students in the groups did not participate at all; many more did not initiate any negotiated interaction in either dyads or small groups. Few produced modified utterances and generally, a small number of students were dominating the group's oral production and interaction. When evaluating the results of these studies, one should consider students' level of language proficiency, the types of tasks, communicative or otherwise, in which the students participate, familiarity with the topics discussed, and other factors related

to the context and atmosphere of the classroom or the place where the group work is done. For example, communicative tasks like information gaps will push students to produce language and to participate orally in the group interaction.

To conclude this section, oral interaction between students can serve some important functions, such as providing opportunities for generating input, producing output and getting positive or negative feedback. Bygates (1988) holds that student-student oral interaction may help language development in two ways:

1. It gives the learners the opportunity to integrate grammar into their oral skill due to the flexibility it offers in choosing the most efficient syntactic units for communication.

2. Group interaction can initiate and activate discussion allowing communication to take place.

## NSs/NNs INTERACTIONS VS. NNSs/ NNSs INTERACTIONS

The linguistic environment in which L2 learners are immersed has been viewed as one possible source of difference between first language (L1) and L2 acquisition. Native speakers of a certain language were found to simplify their language, often switching to an ungrammatical variety of it when speaking to non-native speakers or learners of that language. Such speech came to be known as foreigner talk. Omissions, expansions, and replacement or rearrangements are characteristics of the ungrammatical foreigner talk addressed to non-natives. Grammatically accurate foreign talk is often reduced to shorter utterances as measured by T-units. When it comes to vocabulary, NSs restrict themselves to using high frequency lexical items. In other words, they tend to restrict the range of the vocabulary they use when interacting with NNSs (Larsen-Freeman and Long, 1990).

When NSs do not understand the message conveyed by NNSs during interaction, they signal that to the speakers. In response to that, the learners were found to segment problematic structures or words and modify them towards

comprehensibility. Modifications made by learners depend greatly on the type of signals used by NSs (Pica, 1994). In cases where the signal for non-understanding appears in the form of repetition, for example, learners may respond with a "Yes" answer without going into details.

When NNSs interact with other NNSs, they were found to engage in more negotiation of meaning, especially if the learners had different language backgrounds, where phonology and the difference in sound systems interfere or come into play (Shahadeh, 1999). Veronis and Gass (1985) affirm that interactions between NNSs and their counterparts not only maximize negotiation, but also provide an unthreatening forum. They found a higher frequency of non-understanding routines to be present in such interactions. To tackle incomprehensibility, learners engage in trouble-shooting procedures to render their messages comprehensible to the interlocutors (Long, 1983a: 1983b, cited in Aston, 1986). The huge amount of negotiation of meaning, elicited by these interactions in part happens due to the positive atmosphere that prevails in the context. Veronis and Gass (1985) refer to this context as the "unthreatening forum". Shahadeh (1999) explains this more clearly by saying that learners do not lose face when interacting with each other in the same way as they do when interacting with NSs. Knowing that all the participants in the negotiation of meaning are in the process of learning the language and that each has some imperfections in their language, or rather interlanguage, is likely to give the learners the peace of mind as well as the confidence to speak up and participate. Anxiety is reduced to a minimum, so students are more receptive to the language input emerging in the negotiation.

One major concern here is the accuracy of the input provided by learners to each other. Will the learners be acquiring each other's interlanguage? Probably, and hopefully, not. It was found that when learners engage in negotiation of meaning, and are confronted by incomprehensibility of their input, they tend to modify it in the direction of the target language, making it more plausible and better understood (Gass and Veronis, 1989, Foster and Ohta, 2005).

Similar findings to those obtained by Gass and Veronis were also found by Kashimaro (1992, cited in Shehadeh, 1999). His study had two main aims. First, it aimed at finding out whether non-native speakers could push the output of each other to be more grammatical and more target-like. Second, the study aimed to investigate the effect of task type on the frequency of incomprehension signals in each task. Two tasks were chosen, an information gap in the form of a jigsaw, and an open-ended discussion. The findings indicated that the utterances of the learners were more target-like during the open-ended discussion. For this reason, fewer incomprehension signals were found during open-ended discussions. To explain the findings one could surmise that in the open-ended discussion there is flexibility as to what students choose to talk about and what they choose to avoid (if they intend to play safe). The information gap task generated the greatest amount of negotiation, as measured by the number of incomprehension signals that occurred during the interaction. This is in line with the common consensus that communicative tasks, such as information gap activities which require the participation of all the learners in order to accomplish the task successfully, are the best in terms of their potential input, output and interaction.

However, one problem with the aforementioned study is that it failed to illustrate the total amount of interaction produced in every task and whether the differences in the amount of interaction were significant or not. Nevertheless, the study demonstrates that task type is one of the factors that can affect the process of negotiating meaning. Pica and Doughty (1985) found greater turn-taking and more output production done in NNSs/NNSs interaction than in NSs/NNSs' interactions.

A second concern that comes to mind regarding NNSs/NNSs' interactions is the possibility that the interaction is dominated by proficient students to the neglect of or the lack of involvement by less proficient ones. This situation could happen and in fact was documented in some studies, like that of Pica and Doughty (1985). A counter argument to

this could be that lack of participation is not an indicator of not learning. Some students learn better by listening to others. Recent research show that introverts are better learners of languages than extroverts because they take their time to internalize language before hurrying themselves to produce it. Learner factors such as personality and learning styles are factors that need to be kept in mind when examining language acquisition in general and negotiation of meaning in particular.

Shahadeh (1999) conducted a study involving learners of English coming from different language backgrounds. The study examined the ability of these NNSs to modify their interlanguage utterances towards comprehensibility in response to self-initiated and other initiated NNSs/NNSs and NS/NNSs interactions. Two communicative tasks were used, namely picture dictation and opinion-exchange. The researcher hypothesized that:

1. NNSs/NNSs interaction would provide additional chances for other-initiated clarification requests and self-initiated clarification attempts to produce more comprehensible output than NSs/NNSs interactions.

2. More modified comprehensible output would be produced in NNSs/NNSs interactions.

3. Picture dictation tasks would generate more chances for self-initiation and other-initiation and more modified output would be produced during this task.

The findings indicated that with regard to the first hypothesis, NNS partners did provide greater chances for other-initiated clarification requests than NSs partners; however, the differences were not significant. This finding provides only partial support for what is hypothesized about NNSs/NNSs interaction and its potential to generate more chances of interaction and negotiation of meaning than NSs/NNSs interactions. The occurrence of self-initiated clarifications was almost evenly distributed between the two types of interactions. Extended negotiation routines were significantly greater in NNSs/NNSs interactions than in NS/NNSs interaction when attempting to produce comprehensible output. This finding might seem to contradict the finding mentioned above which stated that NNSs/NNSs interactions were not found to differ significantly with regard to other initiated clarification requests from NSs/NNSs' interactions. However, the focus of the first finding, as it appears, was on other initiated clarification requests while the later mentioned finding focused on the attempts to produce comprehensible input. The researcher was not very clear in distinguishing between the findings and what each meant.

Hypothesis (3) was confirmed because the findings showed that the picture dictation task offered a significantly higher occurrence of other initiated clarification requests than the opinion exchange tasks.

## NEGOTIATION OF MEANING, COMPREHENSION AND LANGUAGE ACQUISITION

Comprehension has been viewed as the access gate to second or foreign language acquisition. Without it, it is difficult to imagine acquisition taking place. Therefore, a positive relationship has always been inferred between acquisition and comprehension. Studies on different input types, including foreigner talk, teacher talk, and negotiated interaction and premodified input, actually provide some kind of evidence for the importance of comprehension in language acquisition. In addition, evidence also could be derived from studies on the hearing children of deaf parents. The input for these children comes from TV mainly, which was found insufficient for successful acquisition to occur due to the fact this kind of input is incomprehensible in many ways and unmodified to suit the developmental level of the hearing child. For example, Dutch children who learned German only through TV were found to have difficulty acquiring German (Loschky, 1994). Thus, it appears that interactions in natural communicative settings,

or at least simulated settings, are of vital importance to the acquisition process. Social interaction, in the Vygotiskian theory, is the basis of language learning. The role of the expert, whether it be a teacher, an older person such as a parent or a peer who possesses a better command of the language, in modelling behaviour and in scaffolding it is a key factor in comprehension and hence acquisition. Since negotiation of meaning happens in social, natural or semi-natural communicative settings, it involves the interaction of two or more people who aim to establish mutual understanding of a certain topic. Such characteristics are typical of social settings conducive to language learning.

In her review of research done in the area of negotiation and social settings, Pica (1994) states that research " illustrate[s] ways in which negotiation contributes to conditions, processes and outcomes of L2 learning by facilitating learners' comprehension and structural segmentation of L2 input, access to lexical form and meaning and production of modified output" (p.493). Thus, during negotiation, learners generate input or modified input provided by their interlocutors. The modification helps learners comprehend the meaning of the input produced during the process.

Despite the entire sound theoretical basis for the inferred positive relationship between negotiation and comprehension, no direct relationship has been traced until now. In other words, learners' and interlocutors' negotiation does not always lead to immediate comprehension. Due to this fact, learner variables and other variables involved in the context of interaction have to be put into perspective. Comprehension could occur after the negotiation, because some learners hold some unresolved issues in the back of their minds for further consideration and analysis. In other words, what works for one learner may not work for another and what works in one setting or one context may not be successful in another. This is a problem that prevails in the field of teaching, be it language teaching or just teaching in general. There is no one way that works for all.

Some studies were able to trace relationship types between negotiation and comprehension in the cases of moment-to-moment comprehension. Retention of the materials comprehended during negotiation, however, was found not to be affected by the amount of negotiation done. Ellis, Tanaka and Yamasaki (1994) reported two classroom studies that investigated the effects of modified interaction on comprehension and vocabulary acquisition among 79 and 127 high school students of English in Japan. The results indicated that interactionally modified input resulted in better comprehension than premodified input with no interaction and that interactionally modified input led to more words being acquired than premodified input. However, learners who actively participated in negotiating meaning did not understand any better than those who were simply exposed to modified interaction. Active participants did not learn more new words. In response to that, we would suggest a line of longitudinal studies that take into consideration all the variables that could interfere in the negotiation process. Such studies are rare right now (Bitchener, 2004), but they are greatly needed in the field.

One example of these studies is the one conducted by Bitchener (2004) who investigated the retention of linguistic knowledge gained through negotiation among ESL learners over a period of 12 weeks. Retention was measured after one week and 12 weeks of interaction. In both conditions, the study found a high retention rate. Another major finding was that vocabulary was negotiated more than pronounciation and grammar. It is important to note here that research on negotiating meaning is still gaining momentum with researchers such as Pauline Foster and Amy Synder Ohta continuing interest in the area and connecting it to "sociocultural and cognitive approaches to second language acquisition" (Foster and Ohta, 2005, p. 402).

## FACTORS AFFECTING NEGOTIATION

This section touches on what has been mentioned about variables affecting interaction and negotiation of meaning. The purpose of

including it here is to summarize the most important factors and to present them together rather than leaving them scattered throughout the paper. Among the variables that affect negotiation and the outcomes obtained from it are:

A. Learner variables: These are many and could be related to the age, personality type, gender, learning styles, and level of language proficiency of the learner. Pica (1994) states that if a learner is not yet ready for a new word, then he cannot acquire it, so negotiation can do little towards its internalization. Some learners are extroverts and out-going, so they like to participate and they learn through that; others are introverts and prefer to listen and internalize the language. Some female students may feel comfortable being put into groups with males, so they participate. However, in many Muslim and Middle Eastern cultures, many females do not feel comfortable working with males in the same group. For example, a study conducted in Indonesia by Hery (2001) found that dyads of the same gender produced more negotiation of meaning when working with information gap and jigsaw tasks. There are different learner types; visual students, kinaesthetic students, auditory students, and tactile students. Each learns in his own way, and if we are to do justice to negotiation and its effect, such factors should be considered and accounted for.

B. Type of tasks: The type of tasks used to generate input, output, and modified interaction has a potential effect on the amount of negotiation going on (Cheon, 2003; Hery, 2001; Pica *et al.*, 1989). Tasks are usually classified into:

    1. Information gap tasks or one-way tasks. The success of this type of task is largely dependent on the ability of the participants to supply information to each other. To state that in other words, each student has a piece of information which the other participants do not have and has to share it with them in order to successfully complete the task. Such tasks are communicative tasks that require the participation of all the students in a certain group or pair. Jigsaw and picture dictations are examples of these tasks.

    2. Two-way tasks are tasks in which the supply of information for the successful completion of the task is optional. A good example of such tasks is opinion exchange. Shahadeh (1999) found that picture dictation generated more clarification requests than opinion exchange tasks, which supports the idea that more communicative tasks generate or provide more opportunities for negotiation. Exceptions sometimes arise; however. Foster (1994) found that the grammar task, in which three dyads participated and which was expected to be unpromising in terms of negotiation since it did not require the exchange of information, produced low comprehension units for two dyads, but very many units for another dyad. This takes us back to what was said before about the fact that there is no one accurate way that could work for all with the same degree or potential for success.

C. Interaction in groups, pairs, and dyads: Small group interaction received a lot of support in the context of L2 teaching and learning. While interaction in groups was expected to generate a great amount of language production, some students were found to remain silent during group work when more proficient students dominated the discussions. Foster (1994) found that working in dyads engaged students in much negotiation of meaning when working on the information gap task. As for groups,

however, little negotiation was observed due to the dominance of one student or two in the group.

To conclude this section, the factors affecting language acquisition in general are those that affect negotiation of meaning as well. In addition to the factors mentioned above, setting, topic, mode of interaction, whether oral or written, the intention of the speakers, the style or register they use are all factors that can interfere and affect the process of negotiation of meaning and hence language acquisition (Maley, 1982).

## THE ADVANTAGES OF NEGOTIATION OF MEANING

Here is a list of some of the benefits that students may gain from negotiation. It can:

1. Generate comprehensible input and output (Yuan and Wang, 2006).

2. Develop strategic competence through trouble-shooting strategies that help the learner repair misunderstanding and a avoid breakdown in communication.

3. Develop sociolinguistic competence and social skills as learners try to find a place in the group and attempt to convey their ideas according to the roles they play in the group and in consideration to the roles played by other group members.

4. Generate feedback, negative, signalling non-understanding, or positive confirming understanding and thus providing positive reinforcement.

5. Develop cooperative learning habits, which were found to be better facilitators of language acquisition than competitive learning habits (Yuan and Wang, 2006).

6. Reduce levels of anxiety in students and provide a positive atmosphere for learning.

7. Teach students to work with others in order to achieve mutual comprehension.

## ARGUMENT AGAINST NEGOTIATION OF MEANING

There are two most common arguments against negotiation of meaning, as follows:

1. Students may learn from each other's interlanguage. We refuted that by saying that there are studies that showed that learners recognize the mistakes of each other, and when they attempt to modify their language, their modifications are directed towards more comprehensibility and more target-like forms.

2. Fillmore (1979, cited in Pica, 1994) suggests that social integration which the group achieved through a series of social strategies in N/NN interactions is the key to successful acquisition. Fillmore also suggests the following strategies for social integration in native conversations such as joining a group and acting as if the student understood what was going on, and counting on the assistance of group members. In our opinion, this goes against Swain's output hypothesis, which encourages students to produce language so that their oral language development will not lag behind their listening skills. Swain (1985) builds her hypothesis from the results she obtained from Canadian immersion programme where students were bombarded with input, but were not really successful in language acquisition due to the fact that they were not pushed to produce provide counter evidence against Fillmore's suggestion. Language acquisition requires comprehension as well as active participation if learners are to speak the language in a comprehensible way one day.

## CONCLUSIONS

Negotiation of meaning has been present in the field of language acquisition for over 20 years now (Bitchener, 2004). Presumably, its presence is going to continue due to the fact that negotiation is based on sound theoretical principles and the

value of many of its aspects has been proven by research. Negotiation of meaning is an interpersonal skill that emerges in conversational and communicative contexts that are natural or simulated. It helps learners to generate input, output, and feedback that inform them of their success in transmitting messages they intend to transmit, and it encourages them to employ strategies that help them to get their messages across when breakdowns in communication occur. Although no direct relationship has yet been established between negotiation and comprehension, future longitudinal studies may produce promising results.

Negotiation is a beneficial problem-solving strategy that teaches social skills, and helps students to learn from each other. Different factors come into play when reviewing what happens during negotiation. Learner variables, variables related to the context of interaction, the tasks used, the mode of interaction and the atmosphere in the classroom or in natural settings are all important considerations in conversational interactions. Arguments against negotiation do not appear to be very sound because there is research that goes against them. As long as the role of interaction is considered vital for language acquisition, negotiation will remain a good language teaching technique that can enhance language learning and push the process of language development further.

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# Coastal Port-towns and the Trading Network of the Straits-Malay Traders

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## ABSTRACT

The history of the Straits-Malay merchants and traders has not been fully written, documented, and researched. This article tries to evaluate the role and importance of the Straits-Malay traders from the early period until the mid nineteenth century. Their presence and network cover a vast area and their presence in many ports along the Straits was very important in shaping the economic history of Riau, Aceh, Melaka, and Penang. However, towards the mid nineteenth century, their presence was replaced with the incoming Chinese and the European companies.

**Keywords: Malay, coastal port-towns, Straits of Melaka, trade, shipping**

## INTRODUCTION

The Straits of Melaka is a strategically located at important waterway that links the East and the West. Also known as the *Sea of Malayu*[1], it is located in the heart of the Malayland.[2] Since time immemorial the Straits of Melaka or the *Sea of Malayu* has played a vital role as an important passage connecting the busiest trading route between the Indian Ocean and the Far East (Wolters, 1967). From the early period of the millennium, many coastal ports and towns emerged along the Straits. Most of these ports were located on the eastern coast of Sumatra and on the west coast of the Malay Peninsula. Although not all of these Malay ports and towns became important trading centres, some of them emerged as important regional exchange ports or entrepots. Ports which were strategically located and had the power to command local trade later grew into regional and inter-regional trading markets and became the foci of commercial wealth and exchange for the zones of economic activity that they serviced (Nordin Hussin, 2006, p.1-25).

Scholars' writings on early Malay history have identified a number of trading centres which dated from the first millennium B.C. to the early first millennium A.D. in both the coastal and inland reverine areas along the Straits of Melaka. Most of these were small trading centres and many were described as 'collecting centres'. Some of the early historic collecting centres along the Straits of Melaka were Kampung Sungai Lang and Kelang on the west coast of the Malay Peninsula. The archeological findings of

the prehistoric artefacts at these sites suggested that they were in commercial contact with the mainland and insular Southeast Asia (Leong, 1990, p. 17-38). The existence of these many collecting centres along the Straits of Melaka shows that the Malays had been active in trade and commerce since the early period. The Straits of Melaka, which lay astride the international trade routes between the Middle East, India to the west, and China to the east, soon found itself in the most enviable position. It was in this context of international trade, i.e. from about the second or the third century A.D., several trading polities along the Straits of Melaka first came to be documented in foreign literary sources (Leong, 1990, p. 17-38).

## COASTAL MALAY PORTS AND MALAY TRADERS IN THE EARLY PERIOD

There are many coastal ports and towns along the Straits which have a very long history and as important trading emporiums. The historic port-town of Srivijaya (8th – 13th centuries) was one of them.[3] This port, which was found during the eighth century AD, was the capital city of the Malay kingdom. It later became an important centre for the trade between the East and the West and also a centre for knowledge and culture. It was in this port-town that many traders and scholars converged for trade and to enhance their knowledge of Sanskrit.[4] Even before the fall of Srivijaya, there were many small Malay trading centres, such as Jambi and Temasik (old Singapore) which later became important Malay ports along the Straits of Melaka. Jambi and Temasik served as important trading centres before Melaka was transformed into the greatest trading centre in the East. Scholars also believe that the old port of Jambi became an important port on the Straits long before Srivijaya came to power. However, studies and archaeological research has yet to be conducted on the old Jambi port. Temasik was also a thriving port town. When Stamford Raffles arrived in Temasik in 1819, it was not merely a fishing village as claimed by

him. There were already permanent settlements and the port was a busy and flourishing centre with traders coming from the Straits, Malay Archipelago and also from India and China.

Further up on the west coast of the Malay Peninsula, there were the ancient port-towns of Langkasuka, Beruas, Kuala Selingsing and Kuala Muda Kedah which also served as important trading and commercial centres for the region (Nik Hassan Shuhaimi Nik Abdul Rahman, 1984). Although our knowledge of these port-towns is still scanty, scholars have proven that they had existed since the early millennium and were important trading centres in the *Sea of Malayu*.[5] Further on the northern coast of Sumatra, the ports of Samudra-Pasai and Pedir served as important entreports during the 11th and 12th centuries.[6] The ports served merchants from the Indian Ocean, Arabian Sea, as well as the Bay of Bengal and from the Malay Archipelago. Both port-towns played an important role in spreading Islam to the Malay Archipelago and they also served as a centre for knowledge to this region. In addition to the above, the port of Aceh on the northern tip of the island of Sumatra served as the gateway to the Straits of Melaka. The Kingdom of Aceh which was located on the north-east coast of Sumatra became an important entreport serving the northern region of the Straits during the sixteenth and seventeenth centuries.[7] Traders from as far as the Arabian Sea and Europe converged in Aceh every year to trade.[8] Aceh, during her heyday, was a cosmopolitan city where people of various races (Malay, European, Arabs, Indian, Chinese, Persians and Gujarati) and religions had made their home (Das Gupta, 1962, p. 37-49).

As Aceh was the gateway to the Straits of Melaka from the north, while Johor-Riau was the gateway from the south. The Malay port of Johor-Riau served as an important centre for trade from 1641 to 1784.[9] The expansion of Riau trade and commerce was further enhanced when the Johor Kingdom was ruled by the Bugis princes. As described in *Thufat al Nafis*, the Yang Dipertuan Muda Daeng Kamboja devoted himself solely to extending Riau's trade.

*Several trading perahu came from distant places, and scores of keci came from Bengal, bringing goods from there; scores of wangkang arrived from China with green or red bows; scores of tob came from Siam bringing Siamese goods; and as well as these, perahu from Java. There were scores of selub, senat, tiang sambung, and pencalang from the Bugis lands, pedewakan as well as perahu from the outlying territories, crammed like sardines in the Riau River from the estuary to Kampung China. Goods from China competed with those from Java, and Javanese goods competed with those from Riau, such as gambier, and there were numerous Chinese merchants as well as locally born Bugis merchants. During this period, there were many wealthy people in the country (Raja Ali Haji, 1982).*

The greatness of Riau as the major trading nation and port in the Straits later shifted to Singapore when the island was acquired by the British in 1819. Once again, the island was able to exploit the strategic location to her advantage. Since the Portuguese and Dutch occupations of Melaka, the restriction on trade was a policy and monopoly of trade was carried out on the major commodities traded in the Straits ports. This was contradictory to the trading policy which had been practiced by the early Malay kingdoms. For most parts of the Malay kingdom of Melaka and the kingdom of Johore-Riau, free trade was maintained throughout their era. The fall of Johor-Riau in 1784 saw another misfortune to the Malays by the British and Dutch schemes in Riau, Melaka, Penang and Singapore.[10] With their failures in Penang and Melaka, the English later acquired Singapore from the Malay and free trade transformed the island into a thriving port in the East.[11]

Besides the major port-towns mentioned above, there were many smaller Malay port-towns along the coast of the Straits. Many of these small ports-towns had existed since the early period and some still survived into the twentieth century. The most important of these are Barus, Panai, Kampar, Kota China, Siak, Indragiri, Jambi, Batu Bara, Serdang, Deli,

Kelang, Perak, and Selangor. All these Straits-Malay port-towns served the hinterland areas and acted as the distribution centre for goods from the major port-towns which also functioned as important collection centres for goods from the hinterlands to be traded at the major ports-towns on the Straits. The majority of these ports were located in strategic locations by the rivers which regulated and dictated the trading patterns and networks in the hinterlands and overseas (Nordin Hussin, 2006).

## COASTAL MALAY PORTS AND MALAY TRADERS IN THE EIGHTEENTH CENTURY

Since the first millennium A.D., many important commercial trading centres had existed along the coast of the Straits of Melaka. These were great seaports and foci of communications which developed in response to the increasing volume of seaborne trade in the Malay waters. Conveniently located on the east-west maritime route and possessing good natural harbours, adequate warehouse facilities for the merchants awaiting the next monsoon season and plentiful supplies of fresh water and food, these port-towns were popular meeting places for traders and merchants engaged in long-distance trade. It was in these Malay ports along the Straits of Melaka that merchandise from the Arabian Peninsula and Persia in the Middle East and goods from India, Sri Lanka, and China in the Far East were landed, sold and reshipped to their final destinations. Many foreign merchants found it more economical and reliable to purchase their goods from the ports along the Straits. Apart from being the main ports of transshipment, these entrepots were also major export centres for the local products from the Malay Archipelago. The cosmopolitan character of these port-settlements was often reflected in the mixed character of the material culture found in the vicinity of the settlements.[12]

The fact that along the Straits of Melaka where the heartland of the Malay region was blessed with natural resources such as gold and tin were already being exploited and that many of

these ports were the major outlets for the export of the minerals. There is also evidence to suggest that other mineral ore from the surrounding regions, such as gold, were also traded at these centres. Therefore, the Malay ports served not only as an important place for the transshipment of goods from China and the countries west of the Bay of Bengal, but also as the leading collecting centres for the local produce, especially forest products (sandalwood, rattans, teakwood, bird nests, ivory, and herbs from the forest), minerals (tin and gold), harvests from the sea (fish, tripang, and pearls), food stuffs (grains, paddy, and rice) destined for external or foreign markets. Hence, the Malay ports along the Straits of Melaka were a cosmopolitan in nature. Traders from many places converged and some even had made it as their home. Since life in the ports along the Straits was more cosmopolitan in nature, from at least the first millennium A.D., almost all our entire knowledge regarding the history of these ports derived from many foreign textual sources, particularly from the European travellers (Ptolemy, Tome Pires, Barbosa), Arabian seafarers and cartographers (Ibnu Batutta, Sulaiman al Mahri, al Masudi, Ibnu Majid), Chinese records, and Indian literary work and writings (Leong, 1990, p. 17-38).

It was in this environment that the Straits-Malay ports and the major port-towns on the Straits, such as Melaka and Penang, were able to tap the strategic location of the Straits to their own advantage. In fact, the Straits of Melaka was an integral part of the international sea route linking the East with the West. Its importance as a waterway and passage through which most of the trade between China and India and beyond was conducted had long been recognised. The arrival of the Europeans took this recognition to a different level for they were inclined to put into action the belief that whoever controlled the Straits would ultimately take control of the lucrative trade that passed through it (Nordin Hussin, 2006, p. 1-25).

Throughout the history, the role of the Malay merchants and traders in the Malay-Indonesian Archipelago was very imminent (Nordin Hussin, 2005, p. 215-237). Their presence was very important in the Malay waters since it was they who were the collectors and distributors of goods and commodities which arrived at many major port-towns in the archipelago. Although their presence in the intra-Asian trade is very clearly documented in the Dutch East India Company (VOC) and English records, research and writing on their role in trade have been neglected by scholars (Nordin Hussin, 2005, p. 215-237). Furthermore, the importance of the Malay merchants and traders was seldom highlighted and if they were ever mentioned, their roles were not given any significance detail. The Malay traders were an important group of traders from the archipelago and their presence was clearly seen right from the Srivijaya period until the nineteenth century. However, while trade and commerce expanded in Southeast Asia, the nineteenth century saw the decline of the Malay merchants and traders when fewer of them appeared to have had the means and resources to participate in long distance trade.

By the end of the eighteenth century, the two major ports in the Straits were Melaka (Dutch) and Penang (English). Besides these two main ports, there were many other ports on the coast of the Malay peninsula and the Sumatran east coast which were ruled by the European powers. These ports were sometimes called native or the Malay ports. Among the Malay ports, the most important on the Sumatran east coast were Aceh, Asahan, Batu Bara, Serdang, Deli, Langkat, Tamiang, Rokan, Indragiri, Siak, Kampar, and Palembang. The ports on the Malay Peninsula were Kedah, Larut, Perak, Selangor, Perlis, and Langkawi. These Malay ports were ruled by the Malay rulers and the majority of the traders who had come from there were Malays. These ports were connected to the major ports in the Straits, namely, the ports of Melaka and Penang, and later in the mid nineteenth century, Singapore.

Historically, the port-town of Melaka (which is located on the western side of the Malay Peninsula on the Straits of Melaka) was the main gateway between the East and the West.[13] During the Malay sultanate, it controlled a very wide empire which covered the parts of eastern Sumatra and the western Malay Peninsula. It

was during this period that the merchants from Arabia, Persia, India, further India, and China, as well as from the Malay world, flocked every year to Melaka which was then the centre of inter-Asian trade. The description on how trade and commerce were conducted in Melaka was recorded by the European travellers who had arrived in Melaka during the height of the trading season. Among other, Tome Pires reported that "the affairs of Melaka are of great importance, and of much profit and great honour. No trading port as large as Melaka is known, nor any

where they deal in such fine and highly-prized merchandise. Goods from all over East are found here; goods from all over the West are sold here."[14] It was Melaka's great wealth, strategic location, and the lucrative trade on the gateway between the East and West which finally led to her downfall to the Portuguese (1511-1641) and the Dutch (1641-1824) and later to the English in 1824-1957. However, during the Portuguese occupation of Melaka, they only controlled and occupied a small area, which included the fort of Melaka, as well as the town and its suburb.

TABLE 1
Traders arriving in Melaka in 1780-1793

| Ethnicity/ Year | 1780 | 1781 | 1782 | 1791 | 1792 | 1793 |
|---|---|---|---|---|---|---|
| Malays | 134 | 143 | 203 | 166 | 113 | 113 |
| Melaka Malays | 11 | 15 | 29 | - | - | - |
| Bugis | 64 | 68 | 46 | 17 | 47 | 36 |
| Java | - | 1 | - | - | 2 | - |
| Melaka Burghers | - | 2 | 1 | 2 | 1 | - |
| Melaka Chinese | 32 | 18 | 24 | - | - | - |
| Melaka Kelings | 2 | 1 | 1 | - | - | - |
| Melaka Moors | 3 | 4 | 2 | - | - | - |
| English | 51 | 20 | - | 48 | 81 | 90 |
| Portuguese | 28 | 17 | 26 | 14 | 15 | 15 |
| French | 2 | 2 | 7 | 2 | 6 | 3 |
| Danish | 6 | 2 | 3 | - | - | - |
| Spanish | 1 | - | - | - | - | - |
| American | - | - | - | - | 2 | - |
| Sweden | - | - | - | - | 1 | - |
| Burgher | 2 | 4 | 1 | 1 | 1 | 1 |
| Chinese | 28 | 20 | 41 | 44 | 30 | 27 |
| Moors | 4 | 7 | 6 | - | 3 | 3 |
| Persians | - | - | - | - | - | 2 |
| Kelings | - | - | - | - | 1 | - |
| Pegus | - | - | - | - | - | 1 |
| Arabs | 12 | 9 | 10 | 21 | 11 | 19 |
| Unknown | - | - | 2 | 2 | 4 | - |
| VOC | - | - | 14 | - | - | 1 |
| Total | 380 | 333 | 416 | 317 | 318 | 311 |

*Source*: Nordin Hussin, Melaka and Penang 1780-1830: A study of two port towns in the Straits of Melaka, Vrije Universiteit Amsterdam, 2002

Melaka's main asset was its trade and location rather than its hinterland which was left mostly uncultivated.[15]

Towards the last decades of the eighteenth century, Melaka was still an important centre of trade in the Straits of Melaka. The Dutch war with Riau had decimated the port and eliminated it as a rival in the Straits, while Penang which was founded in 1786, was not yet in a position to compete. In those days, around 300 ships bringing in traders from many different ethnic backgrounds and a huge variety of goods from various parts of Asia visited Melaka annually. This annual flow of traders into and out of Melaka followed a pattern that was determined by the winds and the monsoon. Thus, the trade in Melaka, as with many other ports, was seasonal with its high and low periods coinciding with the tropical monsoons.

Traders came to Melaka in almost as many types and sizes of ships as the variety of goods they brought for there were many kinds of ships which sailed the Southeast Asian waters during the late eighteenth century.[16] Ships from Europe were large and well equipped with cannons and weapons. These were mostly long distance ships which travelled from Europe to the Indian Ocean, the archipelago and China. Besides these, there were also ships which travelled within the archipelago, for example, from ports in the northern Java to the ports in the Straits of Melaka. Small ships normally travelled short distances between the ports in Sumatra and the Malayan Peninsular or within the Straits (Gerrit Knaap, p. 159-169).

The Malays, mostly from Sumatra and the archipelago, also travelled in a variety of ships of which the most popular were the *balo*[17], *banting*[18], *kakap*[19], *pantjallang*[20] and *pentjajap*.[21] The Bugis, who were mostly from Riau and Selangor, used the *padowakan*g, and *pantjallang*.[22] On the other hand, the majority of the Dutch burghers used the bark and the *brigantijn*. The Moors who travelled between India, Pegu, and Melaka sailed in fairly large ships, 80 to 200 lasten in size. The highest numbers of vessels trading in Melaka were the Malay and European ships, followed

by those brought in by the Bugis, Chinese, Melaka-Malays and Melaka-Chinese. In the European category, the English fleet (the EIC and the English country traders) was the largest (Nordin Hussin, 2002: 459-480). The English East India Company traders who visited Melaka were usually those travelling the India-Melaka-China route. The records showed that they were regular visitors although there is no record of the English ships calling at Melaka for 1782 (Nordin Hussin, 2002, p. 459-480). This was probably due to the outbreak of the Anglo-Dutch war in Europe when it was felt unsafe for the English ships to visit a port that was under the control of a hostile nation. No doubt, there would have been a constant flow of the VOC ships coming in and out of Melaka's harbour, but the records do not provide information on this, as it was mentioned earlier. The next biggest group of the European merchants were the Portuguese, followed by the Danes and the French (Nordin Hussin, 2002, p. 459-480).

The Malays represented more than 42% of the total arrivals in 1780/82 and 37% in 1791/93. Meanwhile, the Bugis made up more than 15% in 1780/82 and 10% in 1791/93 (Nordin Hussin, 2002, p. 459-480). The majority of the Bugis skippers who arrived in the years 1780/82 came from Riau, but after the Dutch-Riau war in 1784, most of the Bugis skippers came from Selangor, Terengganu, Trantan and Tembelan. Chinese ships made up more than 7% of the arrivals in 1780/82 and 8% in 1791/93. Most of them came from Javanese ports such as Surabaya, Semarang and Cirebon and less than 1% was recorded to have come from the Chinese mainland. The local traders from Melaka made up more than 12% of the total arrivals in 1780/82 and 7% in 1791/93. Out of these, the largest groups were the Melaka-Malays, followed by the Melaka-Chinese, but later their numbers declined in the 1791/93 period (Nordin Hussin, 2002, p. 459-480).

As can be seen, not only did the Europeans come in large ships and were involved in long distance trade, they also came in large numbers, and this clearly showed their dominance in the Asian trade as a whole. However, while they had

the lion's share of that the trade, the huge Malay and Bugis presence in the short distance regional trade goes to show that, at this stage, native traders remained an integral part of the trading activities of Southeast Asia. It should also be noted that while the number of the Melaka-Malay traders remained steady throughout the 1780/82 and 1791/93 periods, the Melaka-Keling and Melaka-Moors were not seen in the 1791/93 period (Nordin Hussin, 2002, p. 459-480). This could be because many of them had shifted to Penang as it is closer to the Indian subcontinent and it had attracted, right from its opening, a large number of Chulia traders and merchants to settle there. It was probable that the majority of the Melaka-Keling and Moors had also chosen to base themselves on the island (Arasaratnam, p. 126-143).

Traders from Java, who consisted of Java-Chinese, Java-Malays, and Java-Dutch burghers, often came to Melaka bringing with them agricultural produce, as well as food and forest products. In September 1780, nine ships from various ports of Java, 4 from Gresik, 1 from Surabaya, 3 from Semarang, and 1 from Cirebon arrived in Melaka. Two of the skippers were Java-Dutch burghers, 3 Java-Malays, and 4 Java-Chinese. Goods which came from Java consisted mostly of rice, salt, beans, oil, Java cloth, Java tobacco and Java sugar, while goods brought from Melaka by the majority of the traders from Java consisted of *gambir, amballo, damar* and *belacan/terasi* (Nordin Hussin, 2002, p. 62-63). The pattern of the travel appeared to have been one in which many sailed from their port of origin directly to Melaka, stopping at other ports in the Straits or in Batavia only on their homeward journey.

The majority of the Malay traders came from the Malay ports in Sumatra such as Siak, Batu Bara, Assahan, and Indragiri. The most common items brought by them were forest products (rattan) and food items, such as sago, rice, and paddy. Most traders tended to bring only one particular product on their journey to Melaka but returned to Sumatra with a variety of Indian clothes and other sought-after goods, such as salt, and Java tobacco. The Bugis traders

mostly came from Riau and Selangor but later in the 1790s, the majority of them came from Selangor, Terengganu, and Trantan. A regular route covered Riau, Melaka and Selangor. The majority of the Bugis traders, who came from Riau, Selangor, Terengganu or Trantan, brought Bugis clothes or came without any goods but bought various types of Indian clothes in Melaka.

The local traders from Melaka could be divided into five groups, and these were the Dutch burghers, Malays, Chinese, Moors and Keling. However, together, they formed a small group compared to the total number who traded in Melaka. Of this group, those who owned larger ships went as far as India, Pegu/Rangoon, and Mergui. Traders with medium-sized ships operated within the archipelago, covering places like Batavia, Riau, Cirebon, Gresik, Surabaya and Semarang. Those with even smaller ships traded within the Straits, visiting ports along the eastern coast of Sumatra, such as Siak, Batubara, Asahan, Indragiri, and Palembang and also other parts of the Malay Peninsula. All these ships were captained by various ethnic groups such as Malays, Keling, Moors, and Chinese.

Since Penang has no hinterland producing goods for exports, the arrival of the Malays traders and merchants from the Straits was very much awaited. The frequent arrivals of the Malay traders from Sumatra and the Malay Peninsula showed how Penang was dependent on the goods from these traders to feed their China and Indian trades. The Malay traders from the Straits mostly travelled in smaller size ships but they served most of the ports along the Sumatran east coast and the native ports along the Malay Peninsula. There were also Malay traders who had arrived from the archipelago servicing the native ports in the Straits and also the ports of Melaka and Penang. The Malays, who were mostly from Sumatra and the archipelago, travelled in a variety of ships of which the most popular were the *balo*, *banting*, *kakap*, *pancalang,* and *pencacap* (Knaap, 1996: 30-34). Meanwhile, the Malays, the Bugis, who were mostly from Riau and Selangor, used the *padowakang*, and *pancalang*.

For Penang, the earliest data on the shipping list were collected by Francis Light from 1786 to 1794, when he was the Superintendent of the island. These were followed by another document covering the years between 1799 to 1802, which was compiled by George Leith, the Lieutenant-Governor, during his term of office from 1800 to 1803 (Leith, 1805, p. 89). In addition to these, there are also complete data on the arrivals of the Malay traders or *prahus* to Penang, but only for the years from 1786 to 1787 and 1799 to 1802 (Nordin Hussin, 2002, p. 481-497). However, the shipping lists which had been compiled by Francis Light from 1786 to 1794 and the list on the arrivals of the Malay traders from 1786 to 1787 were by far the most detailed that the English produced in Penang. Although the shipping lists compiled by Francis Light are very detailed, the data on Penang trade are very useful as they provide a clear picture of the trends and trade networks which were developed in the early years before Penang was transformed into an important port on the northwest corner of the archipelago.

The early development of Penang's trade could be traced from 1788, that is, two years after the port was opened. Table 2 presents the initial growth over six years until 1794 and the subsequent development until 1802. The shipping list shows that the number of ships coming to Penang increased over the years.[23] Based on the data given in the table, it could be seen that the number of incoming ships increased from fifty four in 1786 to two hundred and sixty five in 1801. The decline in the number of incoming ships in 1794 was because the data for this particular year were only compiled from February to August. Similarly, the number of the incoming ships for the year 1786 was compiled from July to December and this was limited to the periods from January to July and October to December for 1787. The data for the period between 1786 and 1787 only give the number of the incoming large vessels or ships belonging to the English and the others (American and European) to Penang but they do not include the incoming Malay *prahus* so that the numbers would be much higher if the latter

were to be included. Meanwhile, the records by the English did not combine both types of ships in one document. Furthermore, the data on the Malay *prahus* were not regularly recorded and they only appeared in 1786-1787 and 1799-1802. The records by the English classified the vessels according to their sizes and weights. For instance, the vessels or ships which were more than 25 *lasten* (50 tons) were listed together while the *prahus* which had an average weight of more than 1.8 *lasten* or 60 *pikuls* (3.75 tons) but less than 50 tons were listed separately. Thus, the Malay ships, such as the banting (30 tons or 15 *lasten*) and the *penchalang* (37 tons or 18.5 *lasten*) were considered as *prahus* while larger Malay ships like *jong* (125 tons or 62.5 *lasten*), *kichi* (150 tons or 75 *lasten*) and the *pinis* (75 tons or 37.5 *lasten*) were considered as large vessels (Smyth, 1906, p. 79-115).

The total number of the incoming ships for the years 1786 to 87 and 1799 to 1802 was found to be very high. From 85 ships and Malay *prahus* in 1786, the number rose to 3,569 in 1802. In just a decade, Penang was able to attract more than 2,000 ships and Malay *prahus* to its port. The number of the incoming traders also showed a great achievement for Penang, as within a relatively short period, it was able to spread its trading network over quite a wide area. Regular accounts of the number of the incoming ships to Penang only showed the incoming vessels of 50 to 500 tons (25 to 250 *lasten*) which belonged to Europeans and Asian traders.[24] The largest ships to arrive in Penang were those of the English traders, with each ship averaging about 275 *lasten* or 550 tons in weight. This was followed by the American, Danish, and Portuguese traders whose ships were only slightly smaller at an average of 250 *lasten* (500 tons), while the Asian traders who were mostly from the Coromandel coast, China and the archipelago arrived in vessels weighing on the average of 113 *lasten* (226 tons) (Leith, 1985, p. 89; See also Arasaratnam, 1989, p. 20.

In 1786, only 54 ships arrived in Penang but their numbers multiplied rapidly and by 1792 more than 200 called in annually at the port.[25] Although some of the records did not

give the nationality of the commanders of the ships in detail, it is possible to conclude that the largest numbers of ships arriving in Penang were brought in by the English traders, followed by the Asians and other Europeans. Meanwhile, the most frequent arrivals were from the ports in the Straits of Melaka (38%), followed the by ships from the Indian sub-continent (35%).[26] This trend continued throughout the years from 1786 to 1794 with one exception, and that was for the year 1788, when more ships arrived from the Indian sub-continent. The ports in the Straits of Melaka, which had close trading relations with Penang, were Pedir, Kedah, Melaka, Aceh and Selangor. Pedir, in the east coast of Sumatra and Aceh, supplied Penang with pepper, betel nuts and forest products, while the traders from Selangor, Kedah and Melaka brought tin and food products to Penang.
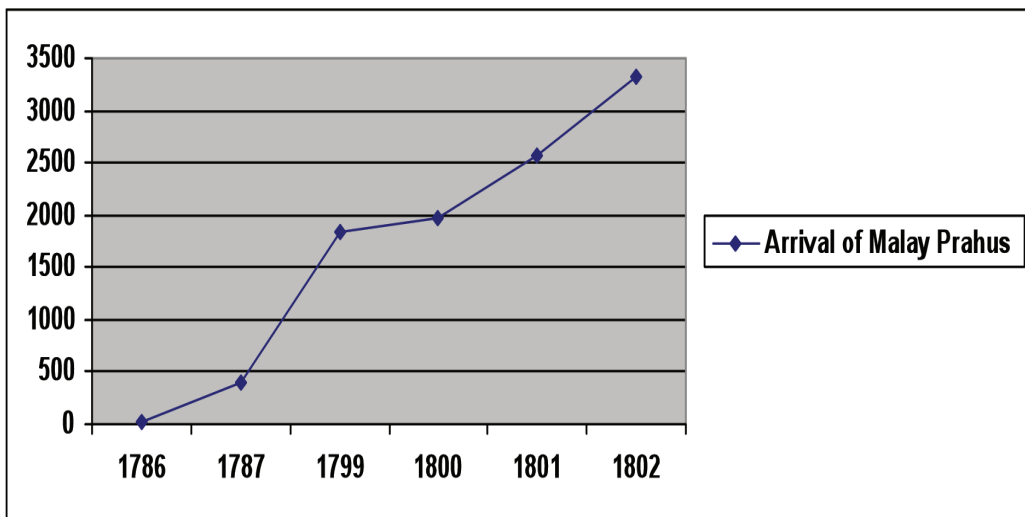
From 1788 to 1794, there were 1,097 ship arrivals in Penang and from 1799 to 1802, there were 867 ships. The highest numbers of traders were the English (66% with 1,286 ships), followed by the Asiatic traders (comprised of the Chulia, Malays, Bugis, Moor, Burmese, and Chinese at 19% with 381 ships) and the

American, Portuguese, Dutch, French, Spanish, and Danish traders (at 15% with 297 ships). The volume of goods brought and carried by the English, American, Portuguese, and Danish traders was larger than that by the Asiatic traders. This was because the Europeans had larger ships and the majority of them were long-distance traders who travelled from India to China and the Archipelago.

The sailing pattern of these traders was predictable. Those who came from the Indian sub-continent travelled from the ports in the Coromandel Coast such as Porto Novo, Nagore or Nagapatnam, Calcutta and Madras.[27] They arrived in Penang and later sailed to Mergui, Tenesserim, Pegu, Junk Ceylon, Melaka, Pedir, Larut and Selangor. These long-distance traders would arrive in Penang from India and then sailed on to Batavia, Siam, China and Macao.

The same period also witnessed a steady increase in the numbers of the Malay and Bugis traders from the Straits in Penang. Most of these traders travelled in *prahus*. In 1786, thirty-one *prahus* were recorded to have arrived in Penang, the number increased to 403 but a year later. A decade later, the number of *prahus* arrivals in

TABLE 2
The arrival of the Malay merchants in Penang in 1786-1787 and 1799-1802



*Source*: Nordin Hussin, Melaka and Penang 1780-1830: A study of two port towns in the Straits of Melaka, Vrije Universiteit Amsterdam, 2002

Penang further increased by leaps and bounds. In more specific, 1,836 *prahus* traded in Penang in 1799, the number stood at 3,328 in 1802. These traders from the Straits normally brought limited number and quantity of goods due to the size of their *prahus* which could normally carry an average of 1.5 *Koyan* (60 *pikuls*) (Leith, 1805, p. 89; Arasaratnam, 1989, p. 20). The *prahus* brought in goods such as forest products (e.g. rattan and aromatic woods), as well as other items (e.g. rice, poultry, cattle, rice, and paddy), minerals (e.g. gold dust and tin) and took away goods from India and China which included Indian clothes, salt, sugar, and opium.

The majority of the incoming Malay *prahus* were from Kedah, Perlis, Kuala Muda, Perak, Larut, Selangor, Batubara, Kera, and Junk Ceylon (Southern Siam).[28] Meanwhile, the Malay traders from Kera and Junk Ceylon on the Southern part of Thailand came to Penang with loads of tin, bird nests, *tripangs*, and rice. The Malay traders from Larut, Perak, and Selangor were also important to Penang because they brought with them tins for the China tea trade.[29] Kedah, Batubara, Kera, and Perlis were important suppliers of food products. One significant development that emerged from the Penang trade with the Straits region in the first decade or so of its opening was the close trading link it succeeded in forging with Pedir, on the east coast of Sumatra. Pedir and its hinterland were important producers of pepper and betel nuts and these two items were the major exporter earners for Penang in the earlier period.[30] In the late 1800s, however, Pedir was replaced by Aceh as an important trading partner after the latter took control of the northern Sumatra.[31]

A few names of Malay traders appear in the documents and details of their business and trade are very scarce. Nonetheless, it is very difficult to establish the number of the Malay traders although there was a bazaar in Penang that belonged to, and was managed by, them. The name, Nakhuda Kechil, appears in the documents as a trader who had originally come from Kedah and later became the headman of the Malay bazaar for traders from Kedah. It was likely that his trading connections were between Penang and Kedah.[32] The commodities handled by him included rice, poultry, paddy, and cattle.[33] Since Penang is situated off the coast of Kedah, there was a close trading network between the town and Kedah with most of the trades consisting of food products from Kedah in return for opium and cloth from India.[34]

Additionally, there were significant trades between the island and Makassar and the Eastern archipelago conducted by the Bugis traders. They came in large numbers to the island, stopping in various Malay ports in the archipelago during their journey.[35] However, their names and their leaders are unknown. One name that came up in the documents is Haji Khussin who owned property in the town but whose origin is not clearly known and whose name does not sound Bugis.[36] As the number of Bugis traders and merchants trading in Penang increased, many settled in a small town on the Penang river (Leith, 1805, p. 51). In 1800, the majority of the Bugis who came to trade and settle in Penang were from Borneo and the Celebes. They were commonly considered as Malays although their language was quite distinct. In a report, Leith described the Bugis as 'bold, independent and enterprising, make good soldiers and if treated with kindness are attached and faithful'.[37] He also mentioned that the Bugis who had settled in Penang were mostly found in a small town on the Penang river and that their numbers fluctuated according to the trading seasons. The strength and the importance of the Malay trading communities on the island could be seen by the establishment of a small Malay town on the southern part of the port-town in Penang. This Malay town was inhibited by the Malay traders who had arrived in Penang according to the monsoon season.

The English had always admired the trading skills of the Bugis. In fact, they had a preference for the Bugis traders who were encouraged to trade in Penang.[38] They even attempted to stop the Bugis from trading with Melaka.[39] According to the English, the Bugis were excellent and trustworthy traders compared to the Chinese and Chulias who were considered shrewd and not to be trusted.[40] While the main

goods brought to Penang by the Malay and Bugis traders consisted of food, forest products and minerals (gold and tin), they also traded in slaves. Although the exact number of slaves brought in by them is not known, in 1792, they brought as many as 46 slaves to Penang which was valued at SpD1,840.[41] The number of slaves imported in 1790 was nine and seven in 1791. After 1792, however, no reports were written on the slave trade of the island.[42] Since the Eastern archipelago was known to be the main supplier of slaves to Melaka, they could have been supplying slaves to Penang as well.[43]

In the early decades of Penang's growth, the largest numbers of traders arriving at the island comprised of the Malay traders from the eastern coast of Sumatra and the west coast of the Malay Peninsula. These traders made up more than 60% of all arrivals in that period. The majority of the Malays traders from Sumatran came from the eastern ports of Sumatra, particularly from Aceh, Batu Bara, Assahan, Bila and also from Siak.[44] Other important Sumatran ports which had close connections with Penang were Kampar, Panji, Rokan, and Serdang. One of the main factors for the increase in the number of the Malay traders to Penang was the close relationship between Francis Light and the Malay traders. This relationship was forged when Francis Light was a country trader trading with many of the Malay ports along the Straits before he settled as an administrator on the island. Furthermore, the English administration in Penang had encouraged the Malays to come to Penang rather than to Melaka.

Apart from the Bugis, the Malay traders, including those from Sumatra and the Peninsula, brought mainly tin to Penang. In the early nineteenth century, the annual supply of tin from Palembang and Lingga was 1,300 pikuls. The interior state of the Peninsular also brought in tin to Penang but its supply was very irregular. The English administration in Penang saw the potential of the eastern coast of Sumatra as an important trading area, and it was for this reason that the EIC tried to forge a closer trading connection with many Malay ports such as Siak, Asahan, Bulu China, and Batu Bara.

Penang imported goods from abroad and then re-exported them to various places.[45] Nonetheless, little is known about the commodities which were imported to and exported from Penang in its early years. Six years after its foundation, a detailed report was compiled on the imports of Penang. By the end of the eighteenth century, the major goods imported came from the Indian sub-continent, China, northern Sumatra and the Malayan Peninsular and these comprised of Indian piece goods such as Indian cloth, opium, pepper, betel nuts, rice, tobacco, oil and ghee, tin, silk, liquor, salt, and various other items including the products from Europe (Leith, 1805, p. 83). The exports from the island were mainly the imported goods which comprised of Indian cloth, opium, tin, betel nuts, and pepper (Leith, 1805, p. 83).

In addition, the island had close trading connections with the Bugis and Malay traders who acted as the main carriers or conveyors of goods to Penang and out of it to ports in the northern half of the Straits of Melaka.[46] In 1792, the major goods brought to the island by these native traders were gold dust, bird nests, tin, Bugis cloth, rice, pepper, brimstone, aromatic woods, and rattan.[47] The main exports of Penang to the native ports of the Straits were opium[48], Indian piece goods, Spanish currency, Bugis cloth, raw silk, sticlac,[49] and cotton.[50] The trade pattern was therefore similar to that of Melaka, except that while the old port-town captured the markets of the southern end of the Straits, Penang was gradually attracting traders from its northern sector. Unfortunately, there are very few details available on the exports and imports with other major trading partners such as the Coromandel coast, Bengal and China, and as the nature of the trade would not have differed from that seen in Melaka, it could be assumed that the major imports from the Coromandel coast and Bengal were Indian cloth, opium, grains, salt, cotton, aromatic woods, oil and tobacco, as well as Chinaware, torches and other manufactured items, in small quantities from China (Leith, 1805, p. 83). It should be noted that the main attraction that China held for the European traders, especially the English, was its tea, which

had a growing market in Europe, but was not a major commodity for the Archipelago.
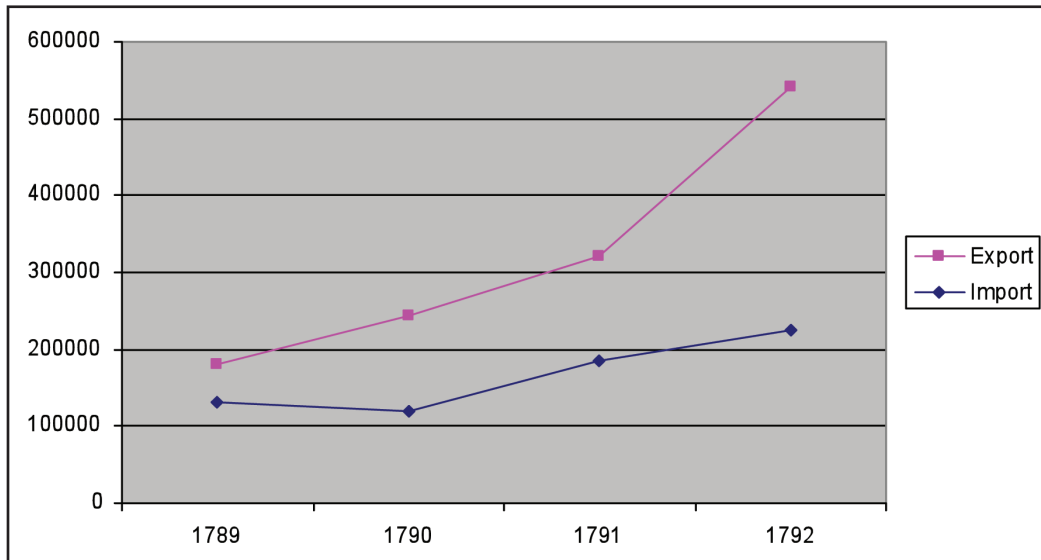
Table 3 shows the values of the goods imported to and re-exported from Penang from 1789 to 1792 by the Malay traders from Aceh, the Malayan Peninsular and the Archipelago.

Thus, it is evident that the Malay traders mainly exported gold dust (Spanish Dollars 38,422.00), bird nests (Spanish Dollars 32,804), tin (Spanish Dollars 27,614), Bugis cloth (Spanish Dollars 27,280), rice and paddy (Spanish Dollars 20,979), whereas, they mainly imported opium (Spanish Dollars 173,880), piece goods/Indian cloth (Spanish Dollars 67,920), currency (Spanish Dollars 28,251), and Bugis cloth (6,850) from Penang. As presented in the figures above, Penang had an import deficit of SpD92,880.35. All of Penang's exports consisted of goods which were imported from abroad such as opium, Indian cloth, and specie (Spanish currency). Specie was in great demand by the Malay traders from the Straits and the Archipelago.

In its early years, Penang relied heavily on the supply of food from abroad. Rice was therefore an important item of trade which was brought mainly by the native traders. In 1792, it constituted more than 7% of the value of all goods brought in by these traders to Penang. Although paddy was grown on the island, this was not sufficient to meet the needs of a growing population. Penang's dependence on imported food created a crisis in its early years when its major supplier, Kedah, threatened to stop sending rice due to unresolved political differences between the Kingdom and the administration in Penang.[51] In the later years and with the increase in the island's population, the supplies were also obtained from Burma and Bengal.

In 1792, gold dust was the major item brought in by the Malay traders, which stood at 17.11% of the total value of Penang's imports from these traders. Most of the gold dust came from the interior of Sumatra and the Malayan Peninsular and Borneo.[52] For as long as gold

TABLE 3
The values of the imports and exports to Penang by the Malay traders from 1789-1792
in Spanish Dollars



(*Source*: Nordin Hussin, Melaka and Penang 1780-1830: A study of two port towns in the Straits of Melaka, Vrije Universiteit Amsterdam, 2002)

dust from the Malayan Peninsular had been a commodity, its outlet was Melaka, to which it was brought from the interior.[53] The gold dust from the Peninsula, which found its way to Penang, was usually conveyed by the Bugis traders who traded from all over the Archipelago, including the principal gold producing areas or outlets, such as Borneo, Sumatra and Melaka.[54] A similar situation was seen in relation to Penang's import of bird nests (14.60%). The major bird nests producing areas were Borneo and Junk Ceylon.[55] Again, the Malay and Bugis traders brought bird nests to Penang from these places which were then exported to China, where it was a delicacy and therefore had a ready market.

The next most important commodity brought in by the native traders was tin (12.29%), which came mostly from the Malayan Peninsular and the island of Banka. Although the trade of tin was monopolised by the Dutch in Melaka, Penang still managed to overcome the Dutch's restrictions through smuggling activities and the Malay traders. Tin from Banka was also brought in by the Bugis traders. Tin was a vital commodity for the English traders whose desire was to capture the lucrative tea trade in China, whereby this also meant that they had to find a commodity that could be exchanged or otherwise suffered a bullion drain. Thus, the role of the native traders was vital in the tin trade, at least in the early years when the Dutch were still able to control the trade.

Although Indian cloth had found a ready market in the Archipelago for centuries, Bugis cloth was also an important item in the cloth trade in the region. Bugis cloth was introduced to Penang by the Bugis traders from Makassar and the Eastern Archipelago. However, the volume of the Bugis cloth exported was smaller compared to the Indian cloth. It is difficult to assess the difference in the price between the two types of cloth. Nevertheless, the value of Indian cloth was reported to be greater, as was its popularity, since it came in various forms and quality (Laarhoven, 1994). Some of the Indian cloth did not come directly to Penang from India but was brought in by the Malay traders who had picked them up from the ports in the Straits which had been visited by the English traders and the Indian traders who came from the Indian sub-continent. The amount of the Indian cloth brought in this manner was rather small (1.01%) as compared to the Bugis cloth (12.14%).

The native traders were also important in the pepper trade. The major suppliers of pepper to Penang were Aceh and Terengganu (Cowan, 1950: 7). Due to the high demands for pepper in Europe, Penang made attempts to encourage the productions of pepper in the early years after its opening. In the first two decades, the enterprise was still in its infancy in Penang and the yields were too small for the purpose of export (Cowan, 1950, p. 53). The jungle in the hinterland was still being cleared at that time and the administration was trying its best to convince the new settlers, especially the Chinese and the Europeans, to cultivate pepper, clove and nutmeg. The process was naturally slow as it took more than one year for the ground to be cleared. Furthermore, there was a short supply of labour in the newly acquired colony. For this reason, Penang had to rely on the pepper brought in by the traders. As reported, the native traders brought SpD10,665 worth of pepper to Penang in 1792.

One of the main contributions of the Straits-Malay traders to Penang's trade was their roles in collecting a range of forest products, such as bird's nest, rattan, algewoods, elephant's teeth, dammar, sapanwood, and brimstones from the ports in Sumatra and the Malayan Peninsula and transporting them to the island for re-export to the Indian sub-continent and China. In fact, some products like sticlac and goods with medicinal properties (e.g. tripang) which they brought in went to the ports within the Straits as these were found in some areas but not in the others in the region. Thus, the native traders did not only bring in, from the archipelago, the commodities whose ultimate destination was either India or China, but they were also involved in a revolving trade chain within the Straits of Melaka. In 1792, the main exports of Penang to Aceh, Kedah, and the archipelago consisted of opium (54.78%), Indian piece goods (21.39%),

specie or Spanish currency (8.9%), Bugis cloth (2.15%), and raw silk (1.43%). Opium became the main item carried by the Malay traders from Penang. Although between 1790 and 1793, these traders took away 105 to 483 chests of opium from Penang, the report did not specifically mention where the opium was taken to, except it was said that it was exported to 'the surrounding areas'.[56] There were, however, some indications that the opium was sent to most ports in the Straits.

The second most important items bought by the Straits-Malay traders to Penang were the Indian piece goods/Indian cloth from the Coromandel coast and Bengal which, like opium, went to most ports in the Straits. In fact, cloth generally constituted a big item bought by the native traders in Penang. Despite the popularity and the availability the of Indian cloth, the Bugis cloth still remained marketable in the region adjacent to Penang, such as Aceh and the northern part of the Peninsula, and this was probably because it was cheaper yet distinctive. A clearer picture is obtained for the commodities imported by Penang in the early nineteenth century. However, the amount or the value of each item was not given (Leith, 1805, p. 83). Nevertheless, an analysis can be made of the most important commodities traded between Penang and the archipelago. Opium, rice/grains, Indian piece goods, pepper, gold dust, and tin remained the main imports of Penang. Most of these commodities were imported from the Coromandel coast, Bengal, Bombay, and the Archipelago, while tea, sugar, paper, Chinaware, and raw silk came mostly from China. It is important to note that the trading trends in the early nineteenth century had not changed to any significant degree from the situation in the early 1790s.

Since Penang has no hinterland producing goods for exports, the arrival of the Malays traders and merchants from the Straits was very much awaited. The frequent arrival of the Malay merchants and traders from Sumatra and the Malay Peninsula showed how Penang was depended on goods from these traders to feed their China and Indian trades. The Malay traders from the Straits mostly travelled in smaller ships but they served most of the ports along the Sumatran east coast and also the native ports along the Malay Peninsula. There were also the Malay traders who had arrived from the Archipelago servicing the native ports in the Straits, as well as the ports of Melaka and Penang.

## CONCLUSIONS

The Straits of Melaka, which is located in the international waterway systems, greatly transformed the Straits-Malays into a thriving and enterprising trading community. In fact, the Straits-Malay traders and merchants were the most important assets for the East India Company in shaping the early history of Penang into an important trading port. The distinctiveness of the Malayland, with its hinterlands rich in agricultural products, mineral ore, sea and forest products which could be exploited and exported to other regions to be exchanged with manufactured goods and other raw materials, had made the Straits into an important centre for trade. Such opportunities were fully exploited by many of the early Malay kingdoms and the Malay traders right until the mid of the nineteenth century, when the Straits fell into the Europeans powers. The drastic changes of the mid nineteenth century saw the Straits-Malay trading community faced with several challenges. The foremost among these were the ascendancy of the English in the region, the rivalries between the English and the Dutch, the coming of the Chinese century in Southeast Asia and the advancement in the shipping technology, as well as the advent of steam ships where sheltered harbours and monsoon winds were no longer important variables. These changes made the Straits-Malay trading community lose its advantage.

## ENDNOTES

[1]The first reference to the term "*Sea of Malayu*" was from an Arabic document dated c.1000, which noted that the travellers reaching the *Sea of Malayu* were approaching the area of China. For detail descriptions on the matter, see G.R. Tibbetts (1979). *A Study of the Arabic Texts containing Material on Southeast Asia*, London; G.R. Tibbetts (1956) "The Malay Peninsula as known to the Arab geographers, *MJTG*, 9, 21-60. See also J.V. Mills (ed.) (1997). Eredia's Description of Malacca, Meridional India and Cathay, *MBRAS*, 14. See also L. Andaya (2000). "A History of Trade in the *Sea of Malayu*. *Itinerario*, xxiv (1), 87-109.

[2]See for example, L. Andaya (2000) "A History of Trade in the *Sea of Malayu*, in, *Itinerario*, xxiv (1), 87-109; L. Andaya (2008). *Leaves of the Same Tree: Trade and Ethnicity in the Straits of Melaka*. Honolulu: University of Hawaii Press; Anthony Reid (2004). "Understanding Melayu (Malay) as a Source of Diverse Modern Identities. in T.P. Barnard (ed.), *Contesting Malayness Malay Identity across boundaries* (pp. 1-24). Singapore: Singapore University Press; Leonard Andaya (2004) "The search for the 'Origins' of Melayu. In T.P. Barnard (ed.), *Contesting Malayness Malay Identity across boundaries* (pp. 56-75). Singapore: Singapore University Press.

[3]See for example, O.W. Wolters, *Early Indonesian Commerce*, Cornell Indonesian Project Ithaca: New York, 1967; See also George Coedes, *The Indianized States of Southeast Asia*, Kuala Lumpur, 1968; Nilakanta Sastri, *History of Sri Vijaya*, Madras: University of Madras, 1949; O.W. Wolters, *The Fall of Srivijaya in Malay History*, Kuala Lumpur, 1970.

[4]In 671 AD a Buddhist scholar named I Ching visited Srivijaya as a pilgrim from China to India and he wrote: "In the fortified city of Fo-che (Srivijaya), Buddhist priests number more than one thousand, whose minds are bent on learning and good practices. They investigate and study all subjects that exist just as in Madhyadesa (India); the rules and ceremonies are not at all different. If a Chinese priest wishes to go to the west in order to hear (lectures) and read (the original Buddhist texts) he had better stay at Fo-Che (Srivijaya) for one or two years and practice proper rules, then proceed to Central India", in, J. Takakusu, *A Record of the Buddhist Religion as practiced in India and the Malay archipelago 671-695 A.D by I. Tsing*, Oxford, 1896, p. xxxiv.

[5]Nik Hassan Shuhaimi Nik Abdul Rahman, *Beruas Kerajaan Melayu Kuno di Perak*, Persatuan Muzium Malaysia: Kuala Lumpur, 1994. See also, J. Chandran, *Lembah Bujang- The Bujang Valley*, Persatuan Sejarah Malaysia: Kuala Lumpur, 1980.

[6]See Russell Jones, *Hikayat Raja Pasai*, Yayasan Karyawan: Kuala Lumpur, 1999; Jorge Manuel dos Santos Alves, "Princes Contre Merchants au Crepuscule de Pasai c. 1491-1521, in, *Archipel,* 1994, issue 47, pp. 124-145; Jorge Manuel dos Santos Alves, "The Foreign traders' management in the Sultanates of the Straits of Melaka: the cases of Melaka-Samudera-Pasai and Aceh 15th and 16th Centuries", in, *From Mediterranean to the China sea –Miscellaneous notes*, Wiesbaden: Harrassowitz, 1998, pp. 131-142.

[7]Denys Lombard, *Le sultanat d'Atjéh au temps d'Iskandar Muda, 1607-1636*. École française d'Extrême-Orient (EFEO): Paris, 1967; Arun Kumar Dasgupta, *Acheh in Indonesian trade and politics, 1600-1641*, Ann Arbor: University Microfilms International, Cornell University, 1962; Takeshi Ito, "A note on some aspects of the trade of Aceh in the 17th century", in, *Nampo-Bunka: Tenri bulletin of South Asian studies*, (1982), issue 9 (Nov.), pp. 33-60.

[8]Takeshi Ito, "A note on some aspects of the trade of Aceh in the 17th century", in, *Nampo-Bunka: Tenri bulletin of South Asian studies*, (1982), issue 9 (Nov.), pp. 33-60; A.K. Das Gupta, "Acheh in the Seventeenth Century Asian Trdae", *Bengal Past and Present*, January-June, 1962.

[9]See Nordin Hussin, *Trade and Society in the Straits of Melaka, Dutch Melaka and English Penang*, NIAS Press: Copenhagen, 2006; Leonard Andaya, *The Kingdom of Johor 1641-1724 Economic and Political developments*, OUP: Kuala Lumpur, 1975. See also Reinout Vos, *Gentle Janus Merchant Prince The VOC and the Tightrope of diplomacy in the Malay world 1740-1800*, Leiden: KITLV, 1993.

[10]Syed Hussin alAtas, *Thomas Stanford Raffles Schemer or Reformer 1781-1826*, Angus and Robertson: Singapore: 1971; Bonney, R., "Francis Light and Penang", in *JMBRAS* vol. 38, Pt. 1, 1965; Bonney, R., *Kedah 1771-1821; the search for security and independence*, Kuala Lumpur: Oxford University Press, 1971.

purchases they were accustomed to make formerly at Rhio, that they will in a few years import gold and silver annually to the extent of half a million of dollars, part of which will be carried in gold to the coast of Coromandel in payment of the coast piece goods and the other part will form a fund for the purchase of goods for the China market. Thus by encouraging this branch of commerce the coast of Coromandel will be benefited and the remittance to China be facilitated", p. 647.

[24]See, A List of arrival and departures of shipping at Prince of Wales Island, 1st Feb to 25th August 1794, in *SSFR,* G/34/6.

[25]List of arrivals and departures of vessels at Prince of Wales Island from July 1786 to Dec 1786, in *SSFR* G/34/2; George Leith, *A Short account of the settlement, produce and commerce of Prince of Wales Island in the Straits of Malacca*, p. 89

[26]See, Appendix: Penang: Incoming ships to Penang 1786-1794 and The Nationality of the Commanders of incoming vessel to Penang in 1788-94 in Nordin Hussin, *Melaka and Penang 1780-1830: A Study of Two port towns in the Straits of Melaka*.

[27]For further discussion on the trading pattern of the Chulia merchants, see, S. Arasaratnam, *Islamic merchant communities of the Indian sub-continent in Southeast Asia*, Kuala Lumpur: University Malaya Press, 1989, p. 18.

[28]An account of goods imported by Malay prows into Prince of Wales Island March 1789, in, *SSFR,* G/34/4

[29]An account of prows arriving at Prince of Wales Island between 1 May and 9th July 1787, in *SSFR,* G/34/2.

[30]A list of arrivals and departures of Shipping at Prince of Wales Island in *SSFR,* G/34/2; *SSFR* G/34/3; *SSFR* G/34/4; *SSFR* G/34/5 and *SSFR* G/34/6; See also An account of goods imported into Prince of Wales Island from 1st August to 31 December 1788, in *SSFR,* G/34/3.

[31]See Report on the trade of Prince of Wales Island 1828/29 in *SSFR* vol. 162; See also, C.D. Cowan, "Early Penang", p. 140, and also, Lee Kam Hing, *The Sultanate of Aceh*, *Relations with the British 1760-1824*, Kuala Lumpur: Oxford University Press, 1995, p. 249.

[32]*Journal of the Indian Archipelago and Eastern Asia*, 1850, Vol. iv, p. 630.

[33]See, report of the fire by the enquiry 8th October 1814 in *SSFR,* G/34/45, see also, *SSFR* 1850, vol. iv, p. 630; *Journal of the Indian Archipelago and Eastern Asia,* vol. iv, p. 641.

[34]*Journal of the Indian Archipelago and Eastern Asia*, 1850, Vol. iv, p. 630; See also, *Journal of the Indian Archipelago and Eastern Asia*, 1850, Vol. iv, p. 641.

[35]Extract letter from Governor Maclister to the Chairman and Deputy Chairman dated 7th November 1808 in *SSFR,* G/34/9 and also report by Raffles on 31st October 1808 in *SSFR,* G/34/9.

[36]See report of the fire by the enquiry 8th October 1814 in *SSFR,*G/34/45

[37]Ibid.

[38]Ibid.

[39]Extract letter from Governor Maclister to the Chairman and Deputy Chairman dated 7th November 1808 in *SSFR,* G/34/9 and also report by Raffles on 31st October 1808 in *SSFR,* G/34/9.

[40]Letter from Francis Light 25th January 1794 to Governor General: "The Bugesses the few inhabitants here at present yet as they come annually to trade and remain two or three months ashore to the number of one or two thousand they are during the time of their residence a part of our society, they are Mahomedans, proud warlike independent people easily irritated and prone to revenge .... they are the best merchants among the eastern islands ..... their cargoes either in bullion or goods with the quantity of opium and piece goods they export make their arrival much wished for by all mercantile people" in *SSFR,* G/34/6. See, also, Farquhar letters in Memoranda of Malacca: "They are certainly far more honest in their dealings than either the Chinese or Choolias", in *SSFR,* Vol. 10.

[41]*Journal of the Indian Archipelago and Eastern Asia*, vol. iv, 1850, p. 658

[42]*Journal of the Indian Archipelago and Eastern Asia*, vol. iv, 1850, pp. 600-647.

[43]See, Appendix: List of Registered Slaves in Melaka 1819-1824 and Appendix: List of Registered Slave Children in Melaka 1819-1824 in Nordin Hussin, *Melaka and Penang 1780-1830: A Study of Two port*

[43]towns in the Straits of Melaka. See, also, Heather Sutherland, "Slavery and the slave trade in South Sulawesi, 1600-1800s", in Anthony Reid (ed.) *Slavery, Bondage and Dependency in Southeast Asia*, St. Lucia: University Queensland press 1983, p. 263-285.

[44]See, Appendix Melaka Shipping Lists 1780/82 and 1791/93 in Nordin Hussin, *Melaka and Penang 1780-1830: A Study of Two port towns in the Straits of Melaka*. See, also, J. Anderson, *Mission to the East Coast of Sumatra in DCCCXXII, under the direction of the government of Prince of Wales Island,* London: William Blackwood, MDCCCXXVI.

[45]See an extract letter from Captain Light dated 20 June 1788 in *Journal of the Indian Archipelago and Eastern Asia*, Vol. iv, 1850: "As the island produces nothing of a commercial nature in itself, but every article fit for the China market to be procured at it is brought from the surrounding countries by the Malays, whose chief inducement to visit it has been the great freedom of trade that inducement ceasing the imports would become too inconsiderable defray the expence of collecting duties on them", p. 647.

[46]See *Journal of the Indian Archipelago and Eastern Asia*, 1850 vol iv, p.658. See also Extract letter from governor Maclister to the chairman and deputy chairman dated 7th November 1808 in *SSFR,* G/34/9 and also report by Raffles on 31st October 1808 in *SSFR,* G/34/9.

[47]*Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 658.

[48]The quantity of opium imported by Malay traders from the surrounding area and the archipelago had increased annually at a rapid rate: from 105 chests in 1790 to 193 chests in 1791 and 483 chests in 1792, see, *Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 660.

[49]Sticlac: Secretion of insects obtained from the twigs and branches of trees; used either as a dye or a resin, see, C.D. Cowan, "Early Penang and the Rise of Singapore 1805-1832" , p. 113.

[50]*Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 658.

[51]Captain Light's letter dated 7th October 1787: "The King of Kedah at other times he seems to have an intention of starving us. The inhabitants here like all other Indians make no provision against accidents. I am therefore obliged to advance money to the King's merchant at Kedah to provide a continual supply of rice and this is retailed to the troops and others at the same price I purchase it" in *SSFR,* G/34/3. See also Light's letter dated 16th November 1787: "The king of Kedah has stopped the exportation of rice since the month of September. On the 10 instant I sent Lieut. Blair with letters to him requesting to know if he would supply me or not. The Raja sent word he would send rice in three days but at the former price. It is not from any scarcity of grain the king prevents the rice from being brought here but from policy he thinks his case desperate and that he shall not obtain anything from the Company. He has therefore laid a duty of 23 Spanish Dollars per coyan on rice for exportation. This deprives those who would deal in rice of all emoluments and is equal to prohibition. The country people find no purchasers for the surplus paddy(the king excepted) who buys it at a small price and sells it again at 50 Spanish Dollars per coyan to strangers. The consumption of this place is 25 coyan per month exclusive of foreign demands" in *SSFR,* G/34/3.

[52]Report by Raffles 31st. October 1808, in *SSFR,* Vol. 9.

[53]Ibid.

[54]Ibid.

[55]Ibid.

[56]*Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 660.

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# Developing Learner Autonomy in the ESL Classroom Through the Use of Learning Contracts

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**ABSTRACT**

The consensus among learner autonomy experts indicates that the parameters of today's teaching and learning processes have been significantly extended to ensure that our learners become autonomous lifelong learners. Such initiatives place a critical demand on educators to ensure they equip their learners with all the necessary learning tools and skills so that they can take responsibility for their own learning. This paper analyses the development of learner autonomy through the use of learning contracts which were used during a 15-week Strategy Training Programme. Specifically, the study explored to what extent learning contracts could help develop ESL students' abilities in managing their learning viz-a-viz, the planning, organization, and evaluation of the learning process. The main study (Sidhu, 2009) involved a trained TESL teacher and an intact ESL class of 42 students in an urban secondary girls' school located in Selangor, Malaysia. This paper details the learning progress of six of the 42 ESL students involved in the Strategy Training Programme. The data collection process employed the use of learning contracts, semi-structured interviews, and a feedback form. Findings indicated that the learning contract was seen as an effective tool in empowering students to take charge of their own learning. Students showed more confidence in planning and organizing as compared to evaluating their learning process. The implication of the results suggest that students must be provided with more opportunities to critically reflect and evaluate their own learning in order to enhance their learning progress towards becoming autonomous lifelong learners.

**Keywords: Learner autonomy, ESL classroom, strategy training, learning contracts, teacher perceptions, evaluating learning, lifelong learning**

## INTRODUCTION

Responsible learners are those who accept the idea that their own efforts are crucial to the learning process (Scharle and Szabó, 2000). Increasingly, in today's ESL classrooms, teachers are striving to inculcate this trait in their learners by being equal partners in the teaching and learning environment. Although learner autonomy has been one of the dominant topics in language teaching over the last three decades, an all encompassing definition has still to be achieved. Thang (2009, p.1) notes that despite the existence of a number of differing views, autonomy in language learning is principally concerned with providing learners with "strategies and techniques for learning a language in the absence of a teacher" or

alternatively "providing learners with the conditions and opportunities for exercising degree of independence". Bailly and Ciekanski (2006) point out that learner autonomy refers to various forms of independent or self-directed learning involving limited teacher intervention.

Other researchers (Wenden, 1998; Hiemstra, 2004; Holec, 2007; Brown, Smith and Ushioda, 2007; Balcikanli, 2008; Jiménez Raya, 2009) concurred in defining autonomy as the ability, power or capacity to do something and that an autonomous learner is one who is capable of taking charge of his/her own learning. These traits are not inborn and therefore, must be acquired either naturally or by formal learning. In many ESL classrooms, this 'formal learning' in language learning is often referred to as learner training. According to Wenden (1998), the history of learner training or the 'learning-how-to-learn' concept can be traced from the early 1900s and in today's contexts its goals (educational, personal, and social) are clearly outlined.

Holec (2007) suggests that autonomous learners are capable of managing their own learning in that they are capable of making the whole range of decisions necessary to plan and carry out a learning programme. Such decisions include choosing suitable learning objectives and deciding upon appropriate content and learning materials to accomplish the chosen learning objectives. It also involves making decisions about the methods and techniques to be used in successfully completing the task. As a manager of the learning process, autonomous learners have the capability to monitor and assess the outcome of their own performance (Benson and Nunan, 2005). Cohen (2000) and Cotterall (2009) concurred with these characteristics but emphasized that autonomous learners may not necessarily have external, observable features but they have some distinctive characteristics. They are learners who understand what is being taught, are able to formulate their own learning objectives, are able to select materials, make use of appropriate learning strategies and monitor and self-assess their own learning. Lamb and Reinders (2007) and Thang (2009) added that

students' preferences for these characteristics may be influenced by socio cultural factors.

Notwithstanding constraints in many ESL contexts, learner autonomy programmes encourage self paced learning and this addresses the fundamental aspect of individual differences with regards to ability, interest, personality, motivation, and learning style. Researchers (*see* Oxford, 1990; Aase, 2003; Aoki, 2003; Benson, 2001: 2007; Sidhu, 2009) have indicated that there is a positive correlation between learner autonomy and effective language learning. Adding to this discourse, Chia (2009, p. 37) states that in today's technological era, we are constantly being bombarded with new information and communication technologies making it even more pertinent for us to constantly 'update' and 'upgrade' our skills through self learning in order to stay relevant in today's increasingly interconnected and globalized work environments.

Proponents of learner autonomy, such as Oxford (1990), Benson and Nunan (2005), Loewen (2006), Benson (2007) and Sinclair and Thang (2009), emphasize that students can be trained to be autonomous learners through learner training. It refers to a process where learners are explicitly taught techniques of learning a language and awareness as to 'how' and 'when' to use strategies to enable them to become self-directed learners (Williams and Burden, 1997; Lamb and Reinders, 2007). Besides learner training, learner autonomy can also be encouraged through self access centres and learning tools, such as reflective journals and learning contracts.

According to Hammond and Collins (1991, p. 131), a learning agreement or a learning contract is "a detailed statement prepared by the learner, usually with support from a mentor or facilitator and it is developed after learning needs have been diagnosed". It is a written document on how a particular activity will be undertaken so that learning goals can be achieved.

Several researchers (e.g. Hammond and Collins, 1991; Atkins, 2005; Anderson, Reinders and Jones-Parry, 2004; Gao, 2006; Cotterall, 2009) acknowledge that learning agreements

prepare learners for lifelong learning skills. They accentuate that through learning agreements, learners not only experience increased levels of learner autonomy, empowerment and control, but personal growth and increased self-esteem, especially when they have succeeded in the learning process. Learning agreements also encourage learners to meet their own identified learning needs, rather than follow a pre-determined course of studies. As a consequence, learning contracts help students to cope with the management of the learning process especially during the transition period when learners move from teacher-directed learning to self-directed learning (Scharle and Szabó, 2000; Lamb and Reinders, 2007). By using learning contracts, learners are "free to work in their own preferred learning styles, at their own pace, using sequencing which is personally meaningful" (Hammond and Collins, 1991, p. 138). As learning contracts acknowledge individual differences, learning can be tailored to meet a learner's personal needs and goals in that they offer language learners greater opportunities to work towards, and achieve, individual goals (McGarrell, 2008).

Despite their advantages, learning agreements have also been known to present a number of limitations. Anderson, Boud and Sampson (1996) put forward some of the concerns that one may experience when trying to implement learning agreements. They state that learners are not always in the best position to judge what they need to learn, as many learners simply do not know what they do not know. Additionally, some learners may experience problems with their advisors and some learners and staff members may oppose this new method of assessment. Furthermore, the whole process is often time-consuming and academic standards could fall if learners choose their own assessment.

However, Lamb and Reinders (2007) contend that most of these limitations are usually experienced only in the initial stages of implementation and mainly occur due to inadequate orientation of learners and facilitators. Balcikanli (2008) points out that the ability to write contracts is a learned skill and facilitators must spend considerable time helping students to focus on realistic and manageable activities.

Fisher, Hafner and Young (2006) suggest that at the initial stage, the teacher should be present to provide help with the whole process especially with deciding how the learning task should be carried out, the kind of materials needed and how to assess achievement. At the beginning, learners' practice is restricted perhaps only to identifying objectives. Later, the task of contract completion can be simplified by dividing learners into small groups where each group is provided with a sample contract and a set of questions against which the learners evaluate the contract. Such a move would not only help learners become more reflective in their approach but also gradually help them in the writing of their own learning contracts.

Loewen (2006) points out that there is no limit to possibilities as to what a learning contract may look like. If a teacher is contemplating using contracts with learners, it is important to decide how much of the contract is going to be drawn up by the learner independently and how much will be completed collaboratively with the teacher. Hence, key questions may include: What are the learning objectives? What activities will help achieve the objectives? What is the appropriate time frame for achieving the objectives? What resources will be needed?

## METHODOLOGY

This study investigated the development of learner autonomy through the use of learning contracts in an intact ESL classroom during a 15-week Strategy Training Programme (STP hereafter). It explored the development of learner autonomy in helping students plan, organize and evaluate their learning process. The main study (Sidhu, 2009) involved an intact upper secondary ESL Malaysian classroom of 42 students in an urban all-girls school located in Selangor. These Form Four students were approximately 16 years old and had been studying English as a Second language (ESL)

for the past 15 years in schools.  However, this paper outlines the experiences of six students. The teacher (referred with the pseudonym *Karen* hereafter) is a trained TESL teacher with twenty years of teaching experience.  She had also undergone a Learning-how-to-Learn workshop conducted by the Ministry of Education.  Besides that, she was also the resource person for learner autonomy in her district. In this study, data were collected through the use of learning contracts, semi-structured interviews and a feedback form.

During the 15-week Strategy Training Programme (STP hereafter), the students were required to write individual learning contracts with the aim of fostering learner autonomy. Prior to the 15-week STP, students underwent a two-week ice-breaking session, where they were introduced to strategy training and provided with ample practice in preparing learning contracts. Guidelines on writing learning contracts and an example of a completed learning contract were also given to students.  Students were also briefed on the aims and benefits of learning contracts and they were encouraged to comment on samples of completed learning contracts.  Then, students were encouraged to draw up a learning contract of an upcoming topic.  The purpose of this activity was to raise awareness among students on how to write clear and realistic learning objectives and evaluate their own learning process.  The learning contract framework used in this study required students to make decisions on a number of aspects in the management of learning, i.e. planning, organizing and evaluating their language learning process.

All students were required to complete three compulsory learning contracts within the 15-week STP.  They were also encouraged to prepare their own learning contracts for self-study.  The learning contracts of six students were analyzed. The selection was based on the students' pre and post strategy training scores obtained from the administration of Oxford's (1990) Strategy Inventory Learning (SILL) questionnaire.  The scores revealed that a majority of the intact class of 42 students (92.8%) displayed an increase in the use of language learning strategies (LLS hereafter) whilst only 7.2% recorded a decrease.

Thus, three students who recorded the highest frequency use of LLS (referred to as Students A1, A2 and A3) and the three students who displayed a decreased use of LLS (referred to as Students B1, B2 and B3) were chosen for the case study.

This study employed a mixed method which included both qualitative and quantitative research instruments.  Besides learning contracts, semi-structured interviews were also conducted with the six students and the TESL teacher (Karen) in order to investigate the effectiveness of learning contracts in helping them manage their learning process.  The quantitative component involving some descriptive statistics was obtained from the Feedback Form which was distributed to all the 42 students.  The main aim of the Feedback Form was to investigate students' perspectives on the use of learning contracts in enhancing their management of the learning process.  Students were required to respond based on a 4-point Likert scale where a score of 1 indicated 'least successful' whilst a score of 4 indicated that they were 'most successful'.

The learning contracts were analyzed to investigate whether strategy training had an effect on developing learner autonomy in terms of helping them manage their learning.  An example of the coding procedure used to analyse the learning contract is presented in *Fig. 1*.  In investigating students' planning abilities, the learning contracts were analyzed to look into students' abilities to determine and formulate their own learning objectives based on their chosen topic of interest.  To investigate how successful students were in organizing their own learning process, the analysis looked into the following aspects:

- Ability to decide and propose suitable learning tasks to achieve the identified learning objectives;
- Ability to determine and locate suitable learning materials to successfully accomplish the learning task(s), and;
- Ability to decide on the pace of learning, i.e. their ability to set and keep to proposed

target dates for completing the chosen learning task(s).

Finally, learning contracts were also analyzed to investigate the students' ability in self-evaluating their work or performance upon the completion of the learning tasks.

## FINDINGS AND DISCUSSION

The following section presents the findings based on the three main components of managing the learning process investigated in this study, i.e. students' planning, organizing and self-evaluation abilities.

| Name: *Student A1* | Date: *6 July* | Topic: *Information in reports* |
|---|---|---|

| Objective(s) | | | | |
|---|---|---|---|---|
| • *To read and understand a story book and to write a report* → [PLANNING] | | | | |
| • *To widen my vocabulary power while enjoying reading* | | | | |
| **Proposed Task/Activity** | **Proposed Resources** | **Target date of Completion** | **Evidence of achievement** | **Assessment of Performance** |
| *3. To scan for unfamiliar words and search their meanings using a dictionary.* *4.To jot down new and unique phrases for future essays* *5.To write a short account of the story for a Book Report* | *A horror story book "the 7th. Fontana Book of Great Horror Stories" by C.S. Forester* | *17July* *Completed 15 July* | *All ~~most my~~ these tasks had been done in my vocabulary book* | *I learnt a number of unfamiliar words and phrases that I'm positive will help me in my writing. Before searching for the meanings of the words I had tried to guess them by connecting to the words before and after like we learnt in class. I thoroughly enjoyed reading and ~~doing it~~ writing the synopsis of the story. Still a lot to improve on my vocabulary* |

| Determining Learning Tasks | Determining Learning Materials | Pacing the Learning Process | | EVALUATING LEARNING |

**ORGANIZING LEARNING**

*Fig. 1: Coding procedure used to analyze a sample learning contract*

*Legend*:
Planning – Ability to determine and formulate learning objectives.
Organising – Ability to decide on suitable learning tasks and learning materials to accomplish learning objectives and pace their learning.
Evaluating – Ability to self-evaluate their performance upon the completion of the learning task.

*Students' Language Planning Abilities*

Extracts of the six students' first learning contracts revealed that even though all students were able to express their general learning objectives, their specific learning objectives still left much to be desired. For example, the learning objectives of Students A3 and B2 who aimed to 'read and understand a story' may be perceived as rather general objectives. Meanwhile, Student A1's objectives such as 'to read for understanding, enjoyment' and 'to encourage the reading habit' may be interpreted as rather broad and ambiguous learning aims planned for a short span of time (in this case, she planned to complete the task within two weeks).

This limited planning ability evident at the beginning of week 2, however, saw some changes for both Students A2 and B3 who showed slight improvement in their planning abilities when they submitted their learning contracts in week 4. They were able to express both the general and specific objectives of their own learning. For example, Student A1 had two objectives - one for reading and one for vocabulary. Though she was not very focused in formulating her reading objective, she achieved more success in articulating her vocabulary objective which was to 'use a dictionary to locate meanings of words and learn to use them in different contexts'. Similarly, Student B3 also fell short in formulating her reading objective but her formulation of her vocabulary objective (to pick out descriptive words for use in essays) signified her slight improvement in her planning abilities.

It was also around this time that Student A2 by week 7 was able to determine both the general and specific objectives of Lesson 7B and her learning objectives for Learning Contract 3 displayed her ability and success in formulating rather clear and focused learning objectives. Her objectives to 'read, understand and summarize an article' and 'to find meanings of unknown words using a dictionary' can be seen as focused and explicit learning objectives. Similar success was also seen in the planning abilities of Students A3 and B3. Their learning objectives for Lesson 7B (*see* Table 1) when matched with the objectives provided by the teacher indicated that both of them were able to successfully articulate both the main and specific objectives of the lesson. Both also displayed their success in formulating rather focused learning objectives for the second learning contract.

*Students' Organizational Abilities*

Learning contracts were also analyzed to examine how successful students organized their own learning process. This aspect of managing the learning process involves students' ability to do the following: decide and propose suitable learning tasks to achieve the identified learning objectives, determine, and locate suitable learning materials to successfully accomplish the learning task(s), and decide on the pace of learning (their ability to set and keep to proposed target dates for completing the chosen learning tasks).

Students' ability to propose learning tasks (*see* Table 2) revealed that most of the students had the objective 'to read and understand' as one of their main objectives for Learning Contract 1. Yet, they failed to propose a tangible way to check their understanding of the materials read. However, these limited capabilities saw some marked improvement when the students stepped into the middle phase of the training programme (weeks 6-10). A closer analysis of the students' learning contracts revealed that by the end of the training programme, all six students were successful in determining suitable learning tasks to achieve their learning aims. The learning tasks proposed also indicated that at the beginning phase, the students seemed satisfied with proposing simple reading comprehension tasks but as they progressed into the strategy training programme, they were more willing to take on challenging and ambitious learning tasks. They took on tasks such as writing a talk (Student A1) and writing a summary (Students A2, A3, B2).

*Pacing the Learning Process*

An analysis of the students' first learning contracts revealed that, except for Student A2,

TABLE 1
Extracts from students' learning contracts indicating students' planning abilities

| Student | Beginning phase of training (Weeks 1 -5) | Middle phase of training (Weeks 6 - 10) | Final phase of training (Weeks 11 -15) |
|---|---|---|---|
| A1 | Learning Contract 1- Week 4<br>To read with understanding, enjoyment and to search meanings of unfamiliar words. To encourage reading habit | Learning Contract 2 - Week 6<br>To read, understand and write a book report<br>To widen my vocabulary power while enjoying it | Learning Contract 5 - Week 14<br>To read and understand two articles on 'Consumerism' and write two summaries<br>To improve my word power by guessing meanings of difficult words |
| A2 | Learning Contract 1 - Week 4<br>Read and understand information in a book on environmental issues<br>Use a dictionary to locate meanings of words and learn to use them in different contexts | Learning Contract 3 - Week 9<br>To read, understand and summarize an article on an interesting place of travel<br>To find meanings of unknown words using a dictionary to widen my vocabulary | Learning Contract 5 - Week 11<br>To read, understand and summarize a passage on moral values<br>To use a dictionary to locate meanings of difficult words and to use a thesaurus find similar meanings |
| A3 | Learning Contract 1 - Week 5<br>To read and understand a story | Learning Contract 2 - Week 10<br>To read and understand a passage by answering comprehension questions based on passage<br>To use a dictionary to locate meanings of new words | Learning Contract 3 - Week 12<br>Read and understand a passage on moral values<br>Answer questions based on the passage<br>To write a summary of the passage |
| B1 | Learning Contract 1 - Week 5<br>To widen my vocabulary | Learning Contract 2 - Week 10<br>To improve my grammar and vocabulary | Learning Contract 3 - Week 13<br>To read and understand a story on moral values and do a comprehension exercise<br>To find meanings of difficult words using a dictionary |
| B2 | Learning Contract 1 - Week 5<br>Read and understand information in a story | Learning Contract 3- Week 10<br>To improve composition skills by reading descriptions of places and jotting down interesting words and phrases | Learning Contract 4 - Week 13<br>To read and understand a passage on health<br>To answer comprehension questions and write a summary |

continue Table 1

| B3 | Learning Contract 1 - Week 4 To read and understand a story and pick out descriptive words which can be used for essays and also to widen my vocabulary | Learning contract 2 - Week 8 To read and understand an extract from a book on tourism To search for new words to improve vocabulary using a thesaurus | Learning Contract 3 - Week 13 To read and understand short stories as well as to locate the moral values behind the stories To find meanings of difficult words using a dictionary |
|---|---|---|---|

TABLE 2
Extracts from students' learning contracts indicating their abilities to determine suitable learning tasks

| Student | Beginning Phase of Training (Weeks 1-5) | Middle Phase of Training (Weeks 6 - 10) | Final Phase of Training (Weeks 11 -15) |
|---|---|---|---|
| A1 | Learning Contract 1- Week 4 1. To read stories for enjoyment while understanding it 2. Learn new words from the story by jotting them down in the vocabulary book 3. Look for the meanings of these words and construct different sentences | Learning Contract 2 - Week 6 1. To scan for unfamiliar words and search their meanings using a dictionary 2. To jot down new and unique phrases for future essays 3. To write a short account on the story for a Book Report | Learning Contract 5 - Week 14 1. To learn new words from articles and find their meanings using a dictionary 2. To read and understand articles on Consumerism and then use information in the articles to write an essay (a talk) on "Consumerism" |
| A2 | Learning Contract 1-Week 4 1. To read and comprehend a book on how to save the environment 2. To learn 5 new words and construct sentences with them | Learning Contract 2- Week 6 1. To answer 60 objectives questions based on reading passages 2. To learn 5 new words in Reader's Digest and construct sentences with them | Learning Contract 4 - Week 11 1. To read, understand and answer comprehension questions based on story read 2. To summarise the story 3. To learn 5 new words used in the story by making sentences 4. To find similar meanings of the 5 new words using a thesaurus |

continue Table 2

| | | | |
|---|---|---|---|
| A3 | Learning Contract 1- Week 5<br>To read and understand stories | Learning Contract 2 - Week 8<br>1. To read and understand a passage and answer comprehension questions<br>2. To find meanings of new words using a dictionary | Learning Contract 4 - Week 12<br>1. To read and understand a passage on "Bravery Award for Student" and complete a comprehension activity<br>2. To write a summary of the passage |
| B1 | Learning Contract 1- Week 5<br>To read a fiction book to improve my word power | Learning Contract 2 - Week 10<br>1. To read and understand a passage on descriptions of places<br>2. To identify 5 new words and locate their meanings from the dictionary | Learning Contract 3 - Week 14<br>1. To answer comprehension questions based on a story<br>2. To locate meanings of 5 difficult words found in the story |
| B2 | Learning Contract 1- Week 5<br>To read a story to improve my English | Learning Contract 3- Week 10<br>1. To read tourist brochures and write a composition by the title, "Beautiful Places to visit in China"<br>2. To find meanings of difficult words by use of dictionary<br>3. To improve writing skills by jotting down interesting words and phrases from brochures | Learning Contract 4 - Week 14<br>1. To read a passage and do a comprehension exercise<br>2. To write a summary of the passage on health |
| B3 | Learning Contract 1- Week 4<br>1. To read and understand a story<br>2. To learn 5 descriptive words and phrases and to use them in sentences | Learning Contract 2- Week 9<br>1. To read and answer comprehension questions based on a description of a famous place<br>2. To locate the meanings of 5 new words and find their synonyms using a thesaurus | Learning Contract 3 - Week 13<br>1. To read a short story and give the moral value<br>2. To answer questions on the story<br>3. To list down new words and find their meanings using a dictionary |

TABLE 3
Students' ratings of their ability to organize their own learning

| Aspects of organizing the learning process | Mean score |
| --- | --- |
| Determining learning tasks to achieve learning objectives | 3.0 |
| Deciding how long you should spend on a learning task | 3.2 |
| Deciding and locating suitable materials to accomplish a learning task | 3.3 |
| Overall Weighted mean Score | 3.2 |

*Scale*: 1=least successful, 2= fairly successful, 3=successful, 4 = very successful

they failed to keep to their own assigned target dates for completing their learning task. Both Students A1 and B3 started working on their learning contract on 15 June but gave themselves slightly more than a week to accomplish the task. Both failed to keep to their proposed dates of completion. This could probably be attributed to their limited ability to pace their learning. They had set a rather unrealistic time (one week) to complete a task involving extensive reading. Both, however, they managed to achieve success after spending an additional week on the task.

Students A3, B1, and B2 set aside three weeks to complete their task but failed to keep to their target dates of completion. Student B2 only managed to complete her task five days later whereas Student B1 admitted that when she submitted her contract on 6 July, she had read only 15 pages in the three weeks. Her excuse was 'I have too much homework and tuition'. She, however, promised to read 'half an hour' everyday before going to sleep. This showed that by week 5, most students possessed rather limited abilities in pacing their learning. While some set unrealistic dates for completing learning tasks, others were not disciplined enough to keep to target dates that they had set for themselves. This limited capability of achievement, however, saw a change during the middle phase of the training programme (weeks 6-10). For example, Student A1 read a story and wrote a book report while Student B2 read brochures to get information for writing a composition. Meanwhile, Students A2, A3, and B3 answered comprehension questions based on

their reading materials. These five students were also successful in determining suitable tasks for their vocabulary component.

*Selection of Materials*

The findings also revealed that even though all the six students' written documents indicated that they entered the STP with rather limited capabilities in almost all aspects of organization of the learning process, it was not so where locating learning materials were concerned. For example, for Learning Contract 1, students were required to locate suitable reading material for extensive reading. The students' learning contracts indicated that all of them were successful in locating suitable materials. For example, Student A1 read stories from the book The Ghouls whilst Student A3 read short stories from the book, Twentieth Century Short Stories by Barnes and Egford. Students B1, B2, and B3 chose other books of fiction. Student A2 was the only student who chose to read a non-fiction book. She read a book entitled How to be Green by John Buttons (a book on how to save the environment). All these six choices are a clear indication that the students had no trouble locating appropriate materials for extensive reading.

The second compulsory learning contract given to students during the middle phase of the STP required them to locate suitable materials for the topic "Descriptions of scenes and famous places." Here again, all students were rather successful. The third compulsory learning

contract carried out during the final phase of the STP required students to carry out activities on the topic "Stories on Moral Values." All the six students displayed their confidence and success in locating stories on moral values. For example, Student B2 read Guy de Maupaussant's famous short story entitled The Necklace and Student B3 read The Lumber Room, a short story by Saki. Student A3 chose to get her material from a revision book and Student B1 located her material (extract from Robinson Crusoe) from her Form Four English language textbook.

The above findings indicated that the students initially came into the programme with rather limited organizational abilities but by the end of the programme, all students were successful in various aspects of organization of the learning process. This claim was further affirmed by the students during the interview sessions. All the six students claimed that strategy training helped them improve their organizational abilities. Responses also indicated that students felt most successful in locating learning materials followed by pacing their learning process, proposing suitable strategies and finally determining learning tasks to fulfil their learning objectives. Student B3 added that being a school librarian, she had easy access to the school library, whereas Student A2 indicated that that her parents had a well-equipped library at home so she never felt lost for learning materials. Student A1 confessed to being a *'Net Junkie'* and claimed she could get *'loads of information from the Net'*. Although Student B1 admitted that she had no trouble looking for suitable material, she felt that it was still the teacher's duty to bring supplement materials to class because *'not all students can find good materials - especially the weak students'*.

All the six students also expressed that they had no trouble setting and keeping to target dates. Student A1 said that '*with the learning contract I have become more conscious as to what I should do and when I should finish something, so I make it a point to finish it by the due date*'. Student A2 expressed great confidence in her ability to keep to target dates and claimed that the learning contract had made her more disciplined in her

learning. She said that if she had written down a certain date and when the date drew close she would feel '*rather guilty*' so she would quickly attend to the task. Student B2 felt she was successful in keeping to target dates because she felt that '*writing down due dates is like making a promise, so we must keep to our promises*'. Student B3 felt that though she would rate herself as successful, she admitted that she was not always successful because sometimes she had too much homework and tuition.

Students' success in organizing their own learning was further substantiated by findings obtained from the Feedback Form (*see* Table 3). The results indicated that students were rather confident (mean score 3.2) in organizing their own learning. The scores also revealed that they were more successful in locating suitable materials (mean score 3.3) and pacing their learning (3.2) as compared to determining learning tasks (mean score 3.0).

*Students' Self Evaluation of the Learning Process*

Finally, learning contracts were analyzed to investigate the students' ability in self-evaluating their work or performance upon the completion of the learning task. Like the previous aspects, students' limited capabilities in self-evaluation during the beginning phase of the strategy training programme were evident when they submitted their first learning contracts in weeks 4 and 5. Nevertheless, signs of progress in self-evaluation were displayed by all students during the middle phase of the STP. Students A2 and B3 who showed early success in self-assessment, continued to record advancement. They moved from providing general comments regarding their performance to giving themselves grades and marks. For example, Student A2 in Learning Contract 3 noted that she did 'okay' and gave herself a high credit for her summary writing. Besides evaluating her performance, she was also able to articulate the usefulness of the task in helping her increase her general knowledge. Likewise, Student B3 in Learning Contract 2 gave herself a score of 18 out of 20 for her

performance in the reading comprehension task and went a step further in self-evaluation to voice her awareness of her limitations '*I think I still need to improve my vocabulary as I find it difficult to give meaning of new words*'.

A marked improvement was seen in Student A1's abilities to self-evaluate her learning tasks. In Learning Contract 1, she only recorded her limitations and concerns in evaluating and said '*I am not good at marking my own work*'. Later in Learning Contract 3, she was not only successful in rating her summary writing as 'fair and moderate' but was also able to articulate her limitations. She commented that '*in grading summary, I find it difficult to give marks on my language and sometimes I do not know if my content is right*'.

Both Students A3 and B1 who had failed to assess their performance in Learning Contract 1, exhibited progress in self-assessment in Learning Contract 2. In fact, both were successful in scoring their reading comprehension tasks. Student A3 felt the exercise was easy, and Student B1 felt she did learn some new words. On the other hand, Student B2 still lacked the confidence to self-evaluate her own performance. Though she was able to grade her essay as 'moderate' and show her awareness of her limitation that she was '*still not good in grammar*'. She admitted she could not mark her work, so she asked a friend to grade it for her.

In the final phase of training, almost all the students were able to grade their own work and identify their weaknesses. Marked improvement was seen in Student B1 who all this while had stayed away from grading her work. In Learning Contract 3, which she submitted in week 12, she not only gave a score for her performance in reading comprehension but was also successful in locating her weakness in the vocabulary section. She even suggested that she would '*read more and do more vocabulary exercises*'.

Student A1 in Learning Contract 5 displayed her success in giving a grade to her essay. Before this, she had resorted to giving general comments, such as 'fair' and 'moderate.' Though she was successful in assessing her performance, she indicated that she was still not comfortable in evaluating her work when she said '*I still have to learn much more about evaluating my work*'. This lack of confidence was also highlighted in her interview when she highlighted that '*I do not like to mark my own work because I do not know for sure whether my sentences are rightly constructed. Maybe I still have to get my tuition teacher to look at them*'.

The analysis of the students' learning contracts and learning journals revealed that the students did experience an improvement in self-assessing their own performance. Students' responses to the structured interview, however, indicated that only Students A2 and A3 were confident enough to admit that they had been successful in self-evaluation. The remaining four students felt that they were only fairly successful. Although the students admitted that they could judge and evaluate their own work, most of them felt they still lacked the confidence to grade their own work (with the exception of students A2 and A3). Student A1 acknowledged that it was important to grade her own work but nevertheless she liked others to grade her work so that she '*could receive different comments and views*' and these would help her work on her '*weak points*'.

### Students' Overall Ability to Manage Their Own Learning

Analysis of the students' written documents indicated that by the end of the 15-week STP, all six students were successful in managing their learning process. However, the rates of progress and improvement varied from one individual to another. Similarly, the rate of success of each component of the learning process also varied from one student to another. The approximate week during which each of the six students attained success in the three aspects of the learning process is shown in Table 4.

The results show that although Student A1 experienced success in organizing her learning in week 6, it was only in week 9 that she was able to self-evaluate her learning and in week 11

TABLE 4
Approximate week during which students achieved success in managing their own
learning

| Learning process | Planning | Organizing | Self-Evaluating |
|---|---|---|---|
| Student A1 | Week 11 | Week 6 | Week 9 |
| Student A2 | Week 7 | Week 6 | Week 4 |
| Student A3 | Week 7 | Week 8 | Week 8 |
| Student B1 | Week 11 | Week 14 | Week 10 |
| Student B2 | Week 11 | Week 10 | Week 13 |
| Student B3 | Week 7 | Week 13 | Week 10 |

she attained success in planning. Hence, it was only in the final phase of the training programme (week 11) that she was successful in managing her own learning. The results also revealed that both Students A2 and A3 were successful in managing their learning by the middle phase of the training programme (week 8). The rest of the students (Students A1, B1, B2, and B3) experienced success only in the final phase of the training programme.

Interviews conducted with the students also displayed a very positive response with regards to the use of the learning contract. All the six students declared that they found the learning contract useful in making them aware of the 'promise' they had made to themselves and they felt compelled to do the work that they had planned to do. It also helped them manage their learning more effectively and four students claimed that learning contracts gave them a chance to tailor their learning according to their own personal needs.

The efficacy of learning contracts was further acknowledged by the teacher in her interview. Karen corroborated the finding that the learning contracts proved to be slightly more acceptable and beneficial than the learning journals for her students. She felt that by using learning contracts, she was able to foster the development of learner autonomy among her students. She highlighted that '*by using learning contracts, the students were required to plan, organize and evaluate their own learning*' and this '*encouraged the students to take charge of their own learning'.* Karen also indicated that the learning contract had helped improve her students' self-assessment abilities. She, however, confessed that she knew '*for a fact, that they (students) do not like marking their own work*'. This was so because whenever she got them to grade their own work or their peers' she would '*hear a lot of moans and groans*' expressing their dissatisfaction with the activity. Karen strongly supported the use of students' learning contracts as she felt there was marked improvement in their ability to self-assess their own performance towards the end of the programme.

## CONCLUSIONS

The findings in this study revealed that 81 per cent of the students perceived that they benefited from using learning contracts. Moreover, these students also claimed that by using learning contracts, they could concentrate on their weaknesses and carry out activities that could give them the freedom to work to suit their own needs. A majority of the students felt that working using learning contracts enhanced their planning and organizational abilities.

Furthermore, all the six students involved in the case study were successful in managing their learning process. Students also indicated that with help from the STP and the use of learning contracts, they felt more confident of taking charge of their own learning and the teacher need not always be there to tell them what, when, and how something ought to be learned or done. Towards the end of the strategy training, the students were capable of taking charge of their own learning. Students B2 and B3 can be regarded as students who are on the path of being autonomous. In contrast to these students, Student B1 despite showing improvement still lacked the confidence to take charge or responsibility for her own learning.

Generally, the six students in this study responded very positively towards the use of learning contracts. They highlighted that it made them more responsible and disciplined in taking charge of their own learning. For some, it was seen as a 'promise' they made to themselves and it consciously compelled them to do the work that they had planned to do. To others, the learning contract was a means to help them charter their personal learning path to suit their own interests, ability and potential. In fact, researchers like Anderson, Boud and Sampson (1996), Hammond and Collins (1991) and Knowles (1990) assert that learning contracts acknowledge individual differences and encourage personal growth.

At this juncture, it is perhaps pertinent to highlight that getting students to work with learning contracts comes with its share of challenges. Getting students to express themselves critically in writing can be a problem when they are limited users of the language. More importantly, students found it burdensome having to write down their thoughts after each lesson. The researchers in this study were aware of these problems when they embarked on the study. Therefore, they took some positive steps to overcome the challenges. Firstly, a two-week ice-breaking session was carried out to make students aware of the critical reflection and how this process would help them in their own learning process. Once they saw the learning gains, they became more committed. Besides that, the researchers closely monitored the students' progress and provided constructive feedback at all stages. The students highlighted that seeing the commitment of their teacher and the researchers made them feel obliged to do their best.

The findings of this study also imply that students can be helped to manage their own learning process if educators take steps to create a positive learning environment. Such an environment can be encouraged through the use of cognitive tools such as the learning contracts which emphasize reflection and self-diagnosis. Educators must understand that the learning contract provides a supportive framework and a sense of direction and evaluation through which learners could plan their own learning. When preparing learning contracts, students are required to identify learning objectives, determine learning tasks, select suitable learning materials, determine deadlines for completing work, and evaluate their own performance. According to Nunan and Lamb (1996) and Dickinson (1995), all these are crucial decisions in effective learning that will help learners to not only develop greater awareness of language learning but also help them develop learner autonomy. Wenden (1995, p. 190) notes that "it is these real life tasks that should be the focus of course development and lesson planning" in learner training programmes that seek to promote learner autonomy.

Galileo (1564 – 1642) stated that "You cannot teach a man anything; you can only help him to find it within himself". This thought succinctly sums what type of learning environment literacy educators can create for their ESL students.

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# English Language Skills Attrition in Speed and In-depth Reading Comprehension among EFL Learners

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## ABSTRACT

This study aimed to identify if learners experience any skills attrition in speed and in-depth reading comprehension over a two-month non-use of English language. One hundred and twenty-seven tertiary participants received both a pre-test and a post-test, whose contents were adapted from China's College English Test, Band 4 and Band 6, made up of four short passages to measure proficiency change in in-depth reading comprehension (DR) and one long passage to determine the proficiency change in speed reading comprehension (SR). The results did not indicate any statistically significant skills attrition in both modes of reading comprehension, though slight increase was found in SR, while slight skills attrition was obtained in DR. The results questioned the threshold theory in terms of subcategories and provided some possibly beneficial suggestions for English language learners.

*Keywords*: **Attrition, in-depth reading, speed reading, threshold hypothesis**

## INTRODUCTION

In China, after a two-month summer holiday, many university students feel hard to understand the documents carrying modern science and technology since they may have lost much of their English knowledge once gained in their universities or colleges. Thus, this situation is worrying and has led scholars to commit themselves to research into language attrition, which plays a significant role in language learning.

Language attrition, in this study, is defined as the process in which the acquired language knowledge degrades when bilinguals or multilinguals suspend or decrease their language learning. This process should be physiological rather than pathological. In other words, this process should belong to natural decline rather than unnatural decline (Ni, 2007b).

Four areas of language attrition are often discussed. They can be categorized based on what language (L1 or L2) is attrited and where (L1 or L2 context) the language is attrited. Based on these criteria, the description of language attrition is known as the "van Els taxonomy" ("language attrition," n.d.) (*see* Table 1). As illustrated in Table 1, L1 loss in an L1 environment can be observed among people with

dementia or those with aphasia in the situation of native language. L1 loss in an L2 setting can be observed amongst immigrants who lose their first language in their new environment. L2 loss in an L1 setting is usually observed in individuals who have lost the ability to use an L2 that was perhaps studied at school in their L1 setting. Finally, L2 loss in an L2 environment is most commonly observed amongst immigrant communities without any formal training in their L2 who lose that L2 as they age and revert to their L1 ("language attrition," n.d.). This study mainly focused on the attrition of L2 (English) learners in an L1 (Chinese mandarin) language environment.

There are a number of hypotheses in the area of language attrition. One well-known hypothesis, which is referred to as *threshold theory,* has been heatedly discussed and corroborated in literature. Neisser (1984) suggested that Bahrick's participants might have overcome a "critical threshold" which helped them to become more resistant against attrition, implying that there was "a critical point in *overall language proficiency*, below which attrition is rapid and extensive, but above which a large proportion of the initially acquired material is retained" (Clark, 1982, p. 58). The findings in Bahrick's study showed that after the first years in which all subjects lost equal amounts, the subjects who had received higher levels of training lost a progressively smaller proportion of their knowledge. Thus, it can be said that higher levels of proficiency in the long run aid retention (Xu, 2007, p. 6). So far, there has been a great deal of research devoted to this hypothesis, arguing that the threshold hypothesis should be taken into consideration in future attrition research (Grendel, 1993; Weltens and Grendel, 1993; Weltens, van Els and Shils, 1989;

Hansen, 1999; Murtagh, 2003). It is argued that those who have passed the threshold must have shaped a systematic ability to understand and internalize the knowledge structures, which is called a schema by Neisser (1984). He explained that this schema was much more resistant to attrition than isolated pieces of information.

An amount of research into language attrition over a holiday has been conducted in various linguistic elements. Smythe *et al*. (1973) conducted a study to investigate second language attrition over a summer vacation, during which no SL instruction was provided. 220 students from three secondary schools in Ontario were tested for the amount of loss in French skills they might suffer during the summer vacation between grades nine and ten. It was concluded that the loss in reading comprehension was slight but significant, while there was also a slight but significant gain in listening comprehension.

Cohen (1974) investigated the effect of summer vacation on Spanish oral skills. The selected 14 participants were Anglo children from the Culver City Spanish Immersion Programme. These children were taught exclusively in Spanish when they were in kindergarten and then gradually introduced into Mandarin in the 1st grade. The effect of summer vacation between the first and second grades on their spoken Spanish was studied, and it showed that a three-month summer vacation had reduced the chilren's Spanish oral skills. Utterances became shorter. At least one grammatical class (preposition) was slightly less used, while another (verbs) was more frequently applied. After the vacation, the participants made more errors than they had done before the vacation. Problems with articles and adjectives which learners used to misuse remained.

TABLE 1
Attrition taxonomy

| Van Els terminology: Possible attrition | | |
| --- | --- | --- |
| X | Language environment (L1) | Language environment (L2) |
| L1 loss | L1 (e.g. aphasia) | L1 (e.g. minority communities or immigrants) |
| L2 loss | L2 (e.g. language students) | L2 (e.g. older immigrants who revert to their L1) |

However, there are also different voices in the literature. For example, it was argued that the participants generally demonstrated little language attrition over eight months of non-use of Spanish. Although high retention of receptive abilities, such as reading and listening, was expected, the participants' productive sub-abilities, such as phonology, vocabulary and syntax, were better than expected (Mehotcheva, 2007).

In China, there has also been some literature regarding language attrition. Wang (2008) explored the vocabulary attrition and argued that vocabulary attrition was a significant phenomenon in language attrition. Moreover, according to the empirical investigation on the factors influencing foreign language attrition, it was proven that the Argument for the Superiority of Younger Learners in foreign language acquisition was a one-sided view (Cao, 2007). Cao (2007) argued that learners need to learn a foreign language only after they have possessed the basic skills of their mother tongue. It is not true that the younger the learners are, the more competent they will be in learning a foreign language. Young learners are vulnerable to foreign language attrition, especially in the contexts of their native language. The attributes of foreign language attrition were also summarized from eight aspects: exclusive inducement, physiological mechanism, independent attriter, selected linguistic elements, regressive attriting course, ununiformity speed, obscure performance, and accelerated relearning (Ni, 2007a).

Despite the fact that plentiful research into language attrition has been carried out, to the author's knowledge, there has not been any research devoted to language attrition in terms of speed and in-depth reading comprehension. Most of the research regarding reading comprehension only took the overall reading comprehension proficiency into account, instead of further subcategories. Accordingly, this study, which dipped into the attrition in reading comprehension at different rates, i.e. speed and in-depth reading comprehension, would possibly open a new window to further exploration of language attrition in reading comprehension.

The dawn of the new century is witnessing much research concerning the processes of reading comprehension, among which Steinberg's (Steinberg *et al.*, 2001) Universal Four-Phase Reading Program seems convincing and interesting. The programme comprises four phases, namely, the Word Familiarization, Word Identification, Phrase and Sentence Identification, and Book Reading. This programme focused on meaning-oriented reading activities. In this study, reading comprehension was measured through standardized tests rather than other instruments that could identify the four phases, so the four phases would be integrated into a whole, i.e. the overall reading comprehension ability, rather than the specific four phases, would statistically be measured in order to determine if the learners experienced any attrition in reading comprehension during the two-month break. Gough and Tunmer (1986) proposed the *simple view* of reading, in which reading comprehension is seen as the product of *Word Decoding* and *Listening Comprehension*. The formula is as follows:

*Reading comprehension= Word Decoding × Listening Comprehension*

Though simple, this approach does a remarkably good job of accounting for the data (e.g. Johnston and Kirby, 2006), and it indicates that the abilities to decode words and to understand oral language greatly impact reading comprehension ability. Learners whose word decoding ability is very poor or those with very low listening comprehension ability tend to be poor readers. In other words, in case that learners' listening comprehension is significantly raised and their word decoding ability remains stable, it is possible that they gain in reading comprehension. On the other hand, if learners' word decoding ability rises and listening comprehension ability remains the same, their reading comprehension ability may also climb up. This study would firstly identify

whether attrition occurs during the holiday and then analyze the results with this widely accepted formula.

This study aimed to explore if students, namely; tertiary students of Nanjing University of Posts and Telecommunications (NJUPT) experienced attrition in speed and in-depth English reading comprehension. The purpose of this study was to test the theory of language attrition that relates time span to English reading comprehension for the undergraduates at NJUPT. The time span, one independent variable, is generally defined as the period when participants receive no specific language training and have no immediate access to language use. The possibly attrited reading comprehension, the dependent variable, is deemed as the reading proficiency after the participants are beyond English learning for a certain period. The intervening variables such as testing environment and scoring criteria were statistically and properly controlled in the study. Apparently, there were some deficits in this study. On one hand, the sample group selected was merely from NUPT in China. This sample group might not represent all of the tertiary students in China since other tertiary students in different universities were not included. This might also cause or lead to biased results although the sample group was randomly selected from a large population, which was considered a compensation for this limitation. On the other hand, the time span between both tests was merely two months, and this might have left residues in the participants' mind and thus influenced the results obtained. In order to achieve the research purpose, a research question was raised, "Will students experience attrition in both speed and in-depth reading comprehension over a two-month holiday break?"

## METHODS

The design of this study involves two tests which were conducted before and after the holiday, respectively (referred to as pre- and post-tests). The performance scores of both the tests were analyzed by means of SPSS, a well-known programme with the full name *Statistical Product and Service Solutions*. Meanwhile,

the theoretical framework was based on the related theories in foreign language attrition and memory science, e.g., threshold theory and reading comprehension theory, which attempted to integrate quantitative with qualitative methods in order to gain reliable and plentiful results to a large extent.

### Participants and Their Sampling

First of all, the information on the EFL learners, such as matriculation numbers, and genders, was gathered to define the participants. In this study, 3 out of 9 classes were randomly selected to participate in both the tests and Classes A31, A38 and A 40 were finally chosen. The number of participants was 127, and this was basically representative since they were randomly selected according to their matriculation numbers. All of the participants had received two semesters' English education in NJUPT, in which both intensive and extensive reading courses were involved.

The participants, with Chinese and English as L1 and FL, respectively, were tertiary students from NJUPT. The sample of the study was from non-English major students. They were students from different faculties, majoring in different fields, out of which, male and female students were roughly proportioned (around 70% males to 30% females). Having learned English in NJUPT for two semesters, all the participants began to learn English in their junior middle school. Therefore, all of them have learned English for around seven years in the Chinese context. The age of the participants varied from 18 to 25 years old. Those aged from 18 to 20 accounted for 57.6%, followed by those aged 21 to 23 with 42.4%. The male participants accounted for 44%, and females formed the remaining 56%. There were a total of seven majors among the participants, namely, network engineering (0.8%), logistic management (8.8%), electronic business (22.4%), marketing (26.4%), information management and system (40.0%), communication engineering (imbedded system development) (0.8%) and automation (0.8%).

*Procedure*

In this study, the required data were collect longitudinally. At NJUPT, English is a compulsory course for students to register. Most of the students in the same grade select the same English course. Students are required to register for the same English courses during the first 4 to 5 semesters without exception. At the end of the semesters, they tend to take the same tests for the same English courses. Therefore, it is more convenient to conduct the tests twice on the same participants.

The two-month holiday is considered as an incubation time when students receive no formal training and have no immediate access to English knowledge. The timeline is graphically presented in *Fig. 1*, showing the specific time when the data were collected. The participants went through the pre-test in July 2008 (i.e. before the summer holiday) and the post-test in September 2008 (i.e. after the summer holiday) in the same classroom invigilated by the same two lecturers.

There are two pairs of pre- and post-tests. Pair 1 includes pre- and post-SR, and Pair 2 is made up of pre- and post-DR. Both pairs have different test items. They, however, are at the same difficulty level. The difficulty levels are set via sampled test takers' performance scores by the committee in charge of CET4 and CET6 every year. Both were adapted from the same CET 4 (China's College English Test Band 4) and CET 6 (China's College English Test Band 6). Furthermore, the number of words in both tests was almost the same. As for the pre-test, there were a total of 2459 words for the in-depth reading and 1299 words for the speed reading.

Similarly, the number of words for the in-depth reading in the post-test was 2461 and this was 1296 for the speed reading of the post-test. Another factor to support the same difficulty level is that both tests should be finished within the same time span, i.e. 50 minutes, during which 35 minutes is allotted to in-depth reading and 15 minutes to speed reading.

Considering the deficit that there might be some information remaining in participants' mind over the holiday, 127 participants took the Pair 2 tests with different test items but at the same difficulty level with Pair 1 tests. After both tests, the same two lecturers marked them under the same guidelines and using the same scoring criteria. All of the answers to both tests were objective, except for the last three blank filling in the part of speed reading. The answers to the last three blanks were also restricted to several words. In order to validate the scoring, the scorers were strictly trained to use the same judging criteria and the biased scorers were screened. In this way, the scores should be able to make unbiased judgments.

*Pre- and Post-tests*

In this study, two test papers, adapted from both CET 6 and CET 4, were used for both the pre- and post-tests. CET 6 and CET 4 should have strong reliability to test the participants' speed and in-depth reading comprehension. They have gone through approximately 20 years of validation ever since they were set in the 20th century. They are nation-wide, large-scale, and standardized tests in the charge of the Chinese Ministry of Education, whose aim is to objectively and precisely measure students'



*Fig. 1: Timeline of the study*

overall English proficiency, including speed and in-depth reading comprehension (Yang and Weir, 1998). To ensure that the difficulty level is the same each time, pilot studies were conducted before they could be taken as formal tests, which can guarantee that test takers' same score means the same level of English proficiency. Therefore, graduates with high scores in CET 6 and CET 4 are widely acknowledged and accepted by employers in China since they can objectively and indiscriminatingly show their overall English proficiency. It has also been evidenced that CET6 and CET4, internally and externally, are both highly reliable and valid to test participants' reading skills (Yang and Weir, 1998).

### Test Description

#### In-depth reading comprehension

This part is a traditionally long-standing test type in China, which is supposed to be able to measure participants' in-depth reading comprehension. In this study, the participants were required to cover approximately 2500 words and complete 20 questions within 35 minutes. There are four passages in this part. Each passage is followed by five questions or unfinished statements. For each of them, there are four choices marked with A, B, C, and D. The participants should decide on the best choice and mark the corresponding letter on the ANSWER SHEET with a single line through the centre. There are a total of 20 questions in this part, and each question accounts for two points, adding up to the full mark 40 points.

This part requires the participants to read with intensive attention and in great detail, otherwise they may fail to choose the correct answer. Many answers lie in bits of details in the context, which aims to compel the participants to conduct in-depth reading rather than merely skimming and scanning. In addition, the main idea of a passage is also a frequent question, demanding students' holistic comprehension of the passage. There are also some questions concerning inferential abilities. The participants

would not be able to obtain the answer directly from the context, rather, they had to infer from the contexts until they managed to get the correct answer. Thus, this part can possibly test the participants' in-depth reading comprehension.

### Speed Reading Comprehension

This part was designed to test the participants' ability to get the main points and obtain the key information by skimming and scanning the passage within a short time. In this part, the participants were given 15 minutes to go over one passage quickly and answer the questions. The number of words for the passage is around 1300, which forms a speed reading task for students to complete within 15 minutes. There are ten questions in total, each question accounting for one point, with a total of ten points. For the first seven questions, the participants were required to mark Y (for YES) if the statement agrees with the information given in the passage; N (for NO) if the statement contradicts the information given in the passage; NG (for NOT GIVEN) if the information is not given in the passage. As for the last three questions, three sentences are supposed to be completed with the information given in the passage. In this part, the participants' certain reading speed is required, which must be much faster than that for in-depth reading. In this way, this test item is supposed to be capable of identifying the participants' speed reading comprehension.

### RESULTS AND DISCUSSION

The non-parametric two-related-samples tests compare the distributions of two related variables. If the data are continuous, normally or not normally distributed, the Wilcoxon signed-rank test (one kind of non-parametric two-related-samples tests) can be used because the test incorporates more information about the data, and it is more powerful than the sign test (Muijs, 2004, p. 89). The data in the tests were all found to be continuous, and thus, the non-parametric two-related-samples test (the Wilcoxon signed-rank test) was used to analyze

TABLE 2
A comparison between pre and post tests (N=127)

| Test | Mean | | Difference | Percentage (%) | Z |
| | Pre | Post | (post-pre) | | |
| --- | --- | --- | --- | --- | --- |
| SR | 5.06 | 5.17 | 0.11 | 2.2/0.97 | 1.73 |
| DR | 21.01 | 20.86 | -0.15 | -0.71/0.98 | 1.37 |

p<0.05, two-tailed

the data.  The test was aimed to test whether the observed differences between the means of the data samples were significant based on the statistical hypothesis testing approach.  The analyzed data include two pairs of data.  One pair is the pre-speed reading and post-speed reading, and the other is the pre-in-depth reading and post-in-depth reading.  The results are shown in Table 2 with the valid number 127, in which SR stands for speed reading comprehension, while DR means in-depth reading comprehension.

This table is quite revealing in several ways.  In the first place, the compared results between the pre- SR and post SR did not show any statistically significant change, although learners' SR after the holiday seemed to be slightly gained.  This is corroborated with the findings for the overall reading comprehension by Mehotcheva (2007), who argued that receptive skills (listening and reading comprehension) were well retained but not highly gained over 8-month non-use.  However, it did not corroborate Smythe's argument (1973), who reported slight but significant attrition in the overall reading comprehension.  In the second place (Table 2), it could be inferred that DR went through slight but not statistically significant attrition during the two-month holiday.  Since it was not statistically significant, the slight attrition might be due to random errors.  Accordingly, it could not be concluded that DR experienced significant attrition during the holiday, which seemed in conformity with Mehotcheva's argument on the overall reading comprehension.

Putting the statistical significance aside for a while, the focus can now be shifted to the percentage of the reading comprehension change.  According to Table 2, it could be easily identified that the post-SR gained 0.11 % over the pre-SR, which could be considered as having a slight gain.  By contrast, the post-DR lost 0.15 % compared with the pre-DR.  In other words, the interesting change found in this study was that learners' SR gained slightly but not significantly, while learners' DR lost slightly but insignificantly either.

It is most likely that some people may argue that the finding of this study is not that convincing.  However, the study is at least valid based on the present situation.  CET 4 and CET 6 are both standardized tests experiencing long practical operation and validation.  Both of them should be qualified to test SR and DR.  In addition, the study is also internally valid.  By way of Cronbach alpha formula, the internal consistency was also assessed.  The coefficient of SR was found to be 0.97, and the coefficient was 0.98 for DR.  Integrating SR and DR into a whole, the item-total Cronbach alpha is 0.75.  Therefore, the pre- and post-tests seemed to have both reached a satisfactory level in terms of internal and external validity.

It is evidenced that the results of this study are corroborated by some literature.  As mentioned above, reading comprehension is affected mainly by two factors, namely, listening comprehension and word decoding.  The listening abilities have been reported to slightly but significantly improve over a summer vacation (Smythe et al., 1973).  On the condition that the listening abilities have increased, the reading comprehension possibly at least remains stable if the word decoding skills have not fluctuated excessively.  Even if the word decoding ability has decreased, the reading comprehension could

still have remained unchanged or resistant to attrition as long as the listening skills increase, as reported by Smythe *et al*. (1973).

Another possible explanation for insignificant attrition in the reading comprehension over a two-month holiday could be explained from the memory theory and threshold hypothesis. In this study, since the participants have learned English for around seven years, they may have arrived at the critical point which made them resistant against forgetting. During the holiday, or when learners have no immediate access to English knowledge or have not received any formal language training, they may still store the acquired knowledge in their mind. When the school began and they received the post-test, their memory might have been stimulated and recovered (Hilgard and Bower, 1966). As a result, their test performance was not significantly poorer than it was before the holiday.

There is another important point worth highlighting. Table 2 indicates that SR increased by 2.2% while DR decreased by 0.71 %. This might reveal that learners had failed to retain DR but successfully retain SR, and this seems surprising and puzzling. One tentative reason is that the thresholds in both the SR and DR are at different levels. Learners might have reached the *critical point* of SR, but still remained away from the *critical point* of DR. The *critical point* of the SR may be somewhat lower than that of the DR. Hence, learners who reached the *critical point* of SR successfully retained SR but forgot the DR since they might have not reached its *critical point*. If this hypothesis is valid, Clark's argument (1982) that learners would become resistant against attrition if they attained to "a critical point in *overall language proficiency*" should possibly be changed to, "a critical point in *language proficiency of a specific linguistic element.*"

The threshold levels in different linguistic elements may vary. There may be a threshold level for the SR but a different level for the DR. Besides, the threshold levels in the short-duration and long-duration listening comprehension, as well as different types of writing and speaking,

may also be divergent. Admittedly, because the decease and increase in both the DR and SR are not statistically significant, the results might have been due to random errors as well.

**CONCLUSIONS**

It is most likely that ESL learners benefit from this study in that they need not worry about the attrition in reading comprehension too much if they have no adequate language contact during their two-month holiday. They may alternatively become more alert towards other linguistic elements, such as the oral and writing skills, which have been found to suffer attrition (Mehotcheva, 2007), and thus, they can consciously practice and prevent attrition. This study may also be linked to the conceptual idea of the threshold levels in language acquisition. The study has revealed that attrition does not occur across all reading skills at the same time. This heterogeneity in attrition could be explained by the presence of different threshold levels in learning a language. It appears that different threshold levels may need to be established to give a meaningful account of how language is learned and retained. This effort may help to demystify some of the unresolved puzzles in language attrition.

This study also seems pertinent and it is also necessary for further work to be done on how attrition can be minimized or overcome. In order to minimize attrition during the two-month holiday, the authors suggest that a relatively concrete programme be designed to serve as holiday language activities to minimize attrition. Based on the overview of statistically significant results, the activities can be designed to take into account language skills which have attrited or otherwise.

Attrition can be explained from many perspectives. It can be linked to the process in language acquisition, language contact, language shift, code switching, and code mixing. In this study, attrition has been linked to a holiday period and data collection was concentrated on the use of standardized tests which could yield reliable data on language ability. While some

of the data were confirmatory of some existing studies, there were also findings which are rather provocative and peculiar. Thus, the data cannot be claimed as exhaustive but they can be used to attain advanced knowledge with regard to attrition and the learning of English as a foreign language.

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# Significance of Community in Malaysian Higher Educational Institutions Sustainability

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## ABSTRACT

Since the beginning of environmental movement, academicians and policy makers have been focusing on the institutions of higher learning. The first document on campus sustainability, the Talloires Declaration, which was ratified by 413 universities, including University Malaya, addressed the concept of community aspect of Higher Educational Institutions (HEI) sustainability. This article is a position paper with the objective to highlight the importance of community in the sustainability of Malaysian Higher Learning Institutions (MHLE). In carrying out this study, the archival and document analysis method was employed, whereby different scholars' articles, dissertations, and tools were reviewed. Further validation of the findings was accomplished by employing the questionnaire survey method. Various documents were analysed thoroughly to figure out how the issue of community and the effects on campus sustainability were addressed. Besides a literature review, observation and interview were also utilized to figure out the challenges faced by Malaysian Higher Educational Institutions. The results indicated that community and campus sustainability have a linear relationship. In the context of MHEI, ethnical polarization, poor command of English and imbalance distribution of gender are the challenges. Likewise, the community is one of the most important aspects and is given high priority. Thus, the findings of this study could serve as a reference for researchers, institutions, and universities that are working on topics related to sustainability in higher education.

**Keywords: Sustainability, higher education, community**

## INTRODUCTION

Sustainability is a topic that has been proposed in many conferences and agendas and has gained the attention of many scholars, academicians, policy makers, and business runners (Prugh, Constansa *et al*., 2000). However, the progress particularly in Higher Educational Institutions (HEI) is not only unsatisfactory (Lozano Garcia *et al*., 2006) but also, according to Jenks-Jay (2000), has been extremely slow and frustrating. Shriberg (2002) declared that despite the activist call for sustainability in HEI, the result remained not satisfactory. Based on the most popular definition of sustainability suggested by Brundtland (1987) in the Common Future's report, sustainable development is a development that meets the needs of the present and future generation simultaneously. Following the definition, this subject addresses the needs of the people. In addition, the concept encompasses three dimensions of needs, namely; environmental, social, and economic (Swart and

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Raskin *et al.*, 2004). The first official statement on campus sustainability is the Talloires Declaration, produced in 1990 (ULSF-a, 1990). This declaration, which comprises a ten-point action plan incorporating sustainability and environmental literacy among universities, was signed at an international conference in city of Talloires, France. It was signed by the presidents, rectors, and vice chancellors of the universities from all the regions of the world (ibid). The Talloires Declaration depicts the scientists' concerns over issues such as the unprecedented scale and speed of environmental degradation, as well as the depletion of natural resources and the significance of universities in combating those unsatisfactory situations (ibid).

On the other hand, Sustainable Higher Education (SHE) is defined by Velazquez *et al.* (2006) as a university or college which promotes minimization of negative effects of fulfilling the university responsibilities as a whole or as a part. According to Saadatian *et al.* (2009), Malaysia Higher Education Institutions (MHEI) have already recognized the concept of SHE and embarked into actions by taking different initiatives in different rubrics, such as (1) sustainability in policy, planning and administration, (2) courses and curricula, (3) research and scholarship, (4) university's operations, and (5) outreaches and services. Thus, the point of departure of this study is its objective which is to play up the gravity of community in sustaining MHEI.

## SUSTAINABLE HIGHER EDUCATION (SHE)

The first campus sustainability assessment began with an audit performed at the University of California, Los Angeles (UCLA) in 1988 (Creighton, 1988). However, at the international level, the assessment started from the Talloires Declaration in France, with more than 265 universities as its signatories in 1990 and proceeded to Johannesburg Summit in 2002. Consequently, the importance of education in aiding worldwide societies to move towards sustainability was emphasized. Thus, to support this agenda, the United Nation Educational, Scientific and Cultural Organization (UNESCO) took the first initiative on a worldwide basis to foster this trend. A framework entitled, "Decade of Education for Sustainable Development" was launched in January 2005, which was expected to be completed by December 2014 (Lozano *et al.*, 2006). Many popular books like *Ecodemia* (Keniry, 1995), *Earth in Mind: On Education, Environment and the Human Prospect* (Orr, 1994), *Greening the Ivory Tower* (Creighton, 1998) and *Sustainability on Campus: Stories and Strategies for Change* (Barlett *et al.*, 2004) have addressed the importance of this topic.

## ROLE OF COMMUNITY IN SHE

Community has been defined as a group of individuals who gather in a place and is organized around common values and possesses social cohesion (Keniry, 1995). Community is one of the most important aspects of SHE (Cole, 2003). Besides, the communities of universities are influential in planning, building, and modifying universities actions to promote sustainable living (Orr, 1994). Among other, university communities can bear responsibilities for the knowledge and awareness enhancement of their own community members while boosting the current technologies and tools towards sustainability. The university communities can have influential roles in other surrounding communities through partnerships and working for more sustainable life (Barnes and Phillips, 2000). Campuses have a direct relationship with their neighbourhood community and their own community has an essential role in its sustainability rating, whereby in the first document of campus sustainability in the Talloires Declaration (1990), the importance of community was considered in the sixth statement of the document. A review of the literature has shown that the existence of social challenges in the communities of the Malaysian Higher Educational Institutions (MHEI), such as the ethnic-based polarization, seem to be a strong barrier to SHE trend in the country (Saadatian *et al.*, 2009). The subject of community is even

more important for MHEI than the other parts of the world since Malaysia is a country which has different ethnic groups and different religions. These include Malays, Chinese, Indian and indigenous people who are interacting in the MHEI with the different mindsets, various values and diverse goals which are not very easy to converge in the single aim of having SHE. Furthermore, Malaysia has experienced the rapidity of development which causes the increase in Malaysians' incomes at every level and thus further which lead to rapid economic growth, industrial development, urbanization process, increasing population, and a changing lifestyle (Haron *et al*., 2005). This lifestyle change will directly affect the community and alter the traditional values. The community in MHEI is very significant since they are one of the most influential agents of change in reaching the goal of the 1 Malaysia programme, which is aimed at enhancing solidarity and unity among all ethnic groups.

## METHODOLOGY

Archival method and document analysis were selected as the methodology for this study. The archival research method was chosen because it includes a broad range of activities applied to facilitate the investigation of documents and textual materials produced by and about organizations (Dane, 2010). Those textual materials are SHE approaches. Archival research has been cited in the most classic sense as an appropriate tool for the study of historical documents in a limited period of time (ibid). This study also aimed at investigating the SHE trend and its relevancy to community from Talloirs declaration as a starting point of SHE approach up to the present. Besides, archival method has its own merit in non-historical investigations of documents and texts produced by and about contemporary subject, often as tools to supplement other research strategies, such as document analyses (ibid). Likewise, archival method has been introduced as a suitable method for analysis of digital texts including electronic databases (ibid). Many of those SHE assessment tools have been derived from electronic database. Finally, the theoretical topics and substantive areas of investigation to which this archival method applied is even broader than the domain of organization science itself which is suitable for exploratory studies such as this study (ibid).

On the other hand, document analysis involves a systematic examination of instructional documents such as tools and frameworks (Lazar and Hochheiser, 2010) which are referred to as approaches in this study. Document analyses have been prescribed for the research which investigates tools and instructions (ibid). Moreover, if the focus of the analysis is on critical examination, rather than a mere description of the documents, it has been highly recommended for exploratory studies (ibid). Thus, document analysis is a suitable technique when the purpose is to gain insights into an instructional approach (ibid). Besides, a document analysis is a low cost technique which suits the financial constrains of this study.

In this regard, several important and popular approaches of SHE were identified and their relationships with the community was also explored. On the other hand, in the realm of SHE and to validate the findings, a questionnaire survey (using the Likert scale) was conducted among Malaysian professionals who attended the 3rd International Conference on Sustainability in Higher Education, which took place in USM, Penang, Malaysia on 20 – 22 November 2009.

Moreover, to explore specific challenges of Malaysian HEI and to investigate their relevancy to different rubrics of SHE, namely; community, wealth, governance, health, knowledge, etc., a literature review, observation, and interview were conducted.

### Validation

The analysis of data using the SPSS software revealed the same results, which had already been presented by archival research. Likewise, in the aspect of Malaysian HEI, literature review, observation, and interview techniques function as a triangulation strategy to validate the finding.

## Questionnaire survey

The study employed another validation method to capture the opinions of Malaysian experts who are working in the realm of MHEI across the country. The 3rd International Conference on Sustainability in Higher Education, which took place in USM, Penang, Malaysia, on 20 – 22 November 2009, was selected as the venue to conduct the questionnaire survey.



*Fig. 1: The 3rd International Conference on Sustainability in Higher Education, 2009*

Altogether, 59 papers were submitted and 112 experts attended the conference. A random sample method was used, whereby population = 114, percentage = 50, confidence interval = 12.54 and the confidence level was 95%, and thus, N = 40. Hence, 43 sets of questionnaire were distributed, out of which 40 were returned. The objective of the questionnaire was to grasp the perceptions of the experts on the importance of different aspects of sustainable campus.



*Fig. 2: Sampling calculation*

## Sample characteristics

The majority (72.5%) of the respondents were Malay, with 48 percent males and 52 percent females (*see* Table 1). The sample's average age was 39 with a standard deviation of 7.23 years. A large percentage of the samples research interest was social sustainability (43%), followed by economic sustainability (20%), and environmental sustainability (37%). The majority of the respondents (56%) possessed a doctorate degree and 27% were with a Masters degree; only 17% were bachelor holders. A high percentage of the PhD holders, as compared with lower education level participants, reflects the high quality of conference which embedded more high quality academicians rather than students.

### Observation

The study employed the observation technique for a strong validity whereby Trochim (2001) has enumerated this technique as the best available approximation to the truth of conclusion. "Unobtrusive Observation" has been selected in order to not affect the behavioural of individual in Malaysian universities. In order to increase the external validity, four universities known as UM, UPM, UKM, and USM were observed in the time span of 36 months, starting from December 2006 to December 2009. The type of "Unobtrusive Observation" has been "Behaviour Trace studies." The type of recording followed the "Descriptive Variable Analyses" which is to observe a phenomenon and to write it down.

### Interview for Validation of Malaysia HEI Challenges

The purpose of this interview was to validate the findings on Malaysia's specific challenges and its effects on SHE. A face-to-face, open-ended interview was conducted from 10 high authorities and very experienced lectures of UM, USM, UKM, UPM. In this regard, an interview protocol was made to avoid the wrong interpretation and bias in the procedure of research. Thus, the interview followed the

TABLE 1
Sample characteristics

| Variables | n = 40 | (Frequency (%) |
|---|---|---|
| Ethnicity | | |
| Indian | 1 | 2.5% |
| Chinese | 10 | 25% |
| Malay | 29 | 72.5% |
| Gender | | |
| Male | 19 | 48% |
| Female | 21 | 52% |
| Research interest | | |
| Sustainable environment | 15 | 37% |
| Sustainable economic | 8 | 20% |
| Social sustainability | 17 | 43% |
| Educational level | | |
| Bachelor | 7 | 17% |
| Master | 11 | 27% |
| PhD | 22 | 56% |
| Respondents' age | 38.67 (mean) | (7.23 standard deviation) |

guideline of Kvale (2007) in seven steps, as follows:

Step 1: "Thematization the interview", i.e. formulating the purpose of interview.

Step 2: Designing the interview questions and the type of questions,

Step 3: Conducting the interview (inclusive of getting permission, tape recording, or writing)

Step 4: Transcript of recording verbatim

Step 5: Analyses, whereby the "interview analyses focusing on meaning" as the style of interpreting and the "Meaning Condensation" as the mode of interpretation which is "very prevalent and valid technique in analyzing the interview" (Kvale, 2007, p. 108) were utilized.

Step 6: Verifying, i.e. checking the reliability of the analyses. In this regard, the research has verified the analyses of interview by resending the interpretation to interviewees via email or calling.

Step 7: Reporting, i.e. the final stage of the interview.

## Sampling in interview

The saturation point theory was utilized in sampling the interview. The fact that the interview and observation are forms of the qualitative research, the issue of sampling is therefore not very significant, and thus, it is better to employ saturation method (Kumar, 2005). This means that in a qualitative research, it is not necessary to determine the extent of the diversity, while the qualitative aspect only supports the archival research. Therefore, the interview was kept on conducting upon the time no new knowledge was gained.

## RESULTS AND DISCUSSION

Ten different approaches have been found to be popular in SHE, especially in North America and Canada. Their popularity is based on Google hits for a span of six months (four times

A       A Simple Audit at University of California, Los Angeles (UCLA) in 1988

B       MacLean's Magazine Annual Guide to Canadian Universities

C       Canadian Centre for Policy Alternative Missing Pieces Reports I, II and III in 1999

D       National Wildlife Federation of the State of Campus Environment

E       Good Company's Sustainable Pathways Toolkit

F       Campus Sustainability Assessment Review Project

G       Penn State Indicators Report

H       Association for the Advancement of Sustainability in Higher Education  Sustainability Tracking, Assessment and Rating System "STARS"

I       University Leaders for a Sustainable Future Sustainability Assessment Questionnaire "(SAQ)"

J       Campus Sustainability Assessment Framework, "CSAF"

*Fig. 3: The mean number of hits in the Google search for each approach for a period of
6 months, i.e. between Jan 2008 - July 2009 (four times every month )*

every month), as shown in the following figure. Among the ten approaches, the four most popular approaches are discussed and analyzed in this section.

*Association for the Advancement of Sustainability in Higher Education Approach (AASHE)*

This new approach has gained the interest of many higher educational institutions.  AASHE is an association which was founded in 2006 with a mission to promote sustainability in future campuses (STARS, 2008).  This institute proposes a rating system, known as Sustainability Tracking Assessment and Rating Systems STAR (ibid).

*University Leaders for Sustainable Future Approach (ULSF)*

The Association of University Leaders for a Sustainable Future is an institute, which attempts to support sustainability at colleges and universities worldwide via publications, research and assessment (ULSF-b, 1992).  It functions as the secretariat for the signatories of the Talloires Declaration.  More than 350 university rectors in more than 40 countries had signed this declaration (Ibid), including University Malaya (UM).

*Campus Sustainability Assessment Framework Approach (CSAF)*

Campus Sustainability Assessment Framework was created by the Sierra Youth Coalition and Lindsay Cole (2003) in Royal Roads University. CSAF is a systematic formula used in analyzing the "sustainability" of Canadian campuses.

*Penn State Indicator Reports Approach*

Penn State Green Destiny Council in USA first performed this approach in 1998 and completed it in 2000. A team of 30 undergraduates, graduate students, several faculty members, and professionals had conducted this approach.

## RESULTS AND DISCUSSION ON THE ROLE OF COMMUNITY ON SHE

AASHE has grouped different subjects pertaining to sustainability into three categories. These are: (1) Education and Research, (2) Operation, and (3) Administration and Finance. On the other hand, Community Relationship and Partnership, which has been suggested in the Administration and Finance part, is a topic with a direct effect on SHE. Those five items are; (1) Community Service Infrastructure (AF Credit13), (2) Student Participation in Community Service (AF Credit14), (3) Student Hours Contributed in Community Service (AF Credit 15), (4) Financial Incentive for Public Service Careers (AF Credit 16), and (5) Outreach and Partnerships Carnegie Designation (AF Credit 17).

Based on the points given by AASHE, it was observed that the most important issue in Administration and Finance is community. To calculate the importance of different issues, the following formula was used: (I=P/(TP) where I = importance of issue, P = possible points of any issue, and TP = total points of the factors in the same category.

University Leaders for Sustainable Future (ULSF) provide a set of questionnaire for



A: Planning
B: Trademark Licensing
C: Sustainability Infrastructure
D: Investment
E: Diversity Access and Affordability
F: Human Resources
G: Community

*Fig. 4: The importance of different subjects on campus sustainability based on AASHE's (STARS Ver 5) points in the Administration and Finance category*

evaluating the level of SHE. It divides the factors into seven categories, namely: (1) Curriculum, (2) Research and Scholarship, (3) Operations, (4) Faculty and Staff Development and Rewards, (5) Outreaches and Services, (6) Student Opportunities, and (7) Institutional Mission and Structure. Among these categories, two groups directly address community related issues. The Outreach and Services category focuses on the relationship between community sustainability and higher educational supports in its local and surrounding region. On the other hand, the category of Student Opportunities focuses on the opportunities provided for the student groups as a small community. Meanwhile, in the Faculty and Staff Development and Rewards category, two out of three questions address the issues affecting the regional community (ULFS-a, 1999).

If we assume the number of questions as the indicator for the importance of that issue, and Outreaches and Services and Student Opportunities as the community indicator,

the significance of community can be made obvious. Based on the formula; I = NQ/ TNQ, where I = importance of issue, NQ = number of questions in that field, TNQ = total number of questions, the result illustrates the significance of community (see *Fig. 5*).

Lindsay Cole (2003) from the Royal Roads University in Canada proposed the Campus Sustainability Assessment Framework (CSAF), which was constituted based on several different indicators; these are the people and ecosystem. The ecosystem indicator includes; (1) air, (2) water, (3) land, (4) materials, and (5) energy, whereas the people indicator comprises of; (1) knowledge, (2) community, (3) governance, (4) health, and (5) wealth and economy.

Addressing the term community in a separate category is an index for showing its importance. As the topic is more important, it therefore attracts more people's attention (Ann, 2003). Hence, the number of indicators is assumed as the index for the importance of this issue, the result will indicate that Community



A: Research and Scholarship
B: Faculty and Staff Development and Rewards
C: Institutional Mission, Structure and Planning
D: Operation
E: Curricular
F: Community (Outreaches and Services, Student Opportunities)

*Fig. 5: The importance of different subjects in campus sustainability based on the sustainable assessment questionnaire of ULSF*

Sustainability is the most important issue for achieving sustainability in the CSAF. This formula was used, "Ip = Npi/ Tnpi", where; Ip = importance of an issue in the people category, Npi = total number of indicators in the people category (see *Fig. 6*).

The results indicated that even in the CSAF, community activities played a very important role in the assessment process. Penn State Indicator Report started the community issue by using this slogan: "All stakeholders in the university – students, faculties, staff, administrators, trustees, parents, and the public have the right to expect that the university will strive to be a civil community of learning; all have an obligation to make it happen". Hence, the following formula was used, "Ip = Npi/ Tnpi", where Ip = importance of the people category, Npi = total number of indicators in the people category (see *Fig. 8*).

*Fig. 8* shows how important the community issue is in comparison to other factors in this approach. Penn State has declared that it emphasizes more on the community since it believes that this factor is one of the important efforts which should be concentrated constantly. It also states that maintaining a sustainable campus requires maintaining a healthy community. Moreover, it emphasized the role of education in producing successful and responsible students who are parts of the society.

*Descriptive Analysis of the Questionnaire Results*

A descriptive analysis was utilized in the analysis of this study. Nonetheless, multiple regressions were also used to analyze the factors influencing respondents' answers about the factors of SHE in MHEI.

The variation in the respondents' answers towards the importance of community in MHEI (ICMHEI) could be hypostatized by an array of independent predictor variables. The equation for the empirical model is as follows: f (ICMHEI) = f {ethnicity, gender, research interest, educational level, age).

*Reliability Test of Results*

Cronbach's alpha coefficient was used to determine the internal consistency reliability of the answer of this study (*see* Table 2). The respondents' perception on People and Ecosystem formed the dependent group. The remainder of the above variables is our independent variable.



A: Wealth and Economy     B: Governance     C: Health     D: Knowledge     E: Community

*Fig. 6: The importance of different subjects in the CSAF, based on the ratio of specific category indicators to all people category indicators*

| | | | | |
|---|---|---|---|---|
| F: Wealth and Economy | G: Governance | H: Health | I: Knowledge | J: Community |
| A: Water | B: Energy | C: Land | D: Air | E: Materials |

*Fig. 7: The importance of the different subjects in CSAF based on the ratio of specific category indicators to all the ecosystem and people category indicators*



| | | | | |
|---|---|---|---|---|
| A: Decision Making | B: Built and Environment | C: Energy | D: Food | E: Material |
| F: Transport | G: Water | H: Land | I: Research and Scholarship | |
| J: Community | | | | |

*Fig. 8: The importance of different subjects in campus sustainability based on Penn State Indicator Report*

*T-test and ANNOVA Test*

In order to test whether the other nominal variables, such as gender, ethnicity, research interest, educational level and age, have significant differences, a T-test for gender and four ANNOVA tests for ethnicity, research interest, educational level and age were conducted. For the variables with less than 5% significant difference, a table of description has been provided.

It shows that there is only significant difference (p = .001) between the males and females, with regard to "water is necessary", whereby the mean value for males (mean = 1.68, sd= -1.86) was found to be significantly higher than that of the females (mean = 1.85, sd = -2.41).

### ANNOVA TEST

As for the effects of ethnicity, research interest, educational level and age on respondents, four ANNOVA tests were performed, whereby none of the results had a significant difference or with the P value lower than 5%. An example of the tests is shown in Table 5.

*Experts' Perceptions Diagrams*

This section discusses the analysis of the experts' opinions in the realm of SHE who ratified the importance of the community aspect by voting 97.5% as "strongly agree". It also showed that the experts were aware of the structure and challenges of MHEI and the role of the campus community in contributing to sustainability of higher education.

*Discussion on Malaysian HEI Challenges*

A review of the literature indicates that the Educational System in Malaysia varies from other parts of the world due to different socio-political background. Hence, it is essential to look at it in details. Education is an important portfolio in the Malaysian government structure, as reflected by the fact that all Prime Ministers,

excluding the first Prime Minister, were once the Education Minister. Malaysia has its own particular challenges in its HEI, such as racial polarization, gender issues, and poor command of English as the major medium of international communication.

*Racial Polarization*

Malaysia has many different ethnic groups. Hence, racial polarization is a reality and it is very prevalent in the Malaysian HEI, whereby students tend to group together according to their ethnic background (Malaysia National News Agency, 2008). Malaysian universities have taken many initiatives to bring about integration of all its ethnic groups together such as organizing cultural shows, sport carnivals, student orientations, competitions, and supporting "One Malaysia programme" which is aimed at enhancing solidarity and unity among all its ethnic groups. For example, various ethnic students of Universiti Putra Malaysia gathered on 17th January 2010 to commemorate the Indian festival called Ponggal. The observation ratified this subject, too.

### Gender issues

Based on a report by Dr. Richard Leets for UNDP (2004), Malaysia's ranking in the UNDP gender index is not as high as it should be. The ratio between the females to males in Malaysian universities, except for Polytechnic, is 2:1. Generally, there are more females than males in the campuses. This gender imbalance does not satisfy the world's standards. This imbalance proportion does not only endanger the future job market of the country, but it will also create some problems in terms of campus management. This can be observed even in the simplest subjects in the campuses, such as possessing the same number of toilets or hostels for the males and females, of which the former is being underutilized and the latter is over utilized. The observation also ratified this particular subject.

TABLE 2
Descriptive statistics

| | N statistics | Range statistics | Minimum statistics | Maximum statistics | Mean statistics | Std. errors | Std. deviation statistics | Variance statistics |
|---|---|---|---|---|---|---|---|---|
| Knowledge will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8750 | .0639 | .40430 | .163 |
| Community will be very necessary | 40 | 1.00 | 1.00 | 2.00 | 1.0250 | .0250 | .15811 | .025 |
| Governance will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.7750 | .0758 | .47972 | .230 |
| Economy and wealth will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8750 | .0639 | .40430 | .163 |
| Well-being of health will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8250 | .0706 | .44650 | .199 |
| Air will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8750 | .0639 | .40430 | .163 |
| Water will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.9250 | .0553 | .34991 | .122 |
| Land will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.9250 | .0553 | .34991 | .122 |
| Materials will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.9000 | .0599 | .37893 | .144 |
| Energy will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.2500 | .0780 | .49355 | .244 |

TABLE 3
Cronbach's alpha coefficient of the answers

| Scales | No. of items | Alpha value |
|---|---|---|
| People group | 5 | 0.69 |
| Ecosystem group | 5 | . 59 |

TABLE 4
T-test

| Ecosystem group | Gender | Mean | Std.dev | T value | Significant |
|---|---|---|---|---|---|
| Water is necessary | Female | 1.6842 | +1.7895 | -2.4797 | .001 |
| | Male | 1.8571 | +2.0476 | -2.407 | .001 |

TABLE 5
ANNOVA test between different ethnic backgrounds

| | | Sum of squares | df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Knowledge is necessary | Between groups | .237 | 2 | .119 | .715 | .496 |
| | Within groups | 6.138 | 37 | .166 | | |
| | Total | 6.375 | 39 | | | |



*Fig. 9: The percentage of the respondents who strongly agreed on different subjects*

Fig. 10: The percentage of the respondents who agreed on different subjects



Fig. 11: The percentage of those who were neutral on different subjects



Fig. 12: The percentage of the respondents who agreed or strongly agreed on
the importance of community

*Fig. 13: Malaysian universities' depolarization efforts via social events*



(*Source*: UPM website, 2010)

*Fig. 14: UPM students of different races attended "Ponggal" (Indian celebration)*

**Poor command of the English Language**

Another challenge in Malaysia's HEI is the poor command of English as an international medium used to connect everyone together, apart from their ethnic groups and own mother tongue (Crismore *et al*., 1996). The poor command of the English language is very prevalent not only among the international students but also among the local students, and even university staff (ibid). The observation also ratified this particular subject as well.

*Discussion on the Malaysian HEI Challenges Based on the Interview*

The interview included many probing as well as the main questions. The answers were analysed and transcribed in 98 pages. The summary of the analyses were done based on the three categories, namely; (1) existence and effects of Imbalance Gender Distributing (IGD), (2) existence and effects of Ethnical Polarization (EP), and (3) existence and effects of Poor Command of English.

TABLE 6
Results from the interview on gender

| No | Affiliation | Have a clear perception of SD and SHE | IGD exist in Malaysia HEI | IGD is a challenge | IGD affects the SHE |
|---|---|---|---|---|---|
| 1 | UKM LESTARI | Yes | Yes | Yes | Yes |
| 2 | UM, Chancellery | Yes | Yes | Yes | Yes |
| 3 | UPM Chancellery | Yes | Yes | Yes (But has period of 30 years to revert) | Yes |
| 4 | Ministry of Higher Education | Yes | Yes | Neutral | Some how |
| 5 | USM, Chancellery | Yes | Yes | Yes | No |
| 6 | UPM, Faculty of Human Ecology | Yes | Yes | Yes | Yes |
| 7 | USM Faculty of Humanity | Yes | Yes | Yes | Yes |
| 8 | UPM, Faculty of Food Science | Not very well | | | |
| 9 | UM Development Dept. | Not very well | | | |
| 10 | USM Chancellery | Yes | Yes | Yes | Yes |

The results from the interview indicate that all the interviewees believe that the IGD exists in Malaysian HEI and majority (except one who was neutral) took it as a threat to SHE.

The result from the analyses of the interview indicate that all the interviewees believe that ethnical polarization exists in Malaysian HEI, and all (except for one) interviewees considered it as a challenge. Besides, all the interviewees also believe that EP is a threat to SHE (*see* Table 7).

The results from the interview analyses indicate that all of interviewees believe that poor command of English exists in Malaysian HEI, except for one interviewee who was neutral, whereas the rest considered it as a challenge. Besides, except for one interviewee who was neutral, the rest considered PCI as a threat to SHE (*see* Table 8).

## DISCUSSION AND ANALYSES

As sustainability concerns with issues of social, economic and environmental, all of them should be addressed sufficiently and fairly. However, these concerns differ from one country to another in the world. In this regard, the most important documents which can identify the most important subjects at the national and international levels have to be reviewed. Hence, employing the archival analysis as the methodology for this study would lead to an acceptable result. In addition, by conducting a comparative analysis on the frequency of different approaches using the Google search engine, as an indicator, had also enabled this study to find out which approach has been widely used. It has been argued that the comparative statistical analysis of the four most popular sustainable campus approaches could give the evidence of the importance of community-related topics in campus sustainability. In this comparison, the

TABLE 7
Result from the interview on polarization

| No | Affiliation | Have a clear perception of SD and SHE | EP exist in Malaysia universities | EP is a challenge | EP affect the SHE |
|---|---|---|---|---|---|
| 1 | UKM, LESTARI | Yes | Yes | Yes | Yes (but not sure about all universities |
| 2 | UM, Deputy Vice Chancellor | Yes | Yes | Yes | Yes |
| 3 | UPM, Chancellery | Yes | Yes | Yes | Yes |
| 4 | Ministry of Higher Education, | Yes | Yes | Neutral | Yes |
| 5 | USM, Chancellery | Yes | Yes | Yes | Yes |
| 6 | UPM, Faculty of Human Ecology | Yes | Yes | Yes | Yes |
| 7 | USM, Faculty of Humanity | Yes | Yes | Yes | Yes |
| 8 | UPM, Faculty of Food Science | No | | | |
| l9 | UM Director of Development | No | | | |
| 10 | USM Chancellery | Yes | Yes | Yes | Yes |

community's important values in accordance with the approaches are as follows: ULSF (25%), CSAF (24%), Pen State Report (15.10%), and STARS (24%), which were the first highest important values as compared to the second highest important values, which were 24%, 21%, 12.10% and 18%, respectively (see *Fig. 8*).

Apparently, the Malaysian professionals' opinions imparted that community is the most important issue in sustaining MHEI, whereby 97.5% of the respondents declared their strong support of addressing the subject of community in research and initiatives. Likewise, the literature review, interviews, and observations have also indicated that Malaysian HEI encounters three challenges, namely; ethnical polarization, imbalance distribution, and poor command of English which apparently are affecting the community aspect of SHE. All these reflect that Malaysian higher learning institutions need to become more sustainable particularly in issues concerning its community.

## CONCLUSIONS

In higher educational institutions, community emerges as an effective factor, implying an important role in the total sustainability of campuses. It has been concluded in order to work or fulfil research on SHE, particularly in Malaysia, emphasizing the community issues is a logical decision. Malaysian experts believe that the community aspect is the most important issue which should be addressed promptly. Thus, through community services, volunteerism, engagement and partnership, universities and colleges will not only enhance their own sustainability level but also empower their students' leadership skills.

TABLE 8
The result from the interview on the command of English

| No | Affiliation | Have a clear perception of SD and SHE | PCE exist in Malaysia Universities | PCE is a challenge | PCE affects SHE |
|----|-------------|---------------------------------------|-----------------------------------|--------------------|-----------------|
| 1 | UKM LESTARI | Yes | Yes | Yes | Yes |
| 2 | UM, Chancellery | Yes | Yes | Yes | Yes |
| 3 | UPM Chancellery | Yes | Yes | Yes | Yes |
| 4 | Ministry of Higher Education, | Yes | Yes | Neutral | Yes |
| 5 | USM, Chancellery | Yes | Yes | Yes | Neutral |
| 6 | UPM, Faculty of Human Ecology | Yes | Yes | Yes | Yes |
| 7 | USM Faculty of Humanity | Yes | Yes | Yes | Yes |
| 8 | UPM, Faculty of Food Science | No | | | |
| 9 | UM | No | | | |
| 10 | USM Chancellery | Yes | Yes | Yes | Yes |

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# The Syntactic Structure of a Noun Phrase: Austroasiatic vs. Austronesia

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## ABSTRACT

The indigenous people of Malaysia consist of 18 ethnics who have their own languages.  These people can be classified into three main categories, namely; Negrito, Melayo Proto, and Senoi. Each of these categories can be further sub-divided into different groups.  For example, Negrito consists of six races, which are Kensiu, Kintak, Lanoh, Jahai, Mendriq, dan Bateq.  Each of these races has its own language which is named after the respective race.  The indigenous languages are of the Austroasiatic stocks. In Malaysia, however, the Malay language, which is one of the Austronesian stocks is the national language of Malaysia.  The status of the Malay language being in a different stock lays a large implication on the native children who are trying to learn and acquire the language.  Due to this, it is vital for us to be aware of the differences of word order between the two stocks, especially at the phrasal and sentential levels. This article discusses and analyzes the differences between the Malay and Kensiu noun phrases.  The analysis on the noun phrase of these languages revealed that there are differences in the words that precede the head noun and the words that follow the head noun in the noun phrase of the Kensiu and Malay languages.  Surprisingly, some of the word orders in the noun phrases in the Kensiu language are similar to the word order in the noun phrases of the Malay language although they are from different stocks.

*Keywords: Kensiu language, Malay language, indigenous, noun phrase, Austroasiatic, Austronesian*

## INTRODUCTION

Generally, a noun, as a part of speech, can be divided into three types.  The first type is the language without nouns, while the second type is the language with no identification of the nouns and the third is the language with a clear identification of the nouns (Rijkhoff, 2002, p. 12). Kensiu and Malay languages can be categorized into the third type.  This is because the nouns in these two languages can be identified easily.  The nouns in the Malay language can be identified easily using a test which uses determiners and adjectives.  Other parts of speech, such as the verbs and adjectives, are also recognizable with distinctive tests without any problem in Kensiu and Malay.  Therefore, the nouns in Kensiu and Malay are very distinguishable.  Nouns are also known as lexical categories because these words are unlimited in numbers.

The lexical category, noun, can also be grouped into a phrase known as a noun phrase (NP).  However, the noun which is a part

of a noun phrase does not necessarily stand independently without any words that lead or follow it to form a noun phrase. On the other hand, a noun can be attended by some other words which may lead and follow it. Those words combine to form a phrase known as NP. Hence, the formation of a NP needs to be described and analyzed deeply in order to justify the position of all the possible words which follow and lead in the NP syntactic structure of both the languages.

The discussion starts with the word order in the NP itself. The ordering of the word that follows and precedes a noun was analyzed using a framework known as Determiner Phrase (DP) Hypothesis to represent the syntactic structure of a NP in Kensiu and Malay. The syntactic structure will clearly show the differences or similarities between the two languages, while explaining them in a very systematic way.

## KENSIU NOUN PHRASE (NP)

In order to explain and compare the differences in the NP of the Malay and Kensiu languages, this article first discusses the NP of the Kensiu language. This section elaborates and explains the noun phrase and all the lexical elements which form the NP. The formation of this NP involves all the lexicals, which follow and lead the NP of the head noun of the Kensiu language. Thus, to seek for relevant data, a field research involving five informants aged between 50 to 70 years, was conducted.

## LEXICALS THAT PRECEDE NOUN IN THE KENSIU LANGUAGE

Generally, a noun in a language may be preceded by several unique elements to form a noun phrase. This discussion argues that the Kensiu language may be preceded by two types of elements, namely; numerals and classifiers. This writing assumes that numerals also include quantifiers. This discussion starts with identifying all the elements that precede a noun.

Universally, as a part of speech, nouns can be divided into three types. First, language without noun; second, language where noun

cannot be identified and third language with clear identification of noun (Rijkhoff, 2002, p. 12). The Kensiu language is a language which possesses a clear noun, such as:

(1) a. *hihuk*
    stick

   b. betiu
      water

   c. penyuk
      cloth

   d. cebak
      hill

   e. kawau
      bird

   f. hiyak
      house

From the data in example (1) above, it can be seen that the noun could not be pluralized with any affixes. On the other hand, this language uses numerals (i.e. quantifiers) like *jenuh* to mean *many* as a means of pluralizing a noun. Subsequently, all the nouns in example (1) can be pluralized using numerals, as in example (2):

(2) a. *jenuh hihuk*
    many sticks

   b. jenuh betiu
      a lot of water

   c. jenuh penyuk
      many clothes

   d. jenuh cebak
      many hills

   e. jenuh kawau
      many birds

   f. jenuh hiyak
      many houses

This phenomenon is a scenario that has been discussed in the Malay language (Fazal Mohamed Mohamed Sultan, 2008). The distinction between the two languages is the absence of reduplication in the Kensiu language. However, the word order of the quantifier and noun is very firm because a quantifier always precedes its noun. Any other word orders are not acceptable in this language, as given below:

(2')  *a'.   *hihuk jenuh*
      *b'.   *betiu jenuh*
      *c'.   *penyuk jenuh*
      *d'.   *cebak jenuh*
      *e'.   *kawau jenuh*
      *g'.   *hiyak jenuh*

This article will continue to explain words that precede a noun in the noun phrase of the Kensiu language. A noun in the Kensiu language may also be preceded by a numeral and a classifier. The Kensiu language uses only one type of classifier and does not seem to have any types of agreement between them, as indicated in example (3) below:

(3)  a.   *biya kebek    naka*
          two classifier jackfruit

          biya kebek    lembu
          two classifier cow

          biya kebek    kawau
          two classifier bird

          biya kebek    hiyak
          two classifier house

Nevertheless, this language also borrows a few classifiers from Malay. These loan words mostly involve modern objects which are not used in their language, as illustrated in (4):

(4)  a.   *biya* batang    kayu
          two  classifier stick

          *biya* helai      *penyuk*
          two  classifier cloth

*nai* ules      *naka*
two classifier jackfruit

These differences clearly show that the Malay language has already started to have great influence on the Kensiu language when the words, *batang, helai* and *ules,* are used in NP (4). Phrases (3) and (4) illustrate that the classifiers precede the nouns in this language. However, the order of the classifiers and numerals is very strict, whereby the classifiers always precede the nouns. The opposite order of these words, on the contrary, is not accepted in this language:

(5)  *a.   *biya naka kebek*
     *b.   *biya* lembu *kebek*
     *c.   *biya kawau kebek*
     *d.   *biya hiyak kebek*

Besides that, the presence of a classifier is also not mandatory in the phrase. Its presence is optional. This means that the presence of a classifier is not influenced by the type of noun. All are optional as in data (6) (Note that the optional properties are described in parentheses):

(6)  a.   biya (kebek)   naka
          two   classifier jackfruit

          *biya (kebek)*   lembu
          two   classifier cow

          biya (kebek)   kawau
          two   classifier bird

          biya (kebek)   hiyak
          two   classifier house

From the discussion above, it is clear that the sequence of numerals and classifiers in a noun phrase has a constant order, as pointed out in (3) until (6). A classifier always precedes a noun, while a numeral always precedes a classifier in the Kensiu noun phrase. This analysis can be outlined in (7):

(7)   numeral - classifier – noun

The word order in the Kensiu noun phrase forms a sequence, which can be summarized into three facts, where great attention should be given. The first fact is that the classifier and the numeral which form the NP of Kensiu language has a strict ordering, where a numeral precedes a classifier before a head noun, as described in (7). Secondly, a classifier cannot exist without a numeral; on the contrary, a numeral can still exist without a classifier. The third fact is that there could be an absence of agreement between the head noun and the classifier that precedes it. This phenomenon is contributed by the existence of a single classifier in this language, which is known as *kebek*.

## WORDS THAT FOLLOW THE NOUN

The head noun in this language also allows words to follow their head noun in order to form the noun phrase in the Kensiu language. This head noun can be followed by pronoun and determiners. The use of pronouns is quite limited in this language. This language does not exhibit any complex or creative use of pronouns as it is in the Malay language. The existence of pronouns is illustrated in example (8):

| (8) | Pronouns in the Malay Language | Pronouns in Kensiu |
|---|---|---|
| | Saya 'I' | yek |
| | Dia 'him' | tak (male) yak (female) |
| | Kami 'we' | yam |
| | Kamu 'you' (singular) | bok |

This language does not utilize one word translation for the pronouns like *aku, engkau* and so on, like in the Malay language. However, the pronoun *him* for male and female is clearly distinguished. Hence, the language utilizes gender differences partly in its pronoun system. This shows that this language clearly marks the genders in as in the pronoun '*him*'. For example, (9) shows the gender difference in the third person singular:

(9)  a.  tak        Nasir
         [+male] Nasir

         yak        Aminah
         [+female]  Aminah

Therefore, the uses of *tak* and *yak* can distinguish the referent in a conversation as a male or female, as further illustrated in the following example:

(10)  a.  *Tak cit   nasik*
          He  eats rice

      b.  *Yak cit   nasik*
          She eats rice

This construction shows that a noun phrase in the Kensiu language is not only preceded by other words before the head noun, but there are also words which can follow the head noun, as in the possessive in phrases (11) and (12) below:

(11)  *heyak yek*
      hut      my
      (my hut)

(12)  *cas   yek*
      hand my
      (my hand)

This language is very strict in its ordering of the head noun and the possessive:

(13)  *\*yek heyak*
      my  hut

(14)  *\*yek cas*
      my  hand

The phrases in (11) and (12) prove that there are no words being inserted to show any agreement with the possessive and the head noun or vice versa in this language.

Other than this type of ordering, this language also has a determiner. It seems that there is only one determiner in this language,

and it is known as *on*. This determiner has a permanent position in the noun phrase. It always follows the head noun as given in (15):

(15) a. *awe      on*
        bamboo the
        (the bamboo)

        *menek on*
        people the
        (the people)

The word order between the determiner and the head noun is always strict. In other words, any wrong ordering between the determiner and the head noun is considered as ungrammatical, as follows:

(16) *a. *on awe*
           the bamboo

     *b. *on menek*
          the people

The discussion for phrases (11) until (16) illustrates a very interesting order. The order can be divided into two types. First, the determiner and the pronoun follow the head nouns. Second, the Kensiu language does not allow the presence of both words at the same time in any order:

(17) *a. *yak cas on*
     *b. *yak on cas*

In summary, it is claimed that the NP of the Kensiu language consists of a numeral, a classifier, a noun, a possessive, and a determiner. All the four classes of words have a very strict order in the Kensiu language. These orders can be summarized as follows:

(18) numeral – classifier – noun – possessive/determiner

## THE NOUN PHRASE (NP) STRUCTURE IN MALAY

The nouns in the Malay language can be preceded by numerals (*dua* 'two', *tiga* 'three', *empat* 'four'), quantifiers (*beberapa* 'a few',

*kesemua* 'all', *setiap* 'everyone') and classifiers (*buah*, *biji*, *seulas*, etc). This N can also be followed by determiners like *itu* 'the/that' and *ini* 'the/this'.

Meanwhile, numerals, quantifiers and classifiers have a strict word order in the Malay language (Fazal Mohamed Mohamed Sultan, 2008). Among other, numerals and quantifiers cannot exist at the same time or precede the nouns, as it is in the following phrase (19c):

(19) a. *beberapa* (batang) pen
        few        (class)   pen
        'a few pens'

     b. *dua orang manusia*
        two class.  people

     c. *\*beberapa dua orang manusia*
        a few     two class. people

The noun can be preceded by a quantifier *beberapa* as in (19a) or a numeral *two* as in (19b). NP (19c) shows that the presence of a quantifier and a numeral at the same time in a NP in the Malay language is not acceptable. This is because the quantifier and the numeral observe complementary distribution. The brackets for the classifier in (19a) mean that the classifier is optional. However, the usage of certain classifier is compulsory while the others are optional because according to Ramli Hj Salleh (1995, p. 4), the existence of classifiers in Malay is dependent on the semantic features [±alive, ±human] of the classifiers. Therefore, the discussions for the numeral and classifier can be summarized into an ordering, such as in (20):

(20) $\left\{ \dfrac{\text{numeral}}{\text{classifier}} \right\}$ - classifier - noun

As for the phrases that follow the head noun in the Malay language, the phrases are genetive NP, adjective phrase (AP) and prepositional phrase (PP), as given in the following examples:

(21) a. [NPKain [NPAhmad]] telah koyak.
        cloth Ahmad    has torn.
        'Ahmad's cloth is torn'

b.  [$_{NP}$Kain [$_{AP}$biru]] itu telah dibuang.
    cloth   blue  the  has  thrown
    'The blue cloth has been thrown away'.

c.  [$_{NP}$Kehancuran [$_{PP}$di Iraq]] tidak boleh
    dihentikan.
    destruction      in Iraq  cannot
    stopped.
    'Destruction in Irqa cannot be stopped'

In short, the NP in the Malay language consists of lexicals and one or more than one lexical units. These lexical units are non-phrase like determiner, quantifier, numeral, and classifier that precede the noun in a NP, while the possessive and adjective follow the noun. Therefore, the order of the whole noun phrase can be summarized as follows:

(22)  $\left\{ \dfrac{\text{quantifier}}{\text{numeral}} \right\}$ ; (classifier); N; possessive;
      determiner

## SIMILARITIES AND DIFFERENCES BETWEEN THE NP IN THE KENSIU AND MALAY LANGUAGES

As a whole, the NP in the Kensiu language consists of numerals, classifiers, nouns, genitives, and determiners. These four elements form a concrete word order in Kensiu. The order of the words can be summarized as follows:

(23)  $\left\{ \dfrac{\text{quantifier}}{\text{numeral}} \right\}$ - classifier - noun – genitive/
      determiner

Meanwhile, the distribution in (23) is similar to other languages in the same group of Mendriq, such as Kensiu and Bateq (Fazal Mohamed Mohamed Sultan, 2009). However, Malay language seems to have almost the same word order as well:

(24)  $\left\{ \dfrac{\text{quantifier}}{\text{numeral}} \right\}$; (classifier); N; genitive;
      determiner

Nonetheless, it is crucial to note that there are differences before and after the nouns, such as in the type of classifiers and the choice of classifiers, determiners, and genitives.

Meanwhile, the Kensiu language does not differentiate the type of classifiers that can be used as it is in the Malay language. The Kensiu language uses only the word *kebek* as its classifier, while various classifiers are used in Malay, depending on the type of nouns. Furthermore, the Kensiu language does not allow the presence of genitive and determiner at the same time, as they are both in the complementary distributional situation. On the contrary, the presence of these elements is allowed in the Malay language. The differences in relation to the latest rebranding of NP to determiner phrase (DP) are discussed in the subsequent section.

## THE STRUCTURE OF DETERMINER PHRASE (DP)

Since Abney (1987) presented his work on noun phrase sentence, linguists have changed their views on the structure of NP. Abney argues that the head of a nominal phrase is a functional category. He also claims that noun phrase is a determiner phrase. His claim was made based on the symmetry between the NP and clausal projection. A clause has a VP which is dominated by a functional projection, tense phrase (TP). Therefore, Abney assumes that NP has to be viewed as an N projection that is dominated by a functional projection, as in (31).



Introducing a functional category into a NP is widely accepted when his idea was implemented in various papers around the world (Ritter, 1987; Delsing, 1988; Ouhalla, 1988). However, those papers mostly involved studies on Roman languages. Therefore, in order to increase the DP analysis in Asian languages, the DP structure of Kensiu and Malay was analysed. Abney also claims that there is AGR in D in every NP. Therefore in the English language, the determiner *the* will have a structure as in (32a),

while the existence of a possessor in a NP is structured as in (32b).

(32a)

```
              DP
         /         \
        D           NP
        |            |
       the          book
       itu          buku
```

(32b)

```
       DP
     /    \
  Spec     D'
   |      /    \
   |     D      NP
   |     |       |
 John's AGR     book
  John
```

Abney attempted to construct a structure which should be able to solve the puzzle of the word order involving numerals and classifiers in English, such as in the phrase like, *their three books*.  He suggested two scope positions which are occupied by a pronoun and a numeral or a classifier.  The numeral and the classifier are named as a numeral phrase (NUMP).  He even suggested that the NUMP stays at the Spec NP.  This suggestion means that all the possessives and numeral phrases describe the head nouns, as illustrated in (33).

(33)

```
        DP
      /    \
   Spec     D'
    |      /   \
    |     D     NP
    |        /    \
    |     Spec     N'
    |      |        |
    |      |        N
    |      |        |
  their  three    books
```

If the structure in (33) is applied on the possessives and the determiners in phrases (28) and (29), the following structure will then be obtained.

(34)

```
          FD
           |
          D'
        /    \
      NP      D
       |       \
      awe      on
     bamboo    the
```

(35)

```
         FD
       /    \
     D'      Spec
    /  \       \
  NP    D       \
   |    |        \
  awe  AGR      yak
bamboo [+poss]   my
```

The structure illustrated in (35) shows that AGR does exist in the structure of DP in the Kensiu language.  In fact, the presence of AGR proves that the possessives are different.  This also proves that the presence of AGR is important so as to verify the presence of a feature.  It is claimed that AGR has a feature [+possessive].  The appearance of *on* at *D* made the unavailability of a feature [+possessive] which eventually blocked the possessive from presenting in that position.  This further explains the ungrammaticality of the phrase in (36).

(36)  *a.   hiyak  yak on
           hut     my   the

      *b.   hiyak on   yak
            hut     the my

The above structure has also portrayed that the sequence of possessive and determiner displays a strict order.  Furthermore, the word order of Kensiu is rather different from English language.  However, the DP has the advantage in explaining the differences without any problem.

## THE POSSESSIVE AND NUMERAL PHRASE OF KENSIU AND MALAY

The syntactic analysis on the NP of Kensiu and Malay reveals that the word order of their NPs is strict. The word order in the NP shows that the head noun can be preceded by a numeral and a classifier, whereas the head noun can be followed by a determiner and a possessive. These differences can be explained if a structure that can accommodate all the characteristics discussed above could be proposed. Therefore, the structure illustrated in (37) is proposed to accommodate the NP of the Kensiu and Malay languages.



This structure can be applied to the phrase in (38) which provides the structure as illustrated in (39).

(38)  *biya kebek hiyak yak*
      two clas    hut    my
      'My two huts.'



The whole DP structure of Kensiu is portrayed in (39). The brackets for ClassP indicate that the phrase is optional. If there is an overt existence of ClassP, there will be adjunction of ClassP. On the contrary, if there is no classifier, there will no ClassP available, as in the structure given in (41).



## CONCLUSION

This article has discussed the noun phrase of an Austroasiatic and an Austronesia language. The Austronesia stock is represented by the Malay language, while the Kensiu language represents the Austroasiatic stock. In brief, the discussion above focuses on the word order of the NP of both languages. The analysis of the two languages reveals that there are differences in the words that follow and precede nouns. Other than that, there are also differences in the classifiers and the type of classifiers which are used in both languages. There are words are similar to those in Malay even though they are from a different language. Finally, a syntactic structure that can accommodate the differences between the languages has been proposed to solve the distinguishing characteristics of the two languages undertaken in this study.

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# Perspectives of Learning Science Effectively: Comparison between Western Australian Teachers and Malaysian Teachers

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## ABSTRACT

Malaysia hopes to be a developed country which is driven by the industrial and agricultural sectors by the year 2020. This aspiration is guided by Vision 2020 and in order to achieve this, the manpower of the country must be developed and furnished with strong technological, mathematical, and science backgrounds as early as the primary level. It is important to note that effective learning influences the attitude of the students towards science, and if Malaysia is to develop in accordance with Vision 2020, this issue must be addressed. In developed countries like Australia, the learning of science is developed humanistically to attract students to science. The learning of science in Australia involves materials, environments, and activities which encourage students to actively participate in the class. Therefore, it is important to investigate teachers' perspectives towards students' learning as teachers are facilitators of learning. This paper discusses the findings of a qualitative study that was carried out to compare the perspectives of primary science teachers from Malaysia and from Western Australia, with the focus on five research questions. The first question is "what are the teachers' perspectives of learning science?", whereas the second, third and fourth are, "what are the teachers' perspectives of effective teaching methods, the importance of teaching aids and implementing science process skills in the learning of science?" and the fifth question is, "how to assess the progress of the students in learning science?" The participants of the study were twelve primary science teachers from Western Australia and from Malaysia, respectively. The data collection approaches employed included open-ended questions, non-participant observation techniques, and document collection. The findings indicated that there are four types of teachers' perspectives of learning science, three perspectives of the implementation of science process skills in learning science, and five methods in assessing students' progress in learning science.

**Keywords: Learning Science, Western Australian Teachers, Malaysian Teachers**

## BACKGROUND OF THE STUDY

Science is a way of explaining how things work and a means for understanding the world around us. Thus, Science education can provide the necessary experiences which will enhance children's perspectives of science. According to Turgut (2008), science educators' search for ways to help students learn science more effectively is an on-going process. Science education is seen as the idea of more authentic contexts for presenting scientific knowledge (Roth, 1995), encouraging students to take part in discussions, argumentation and social negotiation (Newton, Driver and Osborne, 1999) as well as developing their problem-solving skills (Slack and Stewart,

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1990). Therefore, Science teachers should help children develop their knowledge of Science as well as scientific knowledge (Bentley, Ebert and Ebert, 2000). Yager and McCormack (1989) stated that the learning of Science involves the five domains of Science education, which are:

a.  Information: knowing and understanding
b.  Process: exploring and discovery
c.  Creativity: imagining and creating
d.  Attitudes: feeling and valuing
e.  Connection: using and applying

The learning of science in schools should be in line with the challenges and the development in Science education. The eight components of Science in School (SIS) by the SIS project team in 2003 described the characteristics of teaching and learning which effectively support student learning and engagement in Science. The eight SIS components are listed below:

a.  Students are encouraged to engage actively with ideas and evidence;
b.  Students are challenged to develop meaningful understandings;
c.  Science is linked with students' lives and interests;
d.  Students' individual learning needs and preferences are catered for;
e.  Assessment is embedded within the science learning strategy;
f.  The nature of Science is represented in its different aspects;
g.  The classroom in linked with the broader community;
h.  Learning technologies are exploited for their learning potentialities.

(SIS Project Team, 2003)

It is important to note that the Western Australia Curriculum Framework has nine outcomes for the learning of Science. Teachers are given the choice to adjust the framework accordingly so as to suit their classroom environment. Nonetheless, for the framework to be successfully implemented, the elementary Science teachers must fully understand the philosophy behind the framework and must be

able to transform their perceptions of teaching and learning environments into their planning of students' learning. The teaching strategies adopted should therefore develop their students' inquiry skills, the ability to make decision, have authentic contents, and pay attention to the values and attitudes of the students who will be the scientifically literate future citizens (Turgut, 2008).

In Australia, various approaches are used in learning Science in the classrooms. An example of this is the programme, 'Primary Investigations', which is a large Australian primary school initiative (Australian Academy of Science, 1994) using the '5Es' approach. The 5E model is a simple model which encompasses several principles and is used in the primary science curriculum, as follows (Goodrum, 2004, p. 62):

a.  Engage: students' interests are captured through a stimulating activity or question;
b.  Explore: students explore problems or phenomena through hands-on activities.
c.  Explain: explanations and scientific terms are provided to students to help them develop their ideas.
d.  Elaborate: students apply to new situations and discussions to clarify their understanding.
e.  Evaluate: students evaluate what they have learnt.

It is believed that children learn by constantly constructing new knowledge. What is needed, however, is an effective means of instruction that facilitates the construction of concepts identified in the curriculum. (Hubber and Tytler, 2004) discussed the different phases which are common to all conceptual change approaches. These phases are as follows:

a.  Preparation and planning: involves the gathering of materials and planning of activities;
b.  Exploration and clarification: focus is provided and activities are introduced to probe students' conceptions;
c.  Challenge: students' intuitive views are challenged through engagement with activities which are designed by the teachers;

d.  Investigation and exploration: students carry out investigations to explore their questions and seek for evidence;
e.  Application and extension: discussion and debates to clarify the scientific view and to apply it to a range of situations;
f.  Reflection and revisiting: teacher encourages students to reflect on their learning processes and share their findings and ideas.

(Hubber and Tytler, 2004, p. 39-40)

Thomas (2000) stated that the idea of assigning projects to students is not a new one and there is a longstanding tradition in schools for "doing projects", incorporating hands-on activities, developing interdisciplinary themes, conducting field trips and implementing laboratory investigations. Grey (2004) described projects as ideal settings for developing inquiry skills which enable us to better understand our assumptions and the consequences of our actions. A challenging driving question, an investigation process, resources for search, student autonomy, student-centred design, teachers' guidance, collaborative work, and presentation of products are some guiding features of the projects.

Discovery learning is an approach to the teaching of Science that emphasizes students' personal experiences with information and materials as a foundation for conceptual development. Children are provided with materials to manipulate. The Science process skills are important parts of systematic investigations. The emphasis of such techniques is on having children to be actively involved in the manipulation of materials and the consideration of their own ideas and those of others. Hence, the underlying principle is very much similar with the five domains of Science learning approach suggested by Yager and McCormack (1989). Students must first understand the information that is related to their personal experiences, and only then they are able to manipulate the material by exploring and discovering. Students' active participations in the manipulation of materials allow them to be creative, which in turn enhance their ability to formulate connections and relationships between the material and their personal experiences. This learning environment will be more meaningful and effective to the students. It is important to support the learning of Science of all children by providing a variety of opportunities for them to learn. In addition, teachers should provide diverse learning opportunities in the situations which they set up in the classrooms. Students, through their interactions with material, teachers and peers, will construct their own purposes for the lessons, develop their own intentions in relation to the activities, and formulate their own conclusions. Even today, children are often told that the Scientific method consists of a series of steps beginning with observations or questions, proceeding to the formation of hypotheses and then tests, and ending in conclusions (Bentley *et al.*, 2000).

Furthermore, teachers need to remember that science is not a collection of answers to a question, but the search for information that answers the question. Thus, Science provides an opportunity to help children make observations, explore, discover, and build knowledge bases from which they can construct their own explanations. Teachers have the opportunity to help children transform those questions into investigations. Therefore, students need skills to carry out investigations and experiments. The basic Science process skills represent the tools which enable an inquisitive mind to discover answers. This will result in the existence of an active classroom where students are engaged in activities which help to develop valuable skills while learning Science. This concept is very important in the 5E model implemented in the Australian Science classrooms, as students are encouraged to explore problems through hand-on activities where they provide explanations and develop their ideas. In other words, students need to acquire investigative skills so as to prepare them for the process of meaning making in their Science classrooms.

How teachers perceive learning is useful in understanding classroom teaching and assessment practices. It is obvious that assessments serve many purposes other than assigning grades. As classroom teachers,

assessments play a role in two important areas, namely designing effective instructions and measuring students' performance. There are three general approaches to assessments in terms of the tasks required of students. The first is when students demonstrate familiarity with a Science concept through identification of information. For example, a test that makes the use of matching or multiple-choice questions. The second is when students demonstrate awareness of information related to a particular concept by supplying discrete or specific pieces of information, such as in tests which use a fill-in-the-blank format. The third is performance-based assessment where students demonstrate understanding through the application of information and newly acquired skills.

Performance-based assessment requires students to be actively involved in solving problems rather than recalling information or guessing at correct choices. There are numerous techniques which can be employed, such as checklists, write-ups science journal, inquiry reports, portfolios, and scoring rubrics. The purpose of using a checklist is to make sure that students follow the instructions correctly. Using a checklist is an efficient way for teachers to document students' performance during classroom activities. Teachers can add comments about the quality of skills demonstrated and these comments are also a form of recorded evidence. Meanwhile, written journal entries provide physical evidence of students' progress and cognitive growth. Science writes-up are often used to collect data during investigations. This form of assessment can be used to assess students' abilities in collecting and organizing data. Inquiry (research) reports are written communications which are prepared by children to document investigations which are essentially designed and conducted by them. Each inquiry (research) project begins with a question formulated by the students. In this context, the students identify a topic of personal interest, and this is followed by a variety of possible ways to collect information.

Portfolios are representative collections of work samples over a given period of time, and they allow for a reflection of the learning that has taken place. This assessment allows continuous monitoring of a student's achievement by showing diversity of tasks and personal growth. In fact, portfolios are the most familiar form of authentic assessment. They combine various forms of alternative assessments and contain multiple and diverse examples of student-generated products. It is important to note that assessment is an important tool not only for teachers to assess the progress and their students' understanding of the contents taught, it is also an important tool for students to improve on the quality of their learning experiences. In addition, assessment is being emphasized by most of the Science teaching models highlighted in this article, which include the models suggested by Hubber and Tytler (2004), the SIS project and the 5E approach. The idea that students reflect upon their own learning is emphasized so that they can learn to assess their own learning.

Scoring rubrics provide a means for teachers to know what they expect and for children to understand what is expected of them. The rubric describes anticipated levels or standards of accomplishment. Teachers compare each student's work sample to the rubric and determine a numerical score. Kuhn (1997) discusses the importance of rubrics by explaining it in the following way:

> The point is that evaluation that involves more than a 'right answer' approach requires guidelines to govern scoring. If the criteria or focus of the evaluation are not specifically defined and made known to students, the teachers' subjectivity may be questioned.

## RESEARCH QUESTIONS

It is important to investigate the teaching approaches and methods employed by teachers, especially those who are regarded as effective teachers, in ensuring effective learning of

Science among their students. The aim of this study was two-fold. The first was to investigate the primary science teachers' perspectives on learning Science effectively, and the second was to compare the perspectives of the primary science teachers from two countries in terms of their similarities or differences. In order to achieve the aims of the study, a qualitative approach was selected as the focus was on the teachers' perspectives and views. In more specific, this study was carried out with the aim to answer these following questions:

1. What are the perspectives of the Malaysian and Western Australian teachers about learning Science?
2. What are the perspectives of the Malaysian and Western Australian teachers about effective methods in learning Science?
3. What are the perspectives of the Malaysian and Western Australian teachers about the important of teaching aids in learning Science?
4. What are the perspectives of the Malaysian and Western Australian teachers about ways to implement Science process skills in learning science?
5. How do Malaysian and Western Australian teachers assess the progress of their students in learning Science?

## RESEARCH METHODOLOGY

### Research Location and Participants

The research was conducted in two countries, namely Malaysia and Australia. The first stage of the research was carried out in Malaysia under a fundamental research grant. Meanwhile, the second stage involved conducting the study in a developed country such as Australia, and for this purpose, Western Australia was the selected location.

The participants of the study were selected through the purposive sampling because there was a necessity to choose the sample so as to allow the collection of the most relevant information about the phenomenon being studied (Merriam, 2009). The participants were 24 primary Science teachers from several schools. Twelve participants from each country made up the 24 participants of this study. The selection of the participants was also based on their willingness to participate in the study.

### Research Design

The design of this study is qualitative in nature. Three data collection techniques employed in the current study were open-ended reflection questions, non-participant observation, and document collection. The primary source of data came from the teachers' responses to the set of open-ended reflection questions which were developed by the researcher. The advantage of the open-ended questions was to allow the teachers to express in their own words and as freely as possible their perspectives of learning Science, Science process skills, and projects in Science lessons, as well as in assessing students' progress in Science lessons (Fowler, 2009). The second data source was from non-participant observation by the researchers of project presentations in the classrooms, whereas the third data source was documents such as the samples of Science activity work sheets which the teachers distributed to their students during the term. The teachers' perspectives have been reported to be crucial in promoting their willingness "to engage with all issues involved in teaching-and-learning as well as how to interact and communicate inter-culturally" (Scarino and Papademetre, 2002).

Meanwhile, the data from the open-ended reflection questions were reviewed a number of times and analysed qualitatively through a process of open coding (Strauss and Corbin, 1998) in order to identify important concepts and categories. The open-coding process involved labelling and categorizing of the data and the products generated were concepts and categories. The data obtained were divided into the following identified categories, namely the process of teaching and learning science, teaching aids, science process skills, and students' progress. Data obtained from the open-ended reflection questions were analyzed

to examine the similarities and differences in perspectives among respondents from both countries. Turgut (2008) describes categories as concepts which are basic constructs grouped under higher, more abstract levels. From the data analysis process, some assertions were generated as discussed in the section for research findings.

### Research Findings

This section deals with the discussion of three sub-themes, which include the aspects of Science learning, the use of Science process skills in the learning of Science, and the assessment of Science learning. The discussion compares the perspectives of the respondents from Western Australia and Malaysia. This study adopted a qualitative approach as the aim was to investigate the similarities and differences of the respondents' perspectives of Science. Based on this comparison, suitable and effective teaching approaches could therefore be proposed in the teaching of Science. The findings from the data are presented based on the above mentioned sub-themes.

### Learning of Science in Primary School

For the first sub-theme, the respondents were asked to provide their views on the meaning of Science learning. A variety of views were obtained on the definition of Science learning. The first perspective from a respondent in Western Australia was that Science learning involved discovery or hands-on activities. The students were required to explore and investigate so as to enhance their learning and knowledge. The respondents stated that learning Science is:

> "for them to discover through learning"

> "learning how things work"

> "learning that involves exploring, investigating, experiments and hands-on activities"

Meanwhile, a respondent from Malaysia had the following perspective of Science learning:

> "pupils get involved in the concept of Science through hands on and minds on learning"

Another perspective of Science learning is that learning involves interactions and group activities. Through group activities, students are able to share information and views in the process of completing the assignments/projects. Hence, one respondent from Western Australia states that Science learning involves:

> "interacting with others to discover something"

> "background info, experiments and group work"

> "working collaboratively"

### Method of Teaching and Learning in Science

Effective Science teachers employ a variety of teaching methods, and choose the best for each lesson. From the data analysis, a Western Australia respondent suggested a variety of teaching strategies which are suitable for the teaching of Science. Some examples of these strategies are:
a. hands-on
b. investigations/ exploration/ discovery/ inquiry
c. group work
d. experiments
e. demonstration
f. explanation
g. discussion
h. computer interactive activities

During the classroom observations, the researcher noted that the teacher carried out various activities which required active students' participation in pairs, small groups, or as individuals. An example of a class activity is

students are instructed to do individual research work and later present their work in their class. Appendix A provides a sample of the assignments/projects which are required to be done by students for the year. In total, there are 8 research assignments which the students have to complete individually.

Apart from that, there are also activities carried out in pairs. An example is this activity where students are required to investigate the factors causing a teabag to float in the air when heated. Students are supplied with materials such as tea bags, candles and matches. The following picture illustrates how this activity was carried out in the classroom.

Students were also required to involve themselves in group activities. One such group activity required the students to investigate factors influencing a parachute's flight. This group activity was carried out at a nearby park. The students were required to test their parachutes by releasing them from a tower at different heights. An egg which was placed in a basket was also attached to the parachute and on releasing the parachute, the egg had to land on the ground unbroken. Appendix B illustrates the instructions for the parachute assignment and Appendix C provides a sample of an activity worksheet used in the classroom.

A Malaysian respondent indicated various suitable techniques for Science teaching, which are:
a. exploration
b. learning through music
c. experimentation
d. discovery inquiry

Most of the respondents stated that the best technique for the teaching of Science is through the use of experiments. There were also those who felt that experiments could be carried out together with exploration and simulation. Another respondent was of the opinion that the use of music could make the teaching of Science more attractive. In more specific, the respondent stated that:

"learning through music. Use song and create the lyrics based on the topic we want to teach"

It can be seen here that the Malaysian respondents were less aware of the approach for the teaching of Science compared to the respondents from Western Australia.

*Teaching Aids*

The observations also highlighted the use of multiple forms of teaching aids in the teaching of Science in classrooms. One of the respondents from Western Australia explained that teaching aids are important aspects in the planning of Science teaching. According to the respondent, teaching aids are important because:

"they provide hands-on and shared experience to students"

"students need to have access use hands-on learning and examples"

"vital in conducting experiments"

"they manage to hold students' attention towards the lesson and to some extent, the knowledge retention is longer and better"

"keep children interested"

"very important for students to be motivated"

The respondent from Malaysia is of the opinion that the use of teaching aids helps to create a more attractive teaching and learning environment for Science. As a result, students will show more interest to learn Science. According to the respondent:

"the use of LCD and computer helps in the explanation of concepts"

"assists teachers in the explanation in teaching and learning"

"it will make my lesson more interesting. The pupils enjoy and like the lesson and make able to use their 5 senses in the class"

"students will show more interest in Science if suitable teaching aids are used"

The respondents from both countries generally share common perspectives on the required teaching aids.

## SCIENCE PROCESS SKILLS

There are respondents who associate Science learning with the use of Science process skills. The respondents explain that the learning of Science should involve processes such as making predictions, as well as establishing hypothesis and experimenting. A respondent from Western Australia stated that Science learning involves;

"predictions, hypothesis and working in groups"

Another Western Australian respondent mentioned that science learning involved;

"to be able to think creatively, abstractly and logically. Systematically make hypothesis and to gain knowledge"

A Malaysian respondent explained that Science learning is associated with the understanding of life and the environment. For example, responses from the Malaysian respondent about Science learning are given below;

"understand the students' surroundings"

"learn about life, matter, physical and nature"

"study about their syllabus and all the things surround them"

There was also a respondent from Malaysia who mentioned that Science teaching is not only about providing students with scientific knowledge but also the application of knowledge in their everyday life. According to this particular respondent;

"students get to know and apply knowledge of science in life"

In both countries, students are required to understand the surroundings in order to acquire knowledge. Hence, for the implementation of Science process skills in students learning, there are three clear perspectives from the respondents. The first perspective of the respondents from Western Australia is that the implementation of science process skills is minimal:

"minimal because of time constraints but I wish it was more"

Some respondents stated that the use of Science process skills is essential in the students' learning of Science. The respondents from Western Australia stated that the implementation of Science process skills is;

"essential because young students need to be taught step-by-step process in order for them to understand what is being explored"

Another response from the Western Australian Science teachers is that the use of Science process skills is vital because;

"they will be used in tertiary level"

Others felt that Science process skills are very important, as stated by one respondent from Western Australia;

"very important but literacy and Math skills still come first"

"highly important to understand from one activity to the next"

"children learn more by developing these skills through scientific experimentation"

Some of their Malaysian counterparts share the same views. Their responses are as follows:

"very important because without the implementation of Science process skills, learning science cannot happen"

"Science process skills is the most important for students to understand skills"

## STUDENTS' PROGRESS

The respondents were also required to list ways they used to assess their students' progress in learning Science, with reference to their definitions of Science learning and use of Science process skills. Some of the techniques mentioned by a Western Australian teacher are observations or checklist, scientific write-ups, rubrics, quizzes, and tests. Referring to observations, a respondent from Western Australia stated that:

"observation the process, the way children plan and implement and the final product"

"observation throughout lessons"

"observation of students' interest"

For assessment through scientific write-ups, teachers must prepare guide lines on how to assess the scientific tasks given to their students. Students are informed of the aspects which are emphasized in their write-ups through these guidelines.

The Malaysian Science teachers mentioned various methods of assessment they used to assess students' progress. Some of them stated:

"lots of exercises based on their individual ability"

"give many relevant exercises"

"assess through their worksheets and experiments"

Meanwhile, some respondents from Malaysia explained that students could be assessed by what the students could do. They further mentioned that:

"students can give suitable examples and explain the concept clearly"

"students give the correct responses to Science questions"

Rubrics or checklist are prepared by the respondents based on the topics or themes of the assignments. The marking or grading of projects is done based on the prepared rubric, just like the rubric given in Appendix D.

## SUMMARY

This study investigated the perspectives and experiences of primary Science teachers of Western Australia and Malaysia. There were 24 teachers involved in this study, with 12 teachers from Western Australia and 12 others from Malaysia. The study used open-ended reflection questions to probe what came to mind first for the teachers when they thought of Science teacher, teaching Science, learning Science, Science process skills, and when assessing the learning process. The purpose of this investigation was to identify the perspectives of these teachers about learning practices in Science at the primary level.

Four aspects of Science learning were examined in this study. These four aspects were teaching approaches utilized by the teachers in teaching Science, teaching aids used, Science process skills involved, and evaluation methods to monitor students' progress. As for the teaching and learning of Science, all the respondents from Western Australia and Malaysia adopted the teaching strategies which

emphasized on students' active involvements in their Science learning process. Some examples of the activities were experiments and explorations. However, the respondents from Western Australia conducted more hands-on activities, small groups or paired discussions.

As for the use of teaching aids, the respondents from both the countries stated that teaching aids are important tools in making Science teaching-learning processes more interesting. Hence, the use of teaching aids plays a crucial role in the planning of an effective instructional plan. One of the respondents from Western Australia stated that the use of teaching aids in Science classroom could motivate students to participate actively in activities conducted, such as hands-on activities. Other than that, students are able to share their experiences with others and are more motivated to learn the subject. Meanwhile, a respondent from Malaysia explained that the use of multimedia teaching aids could help in explaining scientific concepts. The respondents from Malaysia also stated that the use of teaching aids in the Science lessons could encourage students to utilize their five senses while learning.

The third aspect which had been examined was the Science process skills. Based on the findings, three similar perspectives were identified from the respondents of both countries. The perspectives included; (1) the implementation of Science process skills among primary students is still minimal, (2) Science process skills are essential in the learning of Science, and (3) the use of Science process skills is necessary for students to further their studies to higher levels. In addition, the respondents from Western Australia also stated that the use of Science process skills could enhance critical and creative thinking among the students. Meanwhile, evaluation is an important aspect in determining students' progress. The respondents from both countries agreed that the preparation of rubrics or checklists based on topics is useful in assessing students' learning progress of science projects.

It has been argued that first-hand accounts of teachers' perceptions and experiences should influence the contents and methods in any teachers development programme (Berniz, 2007). The findings of thus study have indicated that there are numerous similarities and differences between the perspectives of the respondents from both countries. The perspectives which are underlined this study viewed positive reform as being essentially generated through contextual understanding, researching first-hand accounts and individual perspective valuing changes might happen but innovation was not only dependent on individuals but also on collective will. These perspectives are apparently essential to this study's understanding of the teachers' perspectives and views.

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**APPENDIX A**

# Year 7
# Research topics
# 2008

1. What is metamorphosis? Choose a living thing that goes through the four stages of metamorphosis. Write a detailed report of each stage. Include pictures and diagrams of its life, habitat, what it eats at each stage of it's full life cycle.

2. What happens to the food we eat? What does the body do with it? Research the fascinating digestive system. Include pictures, diagrams and a brief description of all 11 parts that are involved with digestion.

3. What are Natural Disasters? How do they occur? Choose a significant natural disaster that has occurred over the last 200 years, Research this and present your findings.

4. Design a time line that shows the development of flight over the past 400 years. Choose a particular invention or event and report on your findings in detail.

5. What is photosynthesis? Explain how it is important to the planet and mankind.

6. What are fossils? Explain how they are formed and the different types, indicate how they are important to man. Use a map to show where important fossils have been found around the world.

7. Research in detail the effects that smoking has on the body and its organs. Write about your findings. What is the government is doing to lesson the harm cigarettes are causing?

8. How is electricity generated? Research the many different way that man uses to generate energy. Report your findings using pictures and diagrams and detailed explanations.

*A sample of a set of topics in Science to be completed by students*

## APPENDIX B

# Parachutes

**Task 1**

**Aim.** To investigate how the area of a parachute canopy effects its landing time.

**Materials and Equipment.**

Plastic shopping bags
Cotton thread / string/ fishing line
Metal washers
Masking tape
Scissors
Stopwatches

**Information**

- Use plastic shopping bags to build a parachute, make your design simple as you will have to build this several times. ( This is your control parachute)
- Use metal washes as your skydiver.
- Use cotton thread/ string or fishing line to attach your sky diver to the parachute.
- Decide what size parachute you will build as your control shape.( don't make it too big )
- Decide how and from what height and where you will drop your parachute each time you test it.
- Time how long it takes your parachute to reach the ground.
- Repeat this test four times, record your results and work out the average.
- Change the size of your parachute only.( make sure it is the same shape as your control chute)
- Repeat this test with four different sized chutes and record your results.

**Write up.**

Predict what you think will happen and why you think this will happen.( do this before you start)

- Draw a table of your results showing all your results.
- Draw and label you diagram of your control parachute.
- Construct a graph to show your results showing size of the chute and landing time.
- Write a paragraph on how you made this a fair test.
- Write a paragraph on the things that could affect this investigation.

**Conclusion**

Explain what happened during your investigation and why you think it happened.
How could you improve this investigation.

**Task 2**

To design and build a parachute that will safely deliver to the ground a raw egg in a capsule when dropped from the top of the DNA tower in Kings park.

**Requirements**

- You may use any materials and design for this parachute.
- You will need to bring all your materials from home.
- You will have a 2 hour session in class to build and test your design.
- use the information you have gained from task 1 to help..

*A sample of a guided investigation worksheet for Science*

## APPENDIX C

**Yr 4 Term 2**                    **ICT Project**          Name: _____

### What is a Habitat?

A habitat is the natural place where something lives. A shark's habitat is the ocean. A monkey's habitat is the rainforest. Think of a **habitat** and an animal that lives there. What special things does the animal have or do that helps it to live in that habitat?



### Challenge

You are going to study an animal from a habitat of your choice. You will then use PowerPoint to write a story about the animal that includes both fact and fiction. Your final PowerPoint presentation will consist of story slides linked by hyperlinks to fact slides. To complete the activity, you will:

- Research an animal and its habitat (Weeks 1-2)
- Write a story and facts about the animal (Weeks 3 – 4)
- Use PowerPoint to design story slides and fact slides (Weeks 5 – 7)
- Insert action buttons and hyperlinks to connect the story slides to the fact slides (Weeks 5 – 7)

- The animal I have chosen to study is

_____.

- I will be working with

_____.

*A sample of a Science activity worksheet*

## APPENDIX D

## Science Write Up Parachute Experiment.

| HEADINGS | → | ∨ | ∨ ∨ |
|---|---|---|---|
| **Prediction** | • Simple prediction | • Simple prediction and reason | • Detailed prediction explanation and reasons |
| **Diagrams** | • Diagrams drawn in pencil<br>• Simple labels<br>• Labels have arrows | • Diagrams have titles<br>• Diagrams drawn neatly in pencil<br>• Colour is added to diagrams<br>• Labels are in black fine liner<br>• Labels are written horizontally<br>• Labels use uppercase letters<br>• Diagram has arrows linking to labels | • Diagrams have titles<br>• Diagrams drawn neatly in pencil<br>• Colour is added to diagrams<br>• Labels are in black fine liner<br>• Labels are written horizontally<br>• Labels use uppercase letters<br>• Diagram has arrows linking to labels<br>• Diagrams have borders<br>• Labels are very detailed with explanations. |
| **Paragraphs** | • Simple comments in paragraph form<br>• some observations noted | • Critical comments about all areas<br>• basic explanations and observations | • critical comments about all areas<br>• detailed explanations that show understanding<br>• Fair testing information<br>• Uses scientific language |
| **Results** | • Basic table with headings<br>• Graph showing results<br>• Give size of parachute | • Table and graph with headings<br>• Lines ruled<br>• Title<br>• Measurements shown<br>• 4 trails included | • Table and graph with headings<br>• Correct type of graph<br>• Lines ruled<br>• Title<br>• Colour<br>• All trials included |
| **Conclusion** | • Simple conclusion and improvements stated | • Conclusion and improvements stated and explained | • Conclusion and improvements explained in detail<br>• Conclusion shows a clear understanding of results<br>• Scientific language used in the explanation |
| | • | • | • |
| | | | |
| | | | |

## GENERAL INFORMATION
• All headings and subheadings are underlined.
• A line is missed between each major heading.
• Presented neatly on lined A4 paper or typed.
• Diagrams on blank A4 paper.
• Stapled top left corner
• Name and date

*A sample of a rubric for marking*

# Contrasting Audio-taped Feedback with Minimal Marking Feedback in EFL Writing

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## ABSTRACT

In this study, the researchers contrasted audio-taped feedback (ATF) with minimal marking (MM) among 82 EFL female pre-intermediate learners at Kish Air English Language Institute in Tehran-Iran. These 82 students were selected from among 126 pre-intermediate students according to their scores in a pre-intermediate version of Nelson English Language Test. The subjects were randomly divided into two groups of ATF and MM, each with 41 eligible subjects. In each group, they were assigned to write expository paragraphs of about 120 words during 8 sessions, one session for the pre-test, and another one for the post-test; the remaining sessions were allocated for the treatment. One of the groups received ATF and the other MM. A pre-test and a post-test were used before and after the treatment so as to contrast writing performances of the post- and pre-treatments. The results showed that the ATF subjects performed better than the MM in the post-test, while the MM subjects in post-test did not show any progress.

**Keywords:** Error feedback, audio-taped feedback, holistic method, minimal marking

## INTRODUCTION

There has been a steady argument among scholars and teachers all through the history of teaching writing to second language (L2) learners with regard to the role of error feedback in helping students learn how to write (Fathman and Whalley, 1990; Ferris, 1999; Lalande, 1982; Semke, 1984; Truscott, 1996). Although numerous studies have been conducted in this area, a lot of uncertainties remain, particularly regarding the type of error correction that helps learners to progress in the writing process. As a result, many English as a Second/ Foreign Language (ESL/EFL) writing teachers are often confused about how to help their students.

Meanwhile, many research projects have shown that corrective feedback in the classroom situation is a real need (Bitchener, Young and Cameron, 2005). Nonetheless, limited research has been undertaken to discover if error correction techniques are more effective with regard to the different cognitive styles of the language learners. Grabe and Kaplan (1996) argue that:

> *"students can be positively motivated to explore many areas of knowledge and personal creativity through supportive and constructive responses to their writing" (p. 377)*

It has been stressed that proper feedback can be very helpful in producing "a sense of reader awareness" in the learners as well as "a sense of audience" (Muncie, 2000, p. 52; Boughey, 1997, p. 131) which students seem to lack. In fact, by providing learners with appropriate and fostering feedback, teachers can play a crucial function in facilitating learners' progress.

Lalande (1982) concluded that making students aware of their errors and using guided learning as well as problem solving techniques did result in a reduced number of errors in students' writing. This system eliminates many of the unproductive aspects of typical approaches to correcting errors in compositions. Students need to realize that the purpose of marking and correcting compositions is to eliminate those errors when they write in the future.

Audio-taped feedback is defined as the teacher's tape-recorded comments and suggested changes to written drafts. Boswood and Dwyer (1995) propose that "audio-taped feedback employs technology to humanize the marking process, which can often be machinelike when technology is not used" (p. 20). Based on this suggestion, alternative methods of feedback on writing, such as audio-taped feedback, are worth examining to see the effects of this emerging feedback technique.

## THE CONCEPTS OF AUDIO-TAPED FEEDBACK AND MINIMAL MARKING

Hyland (1990) explains two efficient styles of giving feedback, namely minimal marking and taped commentary, which he advocates as two interactive feedback styles. He believes these is because "feedback must be interactive to be genuinely effective" (Hyland, 1990, p. 285).

MM manipulates a set of marking codes, some symbols and alphabet letters that are representative of the error types the students had in their pieces of writing. It is important to mention here that these symbols are quite conventional and any teacher can develop his or her version of the correction codes (Gray,

| Morphological | |
|---|---|
| Verbs<br>    Verb Tense<br>    Verb Form<br>    Subject-verb agreement<br>Nouns<br>    Articles/determiners<br>    Noun endings (plural/possessive) | vt<br>vf<br>sv<br><br>art/det<br>pl/pos |
| Lexical Errors | |
|     Word choice<br>    Word form<br>    Informal usage<br>    Idiom error<br>    Pronoun error | wc<br>wf<br>inf<br>id<br>pr |
| Syntatic Errors | |
|     Sentence structure<br>    Run-ons<br>    Fragment | ss<br>ro<br>frag |
| Mechanical | |
| Punctuation<br>    Spelling | punc<br>sp |

(*Source*: Ferris *et al*., 2000; Research corpus by Ferris, 2002, p. 53)

2000). The symbols and alphabet letters are chosen mostly in a way that can best symbolize the error types. The error types and responding symbols can be represented as follows:

The above symbols or any other correcting codes as such can be written in the margin of the students' writing or above the error. According to Zeny (2003), the benefit of using correction codes to carry out self-correction is that students tend to pay closer attention to their work, considering different possibilities for choice of lexis, for instance. In order to advocate the inspiring and productive achievement of a newly-developed method, i.e. audiotape feedback (ATF) on writing, Boswood and Dwyer (1996) state that, "the medium [and the method] that teachers choose for giving students feedback have far-reaching effects on the impact of their comments" (p. 20-21). Kroll (as cited in Celce-Marcia, 1991) points out that:

*"Some teachers provide all their feedback orally by asking students to submit a cassette tape with their draft. This method probably works best when the teacher silently reads a student's paper and makes comments directly into the tape recorder while making some accompanying numbers or symbols on the student's text. For ESL students, this method has the advantage of providing more extensive feedback than that likely to be made in writing, as well as allowing the student to replay the tape as many times as necessary to understand and benefit from the teacher's comments. Once the teacher has learned to use this technique, it probably takes less time to complete taped remarks about a paper than it would to put them in writing." (p. 259)*

As mentioned by Hyland (1990), the technique of recorded comments is helpful when learners' reactions to feedback are preferred. The significance of the ATF has been stressed by many researchers (e.g. Hays, 1978; Clark, 1981;

McAlpine, 1989; Patrie, 1989; Hyland, 1990; Boswood and Dwyer, 1996) who emphasize the efficacy and constructiveness of teachers' taped commentaries. (Note that in the present study, the focus was on comparing only two methods, namely the MM and ATF).

## RSEARCH QUESTIONS AND HYPOTHESES

This study intended to answer the following research questions:

Q1: Does the writing act of the subjects receiving ATF (audio taped feedback) on their writing assignments differ on the pre-test and post-test?

Q2: Does the writing act of the subjects receiving MM (Minimal Marking) on their writing assignments differ on the pre-test and post-test?

Q3: Is there any significant difference between the writing act of the subjects receiving ATF and that of those receiving MM on their writing assignments?

In order to examine the three aforementioned research questions empirically, the following null hypotheses were acknowledged:

H0 (1): There is no significant difference between the pre-test and post-test of the subjects who received ATF on their writing assignments.

H0 (2): There is no significant difference between the pre-test and post-test of the subjects who received MM on their writing assignments.

H0 (3): There is no significant difference between the post-test of the subjects who received ATF and of those who receive MM on their writing assignments.

## METHODS AND MATERIALS

The design of this research involved the pretest-posttest non-equivalent groups design, i.e. one of the quasi-experimental designs. After the 82 subjects were assigned into two groups (ATF

TABLE 1
Correlation of the two raters' scores on the pre-test and post-test

|        | Pre-test | Post-test |
|        | Holistic | Holistic  |
| Raters |          |           |
| R1     | .76      | .82       |
| R2     | .82      | .82       |

TABLE 2
The MM and ATF groups' homogeneity test means and standard deviation

| Groups | Number of students | Mean | Standard deviation |
| --- | --- | --- | --- |
| Group A (MM) | 41 | 48.35 | 5.41 |
| Group B (AFT) | 41 | 48.90 | 5.12 |

and MM), the one-way ANOVA was carried out to ensure the homogeneity of the two groups in relation to their general English proficiency. The general descriptive statistics related to the distribution of the subjects in the two groups according to their performance in the Nelson English Language Test are presented in Table 2 .

The subjects of this research were randomly selected among pre-intermediate EFL learners studying at Kish air English Language Institute in Tehran, Iran. The type of sampling employed in this research was cluster sampling. The consequential sample consisted of classes with pre-intermediate EFL female students. Out of 126 language learners who took the test, 82 learners met the requirement and were selected as the sample of the study.

## RESEARCH INSTRUMENTS

This study used three instruments.
a. a pre-intermediate version of Nelson Engwlish Language Test which was administered to select a homogeneous group out of the available population;
b. two one-paragraph expository compositions of about 120 words each, one serving as the pre-test and the other as the post-test; and

c. a tape recorder for commenting directly students' writings and providing the subjects with feedback to give them the opportunity to revise the parts in which communication breakdown may occur.

In general, eight topics were assigned to the selected subjects. Two topics were exploited as the pre-test and the post-test topics with a time limit of 20 minutes, and the remaining six were the writing topics on which the subjects composed their paragraphs and received the appropriate feedback throughout the treatment stage.

The holistic approach to marking was applied for the pre-test and post-test in this study. Consequently, the assessment of the writings was completed by two raters. Meanwhile, the marking processes were carried out separately. The reliability for the marking of the writings through the procedure (i.e. holistic method) was computed using average correlations between the two raters in the pre-test and the post-test (*see* Table 1).

TABLE 3
F-test result - a comparison of the ATF and MM groups' means

| F observed | df | F critical |
|---|---|---|
| 1.10 | 1 & 80 | 4.00 |

TABLE 4
MANOVA - Pre-test, post-test by groups

| Source of variation | Sum of squares | DF | Mean squares | F observed | P | F critical |
|---|---|---|---|---|---|---|
| Test | 2236.80 | 1 | 2236.80 | 61.21 | .000 | 4.00 |
| Group × Tests | 1035.12 | 1 | 1035.12 | 28.19 | .000 | 4.00 |
| Within cells | 2983.70 | 80 | 36.30 | - | - | - |

## RESEARCH PROCEDURES

One hundered and twenty six female pre-intermediate students at Kish Air English Language Institute were chosen from the pre-intermediate classes.  Based on the students' scores in the Nelson English Language Test, 82 students were selected out of the total number of 126 students on the basis of the normal distribution of their scores.  To be more accurate, the students whose scores were between ±1.5 standard deviation were selected as the homogeneous subjects in the first phase and the other students whose scores did not fall within this range were removed.

In Table 3, the F-observed value was 1.10, which at 1 and 80 degrees of freedom was lower than the critical value of F, i.e., 4.00, at the .05 level of significance.  The results of this statistical test proved that there was no statistically significant difference between the ATF and MM groups from the beginning in term of their language proficiency level.

The present study was conducted over 8 sessions in 4 weeks; one session for the pre-test, one for the post-test, and the remaining sessions were the treatment.  The treatment process was carried out within the 6 sessions.  Throughout the 6 sessions, the subjects in both groups wrote paragraphs on expository topics under no time limit.  The only difference between the treatment of the ATF and MM groups was, essentially, in the kind of  feedback they received on their writings.

The subjects in the ATF group received audio-taped feedback on their writings.  This process required every member of the group to submit a blank cassette tape, together with the individual writing.  After collecting the writings and the tapes, one of the researchers read the writings and gave comments directly into the tape recorder.  While giving comments, the teacher made sure that the subjects were provided with cues, such as verb tense and spelling, so as to enable them to fix the parts in which communication breakdown had occurred.  At the end of the term, i.e. when the subjects in both groups had already presented the modified versions of their writings on the previous topic, they took part in the post-test.  In fact, the subjects wrote their paragraphs under a situation identical to the pre-test.  After the post-test, the 82 writings were scored holistically by the same two raters who had marked the scripts separately.

## RESULTS AND DISCUSSION

A multivariate analysis of variance was utilized to display the possible differences between the ATF and MM groups on the pre-test and post-test scored holistically (refer to Table 4).

TABLE 5
Scheffe's test for the comparison between the pre-test and post-test by group

| No. | Comparisons | Mean | Observed difference | Critical difference | Significance |
|---|---|---|---|---|---|
| 1 | Post-ATF Vs Pre-ATF | 71.43, 59.15 | 12.28 | 6.88 | * |
| 2 | Post-ATF Vs Pre-MM | 71.43, 61.77 | 9.66 | 6.88 | * |
| 3 | Post-ATF Vs Post-MM | 71.43, 64.10 | 7.33 | 6.88 | * |
| 4 | Post-MM Vs Pre-ATF | 64.10, 59.15 | 4.97 | 6.88 | NO |
| 5 | Post-MM Vs Pre-MM | 64.10, 61.77 | 2.35 | 6.88 | NO |
| 6 | Pre-MM Vs Pre-ATF | 61.77, 59.15 | 2.66 | 6.88 | NO |

Table 4 shows the F-observed value for the effect of the tests, i.e. the pre-test and the post-test, which is 61.21. This particular value of F at 1 and 80 degrees of freedom is much greater than the critical value of F at .05 level of significance. It can be concluded that the difference between the pre-test and the post-test is significant. In other words, the subjects performed better during the post-test.

The F-observed value for the effect of the group by test factor, i.e. the interaction between the two variables, is 28.19, in which at 1 and 80 degrees of freedom is much greater than the critical value of F, i.e. 4.00 at .05 level of significance. As a result, a Scheffe's test was carried out to identify the accurate location of the differences. The results of the post-hoc Scheffe's test indicated that the subjects in the ATF group performed better than those in the MM group on the post-test (*see* Table 5).

Analysis of Null Hypothesis 1. With reference to the result of the first contrast, it is obvious that there is a significant difference between the pre-test and post-test of the subjects in the ATF group who have received audio-taped feedback on their writing assignments. Nonetheless, this judgment is not in agreement with the argument of Null Hypothesis 1. Therefore, this hypothesis is rejected. Considering the mean score of the ATF group on the pre-test and the post-test (i.e. 59.15,

and 71.43, respectively), one can see that the subjects have had much better products during the post-test. This evident significant change in the writing of the ATF group from the pre-test to the post-test can, therefore, be attributed to the type of feedback they received on their writings in the course of this study.

Analysis of Null Hypothesis 2. Considering the fifth comparison of the Scheffe's test, it can be stated that the null hypothesis 2 cannot be rejected. In other words, there is no significant difference between the pre-test and the post-test mean scores of the members in the MM group whose writing assignments were minimally marked. Hence, it can be mentioned that the MM technique does not lead to a higher writing achievement.

Analysis of Null Hypothesis 3. The third comparison of the Scheffe's test reveals the difference between the post-tests of the subjects in the ATF group (i.e. 71.43) and that of the subjects in the MM group (i.e. 64.10) which were proven to be significant. Consequently, it can be concluded that the ATF group, which had received audio-taped feedback outperformed the MM group whose writing assignments were minimally marked. This finding is against the suggestion of null hypothesis 3 which rejected the existence of any difference in the two groups on the post-test; therefore, this null hypothesis is also rejected.

The sixth comparison of the Scheffe's test (*see* Table 5) demonstrates that no significant difference exists between the two groups in their initial writing performances on the pre-test. However, a comparison made between the ATF group and the MM group on their post-test writing performance shows that there is a difference in the type of feedback the ATF group have received on their writings. In addition, it can be mentioned that the inadequacy of the MM group is probably the result of the inefficiency of the type of feedback they received.

The researchers conclude that revision should form a fundamental part of writing pedagogy. Receiving audio-taped feedback seems to have encouraged the subjects to write reader-based text (McAlpine, 1989). In early experimental article, providing feedback as a reader was suggested as beneficial to the second language writer. McAlpine (1989) describes her process of providing audio-taped feedback, or as she defines it, " a think-aloud protocol" to ESL writers. She claimed that the technique facilitates the negotiation of meaning between the writer and reader. In addition, building the ATF into the instruction of writing might be helpful since the subjects found ATF encouraging as well as a refreshing departure from traditional writing feedback methods, frequently explained throughout a symbol system.

## CONCLUSIONS

This study attempted to establish the comparison between audio-taped feedback and minimal marking feedback on the writings of Iranian EFL learners. The results of the study showed that the ATF could have significant effect on the students' ability to write, but the MM is not very efficient in this regard. Boughey (1997, p. 128) asserts that the correction carried out by the students is within a process approach. She believes that in order for this process of writing, revising, and rewriting to be developmental, "some forms of constructive feedback to the successive piece of writing are desirable, and often necessary." She goes on to say that in large mainstream classes, peer reviews may suggest itself as an obvious means of alleviation of the workload of the teacher. At any rate, the students must first be trained in taking this responsibility. Self-correction can serve as a preliminary practice for this responsibility. The explanation made throughout the study prepared the researchers to the fact that ATF could both direct a higher writing performance and could indirectly help and improve learners' listening skills as well.

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# Effect of Peer Review and Tutor Conferencing on English as a Second Language Learners' Writing Performance

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## ABSTRACT

After years of research on the effect of feedback provided by peers or teachers on learners' writing performance, there is still a need for further investigation in this area. In the present study, a group of learners were observed in the process of an English as a Second Language (ESL) writing course in order to investigate the effect of peer reviewing and tutor conferencing on learners' writing performance in their narratives. For this end, an interrupted time-series design (O-X-O-X-O) was employed. It involved an observation of the samples followed by the first treatment; that is, peer feedback followed by a second observation. Then, a second treatment, or tutor conferencing, preceded another observation. Next, two raters were trained to use the Wong Scale (Wong, 1989) to score the stories written by the samples. The scores were tested for their inter-rater reliability, and an acceptable Cronbach's Alpha was observed. The results of Repeated Measures ANOVA tests indicated even though peer-reviewing had no significant effect on the improvement of the scores in their narratives, the influence of tutor conferencing was observed to be significant.

**Keywords: ESL writing, peer review, tutor conference, feedback**

## INTRODUCTION

Proponents of the Process School consider writing a process in which the student writer plays a central and active role (Raimes, 1983). He is involved in self-discovery learning to manage the appropriate linguistic tools, while the teacher facilitates learning by interfering in the process as little as possible in a co-operative environment (Atkinson, 2003). She seeks to develop in her learners an awareness of their own writing processes through activities like drafting, revising and editing (Hyland, 2003). Writing courses in this approach are viewed as communities of learners in which a primary value is granted to collaborative learning (Faigley, 1985). Thus, learners are encouraged to provide and seek feedback among peers and participate in conferences as they proceed in their writing process.

Interest in peer review and teacher conferencing has triggered a wealth of research on their effect on learners' writing performance for several decades (Elbow, 1973; Murray, 1982; Bruffee, 1983; White and Arndt, 1991; Bitchener, 2008). However, after years of study in the area further research still seems necessary (Fujieda, 2009).

In the area of writing instruction, feedback can be defined as any kind of input from a reader who provides information to the writer

for revision (Keh, 1990). The purpose of giving feedback is to teach skills that assist students in improving their writing and becoming "cognizant of what is expected of them as writers and are able to produce it with minimal errors and maximum clarity" (Williams, 2003, p. 1). As for peer review, it is defined as "an activity in the revising stage of writing in which students receive feedback about their writing from other students, their peers" (Richard and Schmidt, 2002, p. 390). Finally, considering conferencing a negotiated instructional event in which both the learner and the teacher regard individual learner needs, Reid (1993) views teacher conferencing as "a face-to-face conversation between the teacher and the student, usually outside the boundaries of the classroom" (p. 220).

## A REVIEW OF THE RELATED LITERATURE

Ever since they were introduced, peer review and teacher conferencing and their effect on learners' writing performance have been topics of high interest among researchers in the area of writing instruction. This trend of research has resulted in inconsistent findings, some of which will be reviewed in this section.

Research findings have indicated that teacher feedback in the form of overt correction of surface errors does not play a significant role in improving learners' overall abilities in writing. In fact, when it includes inconsistent marking of errors or vague responses on content, it may even influence their writing ability negatively making them confused, passive or frustrated (Williams, 2003). Likewise, Mentor (2004) reports teacher interventions by writing keywords on the board, providing handouts, individual conferencing, evaluating and lecturing consume a good deal of time and energy with no significant improvement in learners' writing skill. Radecki and Swales (1988) also find teacher feedback of any kind not helpful. Such findings may be due to the mismatch between the teacher feedback and the learner's actual needs (Ping, Pin, Wee and Hwee Nah, 2003).

Other research findings, however, indicate that conferencing plays a positive role in the development of learners' writing skills. Reid (1993) believes conferencing can be of particular value for English as a Second Language (ESL) learners since they are even more inexperienced as compared to Native English Speakers (NESs). As she argues, learners in ESL situations find it challenging to learn to control and to actively participate in interactions, negotiate meaning and clarify the teacher's responses. In addition, it is argued that conferencing can enhance learners' writing ability as well as their linguistic accuracy, particularly when it is provided before the students submit their final drafts in a comfortable environment (Ferris, 1995; 2002; Hyland, 1998; Hansen and Liu, 2005). In a study conducted in Malaysia, Vengadasamy (2002) found that teachers' comments were useful when they were in the form of complete sentences. Meanwhile, teachers' short comments which were written in-between sentences did not seem to help learners improve their writing. In another study in Malaysia, Mumtaz Naidu (2007) observed that conferencing with a focus on both content and form was positively effective in learners' writing performance. Finally, in the same context, Shamshad Begham Othman and Faizah Mohamad (2009) reported that teacher's one-to-one oral feedback significantly improved their students' essays.

As for the effect of peer review, several researchers have observed learners at any level of language proficiency may benefit from discussion with peers (Freedman, 1992; Nelson and Murphy, 1993; Berg, 1999; Richard-Amato, 2003; Saito and Fujita, 2004; Abbott and Bogas, 2004; Nelson and Carson, 2006). In most writing assignments, the teacher is the sole individual who reads and responds to them. When an individual other than the teacher responds to their written work, learners develop a state of audience awareness and become more sensitive to the target readers (Rosenblatt, 1988; Reid, 1993). Flower *et al.* (1990) observe that through peer review, learners become

cognizant of the fact that a single text may result in different understandings in different readers. Additionally, according to Reid (1993), peer review makes learners more aware of the variety of social and personal contexts that affect writing. Dailge and Egolf (2004) agree on the positive effect of peer review on learners' writing in that it is an activity that spurs active group learning which in turn enhances understanding and lengthens retention. Peer feedback is considered central in learners' ESL writing development (Gass and Selinker, 2001; Duomont, 2002). Additionally, peer response activities can build a classroom community (Ferris, 2003a). Rollinson (2005) and Min (2006) regard peer review as a valuable aid for its cognitive, social and linguistic, affective as well as methodological benefits. Furthermore, some research findings have indicated that feedback provided by peers can be more useful than teacher feedback (Cumming, 1985; Zhang and Jacobs, 1989).

However, there are studies that have indicated insignificant effects of peer review on learners' writing performance (Manglesdorf, 1992; Mendonca and Johnson, 1994; Sengupta, 1998; Fury, 2004; Mooney, 2004). These researchers have found that learners only selectively approach the comments that are mentioned by their peers. They argue that learners in their studies often depended on their own or their teacher's knowledge rather than their peers'. In a study on Asian learners, Manglesdorf (1992) states that because these learners usually come from teacher-centred cultures, they look down on pair-work and peer comments. Research also shows that peer review plays an insignificant role on the learners' performance in their later drafts while the comments provided by the teacher prove to be more effective (Connor and Asenavange, 1994).

From the review of literature, it is evident that there is a lack of consistency in research findings regarding the effect of the aforementioned variables on the Malaysian learners. Hence, the objective of the study was to measure the effect of peer review and tutor conferencing on the learners' writing

performance. According to a scale developed by Wong (1989), the learners' writing skill was analyzed in terms of the following dimensions:

1. Overall effectiveness: This involves the quality of communication with the reader; in other words, whether the writer can communicate effectively with the reader.
2. Content: This relates to the way in which the writer treats the narrative. The quality of the content in a story can be determined by (a) purposeful choice of significant events and details, (b) mature development of the story, and (c) engaging links between the different parts of the story.
3. Language: The focus of this dimension is on the control of sentence structure and grammar, i.e. whether the learner could accurately and appropriately use the language.
4. Vocabulary: This aspect includes the learners' level of vocabulary development. It is identified by varied and accurate word choice.
5. Total: This shows the learners' overall writing performance. It is achieved by adding all the aforementioned aspects of writing skill.

The following hypotheses were tested in light of the reviewed literature:

$H_1$. Peer review has a significant effect on the learners' overall effectiveness scores.
$H_2$. Peer review has a significant effect on the learners' content scores.
$H_3$. Peer review has a significant effect on the learners' language scores.
$H_4$. Peer review has a significant effect on the learners' vocabulary scores.
$H_5$. Peer review has a significant effect on the learners' total writing performance scores.
$H_6$. Tutor conferencing has a significant effect on the learners' overall effectiveness scores.
$H_7$. Tutor conferencing has a significant effect on the learners' content scores.
$H_8$. Tutor conferencing has a significant effect on the learners' language scores.
$H_9$. Tutor conferencing has a significant effect on the learners' vocabulary scores.

$H_{10}$. Tutor conferencing has a significant effect on the learners' total writing performance scores.

As depicted in *Fig. 1*, peer feedback and tutor conferencing are the two independent variables. The dependent variables of the study included the scores that were given by the two raters to each dimension of the samples' writing performance, i.e. overall effectiveness, content, language, vocabulary, and total. The objective was to investigate if providing the learners with peer review, on the one hand, and tutor conferencing, on the other, affected learners' writing performance.

## MATERIALS AND METHODS

A quantitative method was employed and the interrupted time-series design (O-X-O-X-O) was used in the present study (Marczyk, DeMatteo and Festinger, 2005). In this design, after the participants were observed, they were given a treatment, which was followed by another observation. Another treatment was given before the final observation. A comparison between the first observation and the second observation would show the effect of the first treatment, while the second observation and the third observation could be compared to measure the

effect of the second treatment. The participants and the instrument used as well as the raters and the tutor involved in the study are described in this section.

## SAMPLE PARTICIPANTS

Teaching English as a Second Language (TESL) students (N= 30) from the Faculty of Educational Studies in Universiti Putra Malaysia (UPM), a research university in Selangor, Malaysia, served as the intact group participants of the study. These learners attended the course of 'Teaching of Writing Skills' as a part of their bachelor programme. As for the sample size of the study, according to Creswell (2002), a size of 30 would roughly be sufficient in educational research. Furthermore, a larger sample size would impose financial problems on the researchers since they needed two experienced raters to score three drafts written by each student.

## INSTRUMENT

The Qualitative Writing Scale, also known as the Wong Scale, is an analytic instrument composed of four dimensions which include overall effectiveness, content, language, and vocabulary (Wong, 1989). Wong tested her scale for its validity in the Malaysian context and also



Fig. 1: Independent and dependent variables

observed acceptable reliability scores produced by the instrument. It categorizes narratives into three levels and six band scores of *Good* (5-6), *Fair* (3-4), and *Weak* (1-2). The weight given to the dimension of *language* is twice as much as the other three dimensions; therefore, the maximum total score for a narrative is 30, which is calculated as follows:

$$6 \text{ (overall effectiveness)} + 6 \text{ (content)} + 6 \times 2 \text{ (language)} + 6 \text{ (vocabulary)}$$

As an example, if a rater assigns 4 for 'overall effectiveness', 3 for 'content', 5 for 'language', and 4 for 'vocabulary' of a story, the total score can be calculated, thus:

$$4 + 3 + (5 \times 2) + 4 = 21$$

A score of 21 upon 30 indicates a fair ability in the part of the student writer who wrote the story.

## RATERS

Two experienced raters helped in marking the stories written by the participants. These raters had been involved in correcting essay tests in university placement tests for over five years. During their training, they assigned mostly consistent scores for the participants' stories. The maximum amount of discrepancy that was observed between their scores was only 1 on Wong's 6-point scale. In this regard, Breland, Bridgeman and Fowles (1999, p. 8) argue that scores must be at least 2 points apart on a 6-point scale before they are considered discrepant. In addition, after they had scored the stories, the results of the inter-rater reliability test showed acceptable levels of consistency, as it will be discussed later in the results section. Therefore, adding a third rater to the team was not necessary.

## TUTOR

The tutor in this research was a post-graduate teaching assistant who functioned as a mediator and a facilitator. He had a 30-minute one-to-one discussion with the students on their papers.

## TREATMENT

At the beginning of the semester, the learners were instructed to write a story of 1500 words for young adult ESL learners. The students were free to choose the themes of their stories, but they were encouraged to go for themes that would engage their target audience. They spent the first four weeks of the semester on this first draft. Subsequently, they reviewed at least one of their peers' story and apart from having their own stories reviewed. They read their friends' stories and provided them with oral and written feedback. The feedback included comments on the content and the form of the stories. Some time was set aside to do initial peer review activities in class. Before they started peer response activity, students were taught to give their peers observational rather than evaluative feedback. That is, instead of direct criticism and evaluation of their friends' stories, they would describe how certain events in the story made them feel or think.

Based on the comments provided, the students revised the first drafts of their narratives. By the end of the seventh week, the second drafts of the stories were collected. Following this step, the narratives were read thoroughly by the course tutor who gave the student writers written comments in addition to listening to their stories and providing them with oral feedback during the one-to-one tutor conferencing sessions. The focus of the conferencing was both on the form and the content of the pieces. The tutor followed the guidelines below in the conferencing sessions:

1. Encourage the learners to be active during the conferences. Actively listen to their questions first.
2. Show sincere interest in the stories.
3. In addition to orally stating your comments and responses to the assignment, you may leave written comments in the assignment for future reference.
4. You are not supposed to edit the learners' stories; instead, encourage them to do it themselves.
5. Begin your comments with encouraging expressions. When giving your comments,

keep your critical views for the middle of the meeting but ensure to end it by giving positive comments.

6. Provide criticisms with tact by using expressions like, "Here is a nice story, but you can improve it by… ." If you think the learner has not clarified a point, avoid comments like, "This is vague!"; rather, give comments like, "You may have a good reason to have left this part a bit ambiguous, but I feel your reader here would like to know what makes you think/say this way."

The conferencing sessions ended by week 11, and the final drafts were submitted to be marked and ranked by the end of the twelfth week.

## RATER TRAINING

The two raters were trained to use the scale in two ninety-minute meetings (See the second phase of *Fig. 2*). The rater training meetings were held in two consecutive days. In the first meeting, the researchers purposively selected six stories that, according to the Wong Scale, roughly indicated the different performance levels of the participants. The stories were photocopied and given to the raters, who used the scale to correct them. A table leader, the second author, cross-checked the scores for discrepancies. Any case of disagreement was discussed until the raters reached an agreement. This would help the raters to better understand the instrument. It would also reduce probable disagreement between the raters in the later stages of the scoring.

On the second day, six more similar sample papers with roughly six performance levels were corrected by each rater individually. Then, the table leader and raters worked together to compare the scores given by each rater to the same samples to check for the consistency of the two sets of scores. As it was discussed earlier, the level of agreement among the resulting scores showed the raters were ready for individual scoring the samples. Out of the 12 corrected samples in the rater training period, six were selected as benchmark or anchor papers.

These samples represented the varying levels of performance. The raters could refer to these anchor papers whenever in doubt during the correction of the samples.

## DATA ANALYSIS

SPSS (Version 15.0) was applied for the inter-rater reliability test and for comparing the significance of variance between the scores. Due to the generally high degree of inter-rater reliability, the means of the scores given by each rater were calculated which were assumed as the best possible indicators of the level of these samples. Since it was intended to measure the significance of difference in the writing performance of the same group of learners in three different time intervals, Repeated Measures ANOVA was chosen as the appropriate statistical method. *Fig. 2* summarizes the framework of the study.

## RESULTS

The scores given by the two raters were tested for their inter-rater reliability prior to analysis. As it was mentioned in the description of the instrument, the Wong Scale consists of four scores for each dimension of writing. Therefore, the four different scores that the two raters had given to the overall effectiveness, content, language, and vocabulary of the sample stories, in addition to their total scores were tested for their inter-rater reliability.

Table 1 presents a summary of the inter-rater reliability test results. Reliability coefficients are interpreted in different ways, but a coefficient of below .50 is generally regarded as low, .50 to .75 as moderate and .75 to .90 as high (Farhadi, Jafarpur and Birjandi, 2001). The Cronbach Alpha scores for most of the scores were more than .75 suggesting high inter-rater reliability between the two raters. As the table indicates, only a third of these scores showed moderate reliability. Hence, it was not necessary to include a third rater. The final scores that were analysed were the means of the marks given by the two raters.

**(Treatment and Observations)**

| Week | Assignment | Process |
|---|---|---|
| 1-4 | Write a 1500-word story Submit Draft 1 | Observation 1 |
| 5-7 | Review peer's story; have your story reviewed | Treatment |
| 8 | Submit Draft 2 | Observation 2 |
| 9-11 | Participate in the tutor conference | Treatment |
| 12 | Submit Final Draft | |
| 13-14 | - | Observation 3 |

↓

**(Rater Training)**

| Monday (90 minutes) Training using 6 purposive samples | → | Tuesday (90 minutes) Cross-checking using 6 purposive samples | → | 6 anchor papers |
|---|---|---|---|---|

↓

**(Sample Correction)**

↓

**(Inter-rater Reliability Test)**

↓

**(Final Score Calculation)**

(Rater A's scores + Rater B's scores) /2 = Final Score

↓

**(Data Analysis)**

Repeated Measures ANOVA

*Fig. 2: Research framework*

Table 2 shows the descriptive statistics results of the study. As it can be observed in this table, there was an overall increase in the scores which indicated both treatments played positive roles on the learners. However, to verify the significance of the difference, it was necessary to analyse the data using the Repeated Measures ANOVA. The results are summarized and discussed below. The hypotheses of the study together with the significant values (p), decisions and conclusions are reported in the following section. The level of significance was set at ($\alpha$ = .05) for the statistical calculations.

$HO_1$. Peer review has no significant effect on the learners' overall effectiveness scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .33) is larger than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the learners' overall effectiveness scores.

TABLE 1
Cronbach's Alpha for the four dimensions scores and the total scores
of the three observations

| Dimension | Observation | | |
|---|---|---|---|
| | 1 (Draft 1) | 2 (Draft2) | 3 (Draft 3) |
| Overall effectiveness | .88 | .73 | .84 |
| Content | .85 | .63 | .74 |
| Language | .81 | .76 | .86 |
| Vocabulary | .86 | .62 | .75 |
| Total | .89 | .81 | .84 |

TABLE 2
Descriptive statistics results

| Dimension | Observation | | | | | |
|---|---|---|---|---|---|---|
| | 1 (Draft 1) | | 2 (Draft2) | | 3 (Draft 3) | |
| | Mean | Standard error | Mean | Standard error | Mean | Standard error |
| Overall effectiveness | 3.65 | .18 | 3.75 | .18 | 4.16 | .17 |
| Content | 3.77 | .17 | 4.02 | .16 | 4.47 | .15 |
| Language | 3.55 | .15 | 3.6 | .14 | 4.23 | .17 |
| Vocabulary | 3.75 | .15 | 3.88 | .15 | 4.15 | .15 |
| Total | 18.27 | .70 | 18.80 | .68 | 21.22 | .72 |

HO$_2$. Peer review has no significant effect on the learners' content scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .15) is larger than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the content scores of the learners' narratives.

HO$_3$. Peer review has no significant effect on the learners' language scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .25) is larger than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the language scores of the learners' narratives.

HO$_4$. Peer review has no significant effect on the learners' vocabulary scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .598) is more than ($\alpha$ = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the vocabulary scores of the learners' narratives.

## HO5. Peer review has no significant effect on the learners' total writing performance scores

According to the results of the Pairwise Comparisons test between the first and the second observations, the significant value (p = .08) is more than (α = .05); therefore, the null hypothesis cannot be rejected. It can be concluded that peer review plays no significant role on the learners' total writing performance scores.

## HO6. Tutor conferencing has no significant effect on the learners' overall effectiveness scores

The results indicate a test statistics value of (F = 20.47) and a significant value of (p = .000) which is less than (α = .05). The results of the Pairwise Comparisons test between the first and the third observations; on the one hand, and the second and the third observations; on the other, they also indicate a significant value of (p = .000) which is less than (α = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the overall effectiveness scores of the learners' narratives.

## HO7. Tutor conferencing has no significant effect on the learners' content scores

The results indicate a test statistics value of (F = 17.82) and a significant value of (p = .000) which is less than (α = .05). The results of the Pairwise Comparisons test between the first and the third observations, on the one hand, and the second and the third observations; on the other, they also indicate a significant value of (p = .000) for this dimension which is less than (α = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the content scores of the learners' narratives.

## HO8. Tutor conferencing has no significant effect on the learners' language scores

The results indicate a test statistics value of (F = 44.86) and a significant value of (p = .000) which is less than (α = .05). The results of the Pairwise Comparisons test between the first and the third observations, on the one hand, and the second and the third observations, on the other, also indicate a significant value of (p = .000) which is less than (α = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the language scores of the learners' narratives.

## HO9. Tutor conferencing has no significant effect on the learners' vocabulary scores

The results indicate a test statistics value of (F = 8.65) and a significant value of (p = .001) which is less than (α = .05). The results of the Pairwise Comparisons test between the first and the third observations; on the one hand, and the second and the third observations, and on the other, they also indicate a significant value of (p = .003) and (p = .009) respectively, which are both less than (α = .05). Thus, the null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the vocabulary scores of the learners' narratives.

## HO10. Tutor conferencing has no significant effect on the learners' total writing performance scores

The results indicate a test statistics value of (F = 56.66) and a significant value of (p = .000) which is less than (α = .05). The results of the Pairwise Comparisons test between the first and the third observations, on the one hand, and the second and the third observations, on the other, also indicate a significant value of (p = .000) which is less than (α = .05). This null hypothesis is rejected and it can be concluded that tutor conferencing plays a significant role on the learners' total writing performance scores.

Table 3 summarizes the results of the first five hypotheses which were proposed to test for the significance of the effect of peer review on the five dependent variables of the study. Meanwhile, Table 4 presents the results of hypotheses 6-10 which tested for the effect of tutor conferencing on the dependent variables.

TABLE 3
Results of the effect of peer review on writing performance

| Null hypotheses | p > | α | Decision | Conclusion |
|---|---|---|---|---|
| 1. Peer review has no significant effect on the learners' overall effectiveness scores | .33 | | | Peer review plays no significant role on overall effectiveness scores |
| 2. Peer review has no significant effect on the learners' content scores | .15 | | Since the significant p is more than α, we fail to reject all the null hypotheses | Peer review plays no significant role on content scores |
| 3. Peer review has no significant effect on the learners' language scores | .25 | .05 | | Peer review plays no significant role on language scores |
| 4. Peer review has no significant effect on the learners' vocabulary scores | .59 | | | Peer review plays no significant role on vocabulary scores |
| 5. Peer review has no significant effect on the learners' total writing performance scores | .08 | | | Peer review plays no significant role on total writing performance scores |

## DISCUSSION

The results indicate a significant effect of tutor conferencing and an insignificant effect of peer review on the learners' writing performance. Based on the review of the related literature, the previous research findings on these two variables are quite inconsistent. One possible explanation for the insignificant effect of peer review on students' writing performance in this study can be the cultural differences between the participants in different studies. Fujieda (2009) suggests culturally idiosyncratic norms of learners who take part in ESL writing courses as the culprit, asserting "cultural beliefs and assumptions have a strong impact on learners' behavior and peer feedback management" (p. 114).

Carson and Nelson (1996) conducted a study on the effect of feedback on learner's improvement in their writing skills by considering their cultural background. They investigated Chinese ESL learners' behavior in the process of their peer reviews. They reported that the learners sought to build a sense of camaraderie throughout the activity since they came from a low contact culture and valued conformity among peers. Therefore, it can be implied that learners from homogeneous cultural backgrounds tend to avoid criticizing peers and to be in agreement by establishing a harmony with them. The insignificant effect of peer review in this research could be due to such cultural differences between the participants who were to a large extent from the Malay ethnic group and those of other research who come from a vast variety of cultural backgrounds. This variable can, therefore, render investigating the effect of peer response or teacher conferencing a challenging process which calls for further research.

Besides peers' cultural backgrounds, Ferris and Hedgecock (2005) point out affective barriers as factors that lead to less successful peer feedback procedures. Meanwhile, Leki (1990) notes that learners can be unkind, sarcastic and too critical in their comments. This can raise their peers' affective filters that lead them to avoid their comments all together. As Ferris and Hedgecock (2005) argue, peer feedback may be "potentially harmful to students because of the novice writers' ineptitude in providing useful

TABLE 4
Results of the effect of tutor conferencing on writing performance

| Null hypotheses | Repeated measures ANOVA | | Pairwise comparison (p) | |
|---|---|---|---|---|
| 6. Tutor conferencing has no significant effect on the learners' overall effectiveness scores | F | p | Ob 1 and 3 | Ob 2 and 3 |
| | 20.47 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the overall effectiveness scores of the learners' narratives. | | | |
| 7. Tutor conferencing has no significant effect on the learners' content scores | F | p | Ob 1 and 3 | Ob 2 and 3 |
| | 17.82 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the content scores of the learners' narratives. | | | |
| 8. Tutor conferencing has no significant effect on the learners' language scores | F | p | Ob 1 and 3 | Ob 2 and 3 |
| | 44.86 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the language scores of the learners' narratives. | | | |
| 9. Tutor conferencing has no significant effect on the learners' vocabulary scores | F | p | Ob 1 and 3 | Ob 2 and 3 |
| | 8.65 | .001 | .003 | .009 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the vocabulary scores of the learners' narratives. | | | |
| 10. Tutor conferencing has no significant effect on the learners' total writing performance scores | F | p | Ob 1 and 3 | Ob 2 and 3 |
| | 56.66 | .000 | .000 | .000 |
| | Decision and conclusion) The null hypothesis is rejected. Tutor conferencing plays a significant role in the total writing performance scores of the learners' narratives. | | | |

*Key*: F (test statistics); p (significant value); Ob (observation)

responses and because of L2 students' lukewarm, if not downright hostile, feelings toward peer feedback" (p. 224).

As it is also evident from the results, the students' writing capabilities were varied. This suggests that most of them might have lacked the required oral communicational skills to provide effective feedback. Learners may provide their peers with ambiguous and unhelpful feedback (Ferris, 2003b). They may be unable to comprehend their peer's accent in their oral comments (Leki, 1990). In this line, Liu and Hansen (2002) warn that learners may lack sufficient rhetorical schemata to help

them provide their peers with useful feedback concerning the structure or content of their written works. This could be another reason why peer review in this study did not affect the students' writing scores significantly although this was not the case in other similar studies reviewed earlier. Systematizing the peer review activity by introducing a checklist according to which students could provide comments on their classmates' stories might have led to different results.

The findings support the positive effect of teacher intervention in the process of learners' writing. The results seem to suggest that

teacher's overt intervention can be particularly beneficial in the case of ESL or even more importantly English as a Foreign Language (EFL) setting where learners have relatively little access to authentic language in contrast with situations where learners are in a native English speaking environment. These findings support the results of studies of learners' opinions on teacher feedback, which indicate that students regard their teacher's comments as necessary and helpful (Zhang, 1995; Ferris and Hedgecock, 2005).

The variable of learning style preferences that also varies from learner to learner could also have affected the learners in their performance. For example, some students may be too dependent on the other learners and/or the tutor and thus may reject the idea to perform peer interaction or tutor conferencing when asked to do so. This variable is undeniably worth looking into in future research by using different individuals like ESL language teachers and learners as well as curriculum designers and material developers. Finally, a more structured and systematized peer review activity could have helped the students in providing less vague and more meaningful comments to each other.

## CONCLUSIONS

The study sought to investigate the effect of peer feedback and tutor conferencing on learners' writing performance. According to the finding, peer feedback played no significant role in students' writing performance. However, as the results suggest, they benefited from tutor conferencing. As it was discussed, such findings may be due to the cultural background of the participants in the study. Since they come from a teacher-centred background, these learners value the feedback they receive from their lecturers and tutors more than the comments they get from their peers. Therefore, further research seems necessary to investigate these learners' response to the comments provided by their peers as compared to their response to the tutor comments. There is also a need to replicate the same research with a slightly larger sample size. The relatively small sample size of the study could have resulted in Type I error that entails failing to reject a null hypothesis that is, in fact, false.

As the findings of this study suggest, a positive attitude in the part of the writing tutor or teacher can positively affect learners' improvement in their writing performance. The results also emphasize ESL teachers' intervention in the writing process of their student writers. In addition, the poor results obtained from the peer review highlight the importance of a systematic modelling and treatment of this activity in order to avoid probable ambiguities. Otherwise, the learners' may not grasp a clear understanding of the process, and as a result the activity may not work as effectively as it should.

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# An Exploratory Study on "Online B2B Purchases" in India

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## ABSTRACT

The Indian B2B marketplace is going through a transformation. As a consequence, this emerging market is witnessing a noteworthy change in its growth and investment patterns. Both existing and new players are experimenting with new Buying solutions as they lack a seamless flow of information among customers, suppliers, and their employees. Due to competitive environment all businesses have to ensure accurate and timely presentation of information to their stakeholders for their survival. The way businesses purchase products is one of the most important concern for managers of today. The business buying has been shifted from offline to online Purchases to a great extent. In this fast changing global village, one should know about the Buying process influences and behaviour of their B2B clients in order to extend their desire to establish and maintain long term relationships in long run. So, this research paper investigates the online influence on B2B purchases in India, which can help the businesses to gain competitive edge in today's and futuristic marketplace.

**Keywords: Online purchase, B2B purchase, internet influence, internet purchase, online procurement**

## INTRODUCTION

A common man might perceive consumer market (B2C) to a great extent bigger than business-to-business (B2B) market place. In fact, B2B is much bigger than B2C markets. Whether we talk about commercial markets, trade industries, government organisations or institutions, all are involved in B2B transactions, either directly or indirectly.

Indian sub-continent is one of the major booming economies of the world and this will continue so till centuries. This is of great interest to the Fortune 1000 companies as western economies are tapering off in growth rates due to competitive forces in place. According

to Reserve Bank of India, foreign exchange reserves (excluding Gold and SDR) currently stand $ 261.656 Billion on 4th September 2009. The overall growth of GDP during 2008-09 (according to Central Statistical Organization) has been placed at 7.1 %. Furthermore, the estimated growth in GDP for the service sectors during 2008-09 is placed at 10.3 per cent. Moreover, according to commodityonline.com, India's inflation rate eased again to 0.7 percent for the week ended 26th September 2009.

During the survey, the analysis was made on the respondents who were directly or indirectly attached with the buying/purchasing process of organisations in India. These respondents were

surveyed based on varied criteria. Four major roles played by the buying centre participants were also identified, namely, user, analyst/ engineer, influencer, and purchaser/decision maker.

Users are the ones who actually use the purchased products/services. Their influence may range from negligible to the most important. They may at times initiate purchase actions, help develop specifications, etc. Influencer helps process information that is reviewed by buying centre members. They may provide access to some more facts and provide their expertise (if any).

Analyst/Engineer affects the buying decision by supplying information to guide the evaluation of alternatives or by setting buying specification. They may be a technical staff such as engineers, quality control specialist, R&D personnel, etc. Purchaser/Decision maker (where, decision maker is the final decision making authority, which may be a purchaser/senior management executive or a finance department executive), chooses a good or service. He/she may be the top authority or the person with authority to take purchase decisions. Also, he/she is the formal authority to select supplier/vendor and to implement the procedures for procuring the product or service.

Furthermore, the buying/purchasing cycle is divided into four phases viz. awareness, research, negotiation, and purchase for in the depth analysis of online and offline purchase influence at various stages of buying/purchasing in Business to Business Organisations. So, this research paper investigated the influence of the internet on B2B purchases in India, which could help the businesses to gain competitive edge in today's and futuristic marketplace.

## LITERATURE REVIEW

Business to Business (B2B) is a marketing strategy which involves commercial transactions of goods and services between businesses (as opposed to relations between businesses and other groups; for example, consumer or public administration). Some firms focus entirely on business markets, while others sell both to consumer and business markets. Some examples for this are Reliance, Infosys, Satyam, TATA, IBM, WIPRO, Logitech, Epson, HP, Canon, LG, and Samsung. Business-to-Business markets deal with business purchases of goods and services to support or facilitate productions of other goods & services, either to facilitate daily company operations or for resale.

According to Reeder *et al*. (1991), all marketing strategies must begin with a thorough understanding of the Organisation Buying Behaviour as this entails a different knowledge about the buying situation, process and criteria to apply when making purchasing decisions. Also, the understanding of Organisational Buying Behaviour is fundamental for the supplier of an industrial firm in order to perceive how to satisfy customer demand in an optimal way (Baptista and Forsberg, 1997).

In addition, Haas (1995) states that organisational buying is not simply the action someone takes. It is actually the outcome of interactions between purchasing professionals. Those who are involved in the process may in one way or another influence what is being purchased and supplied. The evolution of technology has changed the traditional way of business purchases. New tools have opened up a new era and new opportunities in every part of the market. The arrival of internet as a multifaceted tool continues to change the performance of the organisations (Smith, Berry and Pulford, 1998). The use of information and communication technologies (ICT) might be used in developing countries that are the most disadvantaged by poor access to information to complement economic policies, in order to boost efficiency and enhance market integration (Treaty establishing the European Community, 1957; Gibson and Ward, 2000; Everard, 2000; Dutton, 1999; Commission Directive, 2001; Cafiero, 1996; Bimber, 1999; Barber, 1998; European Commission, 2000; Arunachalam, 1999; Albarran and Goff, 2000). The literature has also indicated that many organization's procurement processes with their suppliers are organized in numerous arrangements. First, these processes have to be reengineered, uniformed,

incorporated to collaborative processes, and which will then enable successful procurement, and in turn, they will give access to all data at the time when all business partners need them (ActivMedia Research, 2000; Athabasca University, 2002; Chan and Swatman, 1999; European Commission, 2000; Lindemann and Schmid, 1998; Ody, 2001a; Ody, 2001b; Podlogar *et al.*, 2001; Pucihar, 1999; RIS, 2001; Segev *et al.*, 1998; Sterle, 2001). Furthermore, procurement is an integral part of the B2B processes and an essential part of any organization's ability to function effectively but has only recently emerged as an important topic within the fast growing B2B e-Commerce market. An e-Procurement B2B system is an open system that enables the organization to reach and transact with suppliers and customers in virtual markets (Bakos, 1992). In the commercial arena, an organization will procure goods on electronic way only if it sees enough benefits that may be gained from e-Procurement. Moreover, an organization must take very careful steps to prepare business processes for successful implementation of e-Procurement (Podlogar, 2006).

Stakeholders of Buying Centre: According to Webster and Wind (1972), members in buying centre may assume different roles throughout the organisational purchase process. The identification of the roles they play helps marketers to better understand the nature of interpersonal influences in the buying centre. These roles can be categorized as Users, Influencers, Buyers, Deciders, and Gatekeepers.

## RESEARCH METHODOLOGY

The research methodology used is exploratory in nature and this aimed to understand the influence of the internet on the B2B purchases in India, which can help the businesses to gain competitive edge in today's and futuristic marketplace. A survey questionnaire was completed by the purchase people of IT organizations in India in order to understand the determinants in the "Online B2B Purchases" in India in the IT Industry. The emphasized factors included the role of User, Analyst/Engineer, Influencer, Purchaser/Decision Maker with the buying phases as Awareness, Research, Negotiation, and Purchases.

A total of 130 questionnaires were answered, out of which 15 were rejected and 115 questionnaires were analysed, constituting to a sample size of 115 for the research. The sample was drawn from Delhi and NCR. Through the respondents' responses involved in the B2B purchases on various parameters, the authors arrived at the findings and conclusion of the research. The type of data used for the research included both the secondary and primary data. The secondary data included books, journals, internet, etc. The sampling method used was the non-probability sampling which in itself is a type of convenience sampling. Meanwhile, the tools/techniques used are SPSS, MS Word, MS Excel, Internet Explorer, etc.

## DATA ANALYSIS AND INTERPRETATION

The analysis was based on the survey which might also be used for further research by practitioners/researchers.

### General Characteristics of Participants

A wide range of organisations were covered in the survey, and these were used to see the overall scenario of the online purchase influences by B2B buyers. Now, the product/service category which participants were catering to include business services, equipment, hardware, parts/components, software, supplies. The largest contributor was the supplies (33.9%) as presented in Table 1.

TABLE 1
Product/service category of the respondents

| Category | n (%) |
|---|---|
| Business Services | 16 (13.9) |
| Equipment | 13 (11.3) |
| Hardware | 17 (14.8) |
| Parts and Components | 11 (9.6) |
| Software | 19 (16.5) |
| Supplies | 39 (33.9) |

*Fig. 1* also shows the contribution of various types of purchases in the total purchase done by the B2B organizations.

The above model was developed to show the influence of the offline and online purchases category wise. Moreover, the purchase sizes by the respondents are also provided in the table below, indicating that most of the purchases were below Rupees 10 Lakh (nearly 60.9 %).

TABLE 2
Purchase budget of the respondents' organizations

| Purchase budget (Rs.) | n (%) |
|---|---|
| Up to 10 Lakh | 70 (60.9) |
| 10 to 50 Lakh | 30 (26.1) |
| 50 to 200 Lakh | 10 (8.7) |
| More than 200 Lakh | 5 (4.3) |

*Respondents' Level of Education*

The survey included the respondents' highest education level which included high school, graduate, graduate with professional degree, post-graduate, post-graduate with professional Degree, with the maximum level for the category of graduate (37.4 %) or graduate with professional degree (32.2 %) as shown in Table 3.

### Category Influence Model





Fig. 1: Purchases of various categories

*Fig. 2: The participants' highest level of education*

TABLE 3
Purchase budget of the
respondents' organizations

| Highest education level | n (%) |
|---|---|
| High School | 9 (7.8) |
| Graduate | 43 (37.4) |
| Graduate with Professional Degree | 37 (32.2) |
| Post Graduate | 23 (20.0) |
| Post Graduate with Professional Degree | 3 (2.6) |

*Fig. 2* shows the contribution of the participants' level of education in the total purchase done by the B2B organizations.

*Buying Cycle Phase and the Participants' Roles*

The researchers asked each participant to indicate their responses as per the phase and role, as described below.

Awareness    :    Anticipation or recognition of a problem (need)

Research    :    Determination and description of the characteristics and quantity of the needed product/service, search for and qualification of probable solutions or potential sources.

Negotiation :    Acquisition, analysis and evaluation of the proposals, negotiation of the optimal price and finalizing the vendor.

Purchase    :    Approval of purchase, recommendation and authorized purchase and selection of order routine.

The four major roles played by the buying centre participants have been identified as Users, Analysts/Engineers, Influencers, Purchasers/ Decision Makers. Users are the ones who actually use the purchased products/services. As noted earlier, their influence may range from negligible to the most important. They may at times initiate purchase actions, help develop specifications, etc.

Influencers help process information that is reviewed by members of the buying centre. They may provide access to some more facts and provide their expertise (if any).

Analysts/Engineers affect the buying decision by supplying information to guide evaluation of alternatives or by setting buying specification. They may be a technical staff such as engineers, quality control specialists, R&D personnel, etc.

Purchasers/decision makers choose goods or services. He/she may be the top authority or the person with authority to take purchase decision. In addition, he/she is the formal authority to select supplier/vendor and to implement the procedures for procuring the product or service.

## BUY PHASE/ROLE

Majority of the participants were in the research phase of the current buying cycle with the purchasers/decision makers and analysts/

engineers forming the largest group, with 41.7% and 30.4%, respectively.



Recognition-Satisfaction Model

The model above predicts the transformation from the need/problem recognition to the need/problem satisfaction through the interconnections of buy phases and buyers' roles.



Recognition-Satisfaction Directional Model

TABLE 4
Buy phase versus respondents' role

| Buy phase\Role | User n (%) | Analyst/ Engineer n (%) | Influencer n (%) | Purchaser/ Decision maker n (%) | Total n (%) |
|---|---|---|---|---|---|
| Awareness | 4 (13.3) | 2 (5.7) | 0 (0) | 9 (188) | 15 (13.0) |
| Research | 14 (46.7) | 19 (54.3) | 1 (50.0) | 20 (41.7) | 54 (46.9) |
| Negotiation | 6 (20.0) | 6 (17.1) | 0 (0) | 7 (14.6) | 19 (16.5) |
| Purchase | 6 (20.0) | 8 (22.9) | 1 (50.0) | 12 (25.0) | 27 (23.5) |
| Total | 30 (26.1) | 35 (30.4) | 2 (1.7) | 48 (41.7) | 115 (100) |

*Fig. 3: The beginning of the buying cycle begin before purchase*

Based on the research, this recognition-satisfaction model which tells us about the lead buyers at various buy phases in a directional manner was developed.

## WHEN DOES BUY CYCLE BEGIN BEFORE PURCHASE?

As given below, most of the times, the buying/purchasing cycle begins around two weeks, including 1-2 weeks (40%) and within 1 month (33.9%).

TABLE 5
The beginning of the buying
cycle before purchase

| Time before purchase | Respondents (n) | Respondents (%) |
|---|---|---|
| Same Day | 10 | 8.7 |
| 1-2 Week | 46 | 40 |
| Within 1 Month | 39 | 33.9 |
| 2-3 Month | 15 | 13 |
| >3 Month | 5 | 4.3 |

*Fig. 3* shows the contribution of time period in the purchases done by B2B organizations.

## ONLINE AND OFFLINE INFLUENCES

In most cases, online information is used and the maximum contribution is done by online vendor search and purchasing offline (46.9%), with the second lead by online search and purchase (35.6%).

TABLE 6
Off-line and on-line influences

| Offline versus Online | n | % |
|---|---|---|
| Found Vendor Online & purchased Online | 41 | 35.6 |
| Found Vendor Online & purchased Offline | 51 | 46.9 |
| Found Vendor Offline & purchased Online | 6 | 5.2 |
| Found Vendor Offline & purchased Offline | 14 | 12.2 |

## Online/Offline Search Model



The model above shows the online/offline uses in the case of vendor search and purchase decisions which are taken by business organizations. Furthermore, the purchase budget analysis reveals that most of the purchases belong to the category of up to Rs.10 lakh and Rs.10-50 lakh, contributing to 64% and 54%,

*Fig. 4: Online/offline influence versus purchase budget*

respectively, in the online influence; whereas major purchases in the offline category fall in Rs.50-200 lakh and more than 200 lakh range, with 66% and 75%, respectively.

TABLE 7
Online/offline influence versus
purchase budget

| Purchase budget (Rs.) | Offline influence (%) | Online influence (%) |
|---|---|---|
| Upto 10 Lakh | 36 | 64 |
| 10 to 50 Lakh | 45.5 | 54.5 |
| 50 to 200 Lakh | 66 | 34 |
| More than 200 Lakh | 75 | 25 |

Similarly, based on the category of purchase, the offline influence was done mainly in hardware due to the involvement of price and quality as the determinants in decision making, with 56%, while major online influence was in the equipment as well as parts and components. All the other categories contribute almost equally in the offline and online influences.

TABLE 8
Online/offline influence versus
purchase category

| Category | Offline influence (%) | Online influence (%) |
|---|---|---|
| Business Services | 49 | 51 |
| Equipment | 45.4 | 54.6 |
| Hardware | 56 | 44 |
| Parts and Components | 31 | 69 |
| Software | 49.5 | 50.5 |
| Supplies | 48 | 52 |

## DETERMINANTS OF ONLINE AND OFFLINE INFLUENCING FACTORS

When looking at the determinants as a whole, the researchers determined factors such as search engine, vendor website, word of mouth, industry reference, business magazine, IITF/ Trade Exhibition, and seminar/conference. The following table presents the overall rating of both the online and offline factors amongst the participants. The major influence was by the

*Fig. 5: Online/offline influence versus purchase category*



*Fig. 6: Online/offline influencing factors*

Word of Mouth and Industry Reference, with the rating of 5.8 and 5.6, respectively, followed by Vendor Website (5.4), Search Engine (5.2) and IITF/Trade Exhibition (4.7). The least influencing factors were Business Magazine and Seminar Conference, with only 3.5 and 3.2 rating, respectively.

TABLE 9
Online/offline influencing factors

| Factor | Overall rating |
| --- | --- |
| Search Engine | 5.2 |
| Vendor Website | 5.4 |
| Word of Mouth | 5.8 |
| Industry Reference | 5.6 |
| Business Magazine | 3.5 |
| IITF/Trade Exhibition | 4.7 |
| Seminar/Conference | 3.2 |

*Fig. 7: Online/offline influencing factors during awareness phase*

## DETERMINANTS OF BUYING / PURCHASING AT AWARENESS PHASE

The most influential factors at the time of awareness were the Word of Mouth (6.3) and Industry Reference (6.2), followed by Search Engine (5.8), IITF/Trade Exhibition (5.0), Business Magazine (3.7), and Seminar Conference (3.6), respectively.

TABLE 10
Online/offline influencing
factors during awareness phase

| Factor | Awareness |
| --- | --- |
| Search Engine | 5.8 |
| Vendor Website | 6.0 |
| Word of Mouth | 6.3 |
| Industry Reference | 6.2 |
| Business Magazine | 3.7 |
| IITF/Trade Exhibition | 5.0 |
| Seminar/Conference | 3.6 |

## DETERMINANTS OF BUYING/ PURCHASING AT RESEARCH PHASE

The most influential factors at the time of awareness were Industry Reference (6.5) and

Search Engine (6.4), followed by Vendor Website (6.3), Word of Mouth (6.0), IITF/Trade Exhibition (4.9), Business Magazine (3.9), and Seminar Conference (3.4), respectively.

TABLE 11
Online/offline influencing
factors during research phase

| Factor | Research |
| --- | --- |
| Search Engine | 6.4 |
| Vendor Website | 6.3 |
| Word of Mouth | 6.0 |
| Industry Reference | 6.5 |
| Business Magazine | 3.9 |
| IITF/Trade Exhibition | 4.9 |
| Seminar/Conference | 3.4 |

## DETERMINANTS OF BUYING / PURCHASING AT NEGOTIATION PHASE

The most influential factors at the time of awareness were Industry Reference (5.7) and the Word of Mouth (5.5), followed by Vendor Website (5.4), Search Engine (4.5), IITF/Trade Exhibition (4.5), Business Magazine (3.3), and Seminar Conference (2.9), respectively.

Fig. 8: Online/offline influencing factors during research phase



Fig. 9: Online/offline factors during the negotiation phase

TABLE 12
Online/offline factors during the
negotiation phase

| Factor | Negotiation |
|---|---|
| Search Engine | 4.5 |
| Vendor Website | 5.4 |
| Word of Mouth | 5.5 |
| Industry Reference | 5.7 |
| Business Magazine | 3.3 |
| IITF/Trade Exhibition | 4.5 |
| Seminar/Conference | 2.9 |

## DETERMINANTS OF BUYING/ PURCHASING DURING THE PURCHASE PHASE

The most influential factors during the time of awareness were the Word of Mouth (5.3) and Industry Reference (4.4), followed by IITF/ Trade Exhibition (4.3), Vendor Website (4.0), Search Engine (3.9), Business Magazine (3.0), and Seminar/ Conference (2.8), respectively.

TABLE 13
Online/offline factors during the
purchase phase

| Factor | Purchase |
|---|---|
| Search Engine | 3.9 |
| Vendor Website | 4.0 |
| Word of Mouth | 5.3 |
| Industry Reference | 4.4 |
| Business Magazine | 3.0 |
| IITF/Trade Exhibition | 4.3 |
| Seminar/Conference | 2.8 |

## PARTICIPANTS GO ONLINE DURING PURCHASE

Based on the survey, it could be concluded that most of the Buying Centre participants went online during the purchasing process with a significantly high response of 77.4% as compared to others.

TABLE 14
Frequency of the participants going online
during purchasing process

| Would you go online during the purchase process | n | % |
|---|---|---|
| Yes | 89 | 77.4 |
| No | 21 | 18.3 |
| Don't want to answer | 5 | 4.3 |

## WHERE B2B PURCHASERS START ONLINE

The survey results reveal that the major online start was done through search engines with 46.9 % of contribution.

TABLE 15
Where the B2B purchasers start
online

| Where do you start online | n | % |
|---|---|---|
| Search Engine | 54 | 46.9 |
| B2B Search Engine | 16 | 13.9 |
| Vendor's Website | 25 | 21.7 |
| Industry Specific website | 17 | 14.8 |
| Other Websites | 3 | 2.6 |

This was followed by Vendor's Website (22%), Industry Specific Website (15%), B2B Search Engine (14%) and Other Websites (3%).



The model above predicts the use of various online influences which are available through the



Fig. 10: Online/offline factors during the purchase phase

Fig. 11: Frequency of the participants going online during the purchasing process



Fig. 12: Where the B2B purchasers start online

online influence model which helps in moving from recognition to satisfaction of the need/ problem.

### PERCEIVED INFLUENCE AND BENEFITS OF INTERNET DURING BUYING/ PURCHASE CYCLE

*Ease of Use*

- Availability of updated information
- Easy movement across and around websites
- Prompt online ordering
- Prompt query handling

*A Comparison of the Ease of Price and Product/Service*

- Get lowest price for product/service purchase
- Easy comparison of product/service from several vendors
- Easy price comparison from several vendors
- Able to obtain competitive and educational information regarding product/service

*Ease of Information Access and Exchange*

- Increase in speed of information gathering from vendor

- Increase in speed of information dissemination within organization (between and within departments/colleagues)

*Reduction in Paper, Time and Monetary Costs*

- Reduction in order processing time
- Reduced paper flow
- Reduced ordering costs

## CONCLUSIONS

In the light of above discussion, it is concluded that this research adds to our understanding of determinants in "Online B2B Purchase" in India (with a special reference to the IT Industry). Thus, the information collected from 115 respondents as per the objectives of the study has presented an overview of the current situation of the B2B purchasers and their online influences.

The product category included Business Services (13.9%), Equipment (11.3%), Hardware (14.8%), Parts and Components (9.6%), Software (16.5%), and Supplies (33.9%), with a Bugdet range of mostly up to Rs.50 Lakh (87%). The average education levels of the purchasers fell in the Graduate Category. The participants indicated the responses as per the phases of awareness, research, purchase and purchase, along with the role of users, analysts/engineers, influencers, and purchaser/decision makers. The highest contributions were from the research phase (46.9%), the analyst/engineers (54.3%), as well as the purchasers/decision makers (41.7%). In most cases, online information is used and the maximum contribution was by the online vendor search and purchasing offline (46.9%), with the second lead by online search and purchase (35.6%).

When looking at the determinants as a whole, the researchers determined the factors such as Search engine, Vendor Website, Word of mouth, Industry Reference, Business Magazine, IITF/Trade Exhibition, Seminar/Conference. The analysis revealed the overall rating of both the online and offline factors amongst the participants. The major influence was from the
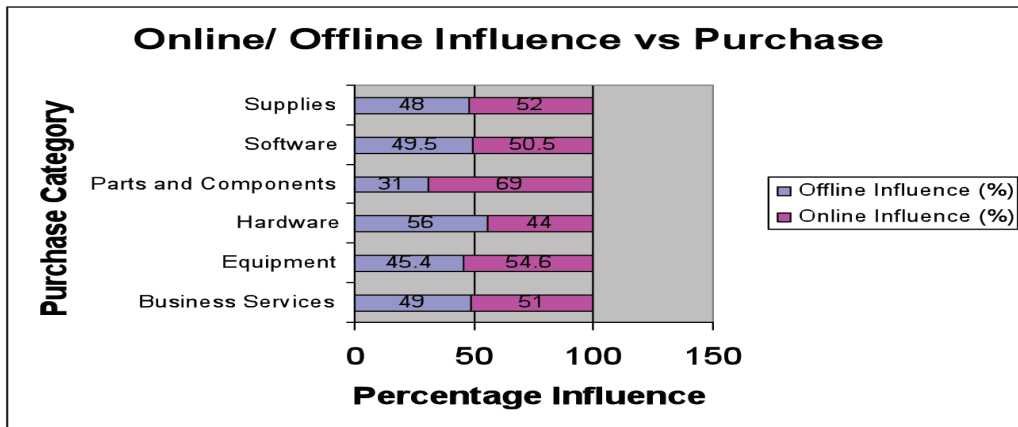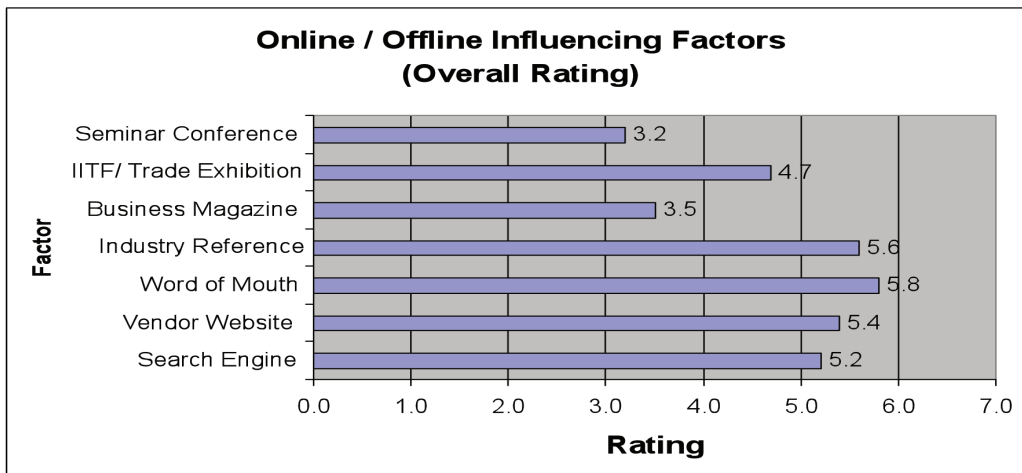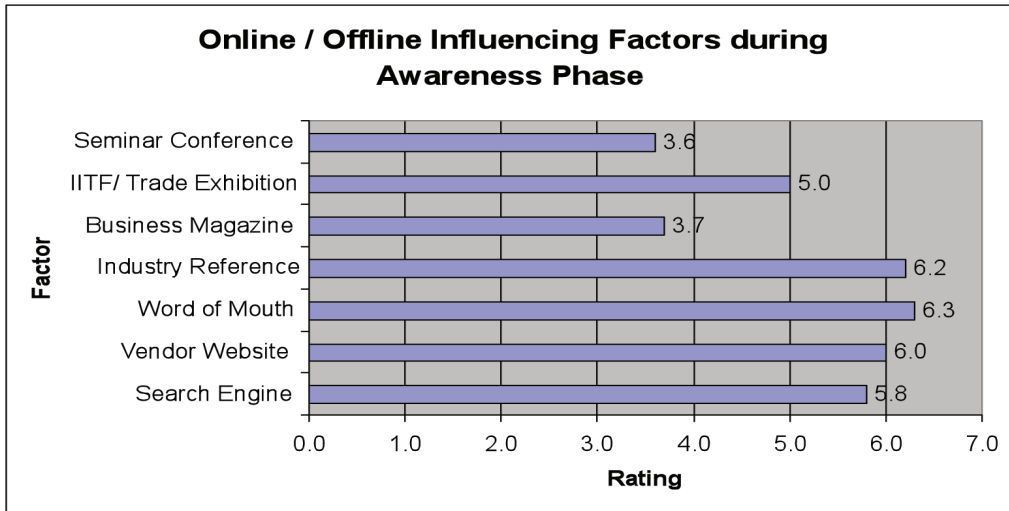
Word of Mouth and Industry Reference with the rating of 5.8 and 5.6, respectively, followed by Vendor website (5.4), Search Engine (5.2) and IITF/Trade Exhibition (4.7). The least influencing factors were Business Magazine and Seminar Conference, with 3.5 and 3.2 rating, respectively. In addition, the survey results also indicated that the major online start was done through search engines with 46.9% contribution, along with the Perceived Influence and the Benefits of Internet during Buying/Purchase Cycle as Ease of Use, Ease of Price and Product/Service Comparison, Ease of Information Access and Exchange, Reduction in Paper, Time and Monetary Costs. Therefore, managers can reduce cycle time and overall cost of the purchase/procurement process, either in terms of money, time, and in many other ways through the basic and advanced knowledge of internet use, benefits and the determinants, knowing the probable and the most effective variables and factors were to be simplified and reengineered.

Consequently, the results and conclusion of the current research paper on the online influence on the B2B purchases in India help the businesses to gain competitive edge in today's and futuristic marketplace.

## SUGGESTIONS FOR FUTURE RESEARCH

1. The study can be conducted outside India, in developed and developing countries.

2. The study can also include relevant factors such as dependability, safety of usage, maintenance, timely recall and trust, as one of the determinants for the B2B purchases.

3. The correlations between internet use and benefits can be surveyed.

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# APPENDIX

## SURVEY QUESTIONNAIRE

Question 1. Type of Product/Service category you and/or your organization are active in most cases.

| | | |
|---|---|---|
| 1. Business Services | 2. Equipment | 3. Hardware |
| 4. Parts and Components | 5. Software | 6. Supplies |

Question 2. How the purchases are done?

1. Online through internet
2. Offline without internet
3. Both ways

Question 3. The value or purchase budget of product/service purchased by you.

| | |
|---|---|
| 1. Up to 10 Lakh | 2. 10 to 50 Lakh |
| 3. 50 to 200 Lakh | 4. More than 200 Lakh |

Question 4. Your Education.

| | |
|---|---|
| 1. High School | 2. Graduate |
| 3. Graduate with Professional Degree | 4. Post Graduate |
| 5. Post Graduate with Professional Degree | |

Question 5. Which Buy/ Purchase phase you are currently working/active?

| | |
|---|---|
| 1. Awareness | 2. Research |
| 3. Negotiation | 4. Purchase |

Question 6. What is your role in the purchase process?

| | |
|---|---|
| 1. User | 2. Analyst/Engineer |
| 3. Influencer | 4. Purchaser/Decision Maker |

Question 7. When does buying cycle begin before purchase?

| | | |
|---|---|---|
| 1. On the same day | 2. 1-2 weeks before | 3. Within 1 month |
| 4. Before 2-3 months | 5. More than 3 months | |

Question 8. Specify which ever is applicable in most cases.

   1. Found vendor online and purchased online
   2. Found vendor online and purchased offline
   3. Found vendor offline and purchased online
   4. Found vendor offline and purchased offline

Question 9. In case you purchase budgets are predetermined, which mode influences you in most cases (either select offline or online influences in each budget category)

| Purchase Budget (Rs.) | Offline Influence | Online Influence |
|---|---|---|
| Up to 10 Lakh | | |
| 10 to 50 Lakh | | |
| 50 to 200 Lakh | | |
| More than 200 Lakh | | |

Question 10. In case you purchase categories are predetermined, which mode influences you in most cases (either select offline or online influences in each budget category)

| Category | Offline Influence | Online Influence |
|---|---|---|
| Business Services | | |
| Equipment | | |
| Hardware | | |
| Parts and Components | | |
| Software | | |
| Supplies | | |

Question 11. Kindly rate the purchase determinants of online and offline influencing factors on a scale of 1 (least influencing) to 7 (most influencing).

   1. Search Engine         1   2   3   4   5   6   7
   2. Vendor Website        1   2   3   4   5   6   7
   3. Word of Mouth         1   2   3   4   5   6   7
   4. Industry Reference    1   2   3   4   5   6   7
   5. Business Magazine     1   2   3   4   5   6   7
   6. IITF/Trade Exhibition 1   2   3   4   5   6   7
   7. Seminar/Conference    1   2   3   4   5   6   7

Question 12. Kindly rate the purchase determinants of online and offline influencing factors during awareness phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 13. Kindly rate the purchase determinants of online and offline influencing factors during research phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/ Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 14. Kindly rate the purchase determinants of online and offline influencing factors during negotiation phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 15. Kindly rate the purchase determinants of online and offline influencing factors during purchase phase; on a scale of 1 (least influencing) to 7 (most influencing).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Search Engine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Vendor Website | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Word of Mouth | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Industry Reference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Business Magazine | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | IITF/Trade Exhibition | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Seminar/Conference | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Question 16. Would you go online during purchase process?

      1. Yes        2. No        3. Don't want to answer

Question 17. In case of online search, where do you start online?

      1. Search Engine        2. B2B search engine
      3. Vendor's website        4. Industry Specific website
      5. Other websites

Question 18. Any other information you would like to share regarding B2B purchases.

_____
_____
_____
_____
_____

Thank you very much for your valuable responses and cooperation.

# Against All Odds: Factors Contributing to the Success of Students with Special Needs

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## ABSTRACT

In the Malaysian education system, students with special needs, such as the deaf, blind and those with learning difficulties, who follow the national curriculum are given the opportunity to sit for the Malaysian Standardized examinations at the end of Year 6, Form 3, and Form 5. The objective of this paper is to discuss factors contributing to the academic achievement of deaf and blind students based on the reports by their teachers, students and school administrators. More specifically, the paper highlights the psycho-social profiles of the students who excel in the examinations in terms of their motivations and the influence of their peers, parents, and teachers towards their performance, as reported by themselves and their teachers. This is a descriptive study which employed both the quantitative and qualitative approaches. Quantitative data were analysed to examine the special needs students' performance in their examinations and the administrators' perspectives on the factors relating to their performances. In general, most of the deaf and blind students scored grades E and D for the standardized exams. However, a small number did well in the standardized exams by obtaining As and Bs, indicating that they have the potentials to succeed academically. The factors which influence the achievements are internal factors (self-motivation, diligence and hard work, as well as possessing good memory) and external factors (peer influence, parental involvement, teacher encouragement, and school support).

**Keywords: Specials needs students, academic achievement**

## INTRODUCTION

In the Malaysian education system, students with special needs, such as the deaf, blind and those with learning difficulties, who follow the national curriculum, are given the opportunity to sit for the Malaysian Standardized examinations at the end of Year 6, Form 3, and Form 5. It is hoped that these students can be at par with the typical students and become productive members of the society. This is in line with the government's quest to achieve equality of educational opportunities. It is however not easy for these students to prepare themselves for the examinations and this is mainly due to their disabilities such as blindness and deafness. It is conceivable that their performance in these examinations is generally poor. Nonetheless, these students are allowed to pursue their studies in the secondary and upper secondary levels and sit for examinations at these levels even though they lack the basic skills crucial to perform well in these examinations. The challenges faced by their teachers are equally great. However, there are some students who have performed well in these examinations. Thus, an examination of the factors contributing to the success of these

students will shed some light on efforts which can be expanded by all those responsible for the education of students with special needs so as to help them to prepare well for these examinations. In an examination-oriented system such as ours, this is important as the students' future in terms of further education and jobs rely heavily on their examination performance.

In this paper, the focus is on the academic performance of the deaf and blind students. Vygotsky's theory of Cognitive Development (1978) was utilized as a basis of discussion. According to Omrod (2006), Vygotsky believed that adults in a society foster children's cognitive development in an intentional and systematic way. In more specific, adults continually engage children in meaningful and challenging activities and help them perform the activities successfully. Vygotsky (1978) also emphasized on the importance of society and culture in promoting cognitive growth. One of the major assumptions of this theory is that adults in every culture will pass down not only physical tools to help their children survive, but also cognitive tools such as strategies, maps, systems, and so on. These physical and cognitive tools will assist and enhance the development of children in the particular culture. Another important assumption is that children as adaptive individuals are able to accomplish more challenging tasks when they are assisted and guided by someone more advanced.

Studies have shown that there are several factors which contribute to the academic success of these students; these include parental involvement, teachers' and peer's influences, and the students themselves. The student factor can be seen as pivotal for as Vygotsky (cited in Daniels, 2001; Scheetz, 2001) had stated, the personal psychological process of the individual depends to a great extent upon the individual's exposure to social interactions which are shaped by the culture where the individual lives. Vygotsky went on to say that the social environment has been proven to be the foundation in concept attainment, thinking,

attitude, and the acquisition of skills. Therefore, the socio-cultural environment is the catalyst that forms the individual's awareness which later directs his or her attention to the stimuli.

Parents, teachers, and peer groups form the socio-cultural environment of the individuals. According to Vygotsky (cited in Daniels, 2001; Scheetz, 2001), the key to academic development is to be aware of the child's intellectual development and guide him or her to reach a more complex intellectual level. This aspect of Vygotsky's theory has been highlighted by several findings, particularly by the studies related to disabled children. Among other, Luckner and Muir (2001) and Luckner and Stewart (2003) found that deaf children had shown academic success when parents involved themselves in the children's learning. In addition, Ngeow (1999), Schargel and Smink (2001) stated that parental involvement is a major predictor of children's academic achievement in school. This is because parents provide a conducive learning environment, determine their children's ability levels with reasonable expectations and actively involve themselves in their children's learning in and out of schools (Stewart and Kluwin, 2001). Meanwhile, studies by Sandra (2000) and Miedel and Reynolds (2000) have proven that parental involvement imposes great effects on their children's academic success. They found that children performed better in their school tests, attend school regularly and complete their school works. Moreover, the children also showed positive behaviour and attitudes. Shargel and Smink (2001) also found that when parents involved themselves in their children's learning, they were more successful, achieved better grades, have good school attendance, consistently completed their school work, showed good behaviour and positive attitudes, with teachers' and parents' good expectations of them, and fewer instances of anti-social behaviour among the children. Similarly, a study by Antia, Jones, Reed and Kreimeyer (2009) on 197 deaf students also showed that parental

participation in school is significantly related to academic outcomes. In this study, the deaf children mentioned that their self-motivation was influenced much by their parents and families.

For optimum learning for the deaf and blind children, another important element in the socio-cultural environment is the support services. Teachers play a very significant role in helping these students realize their potentials. According to Cosby (1998), a true test for a healer is to heal people who need it most. Children could be altered by simple motivational factors like direct role models and forming emotional bonds with them. In other words, a teacher has to teach from the heart, and the children's biggest needs seem to be a teacher who cares about them and their individual needs. Therefore, the measure of a great teacher is working with the most raw, unrefined students and making a change. In support of Cosby's statement, Kritzer (2009) postulated that high quality mediation on deaf children could help improve Mathematical abilities, and teachers could make a big difference by encouraging these children to think and engaging them in cognitively challenging questions.

Peer support is another important influence to students' learning. There are three commonly cited benefits of peer influence on students' learning, namely, learning of academic skills, the development of social behaviours, and classroom discipline. Many young people with disabilities (deaf and blind particularly) have few friends and limited support from peers (Gottlieb and Leyser, 1981). In fact, they often report feelings of rejection and isolation. The impact of social isolation is far-reaching, affecting not only friendships, but also academic success (Hawken, Duran and Kelly, 1991). Benefits from positive relationships with others exist for everyone, including students with disabilities. Many types of relationships are important to development. One approach is to successfully integrate isolated students into academic environments so as to help create informal peer support groups and friendships. Peers can serve some of the same important functions which are generally associated with adult mentors. Peers can act as role models, offer friendship, advice and information, promote a sense of belonging, and empower one another (Byers-Lang and McCall, 1993; Kram and Isabella, 1985; Stainback, Stainback and Wilkinson, 1992). Moreover, students can discover their potential to participate in academic opportunities and careers by interacting with others with similar interests and concerns.

## OBJECTIVE

The objective of this paper is to discuss the factors which contribute to the academic achievement of deaf and blind students based on the reports by the teachers, students, and school administrators. In more specific, the paper highlights the psycho-social profiles of the students who have excelled in their examinations, in terms of their motivations and the influence of their peers, parents and teachers towards their performance, as reported by themselves and their teachers. In addition, insights from school administrators and teachers regarding ways to help students with special needs prepare for the examinations are also highlighted.

## METHODOLOGY

This is a descriptive study which employs both the quantitative and qualitative approaches. The quantitative data were analysed to examine the special needs students' performance in the examinations and administrators' perspectives on factors relating to students' performance. Special needs students are those with specific learning needs. In this study, they include students who are blind and deaf. Retrospective qualitative data were analysed from the interviews with the teachers of the students who did well in the examinations as well as with the students themselves. The teachers of these students were asked to recall their experiences with them while they were preparing for the respective examinations. Likewise, students were also asked to highlight the factors which contribute to their success in the examinations.

In this study, excellent students refer to the blind and deaf students who have scored at least 1A in the standardized examinations (UPSR/PMR/SPM). Fifty teachers and 35 excellent students were interviewed from two types of schools, the Special Education School (SKPK and SMPK) and the normal schools with special classes (Integrated) (Table 1).

The teachers were interviewed using the focused group interview technique, while the students were interviewed individually, guided by open-ended questions. These interviews were done to obtain information from various sources and to ensure validity through triangulation. Triangulation is one of the strategies to enhance internal validity by using multiple investigators, multiple sources of data or combining multiple methods to strengthen and confirm the findings (Merriam, 1998). In this study, source triangulation was applied. The data collected and generated from students were confirmed and verified with other source, involving teachers.

Schools involved in the study were Special Schools and Integrated Schools where students with special needs are integrated with students in the main stream. Students who were interviewed obtained at least one A in the respective examinations. The quantitative data were analysed using SPSS to compute descriptive statistics, including means and standard deviations. The qualitative data were analysed using NVivo software. The interviews were first transcribed and converted into RTF files. The files were then used as the source data for NVivo. This software helps manage and organize themes which were formed from the excerpts of the interview data. Using open coding, the themes were categorized accordingly.

## FINDINGS

### Achievement of Students with Special Needs in Examinations

The findings of this study show that the overall mean score for every subject in the UPSR (Primary School Assessment Test) taken at grade six between the years 2000 and 2005 was between Grade E (1) and Grade D (2). This is very low considering there are five grades altogether ranging from Grade A (5) to Grade E (1). This pattern also indicates that the blind and deaf students have problems in all the subjects. Science seems to be the most difficult subject to score for them with the mean scores falling between 1.31 and 1.85. This means that in the overall, the students can barely score D for the subject. The same is also true for their performance in the examinations taken in the secondary level. Majority of these students obtained Es for each subject taken in the Lower Secondary School Assessment (PMR) and the Malaysian Certificate of Education (SPM). However, there were some students who did well in these examinations and obtained As and Bs for some of the papers they sat for. Although the number is small, it indicates that students with special needs have the potential to succeed academically when given the support and care they need.

TABLE 1
The number of the teachers and students interviewed according to their schools

| | Number of teachers and students interviewed | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | Primary (UPSR) | | Total | Secondary (PMR & SPM) | | Total |
| | SKPK | Integrated | | SMPK | Integrated | |
| Teachers interviewed | 12 | 19 | 31 | 6 | 13 | 50 |
| Students interviewed | - | - | - | 15 | 20 | 35 |

*Psychosocial Profile of the Students who Excel in the Examinations*

This study utilized the interview method to gather information on the psychosocial profile and the characteristics of the students who excelled. The psychosocial profile refers to the internal and surrounding external characteristics of these students, to which their success can be attributed. The characteristics were compiled from the interviews conducted with the teachers and the students themselves. The findings show that there are several internal and external factors influencing their learning and achievement. All the factors individually and collectively influence the motivation and effort of the students to learn and excel in their studies.

*Theme 1: Internal Factors*

**Self-motivation**

Students with special needs who excelled in the examinations were able to self-motivate themselves towards achieving their academic goals. This was clearly stated by R1, who said;

> *"If there's effort, you can succeed. I try to motivate (myself), work harder".* (R1 Form 4 is a visually impaired student from the integrated school)

Another respondent, R16 (Form 4 is a visually impaired student from the integrated school) had her own strategies for self-motivation;

> *"I like to write, sometimes I wrote letters to myself, and then I read them back to motivate myself. At home, I keep a lot of motivational posters".* (R16)

In addition, they are also aware of the importance of education for their future and continuously use this to tell themselves to work harder;

> *"I normally (when I learn) think of what I want to become in the future.*

> *Are there (for people with disability) job opportunities? So I have to study harder to get a better job. Put more effort. God willing, (I have) a better future if I put more effort…"* (R12 Form 6 is a visually impaired student from the integrated school).

Another respondent, R11 (a Form 1 learning disabled student from the integrated school) also admitted that thinking about the future helped motivate himself. He wants "bright future and a not difficult life", and because of that he was "enthusiastic and hardworking" in his studies. Some respondents used the success of others, especially family members to increase their motivation. For example, R15 (a Form 4 visually impaired student from the integrated school) said that;

> *"One more thing….all my brothers are in the university. I'm the only daughter. If I don't make it to the university, I will really feel ashamed of myself. If people see the only daughter does not succeed (in going to the university), I feel like (I am) no use. I want to be like them (the brothers). My eldest brother has gone overseas. My father also used to say that if I want people (to look up to) for motivation, I don't have to search far, I have my own brothers."* (R15)

**Hardworking and diligent**

Many of the teachers interviewed said that the excellent students possess a high level of diligence and perseverance. According to T1;

> *"……He is very disciplined in studying……although he doesn't know, (he answer sheet was torn away from the exercise book), he will do himself. Then he will check his answers. If he is not satisfied, he will ask, why is his answer like this…and not like this?"* (T1)

The teachers interviewed used the expressions such as, "put all his effort", "wants to really understand", "can apply", "very hardworking" and "very obedient" to describe the students. The excellent students were also perceived as;

> "always want (to know) more...I teach them in like 80%...but their effort is more than 100%." (T12)

These positive attributes were also highlighted by the other teachers. Among other, T5 said that;

> "She puts a lot of effort and works hard. That's important. She'll never give up. She'll always want additional information. What is taught in the class is never sufficient for her. She wants more. More than other students." (T5)

T5 also added in two terms "*active and proactive*" in describing the excellent students.

### Strong memory

Among the special characteristic of the excellent students, especially those who are visually impaired was having "strong memory". These teachers repeatedly highlighted the attributes among the students, which apparently helped them relate and transfer previous knowledge to new situations. The teachers mentioned the ability to "get very quickly (what was taught)" and "can apply". According to T12;

> "...can remember...what was thought in March (months before), they can still remember. Their memory is strong". (T12)

*Theme 2: External Factors*

### Peer influence and help

The respondents also said that friends greatly influenced their achievement in the examinations.

According to R1 (a Form 4, visually impaired student from the integrated school);

> "I like to study with friends. Because they have (knowledge) that we don't know, we can ask and share experience." (R1)

Studying with friends apparently created a healthy competition among the students to excel in their academic tasks. This was found to be a strong motivator for the students in their learning. According to R13 (a Form 6 visually impaired student from the integrated school);

> "I compete a lot with my friends. If my friends score high, I normally will try to get the same. My friends gave me a lot of encouragement". (R13)

### Family encouragement and support

Many teachers and students interviewed mentioned "*supportive family*" as one of the most important factors influencing their academic achievements. For instance, R15 (a visually impaired Form 4 student from the integrated school) elaborated on how his family had helped him;

> "When I come back (from the hostel) father prepared timetable for me.... asked me to learn in the morning. He said to study hard...so that I can get a good job. Mama is also like him....like to tell stories of how it was when she was poor. My brother...he likes to challenge me ... if I get (what he challenged me), he gives me (a present)". (R15)

Families were also reported to have given continuous encouragement to avoid them from giving up. R16 (a visually impaired Form 4 student from the integrated school) elaborated on how his father had motivated him;

*"I am close to my dad; I have a younger brother who is blind. Dad says study hard be a teacher to students like me..." (R16)*

The teachers cited the same thing, including parents communicating and working with the school "no matter what time it is". Parents of excellent students also "teach and guide them at home", "do exercises with them' and "shower them with love". The parents also give reinforcements to the students when they manage to achieve something. For example, T10 (UPSR teacher for the blind, integrated school) observed that;

*"Their parents are highly committed and work well with teachers…" (T10)*

Two teachers (T12 and T11, UPSR teachers for the deaf) reported that the parents of one of their excellent students hired tutors for their child during the weekends, and the mother of this child would do exercises meant for her child first and checked her answers with the teachers so that she could understand the concepts properly to be able to help her child with her home work.

**Teacher encouragement and support**

Among the influential surrounding factors which have contributed to the success of these students are the teachers' encouragement and support. The students reported that their teachers have always told them to;

*"not stop learning. Must prove ...must move forward" (R4, a Form 1, visually impaired student from integration school).*

This is supported by R12 (a visually impaired Form 6 student from the integrated school) who said that;

*"Teachers help me by giving me tuition classes and (exercises with) past years questions".*

Overall, many of the respondents who had been interviewed attributed their success to helpful and supportive teachers. Furthermore, the teachers also reported that they had gone the extra mile to help their students prepare well for the examinations. Giving extra classes, having drills in answering past examination questions, teaching them using various approaches, giving continuous motivations, and monitoring their progress carefully were some of their efforts to help their students do well in the examinations. In addition, the teachers are also sensitive to the fact that their students need to work extra hard and the stress that they are facing. Humour and fun were often imbued in their teaching to encourage students who are tired or bored. Commenting on one of their excellent students, T1 (UPSR teacher for the deaf, Special Elementary School) said that;

*"we know her too well, just like our own child, she is too focused and does not know how to have fun, when we put some humour to our teaching she seems surprised and responded well….." (T1)*

**Other factors**

The teachers and the administrators from the special and integrated schools also suggested some crucial factors to increase the achievement of students with special needs in the examinations. Among them are the quality of teachers' skills, workshops and programmes for the students to increase their motivation and learning skills, improvement of the infrastructure, and strengthening teaching and learning efforts. The teachers added that the awareness and sensitivity of the school administration of the special needs of the students contributed significantly towards the success of these students. This is because the

school administrators will be more focused to the special programmes conducted in the school and become actively involved in the planning, monitoring, and evaluating the progress of the programmes. As financial constraint could be a limiting factor for the programmes and the students themselves, the school administrators play a great role in ensuring that a substantial amount of fund is allocated for the programmes and the students.

## DISCUSSION AND CONCLUSIONS

In general, most of the deaf and blind students scored grades E and D for the standardized exams. However, a small number did well in the standardized exams by obtaining As and Bs, and this indicates that they have potentials to succeed academically. The factors influencing their achievement include internal factors (self-motivation, diligence and hard work as well as possessing good memory) and external factors (peer influence, parental involvement, teacher encouragement, and school support).

As compared with typical students, the students with special needs who have excelled in their studies show that they have characteristics which can lead to academic excellence. Nevertheless, they need more support from the significant others to succeed. If the significant people around them (family, friends, teachers, and school administrators) give them good support, these students can actually perform well despite all their limitations. As this study has found out, the deaf and blind students perform well when they compete with other students. In fact, they become self-driven towards achievement and strive to achieve the goal they have set. Therefore, parents, teachers, and school administrators should support them by giving corresponding encouragement. This view is supported by the studies such as Miedel and Reynolds (2000) who have concluded that parental involvement has a positive effect on special needs students' success in school, and the Strathclyde Research Centre regarding

teachers' roles in helping these students achieve their potentials.

Meanwhile, climate of the school and classrooms must be conducive enough to offer productive and enjoyable learning, along with extra efforts at teaching these students, go a long way in helping more deaf and blind students to succeed academically. These students need their schools to help their parents to be more involved in their education and ensure a conducive environment for their learning. They need the relevant authorities to be more sensitive to their needs in terms of the format of the examination questions as well as the implementation of the examinations. This is important as these students should not face problems which are not due to their cognitive handicap during the examinations, but rather to their physical handicap. They also need teachers who are well-trained to understand their needs and act accordingly.

This study has shown that Vygotsky's Cognitive Development Theory is also applicable to children with physical disabilities. The role of supportive adults, as well as the cognitive and non-physical tools provided by the culture (such as Braille writing and sign language) have been proven to help these children achieve their maximum potentials.

It is therefore crucial that all those responsible for the education of students with special needs, namely the parents, teachers, schools, and the Ministry of Education, recognize the fact that although these students are mentally retarded and have multiple handicaps, they have the potentials to succeed academically. Hence, teaching them to excel academically is not a 'lost cause', provided that contributory factors discussed above are creatively enhanced.

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# Consumption of Local News in Television and Newspapers and National Pride among Malaysian Youth

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## ABSTRACT

Drawing from the development journalism theoretical perspective, consumption of local news is posited to correlate with national pride. However, empirical evidence on the theoretical relationship between local news consumption and national pride among youth in Malaysia is lacking. Hence, a survey was undertaken to determine the relationships of exposure and attention to local news in television and newspapers with national pride and whether the relationships vary by ethnicity. A total of 625 Malay, 416 Chinese, and 112 Indian youths voluntarily participated in the survey. Controlling age, gender and self-identification, the results of multiple regression analysis showed that exposure and attention to local television news significantly predicted national pride, and the relationships were shown to be true for all the three major ethnic samples but these varied in strength. Exposure and attention to local news in the newspapers was a significant predictor of national pride only for the Chinese sample. Implications of the findings were also discussed.

**Keywords: News media, news consumption, national pride, youth, Malaysia**

## INTRODUCTION

According to Cohen (2008), much has been studied about the influence of mass media on various social outcomes, such as social capital, political participation, civic engagement, and nationalism. However, there exists an important gap in the literature on the relationships of exposure and attention to news of public and national affairs with national pride, and whether the relationships vary as a function of ethnicity. In the pages that follow, the paper describes the rationale and the relevant literature, and reports the method and results of a survey designed to determine whether exposure and attention to local news in television and newspaper are related to national pride among 15 to 25 year old Malay, Chinese, and Indian youths in Malaysia, and whether the relationships vary by ethnicity.

## NATIONAL PRIDE

The sense of pride of being a Malaysian and towards the nation, an important social outcome, serves a number of different purposes. Mobilization of the population, promotion of solidarity and integration (Henderson and McEwen, 2005), and enhancement of collective self-esteem of the nation (Muller-Peters, 1998) are among them. Identification with the nation and national identity, if it is to be meaningful, has to be accompanied not only by a shared understanding of what that nation presents but also the feeling of pride with the positive

characters of the country (Cohen, 2008). According to Muller-Peters (1998), national pride refers to the emotions toward the national collective, emotions which vary with societal and individual processes. Smith and Jarkko (1998) describe national pride as the positive feelings citizens have towards their country, which are derived from one's sense of national identity. They further argue that national pride involves both the feeling that one has some kind of share in an achievement or an admirable quality.

In discussing the domain of the concept national pride, Muller-Peters (1998) argues that pride in one's nation can be seen in general or overall terms (e.g. I am proud of my nation) and with specific contents (e.g., I am proud of our history), and points out that national pride can express itself; first, in terms of cultural-historical pride, and second, in terms of economic-political pride. In the current study, national pride is used to designate the positive affective bond to national characters, symbols, and achievement.

## DEVELOPMENT JOURNALISM THEORY OF NEWS MEDIA ROLE

Development journalism has been advocated and practiced in Asian countries including Malaysia, where nation building remains a priority (Ramano, 2005; Xu, 2008). Within a nation-building approach perspective, the core idea of development journalism theory is that journalists and the news media, as agents of change, are news-information disseminators and interpreters, advocating and supporting national development policies and programmes, and portraying a positive image of the country (Ramano, 2005). In line with this premise, dissemination and interpretation of positive national news should instil national pride. This pride is derived from a sense of national identity, senses of confidence and self-efficacy, and fortified collective self-esteem as a result of news consumption (Shah, McLeod and Yoon, 2001). It is reasonable to expect national news media to continuously engage in reproduction and reinforcement of national narratives that promote and enhance national pride (Guo, Cheong and Chen, 2007).

Given the important development role played by the news media, the issue of media use and effects has been extensively studied. Past studies on mass media effects, mostly in the west, have demonstrated positive as well as negative effects of mass media use on many social outcomes. While the past studies have contributed significantly in understanding the role of the mass media, many (e.g. McLeod, Kosicki and McLeod, 2002) have commented that the mixed findings of the mass media effect studies could be attributed by the fact that different types of media form and content produce different effects. Hence, there is a consensus in the literature arguing for the need to be specific in the type of media and the type of information in the studies on media use and effects (McLeod, 2000).

News use has been found to correlate with a number of social outcomes, such as social capital (e.g. Beaudoin and Thorson, 2006; Fleming, Thorson and Peng, 2005), political participation (e.g. Zhang and Chia, 2006), civic engagement (e.g. Brehm and Rahn, 1977), nationalism (e.g. Guo, Cheong and Chen, 2007), and national pride (Cohen, 2008), to mention a few. Overall, the line of literature in general suggests that people who have high level of newspaper readership and television news viewing have higher levels of social capital, political participation, civic engagement, and social trust.

Of particular interest in the present study is the relationship between national news media consumption and national pride. The study extends the assumption of the positive role of news media in helping spread nationalism, solidify and strengthen national identity and patriotism (e.g. Anderson, 1983; Guo, Cheong and Chen, 2007) to national pride. Studies that specifically examined the relationship of news media use and national pride are scanty, with the exception of Cohen's (2008) study which found that local television viewing is associated with national pride, but the relationship is rather small.

Past studies on mass media effects have also factored in the role of ethnicity in examining the relationship between media use and effects. Beaudoin and Thorson (2006), for instance, found significant differences between Blacks and Whites in terms of media use and its effects on social capital. The explanation for the different media responses and effects has been tied to distinctiveness theory, which posits that media effects are stronger for the minority because ethnicity is expected to be more salient to people of a minority than to those of majority. In addition, bias in media portrayal of ethnic groups could also lead to different media responses and effects, as suggested in the literature (e.g. Appiah, 2001; Beaudoin and Thorson, 2006). Thus, an examination on the relationship between news media use and national pride should also consider the role of ethnicity in the relationship.

## RESEARCH CONTEXT

Malaysia, a multi-ethnic and multi-religion country, and its media system offer an interesting place to test the relationship between the local news consumption and national pride and to determine whether the relationship varies by ethnicity. While there are many ethnic groups, the three main groups are the Malays, Chinese, and Indians. The mainstream news media are readily accessible to the people. Television and newspapers are major sources of news and information for the people (Media Planning Guide Malaysia, 2007). While news media accessibility is high, the news media are highly regulated and controlled by the government. In view of the developmental role of the news media and as part of the nation building agenda, editors and journalists are expected to advocate the objective of building a Malaysian society that is characterized with strong attachment and pride to the country by informing and reinforcing positive national narratives and symbols. The national narratives of national interest in the mainstream news media are a good instrument to cultivate collective consciousness and sense of pride being Malaysians (Tamam *et al.*, 2005).

A review of past studies on the role of the mass media in Malaysia, Hassan (2008) noted that the news media carry a lot of messages on unity and integration, as well as messages that promote nationalism. While there are studies that have found a positive relationship between news media use and a number of social outcomes such as multiculturalism attitude (e.g. Tamam *et al.*, 2008), studies that specifically examined the contribution of exposure and attention to local news in television and newspaper on national pride have been overlooked. Based on the above discussion, the present study tested the hypothesized relationships of exposure and attention to news of public and national affairs in television and newspapers and national pride, and to determine if the relationships vary by ethnicity. The analysis focused on the 15-25 years youth since they made up a substantial and important segment of the Malaysian population, i.e. 28.6 percent of the population (Media Planning Guide, 2007). The findings of the present study will not only contribute to the literature on the linkages of news consumption with national pride but also provide insights into the efficacy of the news media in enhancing national pride among the youths in Malaysia.

## METHODS

### Sample

The sample was composed of 625 Malays, 416 Chinese, and 112 Indians youths. The mean age was 19.5 year (SD = 2.83). Overall, the sample seemed representative in terms of ethnic ratio in the country, with males and females quite evenly represented. The sample also represented youths from all four regions in the Peninsula Malaysia — 23.5% was from the northern, 33.6% from the central, 21.0% from the southern, and 21.9% from eastern region.

### Procedure

The data analyzed were part of a larger data set from the youth attitude and media use survey conducted between October 2007 and January 2008. A section of the youth attitude and

media used survey questionnaire containing questions pertaining to national pride. The self-administered questionnaires, written in Bahasa Malaysia, were administered on individual or group basis and in different social settings—residential areas, schools, and universities/colleges. The secondary school and college/university respondents were recruited from randomly selected schools and institutions of higher learning after approval from the relevant authorities was obtained. With a written permission from the State Education Department of the selected study area, the researcher contacted the randomly selected secondary schools to conduct the survey. For this group of respondents, the questionnaires were administered in group, ranging from 15 to 30 students per group and their participation was on voluntary basis. For the university student samples, two science-based and one Social Science/Humanities faculties were randomly selected from one private and three public universities. The questionnaires were administered during classes with the consent of the instructors of the selected courses. In addition to this, a substantial portion of the survey sample was recruited from residential area. They were invited to, or found at socially acceptable gatherings. Their participation was also on voluntary basis, and the questionnaire was administered on individual basis. The respondents were given ample time to fill in the questionnaire and encouraged to ask if they had any questions for clarification. The time taken to fill the questionnaire ranged from 20 to 40 minutes. The secondary school students took a longer time to fill the questionnaire compared to university/college students and working youth. All the respondents worked on the questionnaire independently after they had been given instruction on how to fill the questionnaire.

## Measures

A measure of national pride consisted of twelve 5-point Likert items. The respondents were asked to indicate how strongly agreed/disagreed they were with the items. The scale essentially measured the strength of pride in socio-political achievement and pride in culture and history. Some examples of the items are "I am proud to be referred as a Malaysian," "I am proud of the country which is made up of various race and ethnic groups," "I am proud of the cooperative spirit achieved among the various ethnic groups," "I feel proud when the national anthem is played at official functions," "I fully accept Vision 2020," "I am proud of the national cultural policy aimed at fostering national identity," "power sharing among the various ethnic groups is a core national attribute that has ensured political stability in the country." All the items loaded on one factor. The Eigen value of the scale was 6.14 and the variance explained by the factor was found to be 51.36. Thus, the scale was reliable with a reliability coefficient of .91.

The respondents were asked to respond to four-category items by estimating how frequently they watched national and public affairs news in the following three television programmes, namely news programme (0= none, 1= less than 30 minutes; 2= 31-60 minutes, 3= more than 60 minutes a day), televised leader speeches (0= "never" to 3= "regularly"), and news magazine-format programme (0= none, 1= less than 30 minutes; 2= 31-60 minutes, 3= more than 60 minutes a day). For each exposure question above, the respondents were also asked to indicate how much attention they paid to the news on a four-point scale (0= no attention at all, 1= little attention, 2= some attention, 3= much attention, 4= very much attention). The exposure score was multiplied to the attention score to create an index of exposure and the attention to news of public and national affairs. The overall mean scores provide the overall measure of exposure and attention to the local television news. Likewise, the respondents were asked to self-report how much time they spent reading newspapers for national and public affairs news (0= none, 1= less than 30 minutes; 2= 31-60 minutes, 3= more than 60 minutes a day) and how much attention they paid (0= no attention at all, 1= little attention, 2= some attention, 3= much attention, 4= very much attention). It is important to note that a higher composite score

indicates higher exposure and attention to news of national and public affairs in the newspaper.

The respondents were asked to report their gender, year of birth, and how they would like to identify themselves with the response options of Malay, Chinese, Indian, Malaysian Malay, Malaysian Chinese, Malaysian Indian, or Malaysian.

*Analysis Strategies*

Data analysis for this study proceeded in three steps. First, the data exploratory analysis was performed to check for data entry error and normality in distribution. A factor analysis and reliability test was performed on the national pride scale constructed for the study. Second, a Pearson correlation analysis was conducted to examine the zero-order correlations between age, gender, self-identification, exposure and attention to public and national affairs news, and national pride. Finally, hierarchical regression analyses were performed to examine the relationship and contribution of the news media exposure and

attention in predicting national. The regression analysis was done in two steps. In the first step, the independent variables were age, gender, and self-identification. In the second step, exposure and attention to television and newspaper news were added to the regression analysis. The data were disaggregated by ethnicity.

## RESULTS

To better understand the findings, the descriptive statistics for gender, age, self-identification, national pride, and news exposure and attention variables were produced, as presented in Table 1. In terms of gender distribution, the Malay sample was quite balanced in the proportion of males (52.1%) to females (47.9%). However, there were slightly more females (59.5%) in the Chinese sample, and more males (59.5%) in the Indian sample. Meanwhile, the proportions of the males and females in the three groups were adequate for comparative analysis. In terms of age, the Malay, Chinese and Indian samples were comparable. Interestingly, more of the Malay

TABLE 1
Descriptive statistics of gender, age, self-identification, exposure and attention to news
of public and national affairs and national pride

| Variables | Malay (n=625) | Chinese (n=416) | Indian (n=112) |
|---|---|---|---|
| Gender | | | |
| Male | 52.1% | 40.5% | 59.5% |
| Female | 47.9% | 59.5% | 40.5% |
| Mean age (year) | 19.3 (2.90) | 19.7 (2.64) | 20.1 (2.84) |
| Self-identification | | | |
| Malay | 54.0% | - | - |
| Chinese | - | 58.0% | - |
| Indian | - | - | 35.1% |
| Malaysian Malay | 32.7% | - | - |
| Malaysian Chinese | - | 33.7% | - |
| Malaysian Indian | - | - | 48.1% |
| Malaysian | 13.0% | 7.9% | 14.5% |
| Mean national pride score | 4.31a (.537) | 3.78b (.639) | 4.16c (.767) |
| Mean news exposure and attention score | | | |
| TV | 4.27a (2.123) | 1.73b (1.496) | 3.89c (2.570) |
| Newspaper | 3.47a (2.906) | 2.84b (2.434) | 3.75a,c (3.319) |

*Note*: Different subscripted means are significantly different at $\rho < .01$

and Chinese respondents were found to identify themselves in term of ethnicity first, i.e. 54.0% and 58.0% respectively. Only 35.1% of the Indians identified themselves in term of ethnicity first. The number of the respondents identifying themselves as Malaysians was rather small, less than 15.0%.

The mean scores on the national pride were on the high side of a maximum score of 5, suggesting that the respondents generally are proud of the country and of being a Malaysian. The Malay sample scored significantly higher (M= 4.31) than that of the Indian and Chinese samples (M= 4.16 and M= 3.78, respectively), [F= 519.5, ρ < .01].

With regard to exposure and attention to public and national affairs, news in television and newspaper, it seems that exposure and attention to local news were on the low side of the range of possible scores. All the means were below the theoretical mid score, suggesting low exposure and attention to local news. While exposure and attention to the local news were rather low, the Malay sample had a significantly higher mean (M= 4.27) as compared to that of the Indian (M= 3.89) and Chinese (M= 1.73) samples [F= 239.4, ρ < .01]. A similar pattern of the results was observed for the newspaper reading [F= 9.31, ρ < .01].

The results of the zero-order correlations are presented in Table 2. Age is positively correlated with exposure and attention to news of public and national affairs in the television (r= .147, ρ < .01) and newspapers (r= .253, ρ < .01), indicating that news consumption increases with age. The data also showed that exposure and attention to television news are positively correlated with newspaper use (r= .458, ρ < .01). Meanwhile, self-identification (identify self in terms of ethnicity first) is negatively correlated with television news consumption (r= -.130, ρ < .01) and national pride (r= -.113, ρ < .01), but not with newspapers news consumption. Age, however, is not correlated with national pride. The findings indicate that age, self-identification, and gender need to be controlled for a possible confounding influence in examining the relationships and contribution of news media exposure and attention on national pride.

The analysis in this study focused on the relationships and contribution of exposure and attention to news of public and national affairs in television and newspaper on national pride. The regression analysis was done separately for the three samples and the results are summarized in Table 3. Taking into account the possible confounding influence of age, gender, and self-

TABLE 2
Zero-order correlations of gender, age, self-identification, exposure and attention to local news and national pride

|  | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|
| (1) Gender (Dummy=male) | -.087* | -.109* | .039 | -.016 | .034 |
| (2) Age | - | .016 | .147* | .253* | .007 |
| (3) Self-identification (dummy= ethnicity first) |  | - | -.130* | -.056 | -.113* |
| (4) Exposure and attention to public and national affairs news in television |  |  | - | .485* | .492* |
| (5) Exposure and attention to public and national affairs news in newspaper |  |  |  | - | .179* |
| (6) National pride |  |  |  |  | - |

*Note*: One-tailed test of significant, * ρ < .01

TABLE 3
Exposure and attention to local news in television and newspaper as predictors of national pride

|  | Malay (n=625) | Chinese (n=416) | Indian (n=112) |
|---|---|---|---|
| Variables | Std. Beta | Std. Beta | Std. Beta |
| Step 1. Demographic and control variable |  |  |  |
| Gender (1=male) | .163* | .135* | .009 |
| Age | -.123* | -.175* | .225* |
| Self-identification (1=ethnicity) | -.206* | -.223* | -.328* |
| R-square | .082* | .100* | .166* |
| F value | 13.778* | 11.329* | 5.323* |
| Step 2. Exposure and attention to local news |  |  |  |
| Television news | .243* | .135* | .295* |
| Newspaper | .018 | .161* | .086 |
| R-Square | .139* | .157* | .258* |
| F value | 16.669* | 12.644 | 6.075* |
| R-Square change | .057 | .057 | .092 |

*Note*: * $\rho < .01$

identification, the results in the Table 3 clearly show that exposure and attention to television news correlate positively and significantly with national pride, at $\rho < .01$. The relationships hold true in all the three samples, and the relationships seems to be stronger in the Indian ($\beta= .295$, $\rho < .01$) and Malay ($\beta= .243$, $\rho < .01$) samples than that of the Chinese ($\beta= .135$, $\rho < .01$). However, no significant correlation was observed between exposure and attention to news of public and national affairs in the newspaper with national pride for the Malay and Indian samples, except for the Chinese sample ($\beta= .161$, $\rho < .01$). Overall, the findings show that exposure and attention to television news are the only significant predictors of national pride. Exposure and attention to news of public and national affairs in television and newspapers collectively explained about 5.7 % of the variance in both the Malay sample and the Chinese sample. The variance accounted by these two factors is slightly higher (about 9.2%) for the Indian sample.

Interestingly, the results of the regression analysis also show that self-identification is significantly negatively correlate with national pride for all the three samples ($\beta= -.206$, $\rho < .01$ for the Malay, $\beta= -.223$, $\rho < .01$ for the Chinese; $\beta= -.328$, $\rho < .01$ for the Indian). The results imply that the Malay, Chinese and Indian respondents, who identify more in nationality term, seem to have higher pride toward the nation and of being Malaysians as compared to those who identify self more in ethnicity term.

**DISCUSSION AND CONCLUSIONS**

While generalizing the descriptive findings to a larger youth population must be done cautiously, the present analysis seems to suggest that youths in the country, aged between 15-25 years, have favourable attitude and feelings towards the country and being Malaysians. Despite of this positive note, it seems that local news consumption among the youth is a bit low. The reason for this is not clear. A lack of interest, low

news information need, and a poor perception of media credibility are possible explanations. Although this study has overlooked questions on antecedents of news media use, it found that older youths seek and consume more local news than the younger ones. This finding is compatible with the findings of a past study (e.g. Zhang and Chia, 2006). Another issue worth pondering is more Malaysian youths asserting themselves more in ethnicity than nationality. The finding, suggesting that ethnicity is an important and core element of social identity among the respondents, is consistent with that of Liu, Lawrence and Ward (2005) who found that ethnicity is an important attribute of social identity among Malaysians. It is important to highlight that this ethnicity emphasis could pose problem in managing interethnic relation issues in the country.

The present study was designed to determine whether exposure and attention to local news in television and newspaper correlate with national pride among 15-25 year youths. At the same time, ethnicity is factored in examining the connection of news consumption with national pride. The contention is the mainstream news media, which are regulated by the government and being an agent of development and nation building, provide narratives that should enhance shared understanding of what that nation presents and feeling of pride with the positive characters of the country and being a Malaysian. The study found mixed supports for the contention. Only television was found positively and significantly correlated with national pride for all the three ethnic groups studied. The positive association between television news consumption and national pride implies that television news to some extent have an impact on the youths in instilling national pride among the youth, despite the relatively low consumption of television news among them. In addition, the association between television news consumption and national pride was much weaker for the Chinese than for the Malay and Indian samples. This indicates that the impact of television news consumption in instilling national pride is

relatively greater on the Malay and Indian samples than on the Chinese. The finding is compatible with previous research that has demonstrated that media responses and effects vary by ethnicity (e.g. Beaudoin and Thorson, 2005).

While television news seems to have a role in instilling national pride among youths, the same cannot be assumed for newspaper. Contrary to the contention, exposure and attention to news in the newspaper were found to have no association with national pride for the Malays and the Indians. If this is the case, it then implies that the mainstream newspaper in the country has failed in its role in instilling national pride among the youths. However, a significant finding was observed for the Chinese sample only. It is important to consider explanations for the mixed findings. A possible explanation could be the differential in perception of newspaper credibility. Meanwhile, low involvement, an attribute of newspaper consumption, could be another explanation for the non-existing relationship between newspaper reading and national pride. It makes sense that television news consumption has a greater impact than the newspaper consumption because television viewing is a high involvement information processing activity as compared to that of newspaper reading (Cohen, 2008).

The findings generally show that exposure and attention to news of public and national affairs in television and newspaper contributed about 5.7%, 5.7%, and 9.2% in the variance in national pride for the Malay, Chinese and Indian samples, respectively, with television news as a significant determinant. Despite the small contribution, the news media (particularly the television) should be strategically used in citizenship education. It is also important to take note that the news media effect vary by ethnicity, and therefore it should be considered in employing the news media as an agent of nation building.

Nonetheless, several limitations need to be acknowledged. First, the measurement of national pride may be inadequate if it is viewed

as a multidimensional construct. Moreover, the measure may have not adequately captured the theoretical domain of the construct of national pride. Second, a self-report measure of exposure and attention to news in news media is not the best method to measure news consumption. In addition, the study has not ascertained which news types and narratives are actually consumed and contribute to national pride. Thus, the study should be replicated to adult samples to improve generalizability of the findings. In addition to improve measurements, future research should also extend the study of how news media effects on national pride and other social outcomes may differ according to ethnicity.

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# Strengthening Muslim Family Institution: A Management Perspective

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## ABSTRACT

Today, the Muslim society is embroiled with many problems and there are reasons for this. It is the view of many Muslim scholars that presently the Muslim family institution is not as strong as it is supposed to be. The objective of the present research was to apply Quality Function Deployment (QFD) and Analytic Hierarchy Process (AHP) to strengthen Muslim family institution. According to the QFD framework, two types of information are required, namely the 'what' and 'how'. The 'what' includes the requirements for having a strong Muslim family institution, while the 'how' involves the ways to fulfil those requirements. Data are collected from 40 Muslim scholars on a personal contact basis. AHP has been applied to prioritize the requirements ('what'). The QFD exercise provides the prioritized 'technical' requirements ('how'). The findings are expected to provide guidelines for having a strong family institution that can contribute towards developing a healthy society.

Keywords: Analytic hierarchy process, Muslim family management, quality function deployment, priorities

## INTRODUCTION

In the recent time, the Muslim societies all over the world are experiencing problems which have emanated internally as well as externally. In a survey conducted in 1996, under the auspices of United Nation Development Program (UNDP), the Muslim society was depicted as backward (Farooqi, 2007). There are manifold of causes for this backwardness, which include low literacy rate, corruption, lack of motivation to work hard, poverty, unemployment, indifference toward modern knowledge and poor leadership, to mention a few.

In general, education is regarded as the key to solve many of the problems that a society faces. It is for this reason that an utmost emphasis has been placed in Islam to educate its people and the search for knowledge. In fact, the very first verse revealed by Allah (*swt*) to the holy Prophet (*pbuh*) starts with "Read". However, when the literacy rates in many Muslim countries are analyzed, only disappointments surround us. For example, the literacy rates in some Muslim countries are as follows: Afghanistan (36%), Bangladesh (43%), Pakistan (45.7%), Iraq (40.4%), and Yemen (50.2%) (Khan, 2004). According to Spengler (2007), one in five Arabs lives on less than $2 per day, fifteen percent of the Arab workforce is unemployed (this number could be double by

2010), only 1% of the population has a personal computer and half of the Arab women cannot read.

Why is the Muslim society facing all the problems mentioned above? The Muslim society is not supposed to have all these. The views of the authors are drawn from the reports of various mass media, that a large number of Muslims are not practicing Islam. In order to verify this, Muslims need to go back to the family institution, where a child can learn the basic principles of Islam and know the importance of leading a good religious life. If a child is brought up in a proper Islamic atmosphere, the chance of not practicing Islam in his or her later life is minimal and it is hoped that in this way, a healthy society can be created. It is to be noted that no specific problem is addressed in the present study, but a strong family institution is viewed as vital to contain the manifold of problems in the society. Meanwhile, the physical exercise does not address any specific disease as it can prevent many ailments in a human body. The same can be ascribed about the Muslim family institution.

## LITERATURE REVIEW

### Muslim Family Institution

The authors' search for referred journal articles on Muslim family institution did not yield sufficient number of hits. Therefore, they had to rely mainly on the Internet resources.

In order to strengthen a Muslim family, one of the most important matters is the Islamic orientation when a child is in his/her early age. At this time, the parents, especially the mother remains very close to the child (Hussain, 2007). Parents should have a "kangaroo hold" where they can watch their children closely.

Mababaya (2007) mentioned that all Muslim families should practice the rules and regulations of Islam. He further recommended a number of ways to strengthen the Islamic family institution: 1) attending Islamic lectures, forums and seminars, 2) reading books and other materials on Islam, 3) listening to the radio and watching television programmes on Islam, 4)

buying books, booklets, magazines and other reading materials on Islam, 5) learning from the other media (e.g. CDs, videos and cassette tapes) on Islam and family, and 6) using all the opportunities to acquire knowledge about Islam.

According to Hamdan (2007), building self-esteem is one of the important elements in the Islamic family. Children with high self-esteem are capable of making good decisions; they are proud of their accomplishments, willing to take responsibility and ready to cope with frustrations. Thus, parents and the family environment obviously play a crucial role in the development of children's high self-esteem. Her suggestions to improve self-esteem include communicating positively with the children as well as fostering the culture of responsibility and accountability.

According to Aways (2007), *tarbiyah* plays a great role in a Muslim family. He suggested the following steps in bringing up the family: seeking righteous children, setting a good example, placing importance upon *deen*, showing love and kindness towards one's children, teaching good manners, and exercising justice all the time.

Goddard (1999) states that a child development specialist discusses six ways to improve a family institution: 1) caring and appreciation, 2) commitment, 3) communication, 4) community and family ties, 5) working together, as well as 6) flexibility and openness to change.

Lea (1999) emphasizes on "discipline" to strengthen family institution. The author has also mentioned the benefits of discipline, which include successful family, protection of family from being undercut by short-sighted demands, systematic and orderly management, and holding family members to the standards of excellence, etc.

Datuk Syed Othman Alhabshi (1997) reported a survey conducted on 250 youths, out of which, the majority came from lower and middle income families. Some of them revealed that they had sex quite freely, did not perform their prayers and preferred to loaf around than doing anything productive! Ironically, these

youths put the blame on their parents for all these activities and misbehaviours. They complained that they did not experience parental love as much as they would like, they did not see their parents perform prayers and also did not find anything that would attract them to stay in their own homes. Alhabshi (1997, p. 1) further stated that:

> *It would not be fair to leave the problem to the government alone. After all, these youths do not come from the government. They are our own products. We are the first to raise and influence them. We provide the first ever education for them. They have been moulded by us to be what they are. ... To be practical, I feel that we can all attempt to look after our own families to make sure that our own children will not indulge in any of the undesirable activities. One of the ways of doing this is to create a home out of our house.*

He also points out that people are very careful about location, design, façade, colour, style and size of the house. He reminded that one should not just be so obsessed with the physical aspects of the house and forget about the individuals who reside in it.

A strong Muslim family institution can significantly contribute in developing a healthy society. A society can be considered as healthy when its people possess good moral and manners, respect for each other, help and cooperate among themselves, as well as maintain unity and harmony in the entire society. A society devoid of these is vulnerable to fragmentation, and fraught with all kinds of evil. A strong Muslim family may not be a panacea for all the diseases of a society may have, but it can be considered as a multi-vitamin for the body of a society.

The present research focused on how to strengthen a Muslim family institution so that it helps to become good Muslims and develop a healthy society where everybody can live in peace and prosperity. In more specific, the objectives of the present study were:

- To identify the requirements for having a strong Muslim family institution
- To apply Analytic Hierarchy Process (AHP) to prioritize those requirements
- To identify and prioritize technical requirements[1] by applying Quality Function Deployment

*Quality Function Deployment (QFD)*

Quality Function Deployment (Akao, 1990; Bossert, 1991) is a quality management tool that helps design a product/service in response to customer needs and expectations. It is important to note that the QFD requires three kinds of inputs, namely the (1) customer requirements, (2) the technical requirements that address the customer requirements, and (3) the relationships between the customer and technical requirements.

The QFD has been applied in numerous settings. Among other, Pitman *et al*. (1996) showed how the QFD could be used to measure customer satisfaction. They reviewed the MBA programme at Grand Valley State University by utilizing the QFD principles. In general, as a process, the QFD is highly successful in satisfying customer requirements. Evidence has shown that a complex process can be managed using the QFD method and it is a very useful tool in ascertaining customer needs, prioritizing them, and directing organizational resources toward fulfilling those needs.

Zhao and Lam (1998) proposed and tested a methodology for identifying different teaching techniques and their effectiveness in achieving educational objectives from students' perspective. Their paper demonstrates how the QFD and Analytic Hierarchy Process (a multi-criteria decision making tool that is briefly described later) are used in identifying the teaching methods and in evaluating their effectiveness in achieving educational objectives. The study also showed the applications of the AHP and QFD in evaluating the effectiveness of teaching in achieving educational objectives

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[1] Technical requirements are the ways to fulfil the needs of a strong family institution.

at the Department of Applied Statistics and Operational Research of the City University of Hong Kong. With the help of the AHP software Expert Choice, a hierarchy was constructed for the purpose of selecting alternative teaching techniques to achieve teaching excellence. Using pairwise comparisons of subjective judgments from teaching staff, the software package calculated the effectiveness ratings for each of the seven teaching techniques.

Shaffer and Pfeiffer (1995) described the application of QFD in the design of nurse training module. A design team used the QFD approach to identify customer needs and develop teaching module to satisfy customer needs. The module they designed was tested in four large healthcare facilities in the USA, and the design proved very successful.

Though satisfaction of customer needs is the primary objective of applying QFD, the method has been applied in a wide variety of areas due to its generic nature. Apart from the foregoing, some more applications are found in the areas of manufacturing strategic planning (Crowe and Chao, 1996), curriculum and course design (Denton *et al*., 2005), concurrent engineering (Kao *et al*., 2002), and strategic capital budgeting (Partovi, 1999). It is crucial to note that in the present work, the researchers were interested to collect information on the requirements of having a strong family institution (considering family members as customers, and the requirements of strong family institution can be treated as customer requirements) and how these requirements could be fulfilled. This makes the QFD a suitable choice to pursue the objectives of the present study.

*Analytic Hierarchy Process*

Analytic Hierarchy Process (AHP) (Saaty, 1977), a popular multi-criteria decision making tool, was developed by Prof. Thomas L. Saaty at the Wharton School of Business in 1977. This was designed to aid in the solution of complex, multiple criteria decision making problems in a number of application domains. The method enables the people to work with both tangible and intangible factors which employ a 1 to 9 weighting scheme for paired comparisons (Saaty, 2000). According to the originator, a hierarchy can be constructed by creative thinking, imagination and using people's understandings. This method has been found to be effective and practical in making many kinds of complex and unstructured decisions (Vargas, 1990; Vaidya and Kumar, 2006). The method has also been widely used for ranking of a set of factors.

## RESEARCH METHODOLOGY

The present research was conducted based on the interviews of 40 Muslims, of whom some are well-known Islamic scholars. The main criteria for choosing the respondents were high level of education (at least master's degree holders), sound knowledge on Islam, and thoughtfulness on the Islamic civilization. The majority of the respondents comprised four levels of academicians working in various departments of International Islamic University Malaysia, namely professors, associate professors, assistant professors and lecturers. They were asked about the requirements for having strong Muslim family institution and the possible ways to fulfil those stated requirements. A recorder was used to tape record their statements, and the researchers also wrote down their articulated salient points at the same time.

In the first phase of data collection, 25 interviews were conducted to find out Muslim family institution requirements ('what') and the possible ways to fulfil those stated requirements ('how'). In the second phase, the objective was to prioritize the Muslim family requirements. For this purpose, once again, 15 respondents were contacted. They were shown a compiled list of "what" and were asked to prioritize them using the Analytic Hierarchy Process (AHP). Since the AHP is a technical method, its working procedure was briefly described to each of the 15 respondents. They were also requested to fill in the QFD matrix that related the customer requirements with the technical requirements. They were designated as the respondents because

they responded to the researchers' queries, although no formal questionnaire was prepared for them.

After the collection of data in both Phases 1 and 2, the Quality Function Deployment (QFD) was used to finally rank the technical requirements. The QFD uses a specially constructed matrix comprising customer and technical requirements. All the inputs were aggregated and then fed into a sketch that is known as the house of quality (see *Fig. 1*).

The customer requirements or the "what" were listed in the left-hand side of the matrix and the technical requirements were arranged on the top of the house. A proper implementation of the technical requirements was expected to satisfy the customer requirements. After determining the weights of the customer requirements, using some suitable techniques (in this paper the AHP was employed), the next step was to find out the relationship between the customer and technical requirements. It is important to note that one single customer requirement may be related to more than one technical requirement and vice versa. Usually, four symbols are used to represent the relationships (*see* Table 1).

TABLE 1
Various symbols used in the QFD matrix

| Symbol | Meaning | Weight |
|--------|---------|--------|
| ◉ | Very strong relationship | 9 |
| ● | Strong relationship | 6 |
| ○ | Medium relationship | 3 |
| ° | Weak relationship | 1 |

If there is any technical requirement that is not related, the corresponding cell in the grid matrix is left blank. When all the possible relationships between every pair of customer and technical requirements have been identified, one can determine the weights of all these technical requirements. This is done using the following formula:

$$t_j = \sum_{i=1}^{m} c_i r_{ij}, j=1,2,...,n \qquad (1)$$

where
$t_j$ = weight of the jth technical requirement
$c_i$ = weight of the ith family requirement (in the present study this is determined by AHP)
$r_{ij}$ = weight of the relationship between $i^{th}$ customer requirement and $j^{th}$ technical requirement ($r_{ij}$ = 0 or 1or 3 or 6 or 9)
m = number of customer requirements
n = number of technical requirements



*Fig. 1: House of quality framework*

## DATA COLLECTION AND ANALYSIS

As mentioned previously, altogether there were 40 respondents contacted for the data collection on the proposed topic and all of them belonged to various departments and divisions of the International Islamic University Malaysia (*see* Table 2).

TABLE 2
Affiliations of the respondents

| No. | Department | No. of respondents |
|-----|-----------|--------------------|
| 1 | Islamic Revelled Knowledge (IRK) | 9 |
| 2 | History | 2 |
| 3 | Economics | 9 |
| 4 | Qur'an and Sunnah | 5 |
| 5 | Fiqh and Usul al-deen | 5 |
| 6 | General Studies | 2 |
| 7 | Political Science | 2 |
| 8 | Sociology | 1 |
| 9 | Laws | 1 |
| 10 | Others* | 4 |
| Total | | 40 |

The category "others" comprises of four administrative officers working in various divisions of the university.

A list pertaining to the requirements for having a strong family was generated when they answered the open-ended question, "what are the requirements for having strong Muslim family institution?" The words were tape-recorded as well as written down as articulated by the interviewees. From these detailed accounts, a synthesized list was obtained by considering the common and seemingly more important requirements. This synthesized list is shown in Table 3. It is also crucial to noted that there is a bit of overlapping between the requirements; however, no pair of requirements is exactly the same.

TABLE 3
Synthesized list of family requirements

| Code | Requirements |
|------|-------------|
| C1 | Islamic education and manner |
| C2 | Trust among family members |
| C3 | Moral character |
| C4 | Knowledge on basic principles of Islam |
| C5 | Respect each other |
| C6 | Social awareness |
| C7 | Fairness and justice |
| C8 | Transparency |
| C9 | Love and affection |
| C10 | Mutual understanding & cooperation |
| C11 | Patience |
| C12 | Discipline in the family |
| C13 | Good and positive values |
| C14 | Self-esteem and spiritual enhancement |

In the next phase, 15 respondents were contacted to prioritize the above synthesized list of requirements. Since the AHP was used for the prioritization process and this is a technical method, each respondent was briefed about the working process of the AHP. After collecting and combining all the individual pairwise comparison matrices, a synthesized pairwise comparison matrix (PCM) was formed using geometric mean rule of Analytic Hierarchy Process (AHP) (Aczél and Saaty, 1983; Condon *et al.*, 2003). *Fig. 2* shows the synthesized pairwise comparison matrix.

Expert Choice (EC) is a one of the Windows-based software that has implemented Analytic Hierarchy Process to make decisions involving multiple criteria. The software is also used to rank a set of factors according to their level of importance. For the present problem, EC 2000 was used to derive the priorities of the requirements, as shown in *Fig. 3* and Table 4.

*Fig. 2: Synthesized pairwise comparison matrix for family requirements using geometric mean rule of AHP*



*Fig. 3: Individual weights of family requirements determined by Expert Choice 2000 software*

The five most important requirements were observed as:

- Moral character

- Knowledge on basic principles of Islam

- Fairness and justice

- Discipline in the family

- Islamic education and manner

After collecting the family requirements, the same respondents were asked another open-ended question, "what are the possible ways to fulfil those requirements?" As expected, the respondents articulated their responses in a much unstructured manner. The responses were unstructured not because of the unstructured question was asked, but it was rather due to the very nature of the question itself. On the basis of their responses, a list of technical requirements was generated and synthesized, as shown in Table 5.

TABLE 4
Prioritized family requirements

| Code | Requirements | Weight | Rank |
|------|--------------|--------|------|
| C1 | Islamic education and manner | 0.096 | 5 |
| C2 | Trust among family members | 0.037 | 11 |
| C3 | Moral character | 0.135 | 1 |
| C4 | Knowledge on basic principles of Islam | 0.121 | 2 |
| C5 | Respect each other | 0.030 | 13 |
| C6 | Social awareness | 0.029 | 14 |
| C7 | Fairness and justice | 0.102 | 3 |
| C8 | Transparency | 0.034 | 12 |
| C9 | Love and affection | 0.078 | 6 |
| C10 | Mutual understanding and cooperation | 0.059 | 8 |
| C11 | Patience | 0.069 | 7 |
| C12 | Discipline in the family | 0.097 | 4 |
| C13 | Good and positive values | 0.059 | 9 |
| C14 | Self-esteem and spiritual enhancement | 0.055 | 10 |

TABLE 5
Synthesized technical requirements

| No. | Technical requirements |
|-----|------------------------|
| 1 | Role of parents |
| 2 | Ta'lim and tarbiyah based on divine knowledge |
| 3 | Spouse selection |
| 4 | Gain knowledge about society |
| 5 | Effective communication |
| 6 | Role of government |
| 7 | Family library |
| 8 | Awareness of negative elements of media |
| 9 | Practice Islamic culture |
| 10 | Role of neighbours and relatives |
| 11 | Empowerment |
| 12 | Family meeting |
| 13 | Role of teacher as guardian |
| 14 | Effective leadership |
| 15 | Role of media (national & global) |
| 16 | Role of religious leadership |
| 17 | Role of NGO (Non governmental organization) |

After obtaining the technical requirements, the construction of the House of Quality (HOQ) was started and the relationships between the family requirements and the technical requirements were also established. By using four different categories of relationships, as stated previously, the main matrix of House of Quality diagram was filled up (see *Fig. 4*). Afterwards, the weights of all the technical requirements were calculated using formula (1) which was provided in Research Methodology section.

For example, the weight for the "role of parents" is $(9\times0.135) + (9\times 0.121) + (9\times0.102) + (9\times0.097) + (9\times0.096) + (9\times0.078) + (9\times0.069) + (9\times0.059) + (9\times0.059) + (6\times0.055) + (9\times0.037) + (3\times0.034) + (9\times0.030 + (9\times0.029) = 8.64$.

The weights of all the technical requirements are shown in the 3rd row from the bottom in *Fig. 4*. From the weights of the technical requirements, one can determine their ranks. In Table 6, the technical requirements are arranged according to their ranks. If these technical requirements are properly implemented, it is hoped that the

Fig. 4: House of quality for strengthening Muslim family institution

**Standard 9-6-3-1**

| | | |
|---|---|---|
| Very strong | ◙ | 9 |
| Strong | ● | 6 |
| Moderate | ○ | 3 |
| Weak | ∘ | 1 |

| | | 1 Role of parents | 2 Ta'lim and tarbiyah based on divine knowledge | 3 Spouse selection | 4 Gain knowledge about society | 5 Effective communication | 6 Role of government | 7 Family library | 8 Awareness of negative elements of media | 9 Practice Islamic culture | 10 Role of neighbours and relatives | 11 Empowerment | 12 Family meeting | 13 Role of teacher as guardian | 14 Effective leadership | 15 Role of media | 16 Role of religious leadership | 17 Role of NGO's | Weight | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C1 | Moral character | ◙ | ◙ | ◙ | ○ | ● | ● | ● | ● | ◙ | ◙ | ∘ | ● | ◙ | ◙ | ● | ● | ∘ | .135 | 1 |
| C2 | Knowledge on the basic principles of Islam | ◙ | ◙ | ◙ | ○ | ○ | ◙ | ○ | ○ | ◙ | ● | ∘ | ◙ | ◙ | ● | ● | ◙ | ∘ | .121 | 2 |
| C3 | Fairness and justice | ◙ | ◙ | ○ | ○ | ● | ● | ∘ | ∘ | ◙ | ● | ○ | ● | ● | ◙ | ○ | ● | ○ | .102 | 3 |
| C4 | Discipline in the family | ◙ | ● | ● | ○ | ● | ∘ | ○ | ○ | ◙ | ● | ○ | ◙ | ● | ● | ○ | ● | ○ | .097 | 4 |
| C5 | Islamic education and manner | ◙ | ◙ | ◙ | ○ | ◙ | ● | ◙ | ○ | ◙ | ○ | ∘ | ● | ◙ | ● | ● | ◙ | ○ | .096 | 5 |
| C6 | Love and affection | ◙ | ● | ○ | ∘ | ● | ∘ | ∘ | ○ | ◙ | ○ | ○ | ● | ○ | ● | ∘ | ○ | ○ | .078 | 6 |
| C7 | Patience | ◙ | ● | ○ | ○ | ● | ∘ | ∘ | ∘ | ● | ○ | ○ | ○ | ○ | ● | ∘ | ○ | ∘ | .069 | 7 |
| C8 | Mutual understanding & cooperation | ◙ | ● | ● | ● | ◙ | ∘ | ∘ | ∘ | ● | ● | ○ | ◙ | ○ | ● | ∘ | ● | ∘ | .059 | 8 |
| C9 | Good and positive values | ◙ | ◙ | ● | ● | ● | ● | ○ | ○ | ◙ | ● | ∘ | ● | ◙ | ● | ∘ | ● | ● | .059 | 9 |
| C10 | Self-esteem and spiritual enhancement | ● | ◙ | ○ | ○ | ● | ∘ | ∘ | ○ | ● | ● | ● | ○ | ● | ● | ○ | ○ | ∘ | .055 | 10 |
| C11 | Trust among family members | ◙ | ● | ◙ | ○ | ● | ∘ | ∘ | ○ | ● | ○ | ○ | ● | ∘ | ● | ○ | ○ | ∘ | .037 | 11 |
| C12 | Transparency | ○ | ● | ○ | ● | ● | ○ | ∘ | ● | ○ | ○ | ○ | ● | ○ | ● | ● | ● | ○ | .034 | 12 |
| C13 | Respect each other | ◙ | ◙ | ○ | ◙ | ● | ◙ | ○ | ● | ○ | ○ | ∘ | ● | ◙ | ● | ◙ | ◙ | ◙ | .030 | 13 |
| C14 | Social awareness | ◙ | ● | ○ | ○ | ● | ∘ | ∘ | ∘ | ● | ● | ○ | ● | ● | ● | ○ | ● | ○ | .029 | 14 |
| | Weight | 8.64 | 7.80 | 6.34 | 3.31 | 6.29 | 4.24 | 3.10 | 2.80 | 7.88 | 5.34 | 2.17 | 6.47 | 6.63 | 6.89 | 4.11 | 5.85 | 2.53 | | |
| | Column Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | | |
| | Ranking of the technical requirements | 1 | 3 | 7 | 13 | 8 | 11 | 14 | 15 | 2 | 10 | 17 | 6 | 5 | 4 | 12 | 9 | 16 | | |

Muslim family institution will be strengthened, and consequently a society that is with moral, peaceful, and progressive, will be developed.

TABLE 6
The ten most important technical requirements

| No. | Technical requirements | Rank | Weights |
|-----|------------------------|------|---------|
| 1 | Role of parents | 1 | 8.64 |
| 2 | Practice Islamic culture | 2 | 7.88 |
| 3 | Ta'lim and tarbiyah based on divine knowledge | 3 | 7.80 |
| 4 | Effective leadership | 4 | 6.89 |
| 5 | Role of teacher as guardian | 5 | 6.63 |
| 6 | Family meeting | 6 | 6.47 |
| 7 | Spouse selection | 7 | 6.34 |
| 8 | Effective communication | 8 | 6.29 |
| 9 | Role of religious leader | 9 | 5.85 |
| 10 | Role of neighbours and relatives | 10 | 5.34 |

## DISCUSSION OF THE FINDINGS

In the following, the ten most important factors identified for strengthening Muslim family institution are further elaborated in this study.

**Role of parents:** If Muslim parents hope to succeed in their pursuit to raise children Islamically, they must develop a better understanding of how children grow and learn; they need to understand the processes of moral development and the methods of effective teaching and learning. Children will not become moral individuals simply because we want or tell them to do so. They will become moral individuals *by cultivating their minds and hearts*, and by having opportunities to actually see and apply Islamic values in practice (Tauhidi, 2007). To a large extent, the future will depend on how well we educate our children today and to what extent we are successful in transferring the sacred vision of life to them. Attention on the following matters is also drawn:

*Teaching moral behaviour*: The most important part of parents' role in the family is teaching moral behaviour to their children. It is the sublime responsibility of the parents to be morally upright all the time and teach children to be so all the time.

*Cognitive development*: Parents can influence their children's cognitive development in a number of ways. This influence may be in terms of the amount of stimulation and attention a child receives. Parents should identify the specific ways of cognitive development for their children.

*Personality*: Children may learn some aspects of their personality through selective reinforcement and imitation of their parents' behaviour. In order to build the children's personality in the family, parents are the best example.

**Practicing the Islamic culture:** As a part of the Islamic culture, there are some issues which Muslims are required to adhere to. These are pertaining to the names, religious practices, holidays and festivals, marriage, public ceremonies, Islamic clothing, etc.

*Names*: When a baby is born in a Muslim family, it is considered Allah's great blessing for the family. Children bring happiness and joy, and also great responsibilities on the parts of the parents. One of the very first duties parents have toward new born, besides physical care and love, is to give a meaningful Islamic name that carries honour and dignity. It is reported that the Prophet (*pbuh*) said: "*On the Day of Resurrection, you will be called by your names and by your fathers' names, so give yourselves good names*" (*Abu Dawud*).

*Religious practices*: Muslim culture generally includes the essential practices prescribed in Islam. The five formal acts of worship which help strengthen a Muslim's faith and obedience are often called the "Five Pillars of Islam", namely the declaration of faith, daily prayer, almsgiving, fasting, and pilgrimage.

*Muslim's daily life*: Muslims are expected to be the best in morals and manners. Islam forbids any action which infringes the rights of others or harms oneself. Furthermore, Muslims need to make a balance in dealing with life and remaining mindful of their duties to Allah (swt) and to others.

*Holidays and festivals*: Muslims celebrate many festivals including *Eid-ul-Fitr, Eid-ul-Adha, Muharram, Milad-un-Nabi, etc*. In some Muslims countries, people do not perform these festivals keeping the proper decorum, especially *Muharram*. It is important to observe the festivals in a proper manner.

*Marriage*: Marriage is an important element in family institution. The final Prophet of Islam, Muhammad (*pbuh*) stated that 'marriage is half of religion' (Al-Bayhaqi); there are numerous *hadiths* which underscore the importance of marriage and family. In Islam, marriage is a legal bond and social contract between a man and a woman as prompted by the *Shari'ah*. Unfortunately, in many Muslim families, many un-Islamic practices, e.g. dowry, relating to marriage are observed. In order to have a strong Islamic family, it is extremely important to strictly follow the Islamic guidelines of marriage.

*Clothing*: The Islamic dress code is mentioned in the *Qur'ān* and amplified through Prophet Muhammad's (*pbuh*) teachings and practices. A Muslim woman is required to cover all her body with the exception of the front part of the face and hands. Islam has also prescribed a dress code for Muslim males. Allah (swt) says:

> *"Say to the believing man that they should lower their gaze and guard their modesty; that will make for greater purity for them, and God is well acquainted with all they do. And say to the believing women that they should lower their gaze and guard their modesty; that they should not display their beauty and ornaments except what must ordinarily appear thereof"* *(Al-Noor 24:30-31).*

**Ta'lim and tarbiyah:** *Ta'lim* (education) and *tarbiyah* (training) for children should begin very early. The purpose of this is to transform a child's life into a sound Islamic personality, with a good character and moral, strong Islamic principles, sound Islamic knowledge, proper Islamic behaviour, and the wisdom to handle the demands of life in a responsible and matured fashion. Such training should not consist merely of a set of directives, but far more importantly, the parents' unfailing submission to God through a sincere and conscientious practice of the Islamic teachings. An essential part of this training, beginning very early in life, is obedience, respect and consideration for the parents themselves. A well-known Muslim proverb is, "the pleasure of God is the pleasure of the parents."

The Islamic training aims, first, at giving the Muslim child a correct understanding of and the relationship to reality. He is taught very early that it does not consist merely of the material world which we observe and experience but of an unseen dimension as well, at the centre of which is God, the Most High. God's absolute power and sovereignty, man's total dependence on Him and his place in the scheme of things, the existence of Angels and also of Satan and his forces, are all essential parts of this reality. A child is able to understand all these, and a clear understanding of the purpose of his life, the certainty of death and of returning to God when he or others die, and the future Life in the Garden or the Fire forms a vital part of his consciousness and comprehension of reality as he grows up. At the same time, he is taught to love God, the Source of the innumerable blessings, which fill his life, above everything, and that love and thankfulness to Him are best expressed in obedience to His commands.

**Effective leadership:** Basically, leadership is the ability to inspire others to contribute toward the effectiveness and success of the organizations of which they are members (Mcshane and Vongallnow, 2005). The lessons of leadership apply not only to our organizations and community associations, but also to a family unit. Each family has its own ways of deciding

who has the power and authority within the family environment, and which rights, privileges, obligations and roles are assigned to each family member. In most Muslim families, parents are expected to be the leaders or executives of the family, and children are expected to follow the leadership of their parents. As children grow older, they will ask for, and should be allowed, more autonomy, while their opinions should be considered when decisions are made; however, parents are the final authorities. According to the findings, effective leadership is one of the most important factors for having strong family institution. It will be easier for the family members to carry out any job if effective leadership is in place in the family.

It is observed that the families of all kinds tend to do better when they are spurred by some purpose greater than themselves, without sacrificing their own essential growth needs. A family can run very well when their relationships are exemplified by some common purposes, set of values or shared enterprise and those families fare better when the children are raised with some set of values which transcend mere self-interest. More often, these "wider missions" can emerge organically from the relationship of the partners and children. Value statements like a good mission statement for a family should be relevant enough to add meaning and context in specific situations, while broad enough to remain applicable through changing times and circumstances. In the following, few important leadership roles in the context of a family are discussed.

*Communication*: It is very important for the parents as leaders to be a good communicator within the family in order to have a strong family institution. The benefit of communication is a sound relationship between parents and their children. If parents communicate openly and effectively, children will benefit from in their entire lives. Thus, in order to strengthen Muslim family institution, good communication skills should be taken care of by the parents.

*Organization*: Leaders who have to direct and motivate others are generally expected to possess good organization skills. By building

structure and order, a leader will be able to assign a clear vision or goal to those he leads. In a family, this skill can be demonstrated in a number of ways. One way is to have the child get into the habit of using a simple checklist. This can be done by the use of a notebook in which the child can write a list of chores or homework assignments. The child can then cross out the items from the list upon completing the tasks, thereby gaining both a sense of accomplishment and organization.

*Problem solving*: Helping a child to develop good problem solving skills can also go a long way towards helping them grow as leaders. There are various ways to help the child develop this particular skill. One easy way to do it is to role-play with the child. In this role-play, present the child with a difficult situation he may encounter when playing with another child or sibling. Challenge the child to come up with solutions which will solve the situation. Encourage and help him come up with as many solutions as possible. Then, discuss the pros and cons of each solution. This will help structure how a child thinks about solving problems which he may encounter.

*Healthy self-esteem*: Even a child with good leadership potential can be derailed by a bout with low self-esteem. Therefore, it is essential for the child to be able to develop a healthy view of him. There are many different ways in which a child can be helped to achieve good self-esteem. Medical research has shown that one basic factor that contributes to the development of good self-esteem in a child is the presence of an adult who helps the child to feel appreciated and special. In order to help accomplish this, one should set aside some 'special time' for the child. During the time that is set aside, it is best to focus on things which the child enjoys doing, or on areas which he displays strengths in. By doing this, parents will give the child the needed positive reinforcement to develop a healthy self-esteem.

**Role of teacher as a guardian:** Obviously, teachers can play a very significant role to nurture and develop a child's personality. Even though there are beautiful teachings of the

Holy *Qur'ān* and Prophet's (pbuh) *Sunnah*, and existence of many Islamic schools and organizations, many Muslims today do not live in accordance with the principles and values of their faith. This is where, teachers and educators can play significant roles. The teachers, through the Islamic educational system, have crucial roles to play in imparting the Islamic teachings to the students.

In order to strengthen the Islamic family, Muslim educators must restructure the Islamic studies curriculum, i.e. *what* is taught and *how* it is taught. In other words, if our children are to develop the 'spiritual skills' needed to survive as Muslims in the twenty-first century, an academic curriculum based on the Islamic concepts of education is strongly recommended. An Islamic educational system, that is capable of producing Muslim youths with a level of understanding, commitment and social responsibility which will both motivate and enable them to effectively serve Islam and humanity, is needed. Islamic education must be able to produce Muslim youths who are able to identify, understand and work cooperatively to solve the problems which they face in their community and the world in which they are living in (Tauhidi, 2007).

Effective Islamic teaching and learning must be *meaningful* and *integrated*. It must encompass and engage the whole child spiritually, emotionally, socially, intellectually, and physically. Most important of all, effective Islamic teaching and learning must be *value-based.* By focusing on values and by considering the ethical dimensions of topics, Islamic education becomes a powerful vehicle for character and moral development, and thus achieving its real purpose. Educators must realize that every aspect of the teaching-learning experience conveys values to students and provides opportunities for them to learn about values. Teachers must therefore develop a better awareness of their own values and how those values influence their behaviour as role-models and what students ultimately learn from these experiences about themselves, about others, and about Islam.

**Regular family meeting:** Building a successful family is like building a home. Both need a plan. A successful family based on unity and love takes careful planning. One of the best ways to organize a family is to hold weekly family meetings. By doing this, families enjoy special closeness and stability. Memories gathered together during the meeting will bond and sustain the family through the years. The family meeting should be an important part of every family's activity. In relation to family meetings, a few items are discussed below:

*Schedule activities*: Coordinating schedules and planning family activities need to be done weekly. When everyone is present, discuss activities in each day of the week. Try to plan a daily schedule that allows the family to eat at least one meal together each day, even if meal time is a little later or earlier than most convenient time for every person. Sometimes, individual schedules need to be adjusted for the good of the family.

*Talk about upcoming events*: Decide when family members can support one another by attending their activities. Then, plan for one family activity. Remember to talk about all the details of the activity. This will include the date, time, meeting place, food, special clothes to be worn, etc.

*Talk about family matters*: Discuss household tasks, family problems, and anything family members want to talk about. This is a valuable opportunity each week to gather around and share feelings about the family. Anything that needs to be discussed can be shared at this time. It is important that family members speak only positively, and allow the person talking to share his or her feelings in an atmosphere of empathy and caring. This is a time to voice concerns and suggestions for the good of the family.

*Plan next week's family meeting*: In order to make sure that the next family meeting will be a success and each family member is involved, decide about the topics for discussion, especially who will give the lessons from the religious literature.

*Have fun*: Families need to have fun together. The activity should be something that everyone enjoys. It could be as simple as a family walk in the neighbourhood, or playing a board game. The activity could be watching a movie as a family, going to a sporting event, or doing a service for a friend or neighbour. The most important thing is the involvement of all family members in the activities.

It is viewed that the weekly family meeting is an excellent opportunity to learn lessons. As mentioned above, there can be a discussion on correct behaviour, good manners, or one of the important moral values which helps shape children's character. This is because the opportunity to meet together regularly as a family to learn 'life lessons' is priceless.

**Spouse selection:** In Islam, marriage is not a sacrament but rather a legal, binding contract between a man and a woman which establishes the licitness, permanence and responsibleness of their relationship, an acceptance of one another as spouse with a mutual commitment to live together according to the teachings of Islam. Both are to be mindful of their duties to God and their responsibilities to one another in all aspects of their interaction. In selecting spouse, a man should find a bride to be a life partner who will be a companion and helpmate of husband, who is, together with him, responsible for the affairs of the household, the physical and emotional well-being of its members, and the training of the children.

While the mother is generally the primary means of training the children, Islam neither expects nor wants her to carry out this extremely important task alone. It is the joint responsibility of the husband and the wife to bring up their children properly. Although the greater part of the daily work with the children generally falls to the wife, the husband is the principal authority in the home and is responsible not only for the welfare but also for the behaviour of all members of the family. Together, husband and wife must provide an Islamic ambience in their home and a consistent approach to training in which they reinforce and support one another. There are some important qualities which a man should

seek in the woman whom he wants to be his life-partner and the mother of his children.

*Righteousness***:** The first and foremost quality for a wife is righteousness. The Prophet *(pbuh)* urged a man to seek a woman of faith and piety, and indicated that a man attains happiness by marrying her. One of the *hadiths* narrated by Abu Hurayrah *(ra)* reported that the Messenger *(pbuh)* said: "A woman is sought in marriage for four reasons: wealth, social status, beauty, and *deen*. So seek the one with *deen* – may you then be successful" (Sahih Al-Bukhari, Sahih Muslim).

*Good moral character***:** One should seek a wife who is known to possess good moral character or who has been raised in a good moral atmosphere. According to a *hadith* that is similar to the one given above, a woman of low morals should be avoided, even though she has other qualities, such as wealth and beauty.

*Loving attitude***:** One should seek to marry a woman who is expected to have a loving and caring attitude toward her husband. This is normally possible to sense from the environment in which she lives and her family's background. This quality is indicated in a *hadith* narrated by Ibn 'Abbas *(ra)* that Allah's Messenger *(pbuh)* said: "Your women who will be of the people of *Jannah* are those who are loving to their husbands, bearer of many children, and concerned about their husbands" (Ibn Asakir).

*Naivety***:** Naivety, simplicity, and innocence of heart are commendable qualities to be sought in a wife.

*Compatibility:* A man should seek a wife who is compatible with him, and a woman should seek a husband compatible with her. Aishah *(ra)* reported that Allah's Messenger *(pbuh)* said, "Make a choice for your sperm (i.e. offspring), marry those who are compatible" (Ibn Majah).

*Beauty*: This is another quality in the selection of the spouse.

**Effective Communication:** The relationships between parents and their children are greatly improved when there is effective communication in the family. Children begin to form their ideas and beliefs about themselves

and show their respect based on how their parents communicate with them. At the same time, they begin to feel that they are heard and understood by their parents, which boost their self-esteem. On the other hand, ineffective or negative communication between parents and children can lead children to believe that they are unimportant, unheard, or misunderstood. Below are some of the ways to communicate positively with the children and other family members (Jusoh and Jusoh, 2007).

*Communicating effectively while children are young*: Parents should start the stage of open, effective communication when the children are very young. Parents can do this by making themselves available to their children when they just want to talk. Children who feel loved and understood by their parents are more likely to open up and share their thoughts, feelings, and concerns with their parents.

*Communicate as per children's level*: It is very important for the parents to know the levels of their children when they communicate with their children. Parents should try to ask open-ended questions in their conversations with their children. Questions should be matched with children's ability and they need to be creative to answer those.

*Be a good listener*: Listening is a skill that must be learned and practiced, because it is an important part of effective communication. When parents listen to their children, they send the message that they are interested and they care about what their children are saying. When children express a desire to talk, parents should give them their undivided attention. They should put aside whatever they are doing at that time, face their children and give them their complete attention.

*Express your own feelings and ideas during communication*: For communication to be effective, it must be a 2-way phenomenon. Not only must parents be available to and listen to their children for effective communication to take place, they must also be willing to share their own thoughts and feelings with their children. Parents can teach their children moral

and values by expressing their thoughts and feelings.

Unfortunately, many parents are not aware of just how often they use negative forms of communication with their children. As a result, these parents may be planting the seeds of mistrust and low self-esteem in their children's mind. This is why it is important for parents to be aware of and correct any negative forms of communication they may be using with their children.

**Role of neighbours and relatives:** Neighbours and the relatives also play important roles in terms of strengthening Muslim family institution. They can play role in spiritual, moral, intellectual, physical and social preservation, and development of the individual person in a family, with the view of establishing a sound Islamic family as well as a righteous society (Ansari, 2001).

The Holy *Qur'ān* proclaims "Exhortation to Truth" as one of the essential conditions of human success (Al-'Asr 103: 4). Hence, it is the duty of the neighbours and relatives as the vicegerents of God, successor to the Holy Prophet (*pbuh*), and representative of the people, to uphold, propagate and ensure the functioning of truth, and consequently, the spiritual values, which form the basic content of truth in the lives of Muslims. Neighbours and relatives can take all positive steps, including the enactment and enforcement of laws so as to ensure a proper practice of Islamic morals with a view to preserve and promote moral values. In addition, they can also organize and institute the moral education of the people in the society.

One component of duties and responsibilities of neighbours and relatives in order to strengthen the family institution is social welfare for establishment of happiness, peace and order for ensuring healthy existence and development of the individuals. They can also ensure justice without discrimination and without any extraneous consideration, for the preservation of life, honour and property of the individuals, defence of Islam and Muslims against internal disruption and external aggression.

**Role of a religious leader:** A religious leader is an exemplary and respectable person in any society. A Muslim religious leader teaches the society about the role of Muslims, and how one can follow the rules and regulations of Islam, which activities are allowed and which is prohibited. With their vast knowledge about Islam, they can play a crucial role in shaping the society. A significant role they can play through their *Jumma Khutba* to promote and practice Islam in family environment may help strengthen the Muslim family institution.

## CONCLUSIONS

A strong family institution is vital in developing a healthy society. It is in the family children learn the basic of moral and manners. Strong Islamic values infuse family to help shape the character of children and this, in turn, transform those becoming good Muslims in their later life. The paper identifies the ways through which the Muslim family institution can be revitalized. The research findings were based on the interviews with Muslim scholars. Though many articles have been written on the topic, this study is analytical and based upon empirical data. Thus, it is hoped that if the findings are implemented by Muslim families, a society can then be developed wherein everybody can live amidst peace and prosperity.

The sample size considered for the present research was rather small vis-à-vis the topic researched. Furthermore, all the respondents were chosen from the International Islamic University Malaysia. Therefore, for the sake of generalizability of the findings, not only the sample size should be increased, the respondents should also have varied backgrounds. Sufficient literature on the application of management tools in managing Islamic families is also not found. In a nutshell, future research should be directed towards this and with increased sample size involving respondents with wider and diverse backgrounds.

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# Factors Contributing to Financial Stability of Urban and Rural Families

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## ABSTRACT

Personality and behavioural aspects may shape the perception on the financial stability of families. Depending on their residential areas, factors contributing to their financial stability might differ. This study attempted to determine factors that have impacts on the financial stability of urban and rural families in Malaysia. Micro-data were obtained through questionnaire form and self-administered by the family financial manager. A ratio of 60 to 40 for the urban and rural areas was used in the quota sampling resulting in responses from 800 family financial managers in Peninsular Malaysia. Meanwhile, the results of binary logistic regression on the separate samples of urban and rural residences revealed significant factors. Financial risk tolerance, future time orientation, self-worth, household income, and cash-flow activities were significantly predictive of perceived financial stability. For urban families, financial risk tolerance, future time orientation and self-worth were less likely to predict financial stability. Household income was positively predicting financial stability of rural families. Budgeting aspect of cash-flow positively influenced financial stability of urban families and record-keeping was positively significant in predicting the financial stability of rural families. Thus, urban and rural families differ in terms of the factors which predict families' financial stability. Being informed about the factors contributing to financial well-being for the urban and rural families was found to result in better achieving the goals of financial education programme.

**Keywords: Risk tolerance, time orientation, self-worth, urban, rural**

## INTRODUCTION

A growing national economy and an increase in real family income is being experienced by Malaysia, however, available evidence suggests that more families are suffering from problems in managing their finances. Among other, increases in non-performing loan, credit card debt, and bankruptcy among individuals in Malaysia reflected these problems. Non-performing loan for the consumer product category for finance companies increased from RM14.5 million in 2002 to RM 16.7 million in March 2003 (Bank Negara Malaysia, 2003). Consumers are living on a life style of postponing their payments of purchases of goods and services, hence leading them towards financial difficulties or serious financial problems later.

According to the statistic of Bank Negara Malaysia (2009), 13,852 individuals in Malaysia were declared bankrupt in the year 2008. This was an increase of more than two times in a period of one decade. The total of unpaid balance for credit cards also increased from RM1,924 million to RM12,329 million from 1994 to April 2005 (Bank Negara Malaysia, 2005). The scenario indicated that there might

be a mismanagement of their financial resources. With limited financial resources, it is important for families to manage their financial resources effectively.

Meanwhile, mixed results were found from several studies examining the relationship between financial management behaviour of families with the objective financial well-being and the subjective financial well-being of families. However, this study focused only on the subjective well-being of families. Their attitude and personality, apart from behavioural aspects, may also shape the perception on the financial well-being of families. Depending on their residential areas, factors contributing to the financial stability of families would differ according to their locality. This study was designed to seek answers to the following research questions:

1. Do urban and rural families experience different financial stability?

2. What are the socioeconomic characteristics and personality variables that have the likelihood of predicting financial stability of urban and rural families?

3. Which of the financial management practices dimension contribute more to financial stability of urban and rural families?

Thus, the objectives of the study were as follows:

1. To determine the difference in the financial stability between urban and rural families.

2. To ascertain the influence of the socioeconomic characteristics and personality variables in predicting financial stability of urban and rural families.

3. To identify the relative contribution of financial management practices dimension to financial stability of urban and rural families.

## MEASUREMENT OF FINANCIAL STABILITY

Joo (1998), in her review of past research, noted that financial wellness or financial stability is dependent not only on the family's objective financial status but also on the subjective aspect of financial status. On the subjective measurement of financial stability, financial satisfaction was used by Hira and Mugenda (1999) in a study carried out among the residents of USA to represent their financial well-being or financial stability. As stated by Zimmerman (1995), financial satisfaction involves a state of being healthy, happy, and free from financial worry.

Satisfaction with financial stability of dairy farm families in seven aspects of financial satisfaction was studied by Scannell (1990). Those aspects were satisfaction with the present standard of living, emergency savings, past investment and savings, present financial situation, in five years, last year and next year. Meanwhile, Sumarwan and Hira (1992) focused on only one aspect of financial satisfaction concerning the preparation for financial emergencies. Financial satisfaction was used later by Hira and Mugenda (2000) involving five aspects of satisfaction, namely the satisfaction with savings level, debt level, current financial situation, ability to meet long-term goals, and preparedness to meet emergencies. Other researchers who had utilized financial satisfaction to measure financial stability were Hogarth and Anguelov (2004), Joo and Grable (2004), Kim, Garman and Sorhaindo (2003), and Xiao, Sorhaindo and Garman (2004).

## FACTORS CONTRIBUTING TO FINANCIAL STABILITY

### Socioeconomic Characteristics

Families' background has an impact on their financial stability. Joo and Grable (2004) reported that socioeconomic characteristics were significantly correlated with financial stability. The results from the path analysis suggested that older consumers, live longer in certain residence, has lower credit card debt, perceive a more secured retirement, and have a better family relationship were found to be associated with financial satisfaction. However, income was not found to be significantly related with financial satisfaction.

A local study on the savings behaviour by Ariffin, Wook, Ismadi, Mohd Saladin and Nor Ghani (2002), using household micro-data in the state of Malacca, revealed that consumer savings were positively related with age, disposable income and ethnicity group. In particular, the Malay respondents had mean savings that were significantly higher than that of other ethnics. Meanwhile, household size, level of education, and residential area were found to be negatively associated with the level of savings. The mean savings of households were significantly higher for the rural areas as compared to those in the urban.

*Personality and Behavioural Variables*

Risk-tolerance, as an attitudinal construct, was studied by Hariharan, Chapman and Domian (2000). Risk tolerant individuals preferred investing in high risk retirement investments as compared to those who were risk averse. Thus, they would more likely to remain financially independent when once they retire. Joo and Grable (2004) determined that financial risk tolerance, along with education, financial knowledge, financial solvency, financial behaviours, and financial stress level, had direct effects on financial satisfaction. As for the negative relationship of financial risk tolerance, they argued that individuals with higher levels of financial risk tolerance might have increased their financial expectations. Thus, these highly risk tolerant persons would find that their current level of living was inadequate as compared to their standard of living. That brings to a lower level of financial satisfaction among them.

A few studies have demonstrated that personality variables, such as future orientation, predicted the tendency to plan and save. For instance, Hershey and Mowen (2000) found that among individuals aged 35 to 88 years old, future time orientation was positively associated with self-reported financial preparedness for retirement. Lusardi (1999) reported that pre-retirees, with a short planning horizon or more current-oriented, had not only a lower average net worth, but they alos expected to receive less in the way of income from personal savings in retirement.

Future time orientation refers to individuals' psychological attribute regarding their perception of the future and the flow of time (Cottle, 1976; Das, 1993). It was a measure of the extent to which individuals focused on the future, rather than the present or past. Jacobs-Lawson and Hershey (2005) explored the extent to which individuals' future-time perspective influences retirement savings practices. The study on young working adults revealed that future time perspective was associated with more aggressive savings profiles.

Another personality variable, that is self-worth, was defined by Hira and Mugenda (1999) as an evaluation one makes of the self-concept descriptions and the degree to which one is satisfied. A few studies conducted in the financial management field have focused on self-worth. Among other, the studies on self-worth by Grable and Joo (2001) and Hira and Mugenda (1999) found that self-worth had significant relationships with financial belief, financial behaviour and financial satisfaction.

Financial management practices were found consistently in past research to be affecting perceived financial stability of families. For instance, Mugenda, Hira and Fanslow (1990), in assessing the causal relationship among money management practices and satisfaction with financial status, concluded that net worth, savings, monthly debt payments, and absence of financial difficulties were the main determinants of managers' satisfaction with financial status. Meanwhile, stressor events associated with high levels of credit card debt and poor financial behaviours can increase financial stress. High levels of financial stress would negatively affect perceived financial well-being and health (Weisman, 2002).

Kim, Garman, and Sorhaindo (2003) pointed out that financial stressor events and financial behaviours were significant variables in explaining financial well-being. Those who experienced more financial stressor events had lower levels of financial well-being than others. Those who practiced more positive financial

behaviours had higher levels of financial well-being than others. Sumarwan and Hira (1992), who focused on the satisfaction with the preparation for financial emergencies, found that financial well-being was affected by monthly saving, and the number of insurance types apart from the household income and managerial behaviour index. These practices involved the savings and risk practices dimensions.

A study looking at the effect of financial planning on financial satisfaction by MacEwen, Barling, Kelloway, and Higginbottom (1995) revealed that participants' own financial planning for retirement had a specific effect on their expectations for financial well-being. Similarly, parents' financial planning affected their satisfaction with finances. In determining the effect of financial management practices on subjective financial well-being, Joo and Grable (2004) found that financial knowledge, financial solvency, and financial behaviours exhibited positive direct effects on financial satisfaction. Higher levels of financial knowledge, solvency, and the practice of better financial behaviours led to higher levels of financial satisfaction. Financial behaviours thus had a positive indirect effect on financial satisfaction. The single most influential determinant of financial satisfaction was an individual's financial behaviour.

Xiao, Sorhaindo, and Garman (2004) revealed that three financial behaviours increased financial satisfaction, and these were: 1) having developed a plan for my financial future, 2) started or increased my savings, and 3) reduced some of my personal debts. They also found that two financial behaviours, namely having participated in flexible spending program and contributed to my employer's retirement plan were negatively associated with financial satisfaction. Hence, financial behaviours were significant variables in explaining financial well-being. Meanwhile, those who practiced more positive financial behaviours had higher levels of financial well-being than others. The positive significant practices covered dimensions such as financial planning, savings, and credit. Practices

found to be negatively associated with subjective financial stability fall under the cash-flow and savings dimensions.

Keeping written records for farm families was the only financial management practice that was significantly related to financial well-being as found by Scannel (1990). The result indicated that record-keeping done by rural families was associated with financial stability.

In summary, this section presented results of past research that are related to the influence of socioeconomic characteristics such as age, income, household size, and ethnicity on financial stability of families. Other factors studied were personality and behavioural variables that were found to contribute significantly to financial stability of families. However, most of the past research reviewed revealed the influence of financial behaviour as a whole. However, studies focusing on the effects of the financial behaviour components, namely credit, investment, and risk management, are scarce. Hence, this study was looking at the effects of the financial behaviour components, instead of using the composite index of financial behaviour.

## METHODOLOGY

### Sampling and Data Collection

Self-administered questionnaire form was responded by the family financial manager of the families. A family financial manager was identified as those who were involved in the financial management of the family either the wife or the husband or both. The respondents need to be currently married with at least a child. Quota sampling was selected for the sampling since the study involved the urban and rural areas that have certain proportions and could thus increase the representativeness of the population. A ratio of 60 to 40 for the residential areas of urban and rural, respectively (Economic Planning Unit, 2006), was employed. Thus, four regions in Peninsular Malaysia that comprised of the northern, central, eastern, and southern regions were included in the 2007 study

having the responses from 800 family financial managers. For the sampling in each region, one state was chosen, resulted in selecting four states namely Perak, Selangor, Negeri Sembilan, and Pahang.

Urban families were identified from their residential areas that were managed by municipal and city councils. Rural families were determined by their residential areas that were managed by the district council (Population and Housing Census of Malaysia, 2001). For each of the states selected, public and private sector offices were identified from the telephone directory. The government departments and private companies identified were sent letters requesting for the permission to collect data at their premises. The permissions sought through letters handed personally to the officer in charge were followed by phone calls. The departments and companies in each state were targeted a total of 200 respondents with a break-down of 60 to 40 representing the urban and rural residential areas. The questionnaire forms were sent to officers in charge in distributing the self-administered forms to the respondents.

*Measurement of the Variables*

The financial stability of the families as the dependent variable was measured by subjective financial well-being, namely the Malaysian Personal Financial Well-being (MPFW) scale, developed by Garman and Jariah in 2006 (Jariah, 2007). This scale was based the Personal Financial Well-being Scale by on Garman *et al*. (2004). The twelve questions were on attitude, behaviour, control and confidence, with a 10-point scale of measurement. The higher scale reflects a better financial stability.

The independent variables were socioeconomic characteristics, attitudinal and personality variables, and financial management practices. Information on the socioeconomic characteristics of the respondents and the families were gathered, such as the residential area, ethnicity, as well as household income, length of marriage, working experience, and home ownership. The attitudinal variable, that

was financial risk tolerance, was adopted a six-item measurement by Grable (2000).

Personality variable, i.e. the future time orientation of the respondents, was measured using the adapted Future Time Perspective Scale developed by Hershey and Mowen (2000). The construct that consisted of four items was a general measure of the personality dimension which measured the extent to which individuals enjoy and thinking about and planning for the future. Hira and Mugenda's (1999) scale was used for measuring self-worth of the financial manager. The four-item scale looked into the perception of the respondents on themselves in general.

The financial management practices were measured using the items from several authors and researchers. Several aspects of financial practices were included, and these include financial planning, cash-flow management, credit management, investment and savings, and risk management. The specific financial planning items were gathered from the financial goals described by Kapoor, Dlabay and Hughes (2001). Meanwhile, the eleven items of cash-flow management were adapted from Hilgert and Hogarth (2003), O'Neill (2002) and Xiao *et al*. (2004). Credit management used modified items from Hogarth and Anguelov (2004), and Porter and Garman (2003) that resulted in three items.

Investment and savings measurement of eight items were adapted from Hilgert and Hogarth (2003), Hogarth and Anguelov (2004) and Porter and Garman (2003). For the risk management aspect, the four items were adapted from Porter and Garman (2003). The measurement of the above constructs used a 7-point scale, ranging from 1 = "Never" to 7 = "Very often".

*Analysis of Data*

The data were analysed descriptively to obtain the socioeconomic background of the families. The factor analysis and reliability test were applied to the scale measurements. Cross-tabulation was carried out to determine the associations of the groups of families based

on their financial stability with regard to their residential areas.

Binary logistic regressions were applied to determine the factors contributing to the financial stability of the urban and rural families. Families having scored more than the mean of the samples (mean = 6.21) for the average score of the Malaysian Personal Financial Well-being and those who fulfilled any one of the three selected financial ratios were classified as financially stable. Those who scored otherwise were classified as less financially stable. This similar identification of financially well group was used by Baek and DeVaney (2004).

## RESULTS AND DISCUSSION

*Profile of the Respondents*

The socioeconomic profiles of the total sample and the urban and rural sub-samples are presented in Table 1. Most of the urban and rural respondents aged between 30 to 40 years old, with an average of 37.3 years old. Meanwhile, the urban respondents were younger on the average as compared to rural respondents. More of the rural respondents as compared to urban respondents were found to be older than 40 years.

Slightly more than half of the respondents were males and possessed education at the secondary level. The rural male respondents slightly exceeded the urban male respondents. Most of the urban respondents achieved the tertiary level of education and the rural family financial managers obtained secondary level of education. Almost two-third of the rural respondents had secondary level of education as compared to the urban respondents of less than half. Nearly half of the urban respondents possessed tertiary education as compared to only one third of the rural respondents. Thus, most of the urban respondents achieved higher education level than rural respondents.

On the average, the rural family financial managers' working experience was slightly higher than the urban family financial managers. More of the rural financial managers have been

working for over ten years as compared to the urban financial managers. Only one-third of the urban respondents exceeded the ten years working experience as compared to half of the rural respondents. As for their marriage, on the average, the rural families have been married for a longer duration of time as compared to the urban families in the samples. Only one-third of the urban families have been married for more than ten years as compared to rural families that were almost half of them.

In terms of the monthly household income, almost half of the respondents were earning more than the national average household income of RM3, 965 for the urban area (Economic Planning Unit, 2006). The average household income for the sample was RM5, 705, that was higher than the average income of the Malaysian population. Almost two-third of the urban samples had an above average household income as compared to the rural samples with only one-third of the rural families. Thus, more of the urban families obtained higher than average household income as compared to rural families. All the families had a household income above the poverty line of RM687 for the urban area and RM698 for the rural area (Economic Planning Unit, 2006). Hence, none of the families in the samples were living in poverty.

The average household size of the samples was 4.6 and was representative of the population. About half of the samples were above the average household size of 4.5 (Economic Planning Unit, 2006). More than half of the rural families exceeded the average household size as compared to the urban families that were slightly less than half of the samples. Almost three quarter of the families in the samples owned at least a house. Slightly more of the urban families were homeowners as compared to the rural families.

In conclusion, the findings on the profiles of respondents revealed that more urban respondents were younger males, possessed tertiary education level, had working a experience of less than ten years, and have bee married for less than ten years. More of the respondents' families earned household income higher than RM4, 000, with

TABLE 1
Profile of the respondents

| Socioeconomic characteristics | | Full sample frequency (%) (n = 800) | Urban frequency (%) (n = 480) | Rural frequency (%) (n = 320) |
|---|---|---|---|---|
| Age (years old) | Less than 30 | 148 (18.5) | 100 (20.8) | 48 (15.0) |
| | 30 to less than 40 | 343 (42.9) | 218 (45.4) | 125 (39.1) |
| | 40 to less than 50 | 242 (30.3) | 128 (26.7) | 114 (35.6) |
| | More and equal to 50 | 67 (8.4) | 34 (7.1) | 33 (10.3) |
| | Mean age | 37.3 | 36.3 | 38.3 |
| Sex | Male | 465 (58.1) | 276 (57.5) | 189 (59.1) |
| | Female | 335 (41.9) | 204 (42.5) | 131 (40.9) |
| Educational level | Primary | 29 (3.6) | 8 (1.7) | 31 (6.6) |
| | Certificate | 434 (54.3) | 736 (49.1) | 188 (61.8) |
| | Diploma | 144 (18.0) | 94 (19.6) | 50 (15.6) |
| | Degree/Professional | 193 (24.2) | 142 (29.6) | 51 (16.0) |
| | Mean education years | 16.6 | 19.9 | 13.2 |
| Working experience (years) | 0 to 5 | 142 (17.8) | 102 (21.3) | 40 (12.5) |
| | 6 to 10 | 280 (35.0) | 165 (34.4) | 115 (35.9) |
| | 11 to 15 | 149 (18.6) | 84 (17.5) | 65 (20.3) |
| | 16 to 20 | 118 (14.8) | 67 (14.0) | 51 (15.9) |
| | More than 20 | 111 (13.9) | 62 (12.9) | 49 (15.3) |
| | Mean working years | 12.6 | 12.0 | 13.2 |
| Length of marriage (years) | 0 to 5 | 261 (32.6) | 172 (35.8) | 89 (27.8) |
| | 6 to 10 | 236 (29.5) | 150 (31.3) | 86 (26.9) |
| | 11 to 15 | 136 (17.0) | 78 (16.3) | 58 (18.1) |
| | More than 15 | 167 (29.0) | 80 (16.6) | 87 (27.2) |
| | Mean years of marriage | 10.6 | 9.6 | 11.5 |
| Household income (RM) | Less than RM2,000 | 95 (11.9) | 40 (8.3) | 55 (17.2) |
| | RM2,000 to less than RM4,000 | 316 (39.5) | 167 (34.8) | 149 (46.6) |
| | RM4,000 to less than RM6,000 | 159 (19.9) | 109 (22.7) | 50 (15.6) |
| | RM6,000 to less than RM8,000 | 91 (11.4) | 59 (12.3) | 32 (10.0) |
| | More and equal to RM8,000 | 139 (17.4) | 105 (21.9) | 34 (10.6) |
| | Mean household income | 5,705 | 6,297 | 4,816 |
| Household size | Less than 5 persons | 396 (49.5) | 260 (54.2) | 136 (42.5) |
| | More and equal to 5 persons | 404 (50.5) | 220 (45.8) | 184 (57.5) |
| | Mean household size | 4.6 | 4.2 | 4.8 |
| Home ownership | Owner | 571 (71.4) | 347 (72.3) | 224 (70.0) |

lower household size and owning a house. As for the rural respondents, more of them were younger males, possessed secondary level of education, had working experience of more than ten years, but being married for less than ten years. More of them had household income lower than RM4, 000, with higher household size and had home ownership.

*Construct Validity and Reliability*

**Financial management practices**

Financial management practices construct was developed by combining selected items from the previous research (Hilgert and Hogarth, 2003; Hogarth and Anguelov, 2004; Kapoor *et al*., 2001; O'Neill, 2002; Xiao *et al*., 2004;

Porter and Garman, 2003) resulted in 36 items. The construct composed of six conceptual dimensions, including financial planning, cash-flow, credit, savings, investment, and risk. Construct validity, was determined for the financial management practices construct. Meanwhile, the factor analysis was performed to verify the conceptual dimensions of the construct and resulted in seven factors having eigenvalues greater than 1, with factor loadings between 0.423 and 0.872. The Kaiser Meyer-Olkin (KMO) analysis resulted in an adequate measure of sampling, with a high value of 0.944. The Bartlett's test was significant ($\chi^2 = 19012.0$, df = 630, p = 0.000), suggesting that the items were appropriate for the factor analysis. The result from the factor analysis on the financial management practices construct portrayed the importance of the dimensions extracted in managing financial matters. The seven factors extracted from the factor analysis for the financial management practices were financial planning, cash-flow 'record-keeping', cash-flow 'budgeting', credit, investment, and risk.

## Malaysian Personal Financial Well-being

The Malaysian Personal Financial Well-being scale was applied the exploratory factor analysis and this resulted in only one clean factor structure with an eigenvalue of more than 1.0. The items for the factor extracted through the principal component analysis had high factor loadings between 0.746 and 0.888. The KMO for this construct was 0.958, indicating the sampling adequacy and items in this construct were appropriate for the factor analysis as the Bartlett's test was significant (approximate $\chi^2$ = 8612.325, df = 66, p = 0.000). This twelve-item factor represented 68 percent of the total variance explained and all the items were retained as the corrected item-total correlations between 0.702 and 0.860.

## Reliability of the constructs

The reliability test results with the Cronbach's alpha values for the constructs were high, as shown in Table 2. The alpha values for the future time orientation, financial risk tolerance and self-worth constructs were between 0.802 and 0.896. The seven dimensions of the financial

TABLE 2
Reliability coefficients for constructs

| Constructs | Number of items | Cronbach's alpha |
|---|---|---|
| **Personality** | | |
| Future time orientation | 4 | 0.802 |
| Financial risk tolerance | 6 | 0.808 |
| Self-worth | 4 | 0.896 |
| **Financial Management Practices** | | |
| Financial planning | 10 | 0.909 |
| Cash-flow 'record-keeping' | 4 | 0.813 |
| Cash-flow 'budgeting' | 7 | 0.917 |
| Credit | 3 | 0.825 |
| Savings | 4 | 0.817 |
| Investment | 4 | 0.834 |
| Risk | 4 | 0.841 |
| **Financial Well-being** | | |
| Malaysian personal financial well-being | 12 | 0.956 |

TABLE 3
Malaysian personal financial well-being

| Malaysian personal financial well-being | Full sample | Urban | Rural |
|---|---|---|---|
| | Frequency (%)<br>N = 800 | Frequency (%)<br>N = 480 | Frequency (%)<br>N = 320 |
| 1 to 4 (lowest to poor) | 160 (20.0) | 81 (16.9) | 79 (24.7) |
| 5 to 10 (average to highest) | 640 (80.0) | 399 (83.1) | 241 (75.3) |

management practices extracted from the factor analysis showed high Cronbach's alpha values between 0.813 and 0.917. The Malaysian Personal Financial Well-being also had high alpha value of 0.956. Thus, high reliability was displayed by each of the constructs including the financial management practices dimensions.

**Financial stability of urban and rural families**

Table 3 displays the Malaysian Personal Financial Well-being for the sample and also for the urban and rural families. Most of the urban families had average to highest financial well-being state as compared to the rural families and most of the rural families had lower financial well-being state as compared to the urban families. This subjective evaluation of financial stability showed that the urban families were more financially stable as compared to the rural families.

**Factors contributing to financial stability**

Table 4 gives the results from the binary logistic regression with selected socioeconomic characteristics, financial risk tolerance, future time orientation, self-worth, and financial management practices as the independent variables in determining their contribution to financial stability. The model for the urban families was found to be fit (Omnibus test, Chi-square = 141.903; sig. = 0.000; Nagelkerke $R^2$ = 0.342; classification = 69.8%), and this was similar for the model for the rural families (Omnibus test, Chi-square = 116.754; sig. = 0.000; Nagelkerke $R^2$ = 0.408; classification

= 74.7%). Meanwhile, the variances in the financial well-being of the urban and rural families were 34.2 percent and 40.8 percent, as explained by the factors in the respective models.

For the urban residence, none of the socio-economic characteristics was found to be significantly predicting financial stability of family. For the rural residence, however, significant effect was found for the household income. Families earning high household income were four times more likely to perceive themselves as financially stable as compared to those with low household income. Hence, after controlling for psychological variables and financial management practices, only one socioeconomic characteristic namely household income was found to be significant predictor of rural families' financial stability. This is in contrast with the result found in a study by Joo and Grable (2004).

The cost of living for the urban families was apparently higher than the rural families, thus earning high income by the urban families might not result in good financial well-being as compared to the rural families. This scenario explains the difference in the likelihood of predicting financial stability by the household income of the families.

Among the psychological constructs, financial risk tolerance, future time orientation, and self-worth of family financial manager emerged as significant predictors for financial stability of urban families. However, these variables were negatively predicting financial stability. The results for the financial risk tolerance are consistent with the findings by Joo and Grable (2004). However, for future time orientation and self-worth, the results

TABLE 4
Binary logistic regression for financial stability

| Constructs | Urban | | | Rural | | |
|---|---|---|---|---|---|---|
| | B (S. E.) | Wald (Sig.) | Odd Ratio | B (S. E.) | Wald (Sig.) | Odd Ratio |
| Ethnicity | | 3.622 (0.164) | | | 1.056 (0.590) | |
| Ethnicity (Chinese) | 0.366 (0.285) | 1.665 (0.198) | 1.442 | 0.146 (0.344) | 0.180 (0.672) | 1.157 |
| Ethnicity (Indian) | -0.410 (0.375) | 1.199 (0.274) | 0.664 | -0.409 (0.511) | 0.641 (0.423) | 0.664 |
| Respondent's education level | 0.044 (0.050) | 0.774 (0.379) | 1.045 | 0.000 (0.068)) | 0.000 (0.995) | 1.000 |
| Respondent's working experience | -0.012 (0.026) | 0.221 (0.638) | 0.988 | -0.003 (0.032) | 0.008 (0.930) | 0.997 |
| Household income | 0.644 (0.473) | 1.850 (0.174) | 1.904 | 1.436 (0.650) | 4.884* (0.027) | 4.202 |
| Home ownership | 0.070 (0.256) | 0.075 (0.785) | 1.072 | -0.267 (0.329) | 0.658 (0.417) | 0.766 |
| Respondent's age | 0.011 (0.027) | 0.171 (0.679) | 1.011 | -0.039 (0.033) | 1.437 (0.231) | 0.962 |
| Family financial manager | 0.288 (0.220) | 1.722 (0.189) | 1.334 | 0.149 (0.286) | 0.269 (0.604) | 1.160 |
| Financial risk tolerance | -0.053 (0.021) | 6.732** (0.009) | 0.948 | 0.017 (0.024) | 0.524 (0.469) | 1.017 |
| Future time orientation | -0.062 (0.025) | 5.960* (0.015) | 0.940 | -0.008 (0.030) | 0.073 (0.787) | 0.992 |
| Self-worth | -0.646 (0.143) | 20.433** (0.000) | 0.524 | -0.566 (0.187) | 9.160** (0.002) | 0.568 |
| Financial planning | -0.004 (0.015) | 0.085 (0.771) | 0.996 | 0.017 (0.022) | 0.632 (0.427) | 1.017 |
| Cash-flow 'Record-keeping' | 0.027 (0.033) | 0.687 (0.407) | 1.028 | 0.103 (0.044) | 5.480* (0.019) | 1.108 |
| Cash-flow 'Budgeting' | 0.082 (0.023) | 12.842** (0.000) | 1.085 | 0.042 (0.032) | 1.697 (0.193) | 1.043 |
| Credit | -0.033 (0.040) | 0.706 (0.401) | 0.967 | -0.027 (0.056) | 0.233 (0.629) | 0.973 |
| Savings | -0.294 (0.214) | 1.895 (0.169) | 0.745 | 0.081 (0.270) | 0.091 (0.763) | 1.085 |
| Investment | 0.339 (0.612) | 0.307 (0.579) | 1.404 | 1.110 (0.765) | 2.102 (0.147) | 3.033 |
| Risk | 0.035 (0.025) | 2.023 (0.155) | 1.036 | 0.032 (0.028) | 1.281 (0.258) | 1.033 |
| Constant | -1.264 (2.305) | 0.301 (0.583) | 0.283 | -7.366 (2.857) | 6.649 (0.010) | 0.001 |

Categorical variables: ethnicity (relative to Malay), home ownership (relative to no ownership)

contradict with the study by Jacobs-Lawson and Hershey (2005) and, Hira and Mugenda (1999), respectively.

Family financial managers with high financial risk tolerance were five percent less likely to predict financial stability than those having low financial risk tolerance, while future time orientated financial manager predicted six percent less likely to be financially stable than those current-oriented financial manager. Self-worth was also predicted in the same direction, but with higher probability, i.e. 48 percent less likely to be financially stable as compared to the families with low self-worth financial managers. Thus, with more financial risk tolerant, future-oriented, and high self-worth family financial manager, the likelihood to be financially instable is higher.

As for the rural families, only self-worth was significantly predicting financial stability. It was also negatively predicting financial stability as found for the urban families. In other words, families with high self-worth family financial manager were 43 percent less likely to predict financial stability as compared to those with low self-worth family financial managers.

Since financial risk tolerant individuals were those who were able to accept high risks in financial matters, they tended to be involved in high risk financial activities, such as investing in risky investment. Therefore, they would perceive themselves as financially instable due to the risks faced. On the contrary, future-oriented individuals tended to make long-term investments. They were faced with uncertainties of the return and safety of the principal or capital they invested. Due to these risks, they would also perceive themselves as financially instable.

As stated by Hira and Mugenda (1999), self-worth is an evaluation that one makes of the self-concept descriptions and the degree to which one is satisfied. Thus, for higher self-worth financial managers, the satisfaction degree related to self-concept was also higher. A certain level of financial stability was perceived differently by high self-worth financial manager as

compared to low self-worth financial managers. Consequently, high self-worth individual would perceive their financial stability as low whilst low self-worth individual would perceive the same situation as high.

To conclude, the significant predictors for the financial stability of the urban families were financial risk tolerance, future time orientation, and self-worth of family financial manager whilst for rural families, whereas only one significant predictor was found that was self-worth, after controlling for socioeconomic characteristics and financial management practices.

The dimensions of the financial management practices that contributed significantly to financial stability of urban families after controlling for socioeconomic characteristics, psychological variables, and other financial practices was cash-flow 'budgeting'. Engaging in this financial activity emerged as activities that would predict good financial stability for the urban families. This dimension of financial practice predicted 11 percent more likely for the urban families to be financially stable as compared to those who were not doing any budgeting. Other financial management practices such as financial planning, cash-flow 'record-keeping', savings, investment, credit practices and risk practices were not found to be significantly associated to financial stability of urban families.

As for the rural families, cash-flow 'record-keeping' was the only financial management practices that predicted the likelihood to be financially stable with 8 percent more than those who did not do record-keeping. The results are consistent with that by Scannel (1990) who carried out a study on rural families. Other financial management practices were not significantly predicting the financial stability of the families.

In comparison, only cash-flow practices, such as budgeting, had the tendency to predict financial stability of the urban families, while cash-flow 'record-keeping' could predict the financial stability of the rural families.

These results suggest that after controlling the socioeconomic characteristics and psychological variables, financially stable urban families did budgeting while the rural families, on the other hand, did record-keeping.

Thus, the findings from the binary logistic regression revealed factors contributing to the financial stability of the urban and rural families. Such significant factors were household income, financial risk tolerance, future time orientation, and self-worth of the family financial manager, and cash-flow practice. In particular, household income was the significant positive factor predicting financial stability of rural families only. Financial risk tolerance and future time orientation were the significant negative factors predicting the financial stability of the urban families only.

Meanwhile, the factor contributing significantly to the financial instability of families that was found for both urban and rural families was self-worth of the family financial manager. Budgeting by the urban families contributed to their financial stability as compared to the rural families. With more complex choices of goods and services, as compared to the rural families, doing budgeting enabled them to make sufficient allocation to the goods and services needed. The rural families, on the other hand, did record-keeping regarding their financial affairs. In particular, record-keeping enabled the rural families to keep track of their income and expenses, and thus they closely followed their expenditure. This would assist in controlling the rural families' expenses. Looking across residential areas, record-keeping practice was a stronger predictor of the families' financial stability as compared to budgeting.

## LIMITATIONS AND RECOMMENDATIONS

The survey was based on the self-reported responses by the family financial managers. As a result, these could result in bias responses, especially in families having both husband and wife equally taking care of the financial matters. Moreover, the measurement of the financial well-being looked at the perception of the responded family financial managers on their family's financial stability. Thus, the perception may vary between husband and wife.

Objective measure of financial stability, such as financial ratios and comparison of the results with the subjective measures should be used for any future studies on financial stability of families. Meanwhile, a comparison of perception on financial stability could also be done between the different cultures, preferably with a larger sample to determine consistency with the results obtained in this study.

## CONCLUSIONS

The financial stability of families determined from subjective measure of Malaysian Personal Financial Well-being indicated that urban families had better financial situation than rural families. Based on the results from the binary logistic regression on separate samples of the urban and rural residences, several significant factors predicting financial stability of urban and rural families were revealed.

In addition, different significant factors were also obtained for the urban and rural residences. Household income of the rural families predicted their financial stability. On the contrary, financial risk tolerance, future time orientation, and self-worth of financial manager were more likely to predict the urban families' financial instability, whereas this was only financial managers' self-worth for the rural families.

Financially stable urban families were those doing budgeting whereas financially stable rural families were those who frequently involved in cash-flow activities specifically doing record-keeping. Record-keeping practice predicted the families to be more financially stable as compared to budgeting.

Being informed about the factors contributing to the financial well-being of different residential areas might help certain families to be financially stable. In particular, financial educators would benefit from the factors identified as this would assist them in developing better financial education programmes based

on the residential areas of families. The results would also enhance the financial planners' ability on how to serve their clients better. As a whole, financially stable families contributed to good well-being of the families and a better community in the long run.

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# The Shift of Policy on Language of Instruction in Schools in Three Southernmost Provinces of Thailand

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## ABSTRACT

The three southernmost provinces of Thailand, namely Pattani, Yala, and Naratiwat, are unique in many ways. First and foremost, the three provinces comprise the largest Muslim populations in the country. In terms of language, the Pattani dialect of Malay is a mother tongue for most people in the area, differing from other parts of the country, where Thai language is used. For long, the differences in language used have been an issue of concern for the Thai government. Earlier, under the strong nationalistic and assimilation policy, not knowing Thai language was a threat to national sovereignty, the strategies used to promote Thai language were coercive and uncompromising. Meanwhile, the use of Malay language in schools was prohibited. However, the situation has changed. Recently, there has been an increasing use of Malay language as a medium of instruction in several government-initiated projects. What are the reasons behind this change? This article aims at examining the policy on language of instruction in schools in three southernmost provinces of Thailand from 1932 to present. The data used for this article are based on the examination of documents and interviews with officers in the region. Compared to the strict prohibition on the use of Malay language in schools in the past, the recent shift of policy which accepts the use of Malay language as a medium of instruction in schools seems to recognize the cultural identity of Muslim students as parts of the education system in the country. However, the article argues that the real impetus for such policy is rather for security purposes, just like it was in the past. Thus, the permission to use Malay language in schools may be temporary.

Keywords: Education, Muslim students, policy, Southernmost Provinces of Thailand, Thai language

## INTRODUCTION

This article traces the policy on language of instruction in schools in three southernmost provinces of Thailand from 1932 to present. It illustrates the change in the policies and the strategies concerning the language of instruction in schools for Muslim students. The data of this article were based on the examination of documents and interviews with officers in the region.

## The Distinctiveness of the Three Southernmost Provinces of Thailand[1]

Pattani, Yala and Naratiwat are located on the furthest south of Thailand adjacent to the Malaysian border (*see* Map 1). Altogether, the three provinces have the largest Muslim populations in the country. Within the three provinces, the Muslims are the majority; they constitute approximately 90 percent of the entire Muslim population. However, as 95 percent of Thailand's overall population are Buddhists, the Muslims in the three provinces are regarded

as a minority group of less than 5 percent of the country's population (Suwannathat-Pian, 2008). This makes them a distinctive case from other minority groups. Muslims in the southernmost provinces have cultivated very strong Muslim and Malay cultures. They speak the Pattani dialect of Malay language as their mother tongue. Their ways of life are strictly regulated by the Islamic codes from birth to death. This contrasts sharply with the majority of other Thais whose lives are premised on the Buddhist culture. Moreover, due to the cultural, religious, and ethnic similarities, the people in the three provinces usually identify themselves with Malays more than Thais. The self-identification as "Malay-Muslims" contrasts with the classification of the "Thai-Muslims" for them by the Thai government (Herriman, 2005).



*Map 1: Three southernmost Provinces of Thailand*

For the Thai state, the identification of Malays for the Muslims in the three southernmost provinces has been a threat to the stability and the sovereignty of the country. Thus, the government has been struggling with assimilating Muslims in the southernmost provinces to be "Thai-Muslims" for a long period of time. One strategy that the Thai government has used is through education and language. By attending Thai schools, the government hoped that Muslims would be acquainted with Thai values, Thai culture, and Thai language. However, persuading Muslims in the three provinces to attend Thai schools and to speak Thai language is not an easy task. Since the stipulation of Compulsory Education Act in 1921, the enrollment rate in schools in the three southernmost provinces was very low. This was due to the fact that in the three provinces, attending Thai schools and speaking Thai language are associated with being Buddhists as most government schools are located within temple boundaries and monks serving as teachers. Thus, instead of attending Thai schools, Muslim parents in the three southernmost provinces usually send their children to *Pondok*, which is an Islamic institution that teaches Islamic codes and Arabic script. For the people in the three southernmost provinces, reading and writing Thai are not seen as merely the act of mastering the language, it is the act of being Buddhist altogether. Thai language is associated with Buddhism the same way as the Malay language is associated with Islam. Thus, one of the biggest challenges for the Thai government, concerning the policy in the three southernmost provinces, is to make people in the three provinces speak the Thai language. The strategies used by the government varied from time to time.

From 1932 until present, the strategies to teach Thai language and to use the language as a medium of instruction in schools have shifted back and forth from strong prohibition of Malay language to the acceptance of the use of that particular language as a medium of instruction in schools. The policy on the language of instruction in schools in the three southernmost provinces from the year 1932 to the present day is discussed in this section.

*The Policy on Language of Instruction in Schools in the Three Southernmost Provinces of Thailand*

The discussion was based on the examination of documents and the interviews that were conducted with officers who worked and are working in the area, both from the earlier period and at present. The discussion is divided into three timeframes, namely, the language policy between 1932 and 1973, the language policy between 1973 and 2004, and the language policy for 2004 until the present day.

*Language Policy During 1932 to 1973*

**Teaching Thai language in government schools**

After the 1932 coup, which marks the end of the absolute monarchy regime and the beginning of the constitutional monarchy system, the education policy for the three southernmost provinces did not change much from the earlier period. The aim of education for the Muslims in the south continued to emphasize the mastering of Thai language in order to unify heterogeneous groups in the country. The problems also remained that Muslim parents preferred sending their children to religious institutions than to government schools, even with the stipulation of the Compulsory Primary Education Act. Thus, the government at that time was careful with the policy to avoid provoking of any dissension to solve this problem. The government of General Phot Phraholyothin agreed to let the Malay language to be used along with Thai language in schools, where all or most of the students were Muslims. However, the situation changed in 1939 when Laung Pibul Songkram was appointed Prime Minister. He dominated the country with his strong nationalistic policies. He announced 12 "Rattaniyoms" or cultural mandates to assimilate the cultural and ethnic minorities to have unified "Thai Culture". The cultural mandates denied the existence of diverse culture and languages and connoted that being Thai meant speaking and using only Thai language with only the dialect of the central region (Baker and Phongpaichit, 2005).

In other words, these forced assimilations and nationalistic policies further alienated Muslims in the three southernmost provinces and heightened the bad impression that Muslims already had towards the Thai government. After the resignation of Pibul in 1944, political instability continued in Thailand.

In 1947, about one hundred Muslims, led by Haji Sulong, convened at the Islamic Committee Office in Pattani province to draft demands concerning religious and self-governing rights. The demands were that primary education (Grades 1 to 7) be conducted in Malay language and that the language be established as official language along with the Thai language (Panklao, 1998). In addition, they also requested that the administrative positions in the southernmost provinces be filled by Muslims. The government gave a positive response to the demands concerning language by allowing Malay language to be taught in schools for five hours per week. However, before the demands could take effect, the government of Luang Thamrongnawasawat was overthrown. When Pibul Songkram returned to power as a Prime Minister in 1947, he ordered the arrest of several Muslim leaders including Haji Sulong, the leader who had earlier made demands to the government. This aroused resentment among the Muslims in the southernmost provinces. In 1948, i.e. 17 days after Pibul took up the Prime Minister post, the Dusun Nyior protest took place in Narathiwat province due to the accumulating resentment. Right after the Dusun Nyior protest, Pibul's government announced Friday as an official weekly holiday in the four southernmost provinces. In education, the earlier policy of teaching Malay language in primary schools was reinstalled in 1948. The Ministry of Education endorsed a special curriculum which allotted equal time for Thai language and Malay language instructions (including religious study) in the government schools in the southernmost provinces. Finally, Pibul Songkram's reign of 10 years ended with the coup d'etat in 1957. Pibul was overthrown by Field Marshal Sarit Thanarat.

The political change has brought about the change in policies toward the minorities, including the Muslims in the southernmost

provinces. Pibul Songkram's strong assimilation and nationalistic policies were replaced by a milder policy of political integration (Forbes, 1989). The earlier stringent cultural codes, such as the prohibition of the use of dialect, were lifted. Apart from the change within the country, the world at that time was torn between the two camps of communism and "democracy". The fear of communism was more severe in the areas at the borders of the country, including the southernmost provinces. As a good ally of Thailand, the U.S. government provided financial and technical supports for the Thai government to fight against communism. Development plans and projects were introduced as ways to improve the lives of the people in the rural areas so that they would not be drawn towards communism. Furthermore, the government stressed the importance of Thai language as a tool to unite the people who were living in different areas. Consequently, the government ordered that the Malay names of roads, streets, bridges and canals be changed to Thai names.

In education, M.L. Pin Malakul, the Minister of Education at that time, proposed new educational administrative areas which divided the country into 12 regions, based on their educational problems. The four southern border provinces of Yala, Pattani, Narathiwat and Satun were put together as the Educational Region 2 due to their similar problems (Pitsuwan, 1985). "The Regional Education Development Project", which aimed at improving the quality of education in several parts of the country, was also implemented. In the Educational Region 2, the focus was to solve the problems of low rates of enrollment and literacy, and the high dropout rate. In 1957, the illiteracy rates among the people in Region 2, particularly in the three provinces of Yala, Pattani, and Naratiwat, were remarkably high. While the illiteracy rate of Thai people on average was at 28 percent, the illiteracy rate in Yala, Pattani, and Naratiwat was 62, 67, and 72 percent, respectively, and these were three times higher than the national average illiteracy rate (Bureau of National Consensus, 1960). Apparently, this was seen as a threat to the solidarity of the country.

While the officers in the Educational Region 2 were searching for effective methods to teach Thai language to Muslim children, one incident rushed the process into execution. In March 1959, King Bhumipol Adulyadej (Rama IX), along with queen Sirikit, paid a royal visit to the office of Educational Region 2 which was located in Yala province. During the visit, the King gave a historical remark about the inability to effectively communicate in Thai by the people in the southern border provinces:

> *"The education here is very important. We have to pay special attention to educate people here to speak Thai. Although not fluently, people here should at least be able to communicate in Thai. During this visit we had to use interpreter. It would be more convenient if we could communicate in Thai."*
>
> (Educational Region 2, 1984, p.3)

This remark was a powerful impetus for the officers in the southernmost provinces to take the matter of teaching Thai language to Muslims as their first priority and imperative mission. Right after the King returned to Bangkok, the regional education development committee convened to find the best way to teach Thai language to the people in the area.

During this period, some officers went to visit schools in the U.S. and observed the bilingual education method that American teachers employed with minority students. Influenced by such method, the head of Educational Region 2 proposed that before starting school, students whose first language was not Thai should be prepared with Thai language for one year. During this one year, the Pattani dialect of Malay language was allowed to be used as a bridge to Thai vocabulary through songs, games, and other extracurricular activities. After that period, however, the students were mainstreamed into normal classrooms and they must use only Thai language. The strategy to teach Thai language was gradually introduced to the schools in Yala, Pattani, Naratiwat, and Satun. Books and

instructional materials were also produced. For example, professors at Yala Normal College (currently Yala Rajabhat University) were invited to write a book on the pronunciation of Thai language for the people whose mother tongue is Malay language. In addition, words that were difficult for the Malay-speaking students were also listed and gathered into a book and distributed to teachers (Educational Region 2, 1984). This method focused on preschool students, with the assumption that language is best learned during younger ages.

The method of preschool bilingual programme was used from 1957 to 1983. Based on the evaluation research conducted by the Educational Region 2, students were found to be happier with this method; they had a better impression of schools and teachers felt less alienated by the classroom atmosphere. This was due to the fact that they were allowed to communicate in their mother tongue. As for the academic performance, however, there was no evidence of significant difference between students who attended the one-year preschool bilingual programme and those who did not. Based on the interviews with the officers who were responsible for the programme, the reason behind this might be that the one-year gain in Thai language proficiency might wane out as students progressed through schools.

At first glance, the language policy during this period looked progressive as compared to the strict prohibition of dialects in schools during the earlier period. Nevertheless, when looking at other levels of education, it was apparent that only Thai language was allowed. Thus, the use of Malay language during students' preschool year could be interpreted as a strategy to make students learn Thai language more effectively. The aim of the government was definitely to emphasize "Thai-ness" through the mastering of Thai language into Muslim students. The real intention aside, this method was effective in pacifying the tension among the Muslims, which was caused by the stringent nationalistic policy during the earlier administration. Students, as well as their parents, were contented that Malay language was recognized in schools, even for one year (Educational Region 2, 1984).

Furthermore, in 1971 and 1972, Educational Region 2 also piloted a "Head Start" programme which taught Thai language to 1st grade students during the two-month summer vacation before the start of the school term. The result was also favourable. The preschool bilingual programme was continued until 1983, but was later terminated because of the change in the administrative structure and the school system.

## Teaching Thai language in *Pondok*

For a long time, the government had been using government schools as bases to promote "Thai-ness" in the forms of Thai language and Thai culture to Muslim children. They had tried to increase the popularity of government schools among Muslim parents by allowing Malay language to be taught in schools. They also used strategies, such as preschool bilingual programme, to enable preschool students to be familiar with Thai language. Despite all these efforts, the enrollment rate in the government schools remained unchanged. Muslims parents still preferred sending their children to religious schools or *Pondok* rather than the government schools. From 1932, when the absolute monarchy was changed to constitutional monarchy, the *Pondoks* remained relatively unaffected due to their status as "religious institutions" not "schools" (Pitsuwan, 1985). In 1961, however, with the claim of the foundation of a separatist organization in the *Pondok* (Panklao, 1998), the government began to keep an eye on the *Pondoks* by ordering them to be registered with the government. The registered *Pondoks* would have to include Thai language and secular education as parts of their curriculum. The *Pondoks* that accepted this agreement would be financially subsidized. From 1961 to 1966, a total of 287 *Pondoks* were registered (Pitsuwan, 1985). The registered *Pondoks* later had the status of "private schools" and they were to follow the regularities established in the Private Institution Act. The traditionally flexible organization of classes was replaced with systematic arrangement of classes and examinations that are similar to those of the government schools. For the government, this

was a brilliant plan to instil a sense of Thai-ness among Muslim children.  However, for Muslims in the southernmost provinces, this plan backfired.  It was seen as a direct attack on their religion because the Thai language and secular studies introduced in the *Pondoks* were based on the Buddhist ideology (Pitsuwan, 1985; Suhrke, 1989).  Moreover, the dispatched teachers were ignorant of the Muslim cultures.  Female teachers wore short skirts or dresses that exposed most parts of their bodies (Kaewdaeng, 1968).  After 1971, there was a recommendation that Thai language be used as a medium of instruction in *Pondoks* and the time allotted for the Islamic studies had to be used for the secular education (Chaipranee and Suwantat, 1981).

The period from 1957 to the beginning of 1990s was based on the ideology of "development" in order to counteract separatist and communist movements.  The development projects in several aspects, including education, emerged at that period.  As parts of the Regional Education Development Project, several strategies were used to teach Thai language in government schools.  At the same time, the government began to reform *Pondoks* to include Thai language and the secular education.  Both attempts were parts of the process of "Thai-icisation" (Suthasasna, 1989, p. 101) of the Muslims to make them identify themselves as "Thai" and feel a sense or responsibility as Thai citizens.  The strategies to teach the Thai language in government schools received positive response among the Muslims because of the flexible strategies, such as the use of Malay language as a medium of instruction.  On the other hand, the attempt to regulate and teach Thai language in *Pondoks* resulted in an unfavorable outcome as some *Pondoks* did not comply with this policy.

Notwithstanding the resentment against the government's intrusion into *Pondoks* by the year 1983, with the attempts of these projects and several others[2], the illiteracy rate in the southernmost provinces was lower in 1980 compared to the year 1960 (*see* Table 1).  The ability of school age Muslim children to speak Thai language also increased (Smalley, 1994).

TABLE 1
Illiteracy rate in the southernmost provinces of Thailand

|  | 1960 | 1970 | 1980 |
| --- | --- | --- | --- |
| Southernmost provinces (Pattani, Yala, Narathiwat, Satun) | 62% | 48% | 30.61% |
| Country average | 28% | 18.2% | 14.30% |

(*Source*: Educational Region 2, 1984)

*Language Policy During 1973 to 2004*

In 1973, students revolted against the government of Thanom Kittikarjorn and demanded more democratic constitution.  However, with the military coup of 1976, Thailand once again swung back to military rule.  After the revolution, several governments took turn to rule.  The political pendulum swaying between military and civilian government followed.  In 1975, the Education Reform, which included several progressive reform agenda, was announced.  However, before reaching its full implementation, the military coup of 1976 revamped most of its reform spirit.  As for education of Muslims in the southernmost provinces of Thailand, the policies which emphasized stability, security and anti-communism were continued. The government still stressed that, Thai citizens, including Muslims, must be proficient in the Thai language.  Under this policy, the preschool bilingual programme, that was aimed at strengthening the proficiency in the Thai language before students started schooling, was also continued and expanded to cover more than 100 schools every year (Panklao, 1998).

In 1980, General Prem Tinlasulanon succeeded General Kriangsak Chomanan. The major policy concerning education in the southernmost provinces was similar to those of the earlier governments, where Thai language and Thai culture were emphasized.  The major strategies or methods to teach Thai language included the continuing implementation of a one-year preschool bilingual programme, a Radio programme to teach Thai language, and the promotion of informal education to reach wider

clients. One prominent change also occurred during this period. In 1973, there was a petition from Narathiwat to the King that Buddhism was taught to Muslim students in a primary school, where textbooks with Buddha images were used (Dema, 2008). Consequently, the Educational Region 2 took charge of formulating a curriculum on the Islamic religion studies to be used in government primary and secondary schools.

Apart from the change in political leadership, the change in educational administration had also influenced the policies and strategies concerning the education of Muslims in the southernmost provinces. In 1983, the preschool system was changed into a 3-year kindergarten system. This naturally made the one-year preschool bilingual programme removed from the system due to the fact that the aim of the kindergarten programme was character building and not academic preparation. Moreover, because the preschool bilingual programme was in the form of a "project" and not a permanent policy, it was easier to be discontinued. Thus, the preschool bilingual programme which had been offered for twenty years had to be discontinued to give way to an "innovative" teaching method imported from Australia, namely the Concentrated Language Encounters (CLE). This method, introduced by officers from the central office, emphasized the comprehension of whole sentences, or whole contexts rather than the correct pronunciation and comprehension of each word. According to an interview, people who had worked with the preschool bilingual programme in the Educational Region 2 for ten years opposed this new method on the ground that it was imposed upon them by the central office who knew little about the problems of language learning in the southernmost provinces. Regardless of the resentment, the method had replaced the preschool bilingual programme and has been widely used since 1983.

In 1999, there was another tremendous change that affected the policy on Thai language in the three southernmost provinces. The 1999 National Education Act was promulgated. This act brought about radical change in the administrative structure, instructional

approaches, and curriculum. The change that particularly affected the language instruction in the southernmost provinces was the change in administrative system. Before the education reform, the Educational Region 2 was the organization that overlooked the language instruction strategies for the whole southernmost provinces encompassing the four provinces of Pattani, Yala, Narathiwat and Satun. Therefore, similar strategies were employed for the language instruction in the four provinces based on their similar problems. However, as the 1999 National Education Act emphasized decentralization of administrative power and encouraged that each province worked on their own to solve problems, the idea of having Educational Region 2 to oversee education for the southernmost provinces seemed to be redundant. After the reform, in each province, 2-3 Educational Service Areas[3] were set up to work autonomously to find unique ways to solve educational problems in their areas. This decentralization of the administrative system might work elsewhere in the country, but not in the southernmost provinces. In particular, the educational problems such as low student achievement due to the lack of language proficiency and the different cultures between students' home cultures and school culture overwhelmed the officers in each Educational Service Area[4]. The state of confusion, which resulted from the introduction of a new educational administrative structure, continued until 2004, only to undergo another tremendous change once again.

In conclusion, the proficiency in Thai language from 1973 to 2004 was expected from the Muslims in the southernmost provinces. The strategies to reach this goal include the one-year preschool bilingual programme, the Radio broadcast, and the use of non-formal education. However, the change in the educational administrative structure affected the language policies. The twenty-year preschool bilingual programme was terminated due to the change in the structure of preschool education. In more specific, the introduction of the Educational Service Areas in each southernmost province decreased the importance

of the Educational Region 2. The cohesive teaching methods and materials of the Thai language in the southernmost provinces changed to the individualized, area-based practices, which brought the feeling of confusion to education officers.

Another noticeable change concerning the language policy during this period occurred in the Chuan Leekpai administration. When Chuan Leekpai took the Prime Minister's office in 1992, it was the first time that "cultural difference" was perceived as a cause for educational problems, such as the language incompetence and the low enrolment rate in government schools. These problems were due to the mismatch between the "cultures" and therefore, not because of the intention of the people to rebel or to secede as framed by the earlier governments. This reconciliation stance of the government resulted in the use of strategies to promote a mutual understanding between the Malay-speaking citizens and Thai-speaking officers.

*The Language Policy from 2004*

The outbreak of the violent incident, i.e. the army post raid in January 2004, signaled the resurgence of violence in the south. Chains of violent incidents such as killing and bombing followed after that incident. While the causes of the insurgency were unclear, many were concerned with the education of the Muslim students in the three southernmost provinces. Although literacy rates had been increased, the students in the three southernmost provinces were not fluent in reading and writing in the Thai language. This language barrier was attributed as a major cause for the low academic achievement. One question was raised, "What is the best strategy to teach Thai language to Muslim students?" As a result, the preschool bilingual programme was revitalized. The very people who had worked in the Educational Region 2 and directly involved in the former one-year preschool bilingual programme, who are now in their 60s, were brought back into light. They proposed that this programme should be extended to include students in higher grades apart from kindergartens. While this

proposal was in the process of collecting more supportive research findings, the government simultaneously implemented a pilot project on kindergarten bilingual programmes in several schools in the three provinces. Malay language was openly allowed to be used as a medium of instruction. Kindergarten students learn the collection of Thai vocabulary through songs, games and other activities that are similar to the preschool bilingual program forty years ago. While the project was still in the steps of piloting, still other researchers went further to propose that Malay language be used throughout the primary school. This group of researchers had also carried out pilot projects of the bilingual programme in some primary schools. The aim of using Malay language is not only to help students learn Thai language better, but also to preserve the Malay language (Premsrirat, 2008).

Differing in their emphasis and details, all of the bilingual projects focus on the Malay language, both as a medium of instruction and in maintaining the respectful identity of Muslim students. The insurgency was undeniably the reason behind this shift of strategies. With violence occurring in the area, the government could not retain or even propose any form of nationalistic policy, such as the strict mandate of Thai language in schools as before. However, looking at it more closely, these strategies were all in the form of programmes or projects, not policy. This means that their life spans are rather uncertain. Some researchers who support a bilingual primary programme have lobbied the government to issue a National Language Policy which allows Thai language, as well as other dialects, to be regarded as national language (Premsrirat, 2008).

From this, it can be interpreted that the intention of the government, regardless of the strategies and policies they have adopted, was the integration of the Muslims in the three southernmost provinces into mainstream Thai culture. The use of Malay language, thus, is used as a bridge for students to learn Thai language, not the full recognition of Malay language as the language to be used throughout the area.

## CONCLUSIONS

Upon reviewing the language policy in the three southernmost provinces from 1932 to the present day, the following conclusions can be drawn:

### Language is Used as an Appeasement Tool to Calm Down the Enraged Muslims

From 1932, whenever there was a tension or a threat of separatist movements among the Muslims in the southernmost provinces, the permission to use Malay language as a medium of instruction or to be taught in schools was one of the policy choices several governments had opted for. For example, during his second term as a Prime Minister, Pibul Songkram allowed Malay language to be taught in primary schools to pacify the outrages after the Dusun Nyior protest. Recently, after the resurgence of violence in the southernmost provinces, pilot projects using Malay language as a medium of instruction in government schools have been implemented, ranging from two kindergarten years to the whole six years of primary school.

Allowing Malay language to be taught in schools and declaring Friday to be the weekly holiday have long been the two popular policy choices to counter the tension created by the separatist movement. At first glance, it seems that language and the day of rest are cultural identity that could be allowed to trade off to retain security of the country. Based on the policy on language of instruction in schools, however, this was not the case. While the government allowed Malay language to be concurrently taught with Thai language in government schools, it stressed the importance of Thai language as an important cultural identity of Thai citizens. Malay language is used in government schools for Muslim students to make connection to the contents of the subject matters in Thai language, such as in the case of the preschool bilingual programme. In other cases, Malay language was used to pacify the resentment of Muslims toward the government, as mentioned earlier. In conclusion, the permission to use Malay language in government schools was for both political and instructional purposes.

### The Importance of Thai Language Has Been Framed Differently According to the Sociopolitical Context of the Time

In the 1940s, 1950s and the beginning of 1960s, being illiterate in Thai language equals to being "un-Thai", "others", and suspiciously, the enemy of the country. However, by the end of 1960s, when the "development" ideology encroached into Thailand, not knowing Thai was linked to low academic achievement, and this was a hindrance to the development of the country. In today's era of globalization, a country's survival depends largely on its productivity and the ability to compete. High quality human resources, which are largely determined by the quality of education, are essential in order for a country to compete in the global market. Benchmarks, such as scores on the national and international tests, literacy rate, years of schooling, are used to judge the quality of human resources of a country. Thus, the population's incompetence of Thai language was one of the big challenges to be overcome in order to increase its competitiveness in the global market. The promotion Thai language among the Muslim students in the southernmost provinces is based on this premise.

Similarly, in today's globalization era, the Malay language is now celebrated as an asset, the same way as Chinese is celebrated as a marketable ability. Thus, we have heard a proposal that Malay language be taught in schools in the southernmost provinces as an elective subject, the same way as French, German, Japanese and Chinese.

Instead of using language as a political tool, it is recommended that the government looks at language as an important cultural identity of students. This cultural identity should be used in schools to create an equal educational opportunity. The programme, such as bilingual education and its impact, should be thoroughly studied. Meanwhile, the permanence of the programme should also be considered.

## ENDNOTES

[1] Sometimes the term "the four southernmost provinces" is used to refer to Yala, Pattani, Naratiwat and Satun. However, this paper focuses only on the three provinces, excluding Satun, because the situation in Satun is different. Most of the Muslim population in Satun speak Thai as their mother tongue, or they speak the language as fluent as their mother tongues. Thus, the researchers did not see much struggle to teach Thai in Satun as it is in the other three provinces.

[2] Other projects include the development of non-formal education, the granting of scholarship to Muslim students, the expansion of the government primary schools.

[3] The Educational Service Areas were similar to the school district in the U.S.

[4] The interview with an educational officer in Yala.

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# Causal Effects of World Crude Oil Prices on the Prices of Rice and Soybean Oil: An ARDL Approach

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## ABSTRACT

This study was undertaken to examine the impact of world crude oil prices on the prices of rice and soybean oil. Autoregressive Distribution Lag (ARDL) method was employed to investigate both the short-run dynamic and long-run relationship. All of the data were the time series annual basis from 1970 to 2008. The results revealed that the long-run relationship between world crude oil prices and rice prices did exist. In addition, the analysis also suggested that crude oil prices formed a major factor in the operation cost for the rice production in Malaysia. Nevertheless, the impact of crude oil prices did not only affect the direct cost in rice production but it also influenced the price of other materials required for rice production such as fertilizers.

**Keywords: World crude oil prices, rice prices, soybean oil prices**

## INTRODUCTION

Due to the sharp rise of the world crude oil prices beginning 2004, the issue of commodity prices has once again become researchers' concern (see *Fig. 1*). In more specific, they have focused on the effect of oil prices on other commodity prices (Yu, Bessler and Fuller, 2006; Baffes, 2007; Amna and Fatimah, 2008). Baffes (2007) conducted a study on the effects of the world crude oil prices changes on 35 other commodities using the annual data from the year 1960 to 2005. The results revealed that if the crude oil prices remained high, the recent commodity prices boom would likely last longer, particularly in the food commodities, fertiliser and precious metal. This is consistent with the study by Amna and Fatimah (2008) who focused on the effect of petroleum prices instead of world crude oil prices on several vegetable oil prices (including soybean oil). The results of the latest study provided strong evidence of a long run equilibrium relation between the prices of the two major commodities. Furthermore, the error correction model estimation indicated a unidirectional long run causality flowing from petroleum to each of the vegetable oil prices under their study.

*Fig. 1* plots the world crude oil prices in US dollar from 1970 to 2008. The world crude oil prices had been sufficiently low in the past two decades. In 2004, however, the world crude oil prices increased sharply and eventually reached US$98.89 per barrel in 2008 (it touched USD136.32 per barrel in July 2008). The world crude oil prices will continue to affect the prices of other commodities in many

*Fig. 1: Price of world crude oil for the year 1970 to 2008*

ways. For example, on the supply side, the world crude oil enters the aggregate production functions of most primary commodities through various energy intensive inputs (e.g. fertilizer and fuel for agricultural commodities) and on transportation expenditures for long distances.

A rapid economic growth in developing countries has resulted in high demand for energy on electricity and industrial uses as well as for transportation fuel. Thus, increases in the world crude oil prices consequently lead to the rise in the prices of the final products. According to the World Bank (2007), global food prices have climbed by 83% since 2005 due to the increase in the prices of food commodity. It is noted that there was a dramatic increase in world crude oil prices at the end of 2008 (see *Fig. 1*). This has affected the cost of producing and transporting fertilizers and many other products which are crucial for the rice production activities. According to Doane Advisory Services (2008), high energy costs would impact the production cost in a variety of ways. Farmers use fuels to operate equipment and run irrigation wells. High energy prices, specifically the price of world crude oil, will indirectly drive up production costs through the increase in the prices of fertilizers and chemicals used in routine operations.

As shown in *Fig. 2*, the prices of rice in Malaysia and soybean oil in the Rotterdam market rose from 1970 to 2008. The price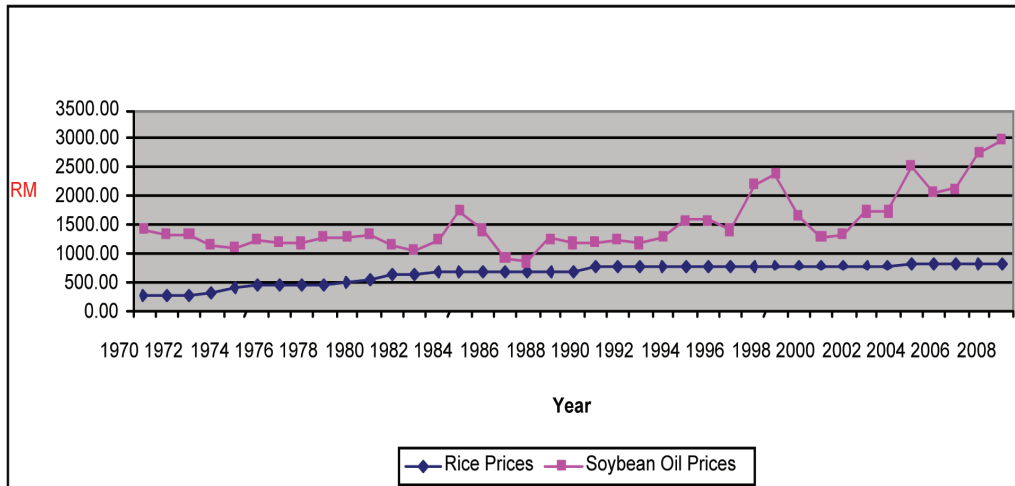s of rice had continuously increased since 1970, from RM 265 per tonne to reach RM 823 per tonne in 2008. In addition, the prices of soybean oil also showed an upward trend from 1970 to 2008. Apparently, the increase in the world crude oil prices mentioned earlier was concurrent with the rise in the prices of rice and soybean oil in Malaysia and Rotterdam market, respectively.

The high correlation between the price of world crude oil and the prices of food commodities, such as rice and soybean oil, raises the question as to the nature of the relationship between the world crude oil prices and the prices of both commodities. Hence, this paper attempted to investigate the relationship between the world crude oil prices and the prices of both food commodities. This study was expected to provide more empirical evidences on the effects of the world crude oil prices as different approaches were used, and for this purpose, the study period was further extended to 2008, where the world crude oil prices reached a peak level as compared to the studies conducted by Yu *et al*. (2006), Baffes (2007) and Amna and Fatimah (2008).

*Fig. 2: The price of Malaysian rice and soybean oil in Rotterdam market for the year
1970 to 2008*

## MATERIALS AND METHODS

This study used the data of the world crude oil prices, and the prices of rice in Malaysia and soybean oil in the Rotterdam market; these data were gathered over the period from 1970 to 2008. The published data on these variables are available from the publications of the Ministry of Plantation Industries and Commodities (MPIC), the Department of Statistics, Malaysia, and the International Financial Statistics (IFS) online service. In more specific, this study evaluated the long-run elasticity and short-run causality as well as examined the impacts of the world crude oil prices on the prices of rice and soybean oil.

The co-integration techniques, such as by Engle and Granger (1987) or Johansen (1988) and Johansen and Juselius (1990), have commonly been used in the empirical economics to study the existence of long-run equilibrium relationship levels between the variables. These methods involve a pre-testing step for unit roots to determine the order of the integration of the variables in the model. In particular, the methods required that all the variables undertaken in the study to be integrated in the same order of one, that is, I(1). In practice, however, not all the variables have a unit root. Some variables are

stationary in level I(0), while others may have two unit roots, I(2), or are stationary in second differences. If the orders of integration of the variables undertaken the study are different, it will cast doubt on the accuracy and validity of the estimation results obtained from the co-integration testing procedures.

However, Engle and Granger (1987) pointed out that if the time series was non-stationary, one could then include lagged dependent and independent variables using a sufficiently complex dynamic specification, such as an Autoregressive Distributed Lag (ARDL) model to allow the regressors to have different orders of integration. As such, in this study, the ARDL bound testing approach proposed by Pesaran *et al*. (2001) was used to allow the regressors to have different orders of integration, either I(1) or I(0), in estimating the functions. The bound test, which is based on the estimation of an Unrestricted Error Correction Model (UECM), is applicable irrespective of whether the underlying regressors are purely I(0), I(1) or is mutually co-integrated. Furthermore, the ARDL model is more robust and performs better with a small sample size compared to the standard co-integration methods (Pesaran and Shin, 1999).

The variables used in this study include world crude oil prices (lnCOP), prices of rice (lnRP) and prices of soybean oil (lnSBOP) in the natural logarithmic form. Meanwhile, the dependent variables are the prices of rice and soybean oil. There are two ARDL functions, as follows:

a. The ARDL model for the function of rice prices

$$\Delta \ln RP_t = \beta_0 + \beta_1 \ln RP_{t-1} + \beta_2 \ln COP_{t-1} + \sum_{i=0}^{p} \alpha_3$$
$$\Delta \ln RP_{t-i} + \sum_{i=0}^{p} \theta_4 \, \Delta \ln COP_{t-i} + \varepsilon_t \tag{1}$$

b. The ARDL model for the function of soybean oil prices

$$\Delta \ln SBOP_t = \beta_0 + \beta_1 \ln SBOP_{t-1} + \beta_2 \ln COP_{t-1} +$$
$$\sum_{i=0}^{p} \alpha_3 \, \Delta \ln SBOP_{t-i} + \sum_{i=0}^{p} \theta_4 \, \Delta \ln COP_{t-i} + \varepsilon_t \tag{2}$$

Where, $\ln RP_t$, $\ln SBOP_t$, and $\ln COP_t$ are as mentioned above, and $\Delta$ denotes the first difference operator, $ln$ represents natural logarithmic transformation, $\beta_0$ is the intercept and $\varepsilon_t$ is a white noise error term.

There are two steps involved in testing the co-integration relationship for both equations. First, the two models were estimated using Ordinary Least Square (OLS) technique. Second, the null hypothesis of the no-cointegration $H_0$: $\beta_1 = \beta_2 = 0$ was tested against the alternative of $H_1$: $\beta_1 \neq \beta_2 \neq 0$ by means of $F$-test. Two sets of critical value bound for the $F$-statistics were generated by Narayan (2005). If the computed $F$-statistic fell below the power bound critical value, the null hypothesis of the no-cointegration could be rejected. On the contrary, if the computed $F$-statistic was above the upper bound critical value, the null hypothesis was therefore rejected, implying that there was a long-run co-integration relationship between the variables in the model. Nevertheless, if the calculated value was within the bound, the inference was therefore inconclusive.

## RESULTS AND DISCUSSION

This section presents and discusses the empirical analysis of the relationship between both the ARDL models as mentioned in the methodology part. The complete analysis involved the bound test to analyse the short-run and long-run relationships. The methods which were adopted in the previous literature mainly concentrated on cases where the underlying variables were integrated of order I(1) (Pesaran *et al*., 2001). Meanwhile, the ARDL approach has some advantages over the other approaches. First, the series used do not have to be I(1) (Pesaran and Pesaran, 1997). Second, even with a small sample, more efficient co-integration relationships can be determined (Ghatak and Siddiki, 2001). Finally, Laurenceson and Chai (2003) stated that the ARDL approach could overcome the problems which resulted from non-stationary time series data. If non-stationary problem was not properly handled, it would lead to spurious regression coefficients which are biased towards zero.

Both models for the bound test co-integration relationships are revealed in Table 1. The bound test is important to test the existence of the relationship level between a dependent variable and a set of regressors, particularly when it is not known with certainty whether the underlying regressor are trend or first-difference stationary (Pesaran *et al*., 2001). There is evidence of co-integrating relationship in model number one, i.e. between the prices of world crude oil and prices of rice. This is proven by the computed $F$-statistic (5.58) which lies above the upper bound critical value at 5% level of significance. However, the model for the relationship between the prices of world crude oil and the prices of soybean oil provides no evidence of co-integration. In other words, the increase in world crude oil prices has significantly impacted the prices of rice in Malaysia but not the prices of soybean oil in Rotterdam. This could probably be due to the difference in the trends of the prices for both the commodities (*Fig. 2*). The rice prices continuously increased during the period of the study, whereas the prices of soybean oil decreased several times.

TABLE 1
The bound test results for long-run relationship

| The critical value of the F-statistic: intercept and no trend | | | | | | |
|---|---|---|---|---|---|---|
| | 90% level | | 95% level | | 99%level | |
| T40 | I(0) | I(1) | I(0) | I(1) | I(0) | I(1) |
| | 3.21 | 3.73 | 3.94 | 4.52 | 5.59 | 6.33 |
| Types of commodity | Calculated F-statistic | | | | | |
| Rice prices | 5.58** | | | | | |
| Soya bean oil prices | 3.23 | | | | | |

*Notes*: ** Significant at 5 percent.  The critical values were taken from Narayan (2005)

After analysing the bound test for co-integration, the next step was to estimate the coefficient for the long-run relationships.  The lagged length ($\rho$) in Eq. (1) and Eq. (2) were determined by Schwartz Bayesian Criteria (SBC) following the suggestion of Pesaran and Pesaran (1997).  The SBC indicated $\rho = 2$ as the most appropriate lagged length for both the equations.  The results of the long-run test revealed that only the prices of rice were positive (0.16) and significantly (at 10 percent level) affected by the prices of world crude oil (Table 2).  This is consistent with the finding of the study by Chaudhuri (2001) whereby the prices of the primary commodity and the prices of world crude oil will co-integrate in the long run.  The result also implies that as the price of world crude oil increase, the prices of rice will also increase.  When this occurs, Malaysia has to face not only the price hike in the local crude oil due to the rise in the prices of world crude oil but also in the price of staple food, i.e. the price of rice.  Unlike the prices of rice, however, the price of world crude oil do not significantly impact the price of soybean oil in the long run.  This is consistent with the finding of the study by Yu *et al*. (2006).  Even when the price of world crude oil reached its highest peak in 2008, the impact on the price of soybean oil remained insignificant.  One may argue that this could be attributed to the sample period used by Yu *et al*. (2006), which was only until 2006.  In the present study, nevertheless, the data were collected up to 2008.  Hence, this shows that the result is robust as the present study made use of different methods or approaches and sample period as compared to that of Yu *et al*. (2006).  As mentioned earlier, this study used the ARDL method to perform the regression analysis.  On the contrary, Yu *et al*. (2006) used the Johansen and Juselius co-integration method.

Finally, the results presented in Table 3 reveal the error correction representation for the selected ARDL model for the prices of rice and soybean oil.  This is also known as the short-run dynamic coefficient estimation.  Both models indicated that there are insignificant relationships (at 10 percent level) between the price of world crude oil and the price of rice, as well as between the price of world crude oil and the price of soybean oil in the short-run, despite the sign effect for both models are positively correlated, with coefficient 0.02 and 0.08, respectively.  One possible explanation for this is that short-term changes in world crude oil prices could be absorbed by the Malaysian Government.  This is due to its position as one of the crude oil producers in the world.  Thus, if there are any changes in the world crude oil prices in the short-term period, the transportation cost will be marginally affected but it will not impact the prices of commodity.

The error correction model, denoted as ECM (-1) in Table 3, was found to be negatively and statistically significant for both the prices of rice and soybean oil models.  The ECM

TABLE 2
The estimates for the long-run elasticities

| Prices of rice | | | |
|---|---|---|---|
| Regressor | Coefficient | Standard error | P-value |
| Intercept | 6.16*** | 0.31 | 0.00 |
| Crude oil prices | 0.16* | 0.09 | 0.09 |
| Prices of soybean | | | |
| | Coefficient | Standard error | P-value |
| Intercept | 6.39*** | 0.57 | 0.00 |
| Crude oil prices | 0.32 | 0.19 | 0.11 |

*Notes*: *** Significant at 1 percent, * Significant at 10 percent

TABLE 3
The estimates for the short-run elasticities

| Rice prices | | | |
|---|---|---|---|
| Regressor | Coefficient | Standard error | P-value |
| Intercept | 0.92*** | 0.22 | 0.00 |
| Crude oil prices | 0.02 | 0.02 | 0.18 |
| Error correction model (-1) | -0.15*** | 0.04 | 0.00 |
| Soybean oil prices | | | |
| | Coefficient | Standard error | P-value |
| Intercept | 1.61* | 0.88 | 0.08 |
| Crude oil prices | 0.08 | 0.05 | 0.11 |
| Error correction model (-1) | -0.25* | 0.13 | 0.06 |

*Notes*: * Significant at 10 percent, *** Significant at 1 percent

indicates the speed of adjustment process to restore the equilibrium following a disturbance in the long-run equilibrium relationship. A negative and significant error correction term implies how quickly the variables will return to the equilibrium. For instance, the model for the price of rice implies that 15% (ECM coefficient = -0.15) of the disequilibrium of the previous year's shocks are able to readjust to the long-run equilibrium in the current year. Similarly, the model for the price of soybean oil

implies that 25% (ECM coefficient = -0.25) of the disequilibrium of the previous year's shocks are able to readjust to the long-run equilibrium in the current year. It is important to note that the model of the price of soybean oil is better than the model of the price of rice. This is because the model for the price of rice would take 7 years to readjust to the long-run equilibrium. However, the model for the prices of soybean oil only took 4 years to readjust to the long-run equilibrium.

## CONCLUSIONS

In this paper, two models which focused on the impacts of the price of world crude oil on the prices of both rice and soybean oil were examined. The first model analysed the relationship between the price world crude oil and the price of rice in Malaysia. The second model investigated the relationship between the price of world crude oil and the price of soybean oil in the Rotterdam market. Due to the growing interest on the rise and fluctuation of the world crude oil prices, it would potentially increase the need for policy makers to remodel the agriculture-related policies. Therefore, this paper aimed to investigate the presence of the long-run relationship between the price of crude oil and the prices of the commodity, particularly on the prices of rice and soybean oil.

Both models used the ARDL approach which had been developed by Pesaran and Pesaran (1997) and Pesaran et al. (2001). The results of the ARDL bound testing confirmed the presence of co-integration in the model for the price of rice, but not in the price of soybean oil. Over the long-run, it is noted that only the price of rice is affected. This also means that the linear combinations of the variables are stationary and therefore, the prices tend to move towards this equilibrium relationship in the long-run. This finding is supported by the study of Chaudhuri (2001) who demonstrated that the prices of the real primary commodity and the prices of the real crude oil are indeed co-integrated. Nevertheless, in line with the study by Yu et al. (2006), the findings of the present study do not provide a strong evidence for the long-run relationship between the price of world crude oil and the price of soybean oil. This may reflect the robustness of the results obtained in this study. Even though different analysis approaches were used compared to the study conducted by Yu et al. (2006), the results remain similar. This suggests that the present prices of world crude oil have no influence on the price of soybean oil. In addition, the results also reveal that the prices of world crude oil do not affect the prices of rice and soybean oil in the short run.

These findings clearly demonstrate the implications of the world crude oil prices on the agriculture sector, particularly for the production of rice. Since Malaysian rice producers are price takers, high production costs which are resulted from the increase in the world crude oil prices would significantly reduce their profit margin. These situations will become worse if they do not receive any subsidies or incentives from the government. On the other hand, no implication was observed for the world crude oil prices on the price of soybean oil. This finding suggests that soybean oil producers do not have to worry about the fluctuation of world crude oil prices. In addition, it is known that palm oil could influence the price of soybean oil as it is a substitute for soybean oil (Amna and Fatimah, 2008).

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# Efficiency Measurement of a Malaysian Hotel Chain Using DEA

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## ABSTRACT

Efficiency evaluation has become an important improvement tool for hotels to sustain in today's highly competitive environment. This study used DEA approach to evaluate the relative efficiency of a Malaysian hotel chain during the period of 2004 to 2008 in terms of Total Factor Productivity (TFP) change. TFP change is measured using DEA-Malmquist productivity index. DEA is a pragmatic tool which combines multiple inputs and outputs objectively onto an overall measure of organizational efficiency. The Malmquist TFP index measures are decomposed into technical efficiency change and technological change. The decomposition of technical efficiency change into two sub-components, pure technical efficiency change, and scale efficiency change is also discussed in this paper. The actual operating data of five inputs and five outputs were collected from 10 hotels under the chain. Empirical results revealed that the TFP of the hotel chain slightly increased by 0.7% over the time period. Six of the hotels in the chain experienced positive TFP change while the others experienced TFP decline. The quadrant of efficiency was proposed to give a two-dimensional view of the hotel efficiency. Meanwhile, technological change was found to be more important factor of TFP growth as compared to technical efficiency change. Therefore, hotels which faced negative growths of technological change are recommended to improve their efficiency through investment in new technology or by upgrading the necessary skills. Additionally, the paper has also identified the best performing hotel within the chain which can be benchmarked by others who are seeking for performance improvement.

**Keywords: Data envelopment analysis, hotel efficiency, Malmquist index, total factor productivity**

## INTRODUCTION

Tourism is defined as a unique product as it is composite in nature, a combination of the tangible and intangible that includes everything that tourists experience (Kandampully, 2000). Tourism has become a major element of the economic prosperity for almost all countries of the world and Malaysia is of no exceptions. Being one of Asia's most popular tourist destinations, Malaysia attracted 22.0 million tourists with tourist receipts of RM 49.5 billion in 2008 (Ministry of Tourism Malaysia, 2009). The statistics has shown that the tourism industry has emerged as an important sector of the Malaysian economy by virtue of the amount of receipts collected from its activities.

The tourism industry in Malaysia comprises of hotels, resorts, lodging, tour services, travel

agencies, restaurants as well as catering services, and transport companies. The scope of the tourism service has progressed from supplying services or mass products and markets to more innovative tourism packages. These include eco-tourism, edu-tourism, health tourism, sports tourism and event organization (MICE). In the Ninth Malaysia Plan, the tourism industry has been identified as having potential to increase its contribution to the service sector in particular and the economy in general. Indeed, under the Third Industrial Master Plan (IMP3, 2006-2020), the tourism services have been identified as one of the eight service sub-sectors to be focused for further development during the IMP3 period. With the implementation of the Ninth Malaysia Plan and IMP3, tourist arrivals to Malaysia were expected to reach 24.6 million by 2010 and correspondingly, tourist receipts were also estimated to reach RM59.4 billion in 2010 (Ninth Malaysia Plan, 2006-2010).

The expansion of the tourism industry, through its linkages, has contributed to growth in other related activities, such as accommodation. With the aim of enhancing Malaysia as one of the global tourism destinations, the hotel sector, being one of the sectors in the tourism industry, plays an important role in maintaining and improving its performance in order to contribute to the growth of the tourism industry. Meanwhile, the hotel sector has also been identified as the potential area having competitive advantage for the development of the Small and Medium Enterprises (SMEs) in IMP3.

In order to sustain and further boost the tourism industry, the hotel sector needs to operate efficiently and provide comfortable accommodations for tourists. It is important for hotels to formulate marketing competitive strategy, strengthen corporate operations and upgrade its quality of service. In formulating these strategies, hotels must first measure their performance. Performance evaluation serves as an important reference for strategic planning and construction policies. Thus, the top management of hotels needs to find ways to evaluate and improve the efficiency and performance of their establishments.

Existing studies on efficiency in Malaysia have primarily focused on the whole economy or the manufacturing industry, yet little has been done in the services industry at firm level. Similarly, there has been extensive literature examining the efficiency of US, UK, Taiwan and Portugal hotels over the recent years, but similar empirical work on Malaysian hotels is still lacking. Much research on the hotel industry in Malaysia has been devoted to the aspects of service quality and customer satisfaction, but very little is known about the efficiency of hotels. Therefore, this paper aims to evaluate the efficiency of a Malaysian hotel chain using the Data Envelopment Analysis (DEA) approach. Consequently, this paper embarks on the following objectives:

- To analyze the relative efficiency of a Malaysian hotel chain in terms of the Total Factor Productivity (TFP) change.

- To identify the best practices hotel with regards to efficiency.

- To determine the factors contributing to efficiency of the hotels.

## LITERATURE REVIEW

### Data Envelopment Analysis (DEA)

Data envelopment analysis (DEA) has become an increasingly popular efficiency analysis tool. DEA is a non-parametric multiple linear programming technique that utilizes multiple input and output measurements in evaluating relative efficiency of individual units within a given population. DEA constructs a production frontier and measures the efficiency of the developed frontiers in the mathematical programming approach. Charnes *et al*. (1978) were the first to invent data envelopment analysis and proposed the DEA-CCR model (which was named after the authors, namely, Charnes, Cooper and Rhodes). The DEA-CCR model had an input orientation and assumed constant returns-to-scale (CRS). However, the model was later extended by Banker *et al*. (1984) who considered alternative set of assumption. The

model is known as the DEA-BCC model with the assumption of variable returns-to-scale (VRS).

In addition to the DEA-CCR and DEA-BCC models, other developments of DEA include the Malmquist Total Factor Productivity (TFP) index. The Malmquist TFP index measures changes in the total output relative to the changes in the usage of the total inputs by obtaining an output-to-input ratio value that takes into account all significant inputs and outputs. The idea was developed by the Swedish statistician Malmquist (1953). The TFP approach is useful both theoretically and empirically. TFP indices can be derived from the theory of production functions and bring a strong theoretical basis in economic to its analysis. Practically, TFP indices are easier to understand as compared to other non-parametric indices (Nyshadham and Rao, 2000). Thus, the Malmquist TFP index gains importance and is frequently used mainly because it can be calculated using quantity information without price data, so problems regarding unavailable or distorted price information are avoided.

Generally, there are two ways to quantitatively analyze efficiency, i.e. the parametric (stochastic frontier analysis, SFA) and non-parametric (DEA) methods. The method adopted by most efficiency studies in the context of hotel industry belongs to the latter. However, both methods have their own advantages and drawbacks. The SFA approach (Anderson *et al*., 1999) is an econometric estimation of a specific model and it is based on the statistical properties of the error terms. For SFA, the choice of the functional form is crucial to model the data as different model specifications can give rise to very different results. Unlike the SFA approach, the DEA does not impose any functional form on the data, or makes distributional assumptions for the inefficiency term. Instead, DEA is easy to apply and it allows the use of multiple inputs and outputs (Bell and Morey, 1995; Morey and Dittman, 1995).

Both SFA and DEA methods assume that the production function of the fully efficient decision unit is known. In practice, however, the efficient isoquant must be estimated from the sample data. Therefore, the production frontier is relative to the sample considered in the analysis. DEA is applied to unit assessment of homogenous units which are normally referred to as decision making unit (DMU). The aim of DEA is to estimate relative efficiency among DMUs which perform the same task using similar technology (processing procedure) to pursue similar objectives (outputs) using similar resources (inputs), such as banks, hospitals, hotels and restaurants. Thus, the identification of DMUs, inputs and outputs in an assessment is as difficult as it is crucial (Barros, 2005a).

The DEA method is able to handle non-commensurate, conflicting multiple output measures and multiple inputs factors of the organizations being evaluated. It provides a comprehensive efficiency evaluation by combining multiple inputs and outputs objectively onto an overall measure of organizational efficiency. DEA is also a benchmarking technique that assesses the relative efficiency of decision making units and analytically identifies the best practices and benchmarks for poor performing DMUs. Applications using DEA for efficiency and performance benchmarking have been numerous. DEA studies have been extensively applied to various industries, such as banking (Debasish, 2006; Lin *et al*., 2007), education (Avkiran, 2001), hospitals (Sarkis and Talluri, 2002; Wei and Liao, 2008; Radam *et al*., 2009) manufacturing (Mahadevan, 2002) and restaurants (Sigala, 2004; Reynolds and Thompson, 2007).

*DEA-Based Studies in the Hotel Industry*

An extensive literature review on 35 DEA applications in the tourism and hospitality sectors between 1986 and 2006 was conducted by Wober (2007). The study concluded that DEA has just raised a lot of attention among tourism researchers recently. Majority of the DEA applications are in the hotel industry. Among the earliest, Morey and Dittman (1995) applied data envelopment analysis to evaluate

the general-manager performance of 54 owner-managed hotels of a national chain in the United States for the year 1993. This study provided the owners of single properties with the ability to benchmark a manager's performance. Bell and Morey (1995) also employed DEA to evaluate the relative efficiency and to discover the best practice solutions of 31 travel departments. The study suggested an extension to the basic DEA which is allocative data envelopment analysis as the benchmarking tool. The authors were the first who highlighted the strengths of DEA for the selection of comparison partners.

In the late 90s, there were several DEA studies in the hotel industry. For example, Johns *et al.* (1997) and Tsaur *et al.* (1999) used DEA to measure efficiency of hotels in the United Kingdom and Taiwan, respectively. Johns *et al.* (1997) implemented DEA to monitor and benchmark productivity in a chain of 15 hotels using data for a 12 month's period. The authors found that DEA is very useful for diagnosing and identifying outstanding behaviour in terms of their measured productivity and gross profit. By using a new efficiency measure (EAM) in their data envelopment analysis, Tsaur *et al.* (1999) estimated efficiency the levels of international tourist hotels of Taiwan. The study showed that the EAM could provide a strong discriminating power as compared to traditional DEA, whereby 10% of the 47 hotels studied were relatively efficient in the EAM model while 17% were relatively efficient in the DEA-CCR model.

More studies to gauge the efficiency of the hotels using DEA were carried out in the recent years. For instance, Anderson *et al.* (2000) estimated managerial efficiency in the US hotel industry using linear programming procedure, DEA. Their findings revealed efficiency levels in various forms (namely, overall, allocative, technical, pure technical, and scale efficiency) and showed that the US hotel industry is highly inefficient with a mean overall efficiency measure of approximately 42%. In Taiwan, Chiang *et al.* (2004) with the interest to compare the performance of hotels under different operational styles, using the DEA-CCR and BCC models, to measure the efficiency of 25

Taipei hotels under three types of management (namely, independently owned and operated, franchise licensed, and managed by international hotel operators). The authors found that not all hotels franchised or managed by international hotel operators performed more efficiently than the independent ones. Instead of using the basic DEA model, Barros (2005b) evaluated the determinants of efficiency of Portugal's public-owned hotel chain, Enatur, using the Malmquist productivity index and the Tobit econometric model for the period between 1999 and 2001. The study contemplated four combinations of technical efficiency and technological change and also explained the determinants of the TFP change.

*Inputs and Outputs Identification*

There are three main categories of measurement units of inputs and outputs, namely financial, physical and a combination of both (Ball *et al.*, 1986). Both the financial and physical units have been used in previous studies. Simple inputs and outputs which have no ratio or composite data were used by Johns *et al.* (1997). The authors preferred non-financial data to be used in developing their DEA model and analysis. Thus, the following four inputs and three outputs were employed: (1) the number of room nights available, (2) total labour hours, (3) total food and beverage costs, (4) total utilities cost; and (1) number room nights sold, (2) total covers served and (3) total beverage revenue. Meanwhile, the use of the financial data, such as beverage revenue, food and beverage material costs and utility costs, was inescapable but their uses were justified on the basis that they were constant across the country and constant with respect to time.

By applying the DEA-CCR model and the Malmquist productivity index, Hwang and Chang (2003) considered indicators used by the Taiwan Tourism Bureau for input-output factors. In measuring the performance and the efficiency change of 45 hotels in Taiwan, four inputs and three outputs were used: (1) number of full time employees, (2) number of guest rooms, (3) total

area of meal department, (4) operating expenses; and (1) room revenue, (2) food and beverage revenue and (3) other revenue. Similarly, Barros and Alves (2004) looked at hotel efficiency, evaluated a Portuguese public-owned hotel chain and estimated their total factor productivity (TFP) change using the DEA-Malmquist TFP index. The authors used five inputs: (1) number of full-time workers, (2) cost of labour, (3) book value of property, (4) operating costs, and (5) external costs. The sales, number of guests and number of nights spent in the hotel were used as outputs.

On the other hand, Sun and Lu (2005) chose slack-based measure (SBM) Malmquist approach as the appropriate version of DEA to measure the hotel performance of 55 international tourist hotels in Taiwan. The four inputs and four outputs used include (1) total operating expenses, (2) number of employees, (3) number of guest rooms, (4) total area of catering department; and (1) total operating revenues, (2) average occupancy rate, (3) average daily rate, and (4) average production value per employee in the catering department. Despite the inputs and outputs discussed, relevant inputs and outputs should be used depending on the focus of the analysis.

## METHODOLOGY

This study applied the Malmquist TFP productivity index, i.e. a non-parametric approach to measure the productive efficiency of a Malaysian hotel chain. This index represents the TFP growth of a DMU, in which it reflects (1) progress or regress in efficiency along with the (2) progress or regress of the frontier technology between two periods of time under the multiple inputs and multiple outputs framework (Cooper *et al.*, 2007). This study employed the output-based approach where the question "by how much can the output quantities be proportionally expanded without altering the input quantities used?" could be asked. In this paper, the productivity change is decomposes into two components namely, technological change (TECHch) and technical efficiency change (EFFch). The

decomposition of TFP into technical efficiency change and technological changes shall provide useful information in the productivity analysis. Technical efficiency change shows that the hotel can be more productive by utilizing the existing technology and economic inputs more efficiently. Meanwhile, technological change refers to the growth in the total factor productivity (TFP) as a result of the technological advancements and innovations in the hotel system.

The Malmquist TFP index measures the TFP change between two data points (e.g. those of a particular firm in two adjacent time periods) by calculating the ratio of the distances of each data point relative to a common technology. Fare *et al.* (1994) specified an output-based Malmquist productivity change index between period $t$ (the base period) and the period $t+1$ is given by:

$$M_0(y_{t+1}, x_{t+1}, y_t, x_t) = \left[ \frac{d_0^t(x_{t+1}, y_{t+1})}{d_0^t(x_t, y_t)} \times \frac{d_0^{t+1}(x_{t+1}, y_{t+1})}{d_0^{t+1}(x_t, y_t)} \right]_{1/2}$$

[1]

where $d_o^t(x_{t+1}, y_{t+1})$ represents the distance from the period $t+1$ observation to the period $t$ technology. A value greater than one indicates a positive TFP growth from period t to period $t+1$, while a value less than one indicates a TFP decline. The decomposition is as follows:

$$\text{Technical efficiency change} = \frac{d_0^{t+1}(x_{t+1}, y_{t+1})}{d_0^t(x_t, y_t)} \quad [2]$$

$$\text{Technological change} = \left[ \frac{d_0^t(x_{t+1}, y_{t+1}) \times d_0^t x_t, y_t}{d_0^{t+1}(x_{t+1}, y_{t+1}) \times d_0^{t+1}(x_t, y_t)} \right]_{1/2} \quad [3]$$

Thus, the Malmquist TFP index can be written as:

$$TFP = EFFch \times TECHch \quad [4]$$

However, improvement in TFP growth does not mean enhancement in both technical efficiency and technological change. Technical efficiency change measures the change in efficiency between current ($t$) and

next ($t+1$) periods, while the technological change (innovation) captures the shift in the frontier technology. By differentiating technical efficiency and technological change, policy actions can be expected to bring about improvement in TFP growth directly.

Furthermore, technical efficiency change can be further decomposed into sub-components, namely, pure technical efficiency change (PEch) and scale efficiency change (SEch), as follows:

$$EFFch = PEch \times SEch \qquad [5]$$

Pure technical efficiency change which is calculated relative to the variable returns-to-scale (VRS) technology measures the relative ability of DMUs to convert inputs into outputs. It shows the investments in the organizational factors related to hotel operation. Meanwhile, scale efficiency change captures changes in the deviation between the VRS and CRS (constant returns-to-scale) technology and measures to what extent DMUs can take advantage of returns to scale by altering its size towards optimal scale (Fare *et al*., 1994).

*Input and Output Measures*

Careful identification of the inputs and outputs is very important for a successful application of the DEA. The assessment of comparative efficiency using DEA should begin with the selection of appropriate input and output measures which can be aggregated into a composite index of overall performance standards. Although any resources used by DMU can be included as inputs, five inputs were selected for this study. The identified inputs were the number of room nights available, the number of employees, employment costs, food and beverage costs, and total operating costs, whereas the five selected outputs included the number of room nights occupied, the number of guests, average occupancy rate, food and beverage revenues, and total operating revenues.

The variables were selected based on the reviewed literature and the availability of the data. For example, total operating expenses including room costs, utilities and maintenance fees whcih affected the profitability of hotels were viewed as inputs. As for the outputs, the total operating revenues which significantly influenced the financial efficiency of hotels were included. As the profit measure alone might not be a good indicator of how efficiently resources were used to provide customer services, the average occupancy rate was also included as an output, because it reflected how efficiently room capacity was utilized as a result of the invested expenses.

Panel data covering the observations on the input and output variables for all decision making units in for year 2004 to year 2008 were collected through mail survey. The questionnaires, which were accompanied with an explanatory letter, were mailed to the managers of the 10 hotels under the chain. The questionnaire contained five input and five output variables with definition and unit. The managers were asked to complete the questionnaire with the operational data of their hotels. After the collection of data, the cost and economic data (e.g. employment costs, food and beverage costs, etc.) were deflated into a constant value (base year 2000) using deflators such as consumer price index (CPI) and added value deflator which were obtained from the Department of Statistics, Malaysia. After deflation, the panel data were analyzed using the Data Envelopment Analysis Programme 2.1 (DEAP 2.1) Software (Coelli, 1996) to compute the Malmquist productivity index of the hotel chain.

Table 1 shows the descriptive statistics of the inputs and outputs of 10 hotels under the chain incorporated in this study.

**RESULTS AND DISCUSSION**

Based on the output-oriented DEA-Malmquist productivity index, the efficiency of the Malaysian hotel chain was measured for the period 2004 to 2008. The performance of the Malmquist productivity index of the 10 hotels under the chain is displayed in Table 2. On the

TABLE 1
Descriptive statistics of the inputs and outputs of the hotel chain, 2004-2008

| Variables | Minimum | Maximum | Mean | Std. dev. |
|---|---|---|---|---|
| Input | | | | |
| Number of room nights available | 17155 | 54900 | 33120.46 | 12310.80 |
| Number of full-time equivalent employees | 28 | 69 | 48.64 | 14.22 |
| Employment costs (RM) | 56883.72 | 1185121.11 | 569247.91 | 275032.74 |
| Food and beverage costs (RM) | 93166.67 | 879471.65 | 360587.01 | 173619.80 |
| Total operating costs (RM) | 66624.55 | 4251303.25 | 1103950.41 | 1048039.13 |
| Output | | | | |
| Number of room nights occupied | 7704 | 36424 | 22418.06 | 8848.21 |
| Number of guests | 16911 | 79774 | 45747.88 | 17944.14 |
| Average occupancy rate (%) | 44.79 | 82.92 | 66.77 | 9.79 |
| Food and beverage revenues (RM) | 17394.64 | 1830227.74 | 885923.86 | 454694.82 |
| Total operating revenues (RM) | 52515.96 | 4074534.16 | 2350302.10 | 1163878.27 |

average, Hotel J recorded the highest growth in term of the TFP with 5.1%, followed by Hotel A (4.2%), and Hotel F (1.8%). Meanwhile, Hotel B recorded the lowest growth in the TFP with negative 2.5%. Overall, the results revealed that the mean score of the TFP change was 1.007, indicating that the TFP of the hotel chain had slightly increased by 0.7% over the time period. Within the chain, 6 of the hotels experienced positive TFP change while the others faced TFP decline.

Table 2 also presents the decomposition of the TFP changes into two components, namely, technical efficiency change and technological change. There was lower technical efficiency change and higher technological change for all hotels. This might be due to the short-run cost-minimizing behaviour in the face of quasi-fixed vintage of capital. All hotels recorded the same level of technical efficiency change (1.000) suggesting no change in technical efficiency during the time period. Meanwhile, all the hotels experienced different levels of technological changes. Six hotels registered increased technological changes of more than 1.000, while the other four registered decreased in the technological change of less than 1.000.

Technical changes can be associated with the diffusion of best-practice technology in the management of hotel activity, such as investment planning, technical experience, and the management and organization in the hotel. On the other hand, technological change is related to the consequence of innovation, such as the adoption of new technologies in the hotel system. On the average, the improvement in the TFP of the Malaysian hotel chain was attributed by technological change (0.7%). Thus, technological change was found to be more important factor of TFP growth as compared to technical efficiency change.

Based on the four combinations of technical efficiency change and technological change introduced by Barros (2005b), this study also contemplated the combinations of technical efficiency change and technological change of the Malaysian hotel chain into a quadrant of efficiency. *Fig. 1* depicts the quadrant of efficiency of the 10 hotels under the chain examined in this study.

There were six hotels included in the first quadrant (Q1), namely, Hotel J, Hotel A, Hotel F, Hotel H, Hotel D, and Hotel E. This quadrant illustrated the hotels with improvements in the

TABLE 2
Malmquist productivity index of Malaysian hotel chain means, 2004-2008

| DMU | TFP change (TFPch) | Technical efficiency change (EFFch) | Technological change (TECHch) |
|---|---|---|---|
| Hotel A | 1.042 | 1.000 | 1.042 |
| Hotel B | 0.975 | 1.000 | 0.975 |
| Hotel C | 0.982 | 1.000 | 0.982 |
| Hotel D | 1.007 | 1.000 | 1.007 |
| Hotel E | 1.003 | 1.000 | 1.003 |
| Hotel F | 1.018 | 1.000 | 1.018 |
| Hotel G | 0.998 | 1.000 | 0.998 |
| Hotel H | 1.014 | 1.000 | 1.014 |
| Hotel I | 0.979 | 1.000 | 0.979 |
| Hotel J | 1.051 | 1.000 | 1.051 |
| Mean | 1.007 | 1.000 | 1.007 |



Fig. 1: Quadrant of efficiency for a Malaysian hotel chain, 2004-2008

technical efficiency change co-existed with the improvements in technological change. These hotels were found to be the best-performing hotels during the period because they had upgraded the organizational factors related to the uses of inputs and outputs and showed innovations related to new technology. As for Hotel J, which was the hotel with the best practices within the chain, it showed improvement in resource allocation by using less inputs (the number of employees maintained and a decrease in the total operating costs during the period), increasing its outputs (the number of room night occupied, number of guests, and total operating revenues). This hotel was able to fully utilize resources available and obtained better revenues. In addition, Hotel J also had a better implementation on the multi-skilling concept

and more effective staffing and scheduling which helped to reduce the dependency on additional employees and consequently contributed to the efficiency of the hotel. The second quadrant (Q2) illustrates hotels with improvements in the technical efficiency change that co-existed with a decline in the technological change. Four hotels, namely, Hotel G, Hotel C, Hotel I, and Hotel B fell into this particular quadrant. These hotels faced a decline in technological change because they upgraded their organizational factors without introducing any new technology that could help them in improving their organizational factors. These hotels are recommended for an induction in technological innovation. In other words, they may need to acquire new technology or innovations and upgrade necessary skills in order to improve the performance.

Hotels which experienced a decline in the technical efficiency change co-existed with improvements in technological change were categorized in the third quadrant (Q3). However, the results in this study showed that none of the hotels fell into this quadrant. Falling into this quadrant would mean that the hotels might have invested in new technologies but were not able to balance the use of inputs versus outputs.

They might need to upgrade their organizational factors, such as marketing initiatives, improvement in quality and achievement of a better balance between the inputs and outputs. Finally, the fourth quadrant (Q4) displays hotels which experienced a decline in both the technical efficiency change and technological change simultaneously. Nevertheless, none of the hotels in the chain fell into this quadrant. If they were classified into this quadrant, the hotels would be categorized as inefficient. Hence, the policy has to accelerate the efficiency through the application of the latest technology, learning-by-doing processes and managerial practices. Corrective actions such as improving the organizational factors related to the balanced use of inputs versus outputs and adopting new technologies or innovations associated with the upgrading of organizational skills are therefore necessary.

The decomposition of the technical efficiency change was further divided into two sub-components, namely pure technical efficiency change and scale efficiency change, as presented in Table 3. All the hotels experienced no changes in both pure technical efficiency change and scale efficiency change (1.000)

TABLE 3
Technical efficiency components of a Malaysian hotel chain, 2004-2008

| DMU | Technical efficiency change (EFFch) | Pure technical efficiency change (PEch) | Scale efficiency change (SEch) |
|---|---|---|---|
| Hotel A | 1.000 | 1.000 | 1.000 |
| Hotel B | 1.000 | 1.000 | 1.000 |
| Hotel C | 1.000 | 1.000 | 1.000 |
| Hotel D | 1.000 | 1.000 | 1.000 |
| Hotel E | 1.000 | 1.000 | 1.000 |
| Hotel F | 1.000 | 1.000 | 1.000 |
| Hotel G | 1.000 | 1.000 | 1.000 |
| Hotel H | 1.000 | 1.000 | 1.000 |
| Hotel I | 1.000 | 1.000 | 1.000 |
| Hotel J | 1.000 | 1.000 | 1.000 |
| Mean | 1.000 | 1.000 | 1.000 |

during the time period. The results showed that both the subcomponents appeared to be equally important to the technical efficiency change. However, there was no improvement in both the sub-components. The improvement in pure technical efficiency change would also mean that the hotels might have invested in organizational factors related to hotel operation and achieved better balance between inputs and outputs. On the other hand, the growth in the scale efficiency change would mean that the size of hotels did matter in affecting their efficiency changes and obtaining economies of scale.

This study also analyzed the productivity changes of 10 hotels under the chain for the period from 2004-2008 using the output-oriented Malmquist approach. The results are presented in Table 4.

As shown in Table 4, none of the hotels had a clear-cut positive or negative productivity change from 2004-2008. Two hotels, namely Hotel A and Hotel G, revealed a better achievement, whereby they achieved positive productivity changes for 3 out of the 4 period intervals. This

might be due to the reason that these two hotels are located at famous tourist destinations and they had also performed better and allocated resources effectively. Conversely, Hotel C and Hotel I recorded negative productivity changes for 3 out of the 4 period intervals. These hotels may need to improve in their performances and resource allocation in order to achieve positive productivity change.

Table 4 also suggests that 7 out of 10 hotels had positive productivity changes between 2005 and 2006. This might be due to the contribution of the promotional efforts by the Malaysian Tourism Promotion Board (MTPB) and Malaysia's increasingly strong reputation as a centre for international events. Besides, this might be the results of the implementation of strategic measures by the Malaysian Government during the Eight Malaysia Plan (2001-2005) to attain rapid tourism growth on a sustainable basis. These strategic measures have benefited the tourism and hotel industry in particular. In contrast, 7 out of 10 hotels had negative productivity changes between 2007 and 2008.

TABLE 4
Productivity changes of a Malaysian hotel chain, 2004-2008

| DMU | 2004-2005 | 2005-2006 | 2006-2007 | 2007-2008 | Firm means | Positive changes | Negative changes |
|---|---|---|---|---|---|---|---|
| Hotel A | 1.119 | 1.023 | 0.828 | 1.246 | 1.042 | 3/4 | 1/4 |
| Hotel B | 0.958 | 0.909 | 1.034 | 1.005 | 0.975 | 2/4 | 2/4 |
| Hotel C | 0.958 | 1.040 | 0.949 | 0.981 | 0.982 | 1/4 | 3/4 |
| Hotel D | 0.983 | 1.058 | 1.012 | 0.977 | 1.007 | 2/4 | 2/4 |
| Hotel E | 0.908 | 1.117 | 1.012 | 0.985 | 1.003 | 2/4 | 2/4 |
| Hotel F | 1.155 | 0.890 | 0.959 | 1.090 | 1.018 | 2/4 | 2/4 |
| Hotel G | 1.008 | 1.035 | 1.003 | 0.948 | 0.998 | 3/4 | 1/4 |
| Hotel H | 0.985 | 1.081 | 1.009 | 0.985 | 1.014 | 2/4 | 2/4 |
| Hotel I | 1.028 | 0.993 | 0.934 | 0.961 | 0.979 | 1/4 | 3/4 |
| Hotel J | 0.999 | 1.105 | 1.168 | 0.947 | 1.051 | 2/4 | 2/4 |
| Annual means | 1.008 | 1.023 | 0.987 | 1.009 | 1.007 | 3/4 | 1/4 |
| Positive changes | 4/10 | 7/10 | 6/10 | 3/10 | 6/10 | 20/40 | 20/40 |
| Negative changes | 6/10 | 3/10 | 4/10 | 7/10 | 4/10 | 20/40 | 20/40 |

The increase in the negative productivity changes in the hotel chain during this period was possibly caused by the global financial crisis (2007–2008). In more specific, this crisis had adversely affected many businesses related to the tourism sector, such as the hotels, tour agents, airlines, retail trade, restaurants, as well as other businesses in other sectors.

## CONCLUSIONS

This paper has examined the efficiency of a Malaysian hotel chain in terms of their TFP growth. A DEA model with five inputs and five outputs was specified and used to estimate hotel efficiency. The analysis was based on the DEA-Malmquist productivity index, which could be decomposed into technical efficiency change and technological change. Additionally, the technical efficiency changes were further divided into subcomponents, namely pure technical efficiency change and scale efficiency change. The Malmquist TFP index is important in performance measurement as it helps in the determination of the factors contributing to the efficiency of hotels.

The findings of this study can briefly be concluded as follows. Hotels J, A, F, H, D, and E were relatively efficient as compared to other hotels within the chain, with Hotel J being the top performer in the hotel chain. TFP was found to have increased by 0.7% throughout the period between 2004 and 2008 for the whole chain. The years from 2005 to 2006 recorded the highest TFP growth (2.3%) whereas the lowest growth (-1.3%) was recorded for the period from 2006 to 2007. The TFP growth in the hotel chain was mainly due to the technological change (0.7%). The results of the analysis have important implications to the Malaysian hotels chain. In more specific, the results indicate that the hotel chain has the potential to further increase its TFP growth through improvement in technological advancement and innovations, along with a constant upgrade of organizational factors. The technological advancement can also be associated with the investment in new methods, procedures and techniques in the hotel operation. The findings can benefit hotel managers who are seeking for performance improvement in which they can benchmark practices being adopted by the best performing hotels. Finally, the findings also serve as an index for hotel management to further improve their establishment's efficiency.

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# Application of Vernacular Architectural Ideas in New Saffein Village of Kish Island

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## ABSTRACT

The vernacular architecture of Iran is a result of a long time process of both social and cultural developments which have expanded all over the country. The hot and humid region of Iran is situated in a long and thin coastal strip on the northern side of the Persian Gulf. Kish Island, with more than 1000 years of history, is located in this region with the same social and climatic factors. Kish was selected as the first Free Tourist Zone of the country in 1971. Following this, Masheh, the most flourishing village on the Island at that time, was relocated in an area adjacent to Old Saffein village, on the north-west coast. This new village is called New Saffein. It has a mixture of traditional and modern architecture. This study sought to emphasize the architectural concepts and ideas which are applied in the houses of New Saffein. The study also reviewed the background of the island in field of vernacular architecture through documental and observational studies. It also investigated the architecture of New Saffein in Kish as a case study in comparison with the vernacular architecture in Old Saffein. It will review the design and construction processes of the houses in New Saffein in relation to the traditional methods used in Kish Island. The article finally attempts to analyse the application of vernacular knowledge in designing New Saffein village to find strategies for guiding the process of developing contemporary housing appropriate for Kish Island and other similar places.

Keywords: Iranian vernacular architecture, Persian Gulf Region, Kish Island, Old Saffein, New Saffein

## INTRODUCTION

Kish Island is one of the most important islands on the northern side of the Persian Gulf. The southern Iranian province of *Hormozgan* governs the Island. During the recent decades, this island, which was once considered a special place to live by the Iranians, has undergone dramatic changes. Kish was selected as a Free Tourist Zone in 1971. Following this, the residents of *Masheh* village, i.e. the most flourishing village on Kish Island at that time, were moved to an area adjacent to *Old Saffein*, on the north-west cost. It is now called New Saffein. The new development has

a mixture of traditional and modern architecture. *Mahmood Monsef*, the first General Director of the Kish Free Zone Organization (KFZO) and the principal architect of New Saffien, mentioned that the effects of the project would make positive impacts to the indigenous local people's living (Monsef, 1978). In contrast, 18 years later in an official report by the same organization, it was found that the people were not interested in leaving their family homes and moving to a new place. Consequently, this show of indifference towards some cultural and social aspects is blamed for some changes in the following years.

Now, after three decades, the questions about the appropriateness of this redevelopment are still being pondered upon. This study attempted to explain the socio-economic values which are evident in the original vernacular architecture on Kish Island. It also investigated the architecture of New Saffein in Kish as a case study in comparison with the vernacular architecture in Old Saffein. In addition, it also reviewed the process of design and constructions of the houses in New Saffein in relation to the traditional methods used in Kish Island.

## VERNACULAR ARCHITECTURE ON KISH ISLAND IN THE NORTHERN EDGE OF THE PERSIAN GULF

The vernacular architecture of Iran is a result of a long time process of social, cultural and environmental developments which are extended all over the country. The hot and humid region of Iran is situated in long and thin coastal strip on the northern side of the Persian Gulf (see *Figs. 1* and *2*). Kish Island is located in this region with the same social and climatic factors.



*Fig. 1: Map of Iran*



*Fig. 2: Hot and humid region, the north side of Persian Gulf*

The Iranian vernacular architecture is based on five fundamental characteristics (Pirnia and Memarian, 1992), namely, the compatibility with needs of people (*Mardom-vari*), inward-looking (*Daroon-geraei*), avoiding un-necessities (*Parhiz az bihoodegi*), self-efficiency (*Khod-basandegi*), and structural rigidity (*Niaresh*). These codes are related to building quality from two aspects (Vakili-Ardebili and Boussabaine, 2006); firstly, concepts and ideas, and secondly, construction and technology. *Mardom-vari*, *Daroon-geraei* and *Parhiz az bihoodegi* address the quality of concept and idea (socio-economical aspects) which the article focuses on, whereas *Khod-basandegi* and *Niaresh* point out the issues related to construction and technology (physical aspects).

In this region, long summers are hot and humid and winters are short and mild. Humidity in all seasons is high (more than 60%) throughout the year. Its annual precipitation is very low, most of which is in the fall and winter. The yearly average rainfall is 145 mm. The mean temperature is between 30 - 34°C during the spring and summer. Sub-ground waters are saline in much of the region and vegetation all around this region is limited. The most important features of the vernacular architecture in this area are the adaptation to the environment and the consideration of economic factors through energy saving techniques (Babakrad, 1985; Pourjafar, 1996).

In general, the characteristics of the vernacular architecture of the region are reflected by one-storey dwelling units with courtyards, high surrounding walls, large windows (towards the courtyard) (Azari-Najafabadi *et al*., 2006). In the houses, most of the bedrooms face east and small rooms are located on the other sides. In addition, due to the high humidity, there are no basements in the buildings. Natural ventilation and breeze are the main ways to reduce the high temperatures and to cool the spaces (Babakrad, 1985). The roofs, which are usually flat, are used as sleeping areas during summer nights. The houses typically do not have any windows on the external walls to prevent indoor activities from being viewed from the outside. Additionally, it creates a better thermal exchange. Natural ventilation takes place through the main entrance door of the houses. Adaptation to the environment and the use of natural energy are fundamental beliefs in their vernacular architecture (Pourjafar, 1996; Babakrad, 1985). Furthermore, the wind tower is the dominant feature in these coastal cities. The size and height are directly related to their distance from the sea. Furthermore, limestone and adobe are commonly used in the house. Both provide a good solar reflection; adobe due to its form and limestone because of its light colour (Azari-Najafabadi *et al*., 2006). All of the settlements in the region have similar local cultural and living aspects as well as traditional house construction methods. Kish Island which is located in the region has similar climatic factors as discussed above.

## NEW SAFFEIN VILLAGE VS. OLD SAFFEIN VILLAGE

Kish Island has more than 1,000 years of history. It reached its zenith of progress between the 12th and 15th A.D. century. In the late 1970s, Kish Island gained prominence again due to its natural and geographical features. During that time, the island had around 10 small villages, out of which *Masheh* and *Saffein* were the two most flourishing ones.



*Fig. 3: To replace Masheh village with New Saffein village*

Due to Kish's new status as a Free Tourist Zone, the traditional lifestyle gave way to dramatic and modern changes. The north-east coast of the Island was selected as the main tourist area at the same location as *Masheh* village. Following this, all the residents of *Masheh* village moved to a new village adjacent to *Saffein*, on the north-west coast in 1975 (*Figs. 3* and *4*). It was called New Saffein. Wooden windows, plain mortar-covered facades disguising, modern concrete structures, and narrow winding paths have formed New Saffein into a contrast of old and new. The government built the houses for all of the residents of *Masheh* at appropriate places as compared to their original lands. The village was built to represent the traditional lifestyle and the typical vernacular architecture of the northern edge of the Persian Gulf for tourists to see. *Monsef*, the principal architect of the village, believes that these buildings present a transformation from old to new. He also mentioned that this project would have positive effects on the local people's living style (Monsef, 1978).

According to one of the KFZO's official reports, the residents of *Masheh* had moved to their new living and working places in New Saffein with interest and eagerness (Monsef, 1978). Nonetheless, based on the recent reports by KFZO[1] and also by Mokhtarpour, the residents of *Masheh* had not been interested to

[1]Kish Free Zone Organization.

*Fig. 4: New Saffein in the neighbouring Old Saffein*

move from their ancestral houses (Mokhtarpour, 2002). The government had changed their large lots to some new smaller lots. As a result, they did not have any place for their traditional vegetable and animal rearing practices at the new houses. Moreover, they lost much of their tradition and their historical culture through these changes. Today, the population of New Saffein is around 800 people who are living in 129 residential units and in a total area of 26,487 square meters.

Vernacular houses are the best examples of the harmony between humans, construction and nature. Hence, this article attempts to analyse the applications of vernacular knowledge in designing New Saffein village to find the strategies for guiding the process of developing contemporary housing appropriate for Kish Island and other similar places. For this purpose, this article presents a comparative study on site planning, specific building elements for the evaluation of the features of the vernacular architecture of Kish Island as used in New Saffein.

## CONCEPTS AND IDEAS

This part of the article compares two general characteristics used in the vernacular architecture of Old Saffein and in the design of New Saffein village. This paper also covers site planning and specific building elements which are covered as sub-topics.

## RESEARCH METHODOLOGY

This study employed two stages to find the characteristics of the vernacular architecture of Old Saffein and assess the application of the same characters in New Saffein on Kish Island. The first stage overviewed the background of the architecture for the hot and humid region of Iran as a part of the Iranian architecture, and also the island in the fields of vernacular architecture through archival and observation study. For this purpose, the principle definitions of the Iranian architecture by *Pirnia* [2] were used as the basis of this study. As a result, all of the elements, which were studied in this research, refer to *pirnia's* definitions. The study also attempted to identify the socio-cultural characteristics of the local people of Kish Island and to understand the occupants of these houses. Moreover, it also reviewed several government publications, particularly the anthropological studies by *Mokhtarpour*, which included maps, photographs and statistics and information about Kish from 1960 to the present day. In this paper, the architectural study of the authors completed the investigation on *Mokhtarpour* for both the villages. In the second stage, there was also a study on the appearance of the vernacular houses through physical observation using photographs and free-hand drawings. In addition, some spatial dimensions were measured in detail for more clarifications. Moreover, the corresponding author was living and working on the Island for

[2] Dr Mohammad Karim Pirnia is known as father of Iranian architecture in the country.

more than six years. Therefore, he not only had access to the first-hand information, but also direct contact with the residents. Living in the research location could open up tremendous opportunities for observation and interactive data collection.

## SITE PLANNING

Four factors related to the site planning of the vernacular houses were studied; these were orientation, organization, layout, and vegetation. The orientation of all the houses was the first factor to be considered in hot regions and it must be carefully determined. This is because a correct orientation can maximize the good effects of cool breeze and minimize the bad effects of the hot sunshine (Ardalan, 1976). In addition, the direction of Kiblah is also another important factor in the orientation of the Muslim settlements. The second factor is site organization which is affected by social, economical and environmental values of the community. The region's vernacular architecture normally consists of a series of spaces which are grouped around a courtyard. The third factor is the layout which clarifies the functions of the different parts of the houses. The old large houses include three different courtyards, each with different functions, namely the main yard, the guest yard and the back yard. Finally, the last factor is vegetation which has a very important role in creating valuable shade.

In this region, vernacular houses have short facades on the west and east sides to reduce the affects of strong solar radiation. In contrast, facades on the north side, and particularly on the south side, are long (Azari-Najafabadi *et al.*, 2006). For this reason, the vernacular houses of the old Saffein have been created with summer and winter sections. The summer spaces look towards the gulf and the winter spaces are on the opposite side. On the contrary to the regional orientation of the houses which face southward, the vernacular houses in the old Saffein face northward in order to catch the valuable breeze coming from that direction. Moreover, the Kiblah plays an important role in the orientation

of these traditional dwellings. *Jame Mosque* is the heart of the village and all the buildings are built around it (*Fig. 5*).



*Fig. 5: Fabric of Old Saffein*



*Fig. 6: Fabric of New Saffein*

In New Saffein, the designers considered the use of modern air conditioning systems. Due to this, they paid less attention to climatic features and the wind direction at the Island (Mokhtarpour, 1999). Moreover, the direction of the houses also varies. For some houses, the living area is located on the south side of the house and facing the gulf, and this is a climatic solution to decrease the high temperature and humidity. On the contrary, some other houses in the neighbourhood face the sun on the east and west sides (see *Figs. 6* and *10*). It was not found in other vernacular settlements of the region. As a result, during the first 10 years of the revolution in Iran, the residents of the village faced a lot

of problems involving power cut off because of some technical and economical reasons. In more specific, they needed electricity to cool off their houses but did not have the supply (Mokhtarpour, 2002).

The urban form of the Muslim environment is greatly contributed by the Islamic principles of the strong social interaction and neighbourly relationships. This foundation is supported by the compact urban form of the residential areas in the traditional Islamic environment of the hot regions (Mortada, 2003). In addition, compactness is another technique of minimizing the direct radiation of the sun on the outside facades of the houses (Ardalan, 1976). In the village, shadow network is formed by a number of different techniques. The most common component of the shadow network is a path, or *kucheh*. The shade is created by its narrow width and high walls which form its edge.

In New Saffein, although, the principle of compactness is applied in the design of most sections of the village (*Fig. 7*), but less attention is paid to this matter for the external part of the house. The traditional courtyard form is not commonly used in the houses. In addition, some of the houses have short external walls to present the residents' traditional lifestyle to the tourists (Monsef, 1978). However, this is not accepted by the local people because it allows outsiders to see internal part of the house, which is in contrast with their beliefs. As a result, the entire short walls were made higher by the owners in the recent years (*Fig. 8*).



*Fig. 8: Short wall has become taller, New Saffein*

The region's vernacular architecture normally consists of a series of spaces which are grouped around a courtyard. These create a semi-enclosed building which reduces the impacts of the outside hot air on the buildings (Azari-Najafabadi *et al.*, 2006), as the warm courtyard floor and the flat roof give out heat at night. In Old Saffein, the vernacular architecture is generally inward-looking. The majority of the houses are organized to have three sections, namely the main yard, the guest's yard, and the back yard (traditional privacy model) (*Fig. 9*). There are two different entrances in the houses, with the main entrance opens to the main yard and the guest entrance opens to the guest's yard.
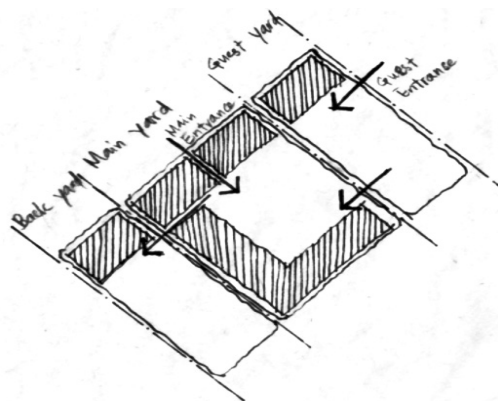


*Fig. 9: Traditional privacy model*


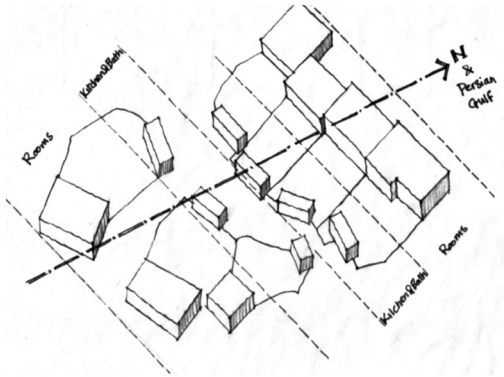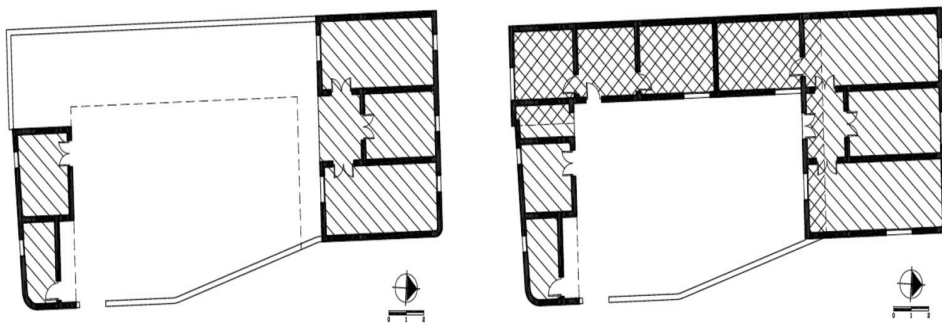
*Fig. 7: A wide street, New Saffein*

*Fig. 10: Site organization, New Saffein*

It is important to note that New Saffein is a Muslim settlement. Islam does not absolutely specify the size of the family. Due to this reason, most of the houses have expanded on their sites because the family size has increased during the recent years. The original houses are designed in two sections. The first section includes the rooms and the second section includes the kitchen, bath and toilet which are built on the other side (*Fig. 10*). *Figs. 11a* and *11b* present a typical house in New Saffein before and after the expansion. This house was designed as a one-family unit but it was changed to support two families in one house.

As mentioned above, the old large houses of Old Saffein include three different courtyards with different functions[3] namely *Hoy_al_beyt* (the main yard), *Hoy_al_majles* (the guest yard) and *zaribe_al_saghirah* (the back yard). The living room (*moraba'eh*), bedrooms (*otagh*), kitchen (*matbakh*) and toilet surround the main yard. Adjacent to all the bedrooms is a place for bathing and this is known as *qati'eh* (*Fig. 12*). *Qati'eh* is separated from the *otagh* with a wall that is increased to the height of 70 cm below the ceiling. *Otaghs* is accessed through a corridor called *Sabat*. At a corner of the yard, there is a place for storing fishing tools and crops (Mokhtarpour, 1999). In the vernacular architecture of Kish Island, the male visitors never enter the main yard. They are brought inside through a special door that opens to the guest's yard. The *mozif* (a special room for the guests) is located in this yard (*Fig. 13*). If the site is too small for a guest's yard, there is a direct door to the *mozif* from the street. Indigenous people keep animals in the backyard. It is separated from the main yard by some low walls. The houses are also flexible to allow for expansion when the families increase in size.

[3]All the local (Arabic) words in this article are borrowed from the book entitled, "Two Years with Indigenous in Kish Island: The Anthropological Study" written by Rajabali Mokhtarpour.



*Figs. 11 a and b: A typical house (Mr. Sedaghat's house) in New Saffein, before and after the expansion*
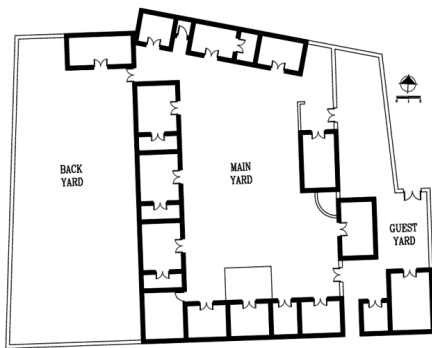
Fig. 12: Vernacular house, Old Saffein



Fig. 13: A mozif in a vernacular house

In New Saffein, on the other hand, the houses only have one courtyard. Most of the spaces are located on two sides of it, and directly open to this courtyard. Rooms are located on one side, whereas the kitchen and bath are on the opposite side. These houses do not have functional spaces, such as *majlesi* and *qati'eh*, which are necessary for the usual lifestyle of the local people. Moreover, Islam encourages an extended form of family in order to maintain strong family ties. Taking all measures to prevent the splitting up of the family and a preference for the extended family living in a single house are two important principles of the Muslim communities (Mortada, 2003). The people of the village follow these beliefs. As a result, any increase in the family members brings
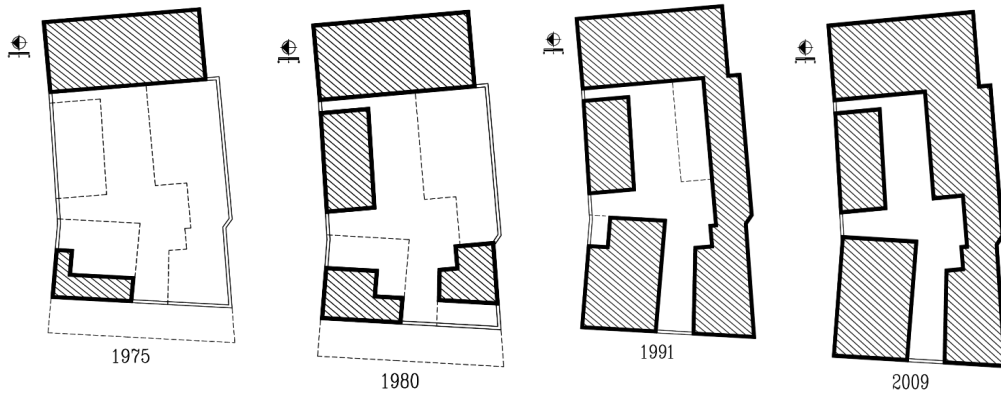
about problems to them. Therefore, many of the owners have expanded their buildings inside their land although they do not have enough area for to do so (*Fig. 14*). Based on an official report, more than 70% of the owners have extended their buildings in their house. Today, 159 families are living in 98 family-units in this village.

Vegetation plays an important role in the vernacular architecture of Kish Island because of its valuable shading properties. *Kahoor* (Prosopis Cineraria) and *Loor* (Ficus benghalensis) are two tree types which are not common to the region but are indigenous to the island. In addition, in the houses of Old Saffein, the backyards are used to cultivate summer crops.

Some local trees in New Saffein, such as *loor*, *kahoor,* and *nakhl'e khorma* (Phoenia dactylifera), are cultivated although there is not enough space. Local trees give some particular visions of the local architecture as well as improving the tourist's visual understanding of the local environmental features (*Figs. 15a*, *b* and *c*). However, the residents do not have any backyard to cultivate these crops, as in their previous houses.

## SPECIFIC BUILDING ELEMENTS

In this part, the article looks at some building elements in the villages. These elements have common functions in all the settlements in the hot and humid region, based on their similar environment and culture. In particular, the openings, transitional spaces, special shading devices, and architectural elements are specific to the vernacular architecture of the region. In the hot and arid region of Iran, most of the openings are oriented towards the courtyard, due to the harsh climate of the outdoor environment. Furthermore, this is a principle idea in the vernacular architecture of Kish Island, in which visitors should never view directly into the house. This shows the importance of the transitional spaces in the vernacular houses. In addition, maximizing shading is another significant feature of the local architecture of the Island. Due to this, the sunshades prevent

*Figs. 14a ,b, c and d: The transformation of a typical house (Mr. Jafar Waez's house), New Saffein*



a)          b)          c)

*Fig. 15: (a) Nakhl'e Khorma;  (b) Kahoor;  (c) Loor*

the penetration of solar radiation into the house.  Finally, wind-catchers are one of the most important elements in the vernacular architecture.  It is important to note that this is a significant climatic solution to bring the cool sea breeze into the houses.

In this region, cross ventilation for internal spaces is used to reduce the heat using small openings which are built on the street-side walls, whereas windows on the courtyard-side walls are often built opposite each other.  Moreover, rooms usually have openings on the sides with positive and negative pressures.  Meanwhile, windows or porticos are mostly not on the street side but are open to the main yards (Azari-Najafabadi *et al*., 2006).  Houses in Old Saffein follow these fundamental features (*Fig. 16*).

*Fig. 16: A house without any outside opening, Old Saffein*

of the main entrance, and it is about 2 meters in height (*Fig. 18*). The length of the *estar* is dependent on the width of the door, and this is to prevent the internal part of the house from being viewed from the outside. In some cases, small halls are used to enter the residence.

In New Saffein, on the contrary, most of the central yards have direct connection to the streets without any transitional space (*Fig. 19*). This is a principle idea in the vernacular architecture of Kish Island, and this is done to prevent visitors from viewing or looking directly into the house (Mokhtarpour, 1999). In term of transitional space, the design of the houses in New Saffein has not adapted to the local beliefs and culture.



*Fig. 17: Wider openings built at New Saffein*



*Fig. 18: An estar, Old Saffein*

The houses in New Saffein were designed using the new technologies which are meant to cool off the internal part of the rooms. For this reason, the architects have not provided enough openings on the street-side walls to adapt to the appropriate environmental conditions. Furthermore, natural lighting that comes from the central yards is frequently not from acceptable directions and cab cause discomforting solar radiation to the rooms. Hence, small windows were made wider and some new openings were created on the north side or facing the Persian Gulf (*Fig. 17*).

In most houses of Old Saffein, a short divider known as an *estar* is erected in front



*Fig. 19: A direct connection to inside of a house in New Saffein*

Maximizing shading is one main objective of the significant features in the local architecture of the Island. In Old Saffein, most of the entrance doors have sunshades (*Fig. 20*). This shading device prevents solar radiation from penetrating into the house. In fact, a large number of the traditional houses have corridors which prevent solar radiation from entering the rooms. Additionally, it is a connector between the yards and the rooms. The use of large windows for natural ventilation, on the yard side of the spaces, can also receive a great amount of sunlight, and thus, it can increase discomfort. However, using large overhangs which are supported on columns is a common method to solve this problem. In this region, the porticos are another solution to protect the building against solar radiation.



*Fig. 20: A typical entrance, Old Saffein*



*Fig. 21: A typical entrance, New Saffein*

The houses in New Saffein have rooms which are typically protected against sunshine through a small covered space. It represents the traditional techniques of maximizing shadow. Moreover, there is no shading device used for the openings on the outside facades of the houses in the village. Most of main entrances open to the yards directly without any sunshade (*Fig. 21*).

Wind-catchers or *bad-gir* are among the most important architectural elements in the vernacular architecture of the island. This is a traditional method used to bring the cool gulf breeze into the houses. The shape and size of the wind-catchers in Old Saffein are different from the wind-catchers which are built in other places of the country. In the houses of this village, they have *bad-gir* which is a recess on the facades, with a split on its floor (*Fig. 22*). Strong winds will stream through this split into the rooms.

In addition, Kish Island is also a coral island. Therefore, 'coral stone' is a main building material which gives a very special feature to the vernacular architecture of Old Saffein. For this reason, the colour of the facades of the buildings is particularly bright white (coral's colour).



*Fig. 22: Bad-gir, Old Saffein*

Fig. 23: Bad-gir, New Saffein

In New Saffein, the form, facades shapes, and some climatic elements of the Kish's rural fabrics are used to make the village similar to its original place, namely Masheh and Old Saffein. The facades are covered with white mortar-cement that is similar to the vernacular facades. Moreover, some regional architectural elements (such as the usual Iranian bad-gir) are repeated in New Saffein to remind us of the original form (*Fig. 23*).

## SUMMARY

Table 1 shows that in the socio-economic aspect, there is a significant contrast between the architecture in Old Saffein and New Saffein although the residents of both are the same.

TABLE 1
Vernacular architecture characters in Old Saffein and New Saffein

| | Vernacular Architecture of Iran | | Kish Island | |
| --- | --- | --- | --- | --- |
| | | | **Old Saffein** | **New Saffein** |
| | Vakili Ardebili, Boussabaine (2006) | Proposed categories by the authors based on Pirnia (1992) | Self observation by the authors, Mokhtarpur (1992, 1996) | Self observation by the authors |
| **Characteristics of Vernacular Architecture** — Socio-economic Aspect (Concepts and Ideas) | Site Planning | Orientation | ▪ Mostly on north-south direction<br>▪ Importance of attention to Kiblah direction<br>▪ Summer section faces to the gulf | ▪Different direction<br>▪Do not paying attention to Kiblah direction |
| | | Organization | ▪ Compact urban form<br>▪ Shadowing network with tall walls<br>▪ Summer and winter sections<br>▪ Different spaces around main yard | ▪Less pay attention to compactness<br>▪Wide streets with short walls<br>▪Living and services sections<br>▪living section on the back of front yard |
| | | Lay Out | ▪Concept of traditional privacy model<br>▪Separated function with specific entrances<br>▪Expandable plan based on family size | ▪Less consideration to family privacy<br>▪Only one entrance into the front yard<br>▪Non-expandable plan |
| | | Vegetation | ▪Important role of trees in the houses<br>▪Local trees *Loor, Kahoor, Nakhl-e khorma*<br>▪Crops cultivation in back yards | ▪Not enough space for vegetation<br>▪Local trees in some of the houses |
| | Building Elements | Openings | ▪ Mostly no windows on street side<br>▪ Cross ventilation to reduce the heat | ▪Less natural ventilation because windows are mostly open only to inside yard |
| | | Transitional Spaces | ▪ *Estar*: (short divider) prevent inside from outsider | ▪Main entrances open to the central yards directly |
| | | Shading Devices | ▪ Main entrances have sunshade<br>▪ Most of the spaces connect to yard through a corridor | ▪No shading device on main entrances<br>▪A small cover space for entering to rooms |
| | | Architectural Elements | ▪ Specific wind-catcher which is a dent on the facades<br>▪ specific bright colour of coral as basic local material | ▪There is no wind-catcher<br>▪Facades are covered with white mortar-cement similar to the vernacular facades |

As mentioned previously, the vernacular architecture of Iran is a result of the long-time processes of the social, cultural, and environmental developments which have been extended all over the country. Due to this, the people and the environment are two bases for every design based on vernacular architecture. Misunderstanding about the people's needs in the design process of New Saffein has caused some difficulties for the people. The following examples further clarify this issue.

The principle idea of the design is to design a village to represent the local lifestyle for tourists (Monsef, 1978). It is significantly different from the traditional and religious values of the Arab Muslim community. Furthermore, the new houses were not adapted to the local's social ranking. The House of *Sheikh*, i.e. the most important person in the community, was not adapted with his social level in the village, and his big family. It is because of this fact that his house has become dilapidated and the *Sheikh* and his family have migrated from the island to other country (Mokhtarpour, 2002).

In addition, the strength of the local community has also changed due to the new design. Housing lots do not support the household members' needs. The local people are living in a patriarchal society. Most fathers still try to play their traditional roles in the society, and they have extended their houses after the marriage of their sons, but limitations in the lot areas do not permit this (see *Fig. 14a, b, c, d*). However, traditional values are meaningful values. The people have created a place in their house like an *estar* or all the short walls have been increased in height to prevent outsiders from seeing or peeping into their homes because the main entrances enable the outsiders to see the internal parts of the houses (see *Fig. 8*). They also made some sunshades on the wide streets of the village, as shown in *Fig. 7*). Furthermore, in the vernacular houses, stores for fishing tools and ovens for traditional cooking are very important elements which there were also not included in the houses. The bathrooms in their new houses are also attached to toilets, the concept which contradicts with their religious beliefs (see *Figs.*

*11a, b*). These examples show that the people have not completely understood the design of New Saffein.

## DISCUSSION AND CONCLUSIONS

The Iranian vernacular architecture is based on five fundamental characteristics (Pirnia and Memarian, 1992). Three of them (namely, the compatibility with the needs of the people, inward-looking, and avoiding un-necessities) concern building quality from concepts and ideas (Vakili-Ardebili and Boussabaine, 2006). Kish Island is one of the most important islands in the northern part of the Persian Gulf. It is located in the hot and humid region of Iran, with the same social factors. In general, the characteristics of its vernacular architecture reflect the Iranian vernacular architecture. Kish was selected as the first Free Tourist Zone of the country in 1971. Following this, *Masheh* village, the most flourishing village on Kish Island at that time was moved to an area adjacent to *Old Saffein*, on the north-west coast. The new village is called *New Saffein*. It has a mixture of the traditional and modern architecture.

In the above discussions, the architecture of Old Saffein and New Saffein has been elaborated in relation to site planning and building elements. In the light of the above discussion, it can be stated that the basis of the vernacular architectural has been ignored in the design of New Saffein. Moreover, it has been reported that the government, scholars and the residents have recognized the social and climatic problems by this ignorance.

In conclusion, Manzoor (1989) stated that "the prevailing traditional architectural forms, community and urban settlement patterns have followed the same evolutionary process, creating a distinct environmental system, i.e. a process of rural-urban evolution during which local and human factors have transformed the built environments into integrated living community". An architectural identity can be founded by understanding the people. For this reason, all the social, cultural, and environmental variables must be understood before applying

of any architectural characteristic. Moreover, traditional values are meaningful values which are the products of long and complex social and cultural evolutionary processes with environmental adaptation. The architectural patterns and systems have evolved to meet certain needs of the people, and they rooted in certain elements of the environment. The application of the vernacular architectural values should not mean a simple copying of the monumental traditional forms and features. The underlying vernacular characteristics and their relationships with the people and their surrounding environments should be carefully understood. More importantly, it is important to highlight the fact that modifying the local images without understanding their values can cause a tragic result as has happen in New Saffein.

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# Effects of Motivation and Gender on the Choice of Language Learning Strategies by Iranian Postgraduate Students

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## ABSTRACT

This study examined the influence of motivation and gender on the choice of language learning strategies by Iranian post-graduate students. One hundred and fifty six Iranian post-graduate students in Kerman province were selected based on a two-step cluster sampling. A translated version of Oxford's strategy inventory for language learning was administered to the participants to determine their use of strategies. Attitude/motivation test battery was also employed to identify the participants' type of motivation. Data analysis showed the following results: a) the participants reported the use of compensation, social, metacognitive, and affective strategies at a high level, whereas memory and cognitive strategies were reported at a medium level; b) integratively-motivated students showed higher overall strategies mean score than instrumentally-motivated ones but it was not statistically significant. Instrumentally-motivated students employed memory strategy more frequently than integratively-motivated students; c) female students employed strategies more frequently than male students. However, this difference was found to be not statistically significant. The findings also showed that the teachers should encourage the learners to actively employ all the strategies in their learning process. Future research may focus on the sub-categories of the strategies and other factors, such as attitude, age, major, personality types, and testing methods.

**Keywords: Strategies, vocabulary, motivation, gender, foreign language**

## INTRODUCTION

Since the late 60's and early 70's, there has been a significant shift within the field of language learning and teaching, with greater emphasis on learners and learning rather than on teachers and teaching (Chamot, 2001; Grenfell and Macaro, 2008). In this view, learners are no longer passive and are viewed as the active participants in the teaching-learning act. It seems to be a reasonable goal for language teachers to make their students become less dependent on the teachers and reach a level of autonomy (O'Malley and Chamot, 1995). Learners need to keep on learning even if the formal classroom setting is not available. Learner autonomy is in line with the current views on the active involvement of learners, popularity of learner-centred approaches, and learners' independence of teachers (Littlewood, 1994; Little, 2000). As a result of the increased attention to the learners and learner-centred approaches, much emphasis has been laid on the learner's active cognitive processes referred to as learning strategies which have been recognized as a key component of an autonomous approach to language learning and teaching (Littlewood, 1999). In much of

the literature concerned with the development of learner autonomy, a lot of importance has been attached to the training of the learners in terms of strategy development and learning skills (O'Malley and Chamot, 1995; Oxford, 1990).

In line with this new shift of interest, how learning strategies influence the success of language learners has been the primary concern of researchers. Rubin and Thompson (1994) state that the main underlying assumption behind learning strategies research in foreign language education is concerned with the idea that one of the factors that make good learners good is their use of learning strategies.

*Objectives of the Study*

The present study intended to investigate the effects of factors, such as motivation (instrumental and integrative) and gender, on the choice of language learning strategies by Iranian post-graduate students. Specifically, the objectives of the current study can briefly be stated as: a) to identify the overall degree of the strategy use by Iranian post-graduate students; b) to identify the most and least frequently used strategies by Iranian post-graduate students; c) to identify any differences between integratively-motivated and instrumentally-motivated Iranian post-graduate students concerning their strategy choice; and d) to identify any differences in strategy use between male and female Iranian post-graduate students.

*Significance of the Study*

The current study was conducted with Iranian post-graduate students learning English in an environment which offers relatively limited windows of opportunity to hear, speak, and write, either outside or inside the classroom (input-poor environment), as well as less opportunity to speak English with native speakers. As stated before, most of the studies on learning strategies have been conducted in the second language environment. Thus, second language learners' strategy patterns may be different from those of the learners learning English as a foreign language since second language learners normally have easy access to input-rich environments in which they have more opportunities to speak, hear, read, and write. This proves that the assessment of the learning strategy patterns in the EFL context as an input-poor environment deserves much attention.

This study is significant for both theoretical and practical reasons. First, from a theoretical viewpoint, the study provides empirical evidence of the connection between language learning strategies and a number of variables, such as attitude and motivation, as well as the fact that it has been conducted in a context that has not been previously examined in this area of inquiry.

Second, this study has practical significance for language pedagogy. The study of the strategy use by Iranian post-graduate students, in the context of other variables such as attitude and motivation, can provide lecturers with a better understanding of how language learning occurs. Therefore, the findings of this study may serve as a guide that enables educators to know the most and least common strategies which students use and how these strategies affect their learning. The pragmatic implications of studying these strategies include pedagogical intervention, i.e. the more is known about strategies, the more such strategies can be taught to learners and therefore increase post-graduate students' learning. Oxford (2001) stated that a good language learner is a learner who utilizes the strategies in the maximum possible extent. Thus, knowing more about strategies utilized by students will help the lecturers to identify which strategies are to be utilized more. Moreover, an awareness of individual differences in learning makes EFL educators and programme designers more sensitive to their roles in teaching and learning. Furthermore, it will permit them to match English lecturers' teaching and post-graduate students' learning so as to develop students' potentials in the EFL learning, as well as to assist students to become cognizant of the ways they learn most effectively. It also helps the post-graduate students to develop strategies and ways to become more motivated and independent learners.

## REVIEW OF LITERATURE

Since 1975, various theorists have contributed to the definition of language learning strategies (Grenfell and Macaro, 2008). Language learning strategies, as determinant factors in the facilitation of learning a new language, have been defined in different ways. Among other, strategies are "the thoughts and actions that learners use to accomplish a learning goal" (Chamot, 2004, p. 14). Cohen (1998) broadly defines second language learner strategies as encompassing both second language learning and second language use strategies. In his terms, language learning and language use strategies are any actions or techniques which are employed by the learners to improve the process of foreign language learning.

Furthermore, Cohen (2007) adds a new aspect to the definition of language learning strategies. He proposes that language learning strategies be defined as a conscious mental activity that must contain not only an action but also a goal (or an intention) and a learning situation. He further states that while a mental action might be subconscious, an action with a goal/intention and related to a learning situation can only be conscious. In this study, the definition of LSs was adopted from Oxford (1994). She believes that LSs are the actions or techniques which are selected consciously by the learners in order to internalize L2 rules and improve their language learning. She introduced these techniques and actions in her language learning classification system.

Oxford's classification as the framework of the current study will be explained in more detail. Oxford (1997: 2001) defines language learning strategies as "specific actions taken by the leaner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (p. 8). Her strategy taxonomy includes six categories: (a) memory strategies; (b) cognitive strategies; (c) metacognitive strategies; (d) compensation strategies; (e) social strategies; and (f) affective strategies. In particular, memory strategies help learners to store and retrieve new information.

Some specific examples of these include remembering new words by creating mental linkages and making associations between what is known and what is new. Meanwhile, cognitive strategies facilitate the understanding and the production of new language. English language learners, for instance, may practice the sounds of English or they could infer the meaning of a new English word by segmenting it into known roots, prefixes, and suffixes. Compensation strategies allow learners to bridge over large knowledge gaps to make meaning. Some examples of this include using circumlocution and making guesses. Metacognitive strategies, social strategies, and affective strategies, on the other hand, help regulate the learning process and learners' emotional responses. Metacognitive strategies are used by the learners to coordinate the learning process, such as planning and evaluating their own learning. Affective strategies help the learners to regulate their emotions, motivations, and attitudes. Some instances of these strategies include anxiety reduction and self-encouragement. Social strategies facilitate learning through learner interaction with others. Learners, for instance, may form study groups to learn a new language or seek help from proficient users of that language.

### Motivation and Language Learning Strategies

As one of the main determinants of foreign language learning achievement, motivation has attracted the attention of many investigators. Different definitions of motivation have been posited by researchers. Motivation theories endeavour to identify what encourage the students to do something specific and what encourage them to select a specific activity and task among all available activities (Pintrich and Schunk, 2002). In second language learning, motivation plays an important role in the process of foreign language learning. In more specific, it helps the learners to continue their learning in the future, even in the absence of teacher and classroom environment. Furthermore, all factors which may influence the process of language learning

are in somehow affected by motivation (Dornyei, 2005). Gardner's social psychological model of second language motivation distinguishes between two motivational orientations, namely, integrative versus instrumental orientation, a distinction highly that is acclaimed among second language researchers and practitioners (Dornyei, 2005).

Integrative orientation reflects a positive attitude toward the second language group and the desire to interact and identify with the second language community. On the other hand, learners with an integrative orientation are interested in the culture of the target language; they want to acquaint themselves with the target community and become an integral part of it. Instrumental orientation relates to the potential practicality of second language proficiency, such as employment and international travel. Thus, learners with an instrumental motivation view the foreign language as a means of finding a good job; in other words, the target language acts as a monetary motive (Gardner and MacIntyre, 1993).

### Gender and Language Learning Strategies

According to Ellis (1994) model for variables which affect language learning strategies, gender is an individual difference among learners which may affect their choice of strategies. Oxford and Burry (1995) believe that the frequency of strategy use is linked to EFL or ESL setting, career interests, cultural background, and gender. However, Ehrman and Oxford (1995) state that gender differences may often be a mask for deeper differences of personality type and career choice. A number of researchers have investigated the effects of gender on the choice of language learning strategies (e.g. Politzer, 1993; Hojjati, 1998).

### METHODOLOGY

#### Participants

One hundred and fifty six Iranian postgraduate students, majoring in art and science, were selected for the present study based on the two-step cluster sampling. All the participants were in the second semester of their studies in Kerman Bahonar University and Rafsanjan Valiasr University.

#### Instruments

For the present study, two sets of instruments were used. The first instrument is the original Strategy Inventory for Language Learning or SILL (Oxford, 1990: 2001). The SILL was chosen for use in this study because it was specifically designed for assessing foreign language learning strategies and it provides a comprehensive, systematic inventory of language learning strategies (Lu, 2007). In addition, the SILL has been used in many language learning strategy studies (Griffiths, 2003; Hsiao and Oxford, 2003). It is a 50-item version for learners of English as a foreign language.

The second instrument for collecting data was the Attitude and Motivation Test Battery (AMTB) which is a Likert-type scale with 59 statements. The AMTB was chosen for use in this study because it was specifically designed for assessing foreign language learning motivations (Lu, 2007) and it has been used in many learning motivation studies (Masgoret, Bernaus and Gardner, 2001; Rueda and Chen, 2005).

#### Procedure

In the current study, two questionnaires were administered to the participants of the first semester of 2009. All students had to sit for the mandatory course-General English - which is offered in the second semester. This class was selected for this study to have the access to all students who were learning English in this class. Two questionnaires were administered and completed in an hour or one session. The researcher explained to the students that they would not be judged based on their answers and that it would not affect their grade. Questions asked were answered by the researcher to make it crystal clear for the respondents.

To analyze the data, the total strategy mean scores of the students as well as that of each strategy category were first calculated by adding up the chosen frequencies of its items and dividing the obtained sum by the number of the items in that strategy group. Meanwhile, the mean score for instrumental and integrative motivation of the students were also calculated to determine the motivation mean scores of the students. The strongest mean score showed the type of motivation the participants have in the current study. Finally, the gathered data were subjected to descriptive statistics (mean and standard deviation) and independent sample t-test to find the answer for research questions.

## RESULTS

The data analysis (Table 1) revealed the overall mean score of 3.67 was obtained for Iranian post-graduate students' strategy use. Meanwhile, the mean scores of 3.5 and above show high use of strategies. Thus, it can be concluded that Iranian post-graduates are high strategy users.

TABLE 1
Descriptive statistics related to the strategy questionnaire

| Mean | SD | Min. | Max. | Frequency |
|------|------|------|------|-----------|
| 3.67 | 0.39 | 2.77 | 4.54 | High |

The descriptive statistics for the scores of the three strategy groups is presented in Table 2 below.

TABLE 2
Frequency for the scores of high, medium and low strategy groups

| Strategy groups | Frequency | Percent |
|-----------------|-----------|---------|
| High strategy user | 104 | 66.2 |
| Medium strategy user | 52 | 33.8 |
| Low strategy user | 0 | 0 |

As demonstrated in Table 2, the participants were classified into three strategy groups based on Oxford's (1990) scale for subjects' division into strategy users considering above 3.5, below 2.5 as the high and low strategy

groups, respectively. The scores of 2.5-3.5 were considered as the medium strategy group. In this study, the number of participants in the high strategy group (n = 104) is double than that of the medium strategy group (n = 52). However, none of the participants was found to be in low strategy group. To find the most and least frequently used strategies, the mean score for each group of strategies was calculated as it appears in the following table.

TABLE 3
Rank order of the favoured strategies

| Strategies | Mean | Rank | Frequency |
|------------|------|------|-----------|
| Metacognitive | 4.08 | 1 | High |
| Affective | 4.01 | 2 | High |
| Compensation | 3.67 | 3 | High |
| Social | 3.55 | 4 | High |
| Cognitive | 3.44 | 5 | Medium |
| Memory | 3.22 | 6 | Medium |

According to Table 3, metacognitive strategy was found to be the most frequently used strategy (M = 4.8), while memory strategy was found as the least frequently used strategy (M = 3.22), affective, compensation, social, and cognitive strategies stood between the most and least frequently strategies, respectively. Moreover, the table also shows that Iranian post-graduate students used metacognitive, affective, compensation, and social strategies at a high level of frequency while cognitive and memory strategies were found to be employed at a medium level of frequency.

To determine the influence of motivation on the choice of language learning strategies, an analysis was done for instrumental and integrative motivation. First, the mean strategy score for instrumentally-motivated and integratively-motivated students were calculated and reflected in the following table.

According to the total strategy mean scores in Table 4, integratively-motivated students used strategies more frequently than instrumentally-motivated students. Moreover, all categories of strategies (except for memory strategies) were used more frequently by

TABLE 4
Mean strategy scores for the participants' instrumental/integrative motivation

| Strategy Motivation | Mem | Cog | Comp | Aff. | Soc | Meta | Total |
|---|---|---|---|---|---|---|---|
| Instrumental | 3.25 | 3.40 | 3.66 | 4.07 | 3.52 | 4.07 | 3.66 |
| Integrative | 3.17 | 3.51 | 3.67 | 4.10 | 3.60 | 4.10 | 3.69 |

*Note*: Mem= Memory, Cog= Cognitive, Meta= Metacognitive, Aff= Affective, Soc= Social, Comp= Compensation

integratively-motivated students as compared to instrumentally-motivated students. In order to determine if the differences between these mean scores are significant, independent sample t-test was conducted and the following t-values table was obtained.

TABLE 5
T-values for the difference between instrumental and integrative mean scores on the strategy questionnaire

| Comparisons | d.f. | t-value | Significance |
|---|---|---|---|
| Memory | 154 | 0.672* | 0.032 |
| Cognitive | 154 | 0.838* | 0.011 |
| Compensation | 154 | 0.032 | 0.975 |
| Affective | 154 | 0.295 | 0.769 |
| Social | 154 | 0.425 | 0.672 |
| Metacognitive | 154 | 0.295 | 0.769 |
| Total | 154 | 0.317 | 0.752 |

Table 5 shows that the only two statistically significant differences were obtained for the memory (t-value = 0.672, p = 0.03) and cognitive (t-value = 0.838, p = 0.01) strategies. It also indicates that integratively-motivated students significantly used cognitive strategies more frequently than instrumentally-motivated ones, while memory strategies were significantly used more frequently by instrumentally-motivated students.

Meanwhile, to identify the differences between the male and female students on the choice of strategy use, the strategy mean score for each strategy category and that of the total strategy use were calculated. Table 6

summarizes the mean strategy scores for students of art and science.

The total strategy mean scores report that male students (M = 3.65) used strategies less frequently than female students (M = 3.63). The only strategy categories which were used more frequently by male students were metacognitive and affective strategies. This also means that other strategy categories were used more frequently by female students. To see if the differences among the strategy means were statistically significant, an independent sample t-test was carried out. The related findings are reported in Table 7 below.

TABLE 7
T-values for the difference between male and female students' mean scores on the strategy questionnaire

| Comparison | d.f. | t-value | Significance |
|---|---|---|---|
| Memory | 154 | 0.553 | 0.582 |
| Cognitive | 154 | 0.055 | 0.956 |
| Compensation | 154 | 1.445 | 0.153 |
| Affective | 154 | 0.069 | 0.946 |
| Social | 154 | 0.059 | 0.953 |
| Metacognitive | 154 | 0.069 | 0.946 |
| Total | 154 | 0.480 | 0.630 |

Table 7 shows there was no statistical significant difference between male and female students in the choice of language learning strategies. The results presented for each research question are discussed in the following section.

TABLE 6
Mean strategy scores for male and female students

| Strategy Major | Mem. | Cog. | Meta. | Aff. | Soc. | Comp. | Total |
|---|---|---|---|---|---|---|---|
| Male | 3.19 | 3.44 | 4.08 | 4.08 | 3.54 | 3.57 | 3.65 |
| Female | 3.25 | 3.45 | 4.07 | 4.07 | 3.55 | 3.77 | 3.69 |

*Note*: Mem= Memory, Cog= Cognitive, Meta= Metacognitive, Aff= Affective, Soc= Social, Comp= Compensation

*Level of Frequency of Strategy Use*

Based on the findings presented in Tables 1, 2 and 3, the participants in the current study were found to be high strategy users (3.67). This finding is not congruent with most of the studies done on language learning strategies of Iranians or Asian EFL students (Zarafshan, 2002; Sedaghat, 2001; Mokhtari, 2007; Hojjati, 1998; Hong, 2006). These studies mostly found the learners as medium strategy users. One reason to find the participants of this study as high strategy users may be due to the participants' level of education, i.e. as post-graduate EFL learners. Kafipour (2006) compared the undergraduate and post-graduate education in Iran, and found that the undergraduate education system in Iran is teacher-centred, i.e. the teacher is the person who lectures, presents and instructs the learning materials. The students should just listen and take note and memorize what the teachers instruct in the classroom. In such situation, the students remain passive without any role in the learning and teaching processes. However, the situation in post-graduate education system is completely different from undergraduate education system. In other words, the post-graduate education system is student-centred. The students are required to actively participate in the learning and teaching processes by presenting lectures, holding conferences and discussion forums. The teachers' role is merely as leaders and organizers. They try to correct the students' mistakes when the students try to teach their classmates through lectures and conferences. Thus, this student-centred learning approach forces the students to be more autonomous and teacher-independent in learning. Oxford (2001)

states that language learning strategies are one of the most important factors which help students to become independent in their learning. This may be the reason why post-graduate students in the current study used language learning strategies in a high level of frequency.

*Frequently Used Language Learning Strategies*

Four categories of strategies were reported to be used at a high level of frequency, including metacognitive (4.08), affective (4.01), compensation (3.67), and social (3.55). The last two categories, namely cognitive (3.44) and memory (3.22) were reported to be used at a medium level. Concerning the overall use of language learning strategies, the results of this study showed that no strategy was applied with a low frequency of use (lower than 2.5) by Iranian EFL post-graduate learners. This finding is identical to the results obtained in the study by Mokhtari (2007), who had investigated language learning strategies of Iranians who were studying in USA. The researcher found that none of the six strategy types was used at a low level of frequency.

Therefore, Iranian post-graduate students reported to have utilized metacognitive strategies most and memory strategies least frequently. Metacognitive strategies involve thinking about the learning process and evaluating how well one has learned (Oxford, 2001). The reason for more frequent use of these strategies can be the EFL context of learning English in Iran. Metacognitive strategies provide control over the learning process and because EFL students are more conscious about their foreign language

development, they apply those strategies which help them to have control over their learning. The participants in the current study, namely Iranian post-graduate students, used metacognitive strategies in the same level of frequency as those students in Oxford (1990) and Philips' (1991) studies.

The high scores in the social and affective areas, as compared with the lower results in cognitive strategy use, suggest that Iranian post-graduate learners are more feeling-oriented rather than thinking-oriented. According to Oxford (2001), a feeling-focused student is concerned with social and emotional factors but does not make decisions based on logic and analysis. In the current study, the participants used social strategies at a high level of frequency. It is a likely explanation that social strategies were used to compensate for the lack of meaningful English language input. Social strategies may also be used in order to make up for learners, with deficiencies in listening comprehension. Therefore, social strategies essentially function as compensation strategies for this population.

The high use of compensation strategies among the participants was similar to that observed in learners from other Asian countries. For example, Bremner (1999) and Park (2005) reported the use of this strategy in a high level of frequency. Compensation strategies enable learners to comprehend or produce new language despite learners' limitations in their knowledge of the target language. Learners use compensation strategies, such as making guesses and using gestures in order to make progress in communication in the absence of a complete knowledge of vocabulary, grammar, idioms, and other language elements. In addition, emphasis on compensation strategies may reflect the students' lack of exposure when learning foreign languages; therefore, they employ such strategies in Iran's input poor environment (Hojjati, 1998).

Cognitive and memory strategies were the least frequently used strategies among the participants. They were reported to be used at a medium level of frequency, whereas all other strategies were used at a high level of frequency.

Oxford (1990) suggested that cognitive strategies are essential in learning a new language because these strategies operate directly on incoming information. However, the current study showed that cognitive strategies, along with memory strategies, were the least frequently used strategies. This result implies that insufficient use of cognitive strategies might be due to these learners' inability or unwillingness to practice, analyze, and reason in the target language. These are essential and popular skills in a traditional language classroom. Results also show that cognitive strategies are among the least frequent used strategies among this population, which provide more evidence of Iranian postgraduate students' lack of knowledge about how to learn a foreign language.

In addition to cognitive strategies, memory strategies were also reported as the least used strategies among the participants. Meanwhile, quite a number of studies have found that Asian learners use memory strategies as their least frequent used strategy (Lee, 2001; Chou 2002, Park, 2005). A likely explanation, therefore, is the traditional rote memorization strategies that Asian learners once were reported to have preferred might differ from the specific memory techniques reported in the SILL. These techniques included making a mental picture of a situation in which the word might be used, using rhymes to remember new words, and grouping new words into synonyms, antonyms, nouns, and verbs. The specificity of the SILL helps to quantify memory strategies. However, it is possible to speculate that the participants in the current study were not familiar with systematic mnemonics or specific techniques in the memory strategies. Thus, these students reported using fewer memory strategies on the SILL.

*The Differences in the Strategy Use between Integratively-Motivated and Instrumentally-Motivated Students*

Mean score for integratively-motivated and instrumentally-motivated students showed that integratively-motivated students used

strategies more frequently than instrumentally-motivated students. All categories of strategies except memory strategies were more frequently reported by integratively-motivated. T-test displayed that differences between strategies mean scores of memory and cognitive strategies were statistically significant.

Integrative motivation was the most significant factor and strongly related to language learning strategy use in the previous studies (*see* Schmidt and Watanabe, 2001; Zarafshan, 2002). The results of this study also support the findings of the earlier research. The findings implied that integratively-motivated students, who acquire language for their daily life or for social purpose, use all strategy types more often than instrumentally-motivated ones who learn a language for getting a better job or for pursuing knowledge in their specific fields of study. Integrative motivation strongly enhances the learners' willingness to use learning strategies, because this motivation involves learners' positive attitudes toward the target language group and language learning, as well as their intention to communicate and integrate with members of the group (Dornyei, 1994).

In the present study, the only significant differences were found for memory strategies (p = 0.03) and for cognitive strategies (p = 0.01). This shows that integratively-motivated students reported to use significantly more cognitive strategies than instrumentally-motivated ones, while memory strategies were significantly used more frequently by instrumentally-motivated students. In line with Chang and Huang's research (1999), integrative motivation is significantly associated with cognitive strategies. Cognitive strategies involve deep-processing strategies such as analyzing and reasoning. Okada *et al*. (1996) asserted that the learners who are eager to follow their goals will become autonomous learners and try to control and monitor their own language learning. Besides, integrative motivation is correlated with conceptual learning but not rote learning. Some considerable studies proposed that integrative motivation is associated with active involvement (Harter, 1992), persistence, participation (Miserandino, 1996), pleasure

(Patrick *et al*., 1993), and more learning activities outside of school (Stipek, 1998). Accordingly, these may support the findings of the present research whereby cognitive strategies were significantly used by integratively-motivated students than those of instrumentally-motivated students. Furthermore, Chang and Huang (1999) explained that EFL learners with instrumental goals possibly prefer memory strategies which cost them minimum time and effort. It seems true for the participants of the current study.

*Differences in Strategy Use between Male and Female Students*

In order to find the answer, mean strategy scores for the male and female students were calculated. Subsequently, independent sample t-test was carried out to find whether or not the differences were significant. Table 4.6 shows that female students used strategies more frequently than male students. Moreover, all strategy categories (except for metacognitive and affective) were used more frequently by female students. T-value in Table 7 reveals that there is no difference between the mean scores of male and female students in utilization of language learning strategies.

The results supported the earlier studies by Oxford and Nyikos (1989) as well as Ehrman and Oxford (1995) who found that women generally used more strategies than men. They suggested that females tended to use a much wider, or at least a very different range of strategies than males for language learning. The present study corresponds with these findings. In spite of the sex differences, the researchers claimed that there was no significant difference between male and female subjects at the 0.05 level. This study did not match Hojjati's (1998) who found that men obtained a higher overall strategy mean than women.

## CONCLUSIONS

A number of conclusions can be drawn based on the results gathered in the current study. Below is a summary of the conclusions based on the analysis of the data gathered.

a.  The participants in this study were found to be high strategy users. They reported to employ metacognitive, affective, compensation, and social strategies more frequently than cognitive and memory strategies. They also reported to use metacognitive strategies most frequently and memory strategies least frequently.

b.  Motivation was found to have a significant effect on memory and cognitive strategies. In other words, integratively-motivated students employed more cognitive strategies than instrumentally-motivated learners while instrumentally-motivated students employed more memory strategies than integratively-motivated students. All the other strategies were used more frequently by integratively-motivated learners but these differences were not found to be significant.

c.  Although gender was found to have no significant effect on the choice of strategies, female students used strategies more frequently than male students.

*Implications*

Based on the above-mentioned findings of the current study, the following implications can be drawn:

a.  Learning about and using any strategy, efficient or otherwise are by-product of practicing in the language learning classroom. The implication of this assertion is that learning about strategies should not be understood only in terms of direct instruction. Rather, they were developed in actual practice where individuals, initially inexperienced and unaware, practice completely and actively in natural settings.

b.  How individuals approach language learning strategies in the classroom should be investigated by language teachers. Developing an awareness concerning one's own language learning strategy use begs the opportunities to provide for students to self-assess, set goals, plan course of action to fulfil these goals, and identify themselves in their own process of learning.

c.  The participants did not use cognitive and memory strategies at a high level of frequency. It seemed that the students were not quite familiar with these strategies. According to the theory of good language learner, a good language learner uses all strategies at a high level of frequency (Oxford, 2001). Therefore, teachers and administrators should be aware of the students' familiarity with language learning strategies. Meanwhile, teachers should be encouraged to motivate their students to use all of the strategies during their learning process.

*Suggestions for Further Studies*

The following suggestions are recommended to be further investigated:

a.  This study has focused on the six major categories of strategies according to Oxford's (1990) framework. The sub-categories of the six major groups of strategies can be further investigated.

b.  In this study, factors such as motivation and gender were examined. Continued studies should be carried out to determine other factors, such as language teaching methods, age, attitude, language learning goals, testing methods, new computer-assisted language learning technologies, learning styles, personality type, and so on.

c.  The present study was carried out at the university level. Replicated studies are recommended using elementary and high school students as participants.

d.  No mention has been made in the report of language learning strategies as related to the characteristics of good language learners. It should be investigated to see whether certain learning strategies are factors of good language learners. Pre-test, post-test assessments are recommended in this area.

e. The participants in this study used metacognitive strategies most frequently and memory strategies least frequently. Nonetheless, further research can be carried out to verify the data.

f. The participants who took part in the current investigation did not have sufficient familiarity with some of the language learning strategies. Teaching language learning strategies would demand a considerable investment of time for practice and discussion activities. Similar studies could be conducted to involve regular classroom teachers over a semester or year in the teaching of learning strategies to obtain a better and clearer result.

g. In this study, language learning strategies were taken into account. Similar investigation can be performed on the learning strategies of language sub-skills such as listening, speaking, reading, and writing.

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# Grammatical Gender Misselection and Related Errors in French Writing by Malaysian Students

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## ABSTRACT

This study aimed to identify grammatical gender misselection errors made by Malaysian students in learning French as a foreign language with regard to writing skills. The study utilized quantitative and qualitative methods of data collection. Data analysis was done by applying the definition of misselection errors by Dulay, Burt and Krashen (1982). A total of 40 subjects participated in this study after 100 hours of learning French. The task consisted of writing two short essays by the subjects, in which they contained different elements of grammatical gender. The results showed that students made misselection errors of French prepositions, verbs, adjectives, articles, and lexis.

**Keywords: Misselection errors, writing, French as a foreign language, grammatical gender**

## INTRODUCTION

The language produced by foreign language (FL) learners almost inevitably contains errors of various types (Hemchua and Schmitt, 2006). This is a part of the language learning process. Thus, using error analysis in language learning can predict the learners' type of errors, as this is useful for developing teaching materials and selecting teaching methods (Kitao and Kitao, 2000). Furthermore, the results of such analysis could be used as indicators of the learners' achievement. Most learners view error correction as part and parcel of acquiring competency in the language learnt. Leki (1991) in her study on second language written production found that 93% of her first year college students felt that it was very important

that grammatical errors be pointed out so that they could try to correct the non-native language in their production.

According to Yarmohammadi (2002), learners may make errors rooted in their mother tongues in the writing process. Richards (1974) defined this type of error as interlingual errors. As indicated by Swan (1997, p. 161), if an English L1 learner of French confuses *fenêtre*, *vitre*, *vitrine*, and *vitrail* (words for different types of window), it is questionable whether this is due to interlingual causes since the English system does not offer so many forms, or intralingual, because the French lexical system is complicated and there is in fact no English term to transfer.

Whether it is interlingual or intralingual, one of the errors is misformation, which Dulay,

Burt and Krashen (1982, p. 108-109) categorized as the use of wrong form of the morpheme or structure. James (1998) called this type of error misselection, since the error was caused by selecting the wrong words, and not by using the wrong form of words. Duškova (1969) refers to this type of error as 'distortions', while Ringbom (1987) calls such errors 'hybrids'. This type of error was made by learners when they tailored the L1 words to suit the syntactic requirements and/or rules of the L2.

Errors in various forms are important sources of information about second language acquisition, because they demonstrate conclusively that learners do not simply memorize the target language rules and then reproduce them in their utterances. They indicate that learners construct their own rules on the basis of input data, and that in some instances at least, these rules differ from those of the target language learners (Ellis, 1985a, p. 9).

## PROBLEM STATEMENT

The French language is linguistically different from most of the main languages in Malaysia, namely Malay, English, Chinese and Tamil, and among the striking differences are the grammar and pronunciation (Hazlina Abdul Halim *et al.*, 2009a). Thus, "due to the incomplete knowledge", learners will make errors which is "the use of a linguistic item (a word, a grammatical item, a speech act, etc.) in a way a native speaker regards as showing faulty or incomplete learning" (Richards *et al.*, 1992, p. 127).

It is important to note that grammatical gender is the most difficult part of French language to be learnt and taught for Malaysians, since in their mother tongues and dominant languages, the structure is limited to either animate nouns or none at all. Thus, the incomprehension of the French grammatical gender rules has led them to make errors in French.

## RESEARCH OBJECTIVE

The objective of this study was to identify and analyse the misselection errors (also called misformation errors) made by Malaysian non-native speakers of French as a foreign language with regard to expressing grammatical gender in their writing.

## LIMITATION OF THE STUDY

This study only focused on the misselection errors of the application of grammatical genders by Malaysian students as well as the misselections errors of choosing grammatical gender elements. It did not include other types of errors, such as additional errors and omission errors. In addition, this study did not take into consideration how the differences and similarities affected the choice of the writing strategies used.

## MATERIALS AND PROCEDURES

This study utilized both the quantitative and qualitative methods of data collection. The subjects consisted of 2nd and 3rd year foreign language students from different fields of humanities and social sciences at Universiti Putra Malaysia. A total of 40 subjects aged between 20 and 24 participated in this study after having 100 hours of learning French. Note that factors such as gender and race were not controlled in this study. The instrument used in the study was the completion of two writing tasks by the subjects. The first essay consisted of writing activities in the past, and in the writing, the students were to be a male. For the second essay, the same topic was given, but this time, the students were to be a female. The purpose was to see whether the students correctly use grammatical gender in the adjectives and past tenses. It was also due to the initial observations by the researcher that the two topics (which was the utilisation of adjectives in French and past tenses) were the main areas where Malaysian students made a considerable number of misselection errors in applying the French grammatical gender.

## FINDINGS OF THE STUDY

Overall, 800 sentences were analyzed and these represented 400 sentences from Essay 1 and 400 sentences from Essay 2 (a rough estimation on the minimum sentences for the two essays (20 sentences) multiplied by the number of respondents, i.e. 40). The researcher observed that 90% of the sentences made by the students in the two tasks were sentences with simple gender application (which involved nouns and adjectives but with only one application of grammatical gender) and only 10% were sentences with complex grammatical applications (which involved nouns, adjectives, prepositions etc. and with more than one application of grammatical gender to be considered).

Listed in *Fig. 1* are the results of the two writing tasks given.

The study found 17.1% of misselection errors of grammatical gender application. These were the most dominant errors in this study. The misselection errors involved were the errors involving the use of nouns, preposition and adjectives.

*Misselection Errors on French Prepositions*

Table 1 shows few examples of the misselection errors of the French prepositions made by Malaysian students.

Most of the misselection errors were in the forms of French prepositions, the noun articles of a country and the mode of transport in French. The errors occurred when the students generalised the utilisation of prepositions for the countries in the same manner as they applied them to other places (for example the name of the roads, building names, etc.).

From the study, it was found that the errors were due to the influence of the students' mother tongue (Malay) or their second language (English). In both languages, we could observe that the prepositions *to* (in English) and *ke* (in Malay) are the same for countries and places. For example, in English, the preposition *to* is used as follows:

1. I went *to* Italy last week

2. I went *to* Petaling Street last week

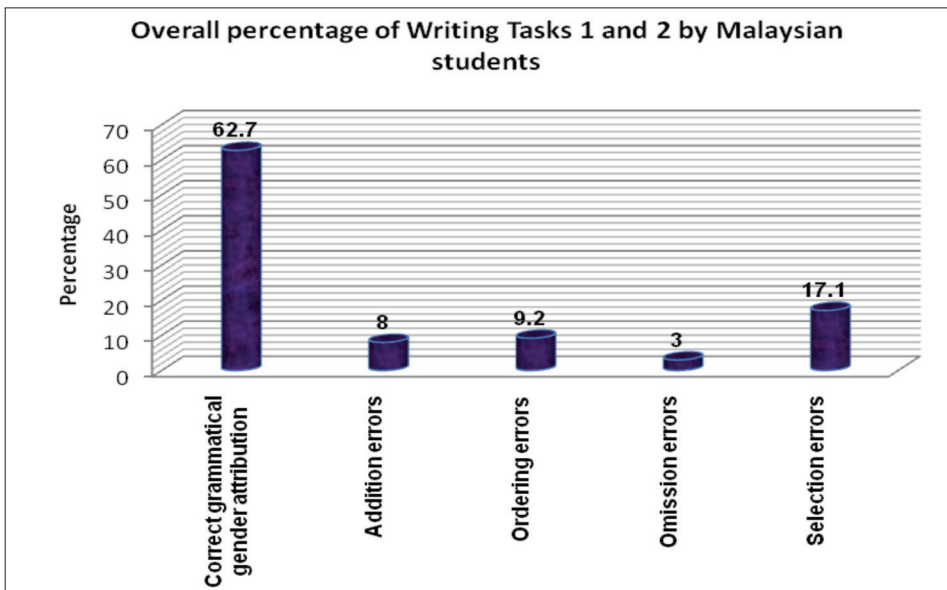In French, for names of countries, one has to take into account the grammatical gender



*Fig. 1: The overall results for Writing Tasks 1 and 2 by Malaysian students*

TABLE 1
Examples of misselection errors on French prepositions

| **French sentences by Malaysian students** | **Appropriate phrases in French** |
|---|---|
| 1. Je vais à l'école **_au_** velo. *(I went to school **by** bicycle)* | Je vais à l'école **_à_** vélo. |
| 2. Je suis allé **_au_** train. *(I went **by** train)* | Je suis allé **_en_** train. |
| 3. J'habite **_à_** Thaïlande. *(I live **in** Thailand)* | J'habite **_en_** Thaïlande. |
| 4. Je suis allé **_à_** Indonésie en décembre. *(I went to Indonesia in December)* | Je suis allé **_en_** Indonésie en décembre |
| 5. Après, nous ont mangés à restaurant **_dans la KLCC_** *(Later, we ate at a restaurant in KLCC).* | Après, nous ont mangés **au** restaurant **_à KLCC_** |
| 6. Nous allons **_à_** marché. *(We go to the market)* | Nous allons **au** marché. |

of the countries in order to determine which preposition to be used. A feminine country (e.g. Malaysia) will use the preposition *en* to indicate *to*, similarly for the masculine countries, in which the preposition *au* is used. For proper names such as the names of buildings and roads (in most cases), the gender will not be taken into account. As such, the prepositions *en, au, aux* and *à* are used to indicate *to*. Below are some examples of this usage:

From the examples shown in Table 2, we can see that in both Malay and English languages, the same prepositions (**to** and **ke**) were used to indicate 'to'. This was the reason why Malaysian students made misselection errors in French prepositions, i.e. they reverted to their knowledge of the English or Malay language.

TABLE 2
Some examples of the prepositions of places in French, Malay and English

| French | English | Malay |
|---|---|---|
| Je suis **allée** *en* Italie la semaine dernière (feminine) | I went *to* Italy last week | Saya pergi *ke* Itali pada minggu lepas |
| J'irai **au** Portugal demain (masculine) | I will go *to* Portugal | Saya akan pergi *ke* Portugal esok |
| J'ai voyagé **aux** Etats-Unis la semaine dernière (plural, no gender form) | I travelled *to* the States last week | Saya melancong *ke* Amerika pada minggu lepas |
| Je suis allé(e) *à* Petaling Street la semaine dernière (masculine/ feminine) | I went *to* Petaling Street last week | Saya pergi *ke* Petaling Street pada minggu lepas |

*Misselection Errors of the French Verbs*

Table 3 shows a few samples of the misselection errors of verbs in French.

The misselection errors of the French verbs made by Malaysian students were closely related to the usage of the French simple past tense or *passé composé*. In more specific, the errors made by the students involved choosing the right auxilary to go with the second component of the *passé composé*. In the first error example, the choice of auxilary *être* for the verb *passer* in the sentence "Je *suis passée* un bonne journée" makes the sentence grammatically wrong. In French, the meaning of the verb *passer* in past tense is dependent on the choice of the auxilary used. If it is combined with the auxilary *être,* the meaning would be the action of *passing-by* an area, whereas if it is combined with the auxilary *avoir*, it brings the meaning *to spend* (as in Example 1).

Meanwhile, the errors for the verb *aller* (to go) in the French simple past tense mainly involve the incomprehension of the rule of applying the past participle to the verbs which need *être* as an auxilary. In French, the application of the auxilary *être* in the simple past tense (*passé composé*) involves 14 verbs (excluding the reflective verbs), including the verb *aller* as used by the respondent in the sentence. In the application of this verb, whenever the verb *être* is used, one will have to take into consideration the grammatical gender that is related with the subject pronoun used.

Example:

> Il *est allé* au magasin hier (he *went* to the shop yesterday)

> Elle *est allée* au magasin hier (she *went* to the shop yesterday)

From the example given, if the subject pronoun is masculine (in this case *il*), the past participle used will have be the masculine participle (*allé*). Likewise, if the subject pronoun is feminine (here, it is *elle*), the past participle will follow the feminine form, and thus, one will have to add *e* to the participle (*allé → allée*).

In Sentence 2 (Table 3), the error made by the student was the misselection of the auxilary *avoir* combined with the verb *aller* and not the auxilary *être*, as it was supposed to be. The application of the auxilary *avoir* (where the grammatical gender of the subject pronoun was not considered) was the reason for the misselection error of the grammatical gender for the participle used.

Based on the error produced, the researcher concluded that the respondents understood the concept of grammatical gender attribution for the 14 verbs which used the auxilary *être* for the past tense. Nevertheless, this comprehension was not applied to the choice of the auxilary for those verbs. The error was due to the "ignorance of rules restrictions" and also an "incomplete application of rules" as elaborated by Dulay, Burt and Krashen (1982, p. 156).

TABLE 3
Some example of the misselection errors of French prepositions

| French sentences by Malaysian students | Appropriate phrases in French |
|---|---|
| 1. Je *suis passée* un bonne journée. *(I spent a good day)* | J'ai *passé* une bonne journée |
| 2. Pendant les dernières vacances, *j'ai allée* à Terengganu. *(During the last holidays, I went to Terengganu)* | Pendant les dernières vacances, *je suis allée* à Terengganu. |
| 3. *J'ai allé* Kuala Lumpur la dernière semain *(I went to Kuala Lumpur last week)* | *Je suis allé* à Kuala Lumpur la semaine dernière |

*Misselection Errors of the French Adjectives*

Table 4 presents some of the French adjective misselection errors made by Malaysian students in their writing.

In the sentence "Kuala Lumpur est ***beau*** ville", it was observed that to get the message across, the student used interlanguage. The misselection error of the adjective is also traceable to the influence of their second language (English). In this sentence, the student adapted the adjective ***beautiful*** in English, without being aware that the adjective was associated to the noun ***ville*** (town) which is feminine. The correct adjective to be used should be ***belle*** which is the feminine of the adjective ***beau***. The researcher felt that it might be due to the fact that the student did not know that the noun ***ville*** is actually feminine, and therefore, the feminine form should be used. It may also be due to the approximation of the noun form to English, and in this case ***beau*** is closer to beautiful than the adjective ***belle***.

The error on the adjective ***jolie*** (pretty) was due to English language or the respondent's mother tongue influence, which associates the adjective ***pretty*** with a feminine noun. With this in mind, the additional –e to the adjective '***jolie***' by the respondent did not take into account the gender of the noun it is associated with. In both

languages, the said adjective is associated, and in most cases, with a noun that is feminine.

*The Misselection Errors of the Articles and Prepositions*

Table 5 shows a few examples of the errors of the French articles and prepositions by Malaysian students.

The misselection errors of the French articles by Malaysian students were mainly due to over-generalisation of the rules from their L1 and L2, for which Yarmohammadi (2002: 27) pointed out that "under the influence of the mother tongue the differences between L1 and L2 are transferred into the learner's language – i.e. interlanguage – hence, interference is created and certain deviant structures are generated."

Another misselection error observed by the researcher was the misselection of the French article. The researcher observed that this was due to the respondents' dominant language, and their daily discourse. In the sentence, "*J'ai mangée un gateaux*", the respondent might be translating the sentence "*I have eaten a cake*" or in Malay "*saya telah makan satu kuih*", which was a common Malaysian discourse, even though what they were trying to say was "*I ate some cake*" or in Malay "*saya telah*

TABLE 4
Example of misselection errors of French adjectives

| French sentences by Malaysian students | Appropriate phrases in French |
|---|---|
| 1. La cuisine au restaurant est très ***délicieux***. *(The food at the restaurant is very **delicous**)* | La cuisine au restaurant est très ***délicieuse***. |
| 2. Le pull est très ***jolie.*** *(The sweater is very **beautiful**)* | Le pull est très ***joli.*** |
| 3. L'hôtel est très ***jolie***. *(The hotel is very **beautiful**)* | L'hôtel est très ***joli***. |
| 4. London est ***grande***. *(London is **big**)* | London est ***grand***. |
| 5. Kuala Lumpur est ***belle***. *(Kuala Lumpur is **beautiful**)* | Kuala Lumpur est ***beau***. |
| 6. Kuala Lumpur est < > ***beau*** ville. *(Kuala Lumpur is a **beautiful** town)* | Kuala Lumpur est une ***belle*** ville. |

TABLE 5
Some example of the misselection errors of the French articles and prepositions

| French sentences by Malaysian students | Appropriate phrases in French |
|---|---|
| 1.  J'ai allé à Kuala Lumpur *le dernière* semain. *(I went to Kuala Lumpur <> last week)* | Je suis allé à Kuala Lumpur *la semaine  dernière*. |
| 2.  Pendant *le* dernières vacances, j'ai allée voyager à Singapore. *(During the school holidays, I travelled to Singapore)* | Pendant *les* dernières vacances, je suis allée voyager à Singapour. |
| 3.  Je suis passée *un* bonne journée *(I have spent a good day)* | J'ai passé *une* bonne journée |
| 4.  Après, nous ont mangés *à* restaurant dans la KLCC  *(Later, we ate at the restaurant in KLCC)* | Après, nous avons mangé *au* restaurant à KLCC |
| 5.  Je suis allé *à la* cinéma avec ma sœur. (*I went to the cinema with my sister*) | Je suis allé *au* cinéma avec ma sœur. |
| 6.  J'ai mangée *un gateaux* et bois *l'eau de minérale*. *(I ate some cake and drank some mineral water)* | J'ai mangé *du gâteau* et bois **de l'eau  minérale.** |
| 7.  La cuisine de *cet* restaurant est excellent. *(The food in this restaurant is excellent.)* | La cuisine de *ce* restaurant est excellent. |

TABLE 6
An example of the misselection errors of the French lexis

| French sentences by Malaysian students | Appropriate phrase in French |
|---|---|
| J'aime *le location* de ma maison *(I like the location of my house)* | J'aime *l'endroit* où j'habite. |

*makan **sedikit** kuih*". In the French language, partitive **du** would be more suitable to be used for translating the sentence, "J'ai mangée *un gateaux* [the appropriate phrase in French is *j'ai mange un gâteau*], to convey the same meaning in English or Malay. When the respondent wrote *J'ai mangée un gateaux* [the appropriate phrase in French is *j'ai mange un gâteau*], the meaning was 'I have eaten the whole cake' or in Malay "*saya telah makan keseluruhan kek itu*", and the researcher believed that it was not what the respondent intended to say.

*Misselection Errors of Lexis*

For the misselection error of the lexis, the selection of the noun *location* was actually a direct translation from English by the students in adapting the noun by inserting the definite article *le*. In this case, it was an interlingual error illustrating "when the required TL item is unknown and the learner borrows an L1 substitute, the consequence is an L1 transfer error" (James, 1998, p. 175). The students did not realise that the noun *location* was *faux-ami* in French. It is important to note that although

the spelling is the same in French and in English, it does not bring the same meaning in the two languages. In English, the meaning is the location of a place, but in French, it means "***hiring something***". Therefore, the sentence "*j'aime le location de ma maison*" meant "I like the act of hiring my house" instead of the intended meaning, "*I like the location of my house*".

## OVERALL FINDINGS

This study explored the grammatical gender misselection errors made by Malaysian students in their French proficiency writing course. The study revealed that the misselection errors were the dominant errors made by the students. Apart from the "ignorance of rules restrictions" and also an "incomplete application of rules*",* the errors were also interlingual errors which were influenced by their mother tongue (Malay) and second language (English).

Lastly, the errors committed were also due to the fact that the students foreignized the lexical items from English, when a word in English was familiar or close to a French word. Hence, the students took it for granted that the meaning should be the same without any further check.

## CONCLUSIONS

Overall, this study, which adopted the misselection error definition by Dulay, Burt and Krashen (1982), attempted to find the errors made by Malaysian non-native speakers of French in their writing. This exploratory study on error analysis is useful for both learners and teachers of French as a second or foreign language. The result of this study can assist the learners to acquire a better understanding of the target language and future studies by identifying specific errors made learners and how they should correct them by knowing, understanding and avoiding such errors. Similarly, this exploratory study is useful for teachers, as it can help them identify which point and why learners committed the specific errors. This

study can also help teachers who are involved in the important task of curriculum development as error analysis can be helpful for syllabus design and teaching (Hongquan and Kikuko, 2007). Finally, an understanding of the causes of errors will help teachers emphasize grammatical points so as to reduce chances of students making such errors.

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# Negotiating Meaning in the EFL Context

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## ABSTRACT

Language learning is a very complex process. It usually takes place inside classrooms and learners might not have the opportunity to sufficiently practice it in real life contexts. Since the main purpose of language learning is communication, most language teachers and researchers have asserted that learners should engage in meaningful interaction and negotiation of meaning through communicative language tasks to improve their communicative competence (Branden, 2000; Morell, 2004; Yuan and Wang, 2006). This paper aims to thoroughly examine the concept of negotiation of meaning and to address its relationship to learners' communicative competence. It examines both theory and research and argues that negotiation of meaning is essential in foreign language classrooms as it provides learners with the opportunity to produce language in a non-threatening atmosphere (Yuan and Wang, 2006) and helps them generate comprehensible input and output (Pica, 1985, Pica *et al.*, 1989). Through negotiation of meaning, learners are pushed to produce language and to make their points clear to achieve comprehensibility. Thus, the paper lends support to the concept of negotiation of meaning and its use in EFL classrooms.

## INTRODUCTION

Human language is a very complex phenomenon, which has always boggled the minds of those who have sought to explain how it is acquired or learned. Although mind boggling, language can be defined, albeit not very expressively, as an automatic, unconscious interplay between content and form (symbols representing sounds and meaning standing for or reflecting cultural, social, perceptual, and cognitive knowledge), which is carried out with the purpose of sharing or negotiating meaning for the sake of communication. This communication is aimed at furthering understanding that will lead to the accomplishment of a certain task which, in turn, will contribute to the welfare of the individual or community.

The fact that language is an automatic, unconscious process means that it happens involuntarily, without conscious thought or consideration from the speakers. Automaticity is applicable to the process of language acquisition, as well as the process of its production after it is acquired. This statement has two important implications. The first is that human children will pick up the language spoken in the surroundings where they grow up without their conscious effort and without any attempt from those around them to teach them the language. This picked up or acquired language will be the mother tongue or native language of these children. The second implication is that when producing the language, people do it automatically without having to think about the words, or sounds or rules that will

make up the comprehensible message. In fact, if a native speaker is asked to analyze and explain the grammatical structure of his own speech and his choice of words, he may not be able to do that, unless he is a linguist or a language teacher by profession.

According to Chaika (1994), "Human language is multilayered. It is composed of a system of meaningless elements that combine by rules into meaningful structures. Sounds, meaningless in themselves form meaningful words or parts of words. These words combine by rules into sentences, and sentences combine into discourses, which include conversation, books, speeches, essays, and other connected sentences. Each level has its own elements and rules for use and each also relates to other levels, also by rule" (p. 7). Since there is no one element that carries full communicative meaning by itself, it follows then that "human language is not isomorphic with its message," which in turn means that "there is no necessary one-to-one correspondence between message and meaning at any level" (ibid, p. 7).

Being multilayered and lacking isomorphism make language potentially complex in terms of "message production and sociological significance" (ibid, p. 8). This complexity, however, is not without benefits; in fact, it is crucial to the creative act of meaning making through language. Each element composing language is meaningless, but can combine with other meaningless elements to produce meaningful messages, and different combinations can produce different messages which convey different meanings. This means that by making different combinations using different rules, humans can produce an infinite number of messages that carry new meanings and new thoughts. These thoughts and meanings can multiply when communicated and shared with other humans who understand them and add their own meaning to them, hence building the edifice of thought and ideas, which explains Chomsky's assertion that language is the tool of thought (Chomsky, 1993). In the words of Chaika (1994, p. 9), "Because elements of language, notably individual sounds, have no

meaning in and of themselves, they can be divorced from meaning. Thus, human language can multiply meanings far beyond those of other communication systems [e.g. animal language]. The essentially meaningless elements of sound and syntax can be combined by rules into a multitude of words, sentences, and discourses… humans can create new sentences, sentences that they have never heard before, sentences that can be understood by others who know the same language."

The built-in rules in all human languages are crucial to creating an infinite number of new words and sentences. These rules are the rules of grammar, structure form or word formation. The acquisition of these rules among native speakers is automatic. As Chaika (1994) puts it, "We certainly cannot articulate the complex sets of rules we use for pronunciation, for sentence construction, and for discourse production. Nor can we explain what we actually do when we understand another speaker. In fact, this knowledge lies below the level of conscious awareness. If it did not, if we were conscious of everything that goes into speaking, oral communication would be considerably slowed down" (p. 6).

The above applies only to the process of acquiring the native language or mother tongue, a process that is effortless, automatic, and natural. However, learning a foreign language is far from being effortless, automatic or natural. The learning process occurs in a context where the language is not spoken as a native language in the community, where exposure to the language is limited and where the methods of learning that language are not natural, but contrived in educational settings that aim to teach it. The foreign language is not the first language that the learner learns for s/he has already acquired his own native language with its sounds, words, and rules. Thus, s/he has a frame of reference occupied by certain sets of sounds and rules which could be quite different from those of the foreign language. The learner of the foreign language comes from a culture that could be different from the target language in terms of norms, values, traditions and experiences. Since

these all shape and determine meaning in the learners' world, any mismatch between them and those of the target language will result in some comprehension and communication difficulties.

How would a learner, then, reconcile the differences without having them overlap to cause negative transfer from the mother tongue to the newly learnt foreign language? If we acknowledge that the purpose of language learning is communication, how can teachers of foreign languages foster communicative competence among their learners? Is it through negotiating form (e.g. structure, grammar, word formation, etc.), or is it through negotiating the meaning of the message? Thus, the aim of this paper is to address these critical questions by focusing on the concept of negotiation of meaning and its relationship with communicative competence and communicative language teaching in the foreign language classroom.

## THE CONCEPT OF NEGOTIATION OF MEANING

The phrase 'negotiation of meaning' has been a subject of much research and discussions among second language researchers and practitioners (Branden, 2000). This phrase was first used in the field of first language acquisition research. Its use then evolved in second language acquisition contexts due to the different developments in the field. The recognition of the active and essential role of interaction in the acquisition of a second or foreign language (Morell, 2004), the role of comprehensible input and output, the effect of conversational modifications or modified interactions and the call for more communicative language approaches are major causes that have led to the emphasis placed on negotiation of meaning. The prevailing hypothesis in current theory is that the more learners struggle to get their messages through or across to their interlocutors, the greater the amount of interaction and therefore the greater the acquisition.

*The phrase negotiation of meaning, as Pica (1994) defines it, "focuses on the comprehensibility of the message's meaning*

*and on the message's form in so far as that can contribute to its comprehensibility" (p. 518). Thus, negotiation is linked to both the lexical as well as the structural aspects of language. Negotiation is first triggered by lexical difficulties (Ellis, Tanaka and Yamazaki, 1994) that cause breakdowns in communication and non-comprehension. Therefore, attention should be devoted first to difficulties impeding comprehension. Attention to and analysis of form can come later. Stressing its interactive nature, Morell (2004, p. 329) defines negotiation of meaning as " an aspect of interaction that occurs when at least two interlocutors work together to arrive at mutual comprehension of their utterances. It is characterized by modifications and restructuring of interactions when instructors and their students anticipate or perceive difficulty in understanding each other's messages."*

Negotiation takes place in communicative and interactional contexts between learners of a foreign language or between native speakers and learners. The differences between the interactions of non-native and native speakers (NNSs/NSs) and those of native speakers and other natives have been the subject of a lot of research. The investigation of the effect of negotiation on acquisition and whether a direct relationship can be traced between negotiation and comprehension on the one hand and negotiation and acquisition on the other is still debated and is still far from being settled (Perllowe, 2000). Meanwhile, variables affecting negotiation, such as learner factors, modes of communication, type of interaction (whether it is in groups, pairs or the classroom), and types of tasks have also been researched by many studies documented in the literature. Research studies on learner variables are reviewed and reported on in the upcoming sections of this paper. The following section reports on three main hypotheses, namely Krashen's input hypothesis, Swain's output hypothesis, and Long's interactional hypothesis, the explanation of which is essential to establish a theoretical framework for the concept of negotiation of meaning.

## THE INPUT HYPOTHESIS

Krashen's input hypothesis (1980, 1983 and 1985) is one of the most influential hypotheses in second language acquisition. This hypothesis states that in order for language acquisition to occur, learners need to be provided with comprehensible input that is one stage beyond their current level of language proficiency (i+1). In order to understand that input, the learners have to struggle to meet that challenge (McGuire, 1992).

Pica (1994) also asserts that input of three types is essential for SLA to take place. The first type is positive input, which she describes as grammatically and syntactically accurate language. Such input must be available to serve the learning process for it resembles data that learners draw on for their learning. Meanwhile, enhanced input is the second type of input necessary for language acquisition. Enhanced input helps learners identify which forms can and which cannot occur in the target language. The last type, which Pica calls negative input and feedback, provides the learners with metalinguistic information on the clarity, accuracy and comprehensibility of the utterances they produce. It is during the negotiation of meaning that all these types of input can be generated.

While Gass (1989) contends that input of some sort is necessary for language acquisition to take place, she expresses some concerns regarding the sort of input necessary saying that this is not yet clear until now. Kagan (1995) characterizes input that fosters language acquisition as comprehensible, developmentally appropriate, redundant, and accurate. However, Kagan admits that input alone is not sufficient for language acquisition to take place. Therefore, he adds output and context variables that interact to determine acquisition. In this way, Kagan agrees with Swain's (1985) hypothesis about comprehensible output.

## SWAIN'S OUTPUT HYPOTHESIS

Since receiving input may not involve any type of interaction among learners, Swain has advocated that though input is essential to language learning, it is not sufficient. Language production, or as she calls it comprehensible output, is another necessity for successful acquisition to occur. She gained this insight through her experience with Canadian immersion students whose oral production lagged behind their listening skills due to the fact that they were never pushed to produce language comprehensible to others.

In her hypothesis, Swain claims that the role of comprehensible input is to "provide the learner with opportunities for contextualized, meaningful use to test out hypotheses about the target language and to move the learners from a purely semantic analysis of the language to a syntactic analysis of it (Swain, 1985, p. 252). Thus, when learners are pushed to produce language, they struggle to make themselves understood by others. In the process, learners come to realize the gap in their interlanguage, or between what they want to say and what they really say. To make themselves clear, the learners move from a semantic focus, where the meaning is the target, to a syntactic analysis of the language, where form comes into consciousness. The grammatical analysis in which the learner engages is vital in language development as it helps learners move from being recipients of input to being active participants who can process the input, turn it into intake and attempt to produce it themselves (Shahadeh, 1999).

Other researchers came after Swain and added several other characteristics of comprehensible output. For example, Kagan (1995) describes such output as functional, communicative, frequent, redundant, and consistent with the identity of the speaker. Comprehensible output could be produced under a variety of conditions such as in interactions and negotiations between natives and non-natives or among non-natives themselves (Shahadeh,

1999), or between a teacher and her students. The output could be modified, premodified or unmodified. Types of tasks and arrangements (e.g. group work, pair work, or individual production) all affect the type of output and input generated. An extended discussion of factors affecting negotiation and output production will be provided later in the paper.

## LONG'S INTERACTIONAL HYPOTHESIS

Until the late 1970s, the role of interaction in language acquisition was taken for granted until Hatch (1978, cited in Shahadeh, 1999) brought it to the attention of teachers and educators. Among the researchers and theorists who followed the path that Hatch had sparked interest in is Long, who devised the interaction hypothesis. During the 1980s, Long started investigating the interactions of NNSs and NSs and saw that speakers modify their output using certain strategies in order to make it comprehensible to their interlocutors. He first called these modifications interactional modifications, but later referred to them as "negotiation." Of course the modified output of one speaker becomes the input of another (ibid).

Long (1980) focused on modified input and distinguished it from modified interaction. In his view, modified input is foreigner talk directed to the learner while modified interaction is related to the structure of the conversation. Topic shifts, comprehension checks and clarification requests are conversational modifications that permeate the interactions of NNSs more often than NSs interactions. Such strategies help speakers to achieve comprehensibility, avoid breakdown in communication and repair the discourse when trouble occurs, in order to ensure continuity of the conversation. Long deduced from the above that conversational adjustments promote acquisition since they ensure better comprehension.

Many studies have found that learners benefit most from interactionally modified input. Loschky (1994) conducted a study that aimed to test aspects of Krashen's input

hypothesis and Long's interactional hypothesis and the possibility that these could facilitate language acquisition. Learners of Japanese were the subjects. They were divided into three groups that received three different treatments, namely unmodified input with no interaction, premodified input with no interaction and interactionally modified input (input modified during interaction). The last group achieved the most in terms of moment-to-moment comprehension, but retention was not affected by the difference in treatment. Long holds that input will not be turned into intake unless the learner is developmentally ready to attend to the structures present in the input (Long, 1983b) and that could explain the reason that no differences between groups were found with regard to retention. Here, learner factors come into play in the process of negotiating meaning.

Gass and Veronis (1985) hold that a great deal is now known about interactions between NNSs and NSs or among NNSs themselves, but little is known about the lasting effect of these interactions on the learners' language development. Longitudinal studies are needed to prove the effect of interaction and negotiation of meaning that take place in conversational interactions.

Loschky (1994) cites Parker and Chaudron (1987), who reviewed 12 studies that compared NNSs' comprehension of unmodified and premodified input for both reading and reading skills. The findings of these studies indicate that premodified input increased NNSs' comprehension. However, Loschky does not say under what conditions the findings were true, something that is deemed essential if the results are to be taken seriously.

## COMMUNICATIVE COMPETENCE AND COMMUNICATIVE LANGUAGE TEACHING

Negotiation of meaning occurs in conversational interactions, which are communicative in nature as speakers and interlocutors try to arrive at a mutual understanding of the messages exchanged by both parties in a social context or

semi-social or simulated social contexts. Many theorists view negotiation as the context for interaction, an activity that has the potential to develop not only social skills but also cognitive and linguistic skills.

Larsen-Freeman (1986) defines communicative competence, as:

> *"Being able to use the language appropriate to a given social context. To do this, students need knowledge of the linguistic forms, meanings and functions. They need to know that many different forms can be used to perform a function and also that a single form can often serve a variety of functions. They must be able to choose from among these the most appropriate form, given the social context and the roles of the interlocutors. They must also be able to manage the process of negotiating meaning with their interlocutors" (p.131).*

Thus, negotiation of meaning is an essential part of the communicative competence of a language learner. Ensuring the continuity of a conversation and the comprehensibility of the conveyed massage take more than a mere knowledge of form and structures: it takes the ability to use strategic competence to avoid breakdowns in communication and repair incomprehensibility when it occurs. Knowledge of style and register, as well as the roles of people involves sociolinguistic knowledge which Canale and Swain term sociolinguistic competence. McGuire (1992) says "communicative competence encompass within it not only the knowledge of structure and vocabulary, but also the ability to negotiate meaning through interaction in a variety of situations which are authentic and realistic" (p.4).

Communicative language teaching perceives language as interaction, as an interpersonal activity that has a clear relationship with the society. Therefore, language use, linguistic, social and situational contexts are to be considered in the language classroom (Burns, 1984; cited in Galloway, 1993). To increase interaction and language use inside the classroom, students are encouraged to speak more, and teacher talk is minimized because the teacher's role is that of a facilitator rather than as a controller or dictator. In order to maximize the time allotted to every student and to increase the opportunities students have to practice the language structures they have been taught and to negotiate meaning, the teacher can use group and pair work, which has long been an integral part of the communicative language classroom (McGuire, 1992). When working in pairs or small groups, learners experience an increased responsibility to participate, and in participating they gain confidence in using the target language in general and they become responsible managers of their own learning (Galloway, 1994).

Recent research has not been consistent with regard to the benefits of group work despite the wealth of theoretical literature supporting and advocating small group work in the classroom. Dyads and groups that work really cooperatively were found to produce more language in speaking and writing (Hery, 2001). To illustrate that clearly, students were found to talk more when put into groups than when just interacting with the teacher. Their language production in groups was not found to be less accurate or careless than when they spoke to the teacher. In addition, students tended to engage in more speech acts in groups than when individually speaking to the teacher. Empirical evidence also shows that group work provides an atmosphere conducive to learning, and encourages the production of comprehensible input and output through the process of negotiating (McGuire, 1992). When negotiating in groups, students develop problem solving techniques that help them overcome the breakdowns in communication that render their messages incomprehensible. Problem solving techniques, in turn, facilitate fluency of language use, which is a major concern in communicative language teaching (Brumfit, 1980; cited in Aston1986).

Cooperation among students working together in a group is a factor that was found to differentiate the language production of cooperative groups from independent ones

(groups that do not really work collaboratively). In his study, McGuire (1992) found that groups which worked cooperatively tended to write longer skits. Cooperative groups, in comparison with independent groups, were found to do more turn taking for the characters in the skits, and the number of interactions was more for the cooperative groups. McGuire (1992) cites Hirose and Kobayashi (1991) who found similar results for group work. They observed that discussion groups incorporating cooperative learning principles could provide more opportunities for the generation of comprehensible input inside the classroom, especially for those who find it difficult to improve their oral skills by practicing outside the classroom.

When comparing the interaction between NNSs in groups and whole-class activities in the classroom, Rulon and MucCreary (1986, cited in Pica, 1994) found that NNSs produced sentences that were at the same level of syntactic difficulty in both contexts. Meanwhile, confirmation checks were more frequent in groups. The conclusion the researchers drew was that group interactions are at least as good as whole-class interactions held in the classroom.

However, contradicting results were found by Doughty and Pica (1986) who concluded that group work might be inappropriate for eliciting modified interaction due to many reasons, among which they mentioned the way the task is structured, students going along with the majority of the group or class, and the dominance of the more proficient students in the discussion. Foster (1998) found no significant difference between working in small groups and working in dyads. Many students in the groups did not participate at all; many more did not initiate any negotiated interaction in either dyads or small groups. Few produced modified utterances and generally, a small number of students were dominating the group's oral production and interaction. When evaluating the results of these studies, one should consider students' level of language proficiency, the types of tasks, communicative or otherwise, in which the students participate, familiarity with the topics discussed, and other factors related to the context and atmosphere of the classroom or the place where the group work is done. For example, communicative tasks like information gaps will push students to produce language and to participate orally in the group interaction.

To conclude this section, oral interaction between students can serve some important functions, such as providing opportunities for generating input, producing output and getting positive or negative feedback. Bygates (1988) holds that student-student oral interaction may help language development in two ways:

1. It gives the learners the opportunity to integrate grammar into their oral skill due to the flexibility it offers in choosing the most efficient syntactic units for communication.

2. Group interaction can initiate and activate discussion allowing communication to take place.

## NSs/NNs INTERACTIONS VS. NNSs/ NNSs INTERACTIONS

The linguistic environment in which L2 learners are immersed has been viewed as one possible source of difference between first language (L1) and L2 acquisition. Native speakers of a certain language were found to simplify their language, often switching to an ungrammatical variety of it when speaking to non-native speakers or learners of that language. Such speech came to be known as foreigner talk. Omissions, expansions, and replacement or rearrangements are characteristics of the ungrammatical foreigner talk addressed to non-natives. Grammatically accurate foreign talk is often reduced to shorter utterances as measured by T-units. When it comes to vocabulary, NSs restrict themselves to using high frequency lexical items. In other words, they tend to restrict the range of the vocabulary they use when interacting with NNSs (Larsen-Freeman and Long, 1990).

When NSs do not understand the message conveyed by NNSs during interaction, they signal that to the speakers. In response to that, the learners were found to segment problematic structures or words and modify them towards

comprehensibility. Modifications made by learners depend greatly on the type of signals used by NSs (Pica, 1994). In cases where the signal for non-understanding appears in the form of repetition, for example, learners may respond with a "Yes" answer without going into details.

When NNSs interact with other NNSs, they were found to engage in more negotiation of meaning, especially if the learners had different language backgrounds, where phonology and the difference in sound systems interfere or come into play (Shahadeh, 1999). Veronis and Gass (1985) affirm that interactions between NNSs and their counterparts not only maximize negotiation, but also provide an unthreatening forum. They found a higher frequency of non-understanding routines to be present in such interactions. To tackle incomprehensibility, learners engage in trouble-shooting procedures to render their messages comprehensible to the interlocutors (Long, 1983a: 1983b, cited in Aston, 1986). The huge amount of negotiation of meaning, elicited by these interactions in part happens due to the positive atmosphere that prevails in the context. Veronis and Gass (1985) refer to this context as the "unthreatening forum". Shahadeh (1999) explains this more clearly by saying that learners do not lose face when interacting with each other in the same way as they do when interacting with NSs. Knowing that all the participants in the negotiation of meaning are in the process of learning the language and that each has some imperfections in their language, or rather interlanguage, is likely to give the learners the peace of mind as well as the confidence to speak up and participate. Anxiety is reduced to a minimum, so students are more receptive to the language input emerging in the negotiation.

One major concern here is the accuracy of the input provided by learners to each other. Will the learners be acquiring each other's interlanguage? Probably, and hopefully, not. It was found that when learners engage in negotiation of meaning, and are confronted by incomprehensibility of their input, they tend to modify it in the direction of the target language, making it more plausible and better understood (Gass and Veronis, 1989, Foster and Ohta, 2005).

Similar findings to those obtained by Gass and Veronis were also found by Kashimaro (1992, cited in Shehadeh, 1999). His study had two main aims. First, it aimed at finding out whether non-native speakers could push the output of each other to be more grammatical and more target-like. Second, the study aimed to investigate the effect of task type on the frequency of incomprehension signals in each task. Two tasks were chosen, an information gap in the form of a jigsaw, and an open-ended discussion. The findings indicated that the utterances of the learners were more target-like during the open-ended discussion. For this reason, fewer incomprehension signals were found during open-ended discussions. To explain the findings one could surmise that in the open-ended discussion there is flexibility as to what students choose to talk about and what they choose to avoid (if they intend to play safe). The information gap task generated the greatest amount of negotiation, as measured by the number of incomprehension signals that occurred during the interaction. This is in line with the common consensus that communicative tasks, such as information gap activities which require the participation of all the learners in order to accomplish the task successfully, are the best in terms of their potential input, output and interaction.

However, one problem with the aforementioned study is that it failed to illustrate the total amount of interaction produced in every task and whether the differences in the amount of interaction were significant or not. Nevertheless, the study demonstrates that task type is one of the factors that can affect the process of negotiating meaning. Pica and Doughty (1985) found greater turn-taking and more output production done in NNSs/NNSs interaction than in NSs/NNSs' interactions.

A second concern that comes to mind regarding NNSs/NNSs' interactions is the possibility that the interaction is dominated by proficient students to the neglect of or the lack of involvement by less proficient ones. This situation could happen and in fact was documented in some studies, like that of Pica and Doughty (1985). A counter argument to

this could be that lack of participation is not an indicator of not learning. Some students learn better by listening to others. Recent research show that introverts are better learners of languages than extroverts because they take their time to internalize language before hurrying themselves to produce it. Learner factors such as personality and learning styles are factors that need to be kept in mind when examining language acquisition in general and negotiation of meaning in particular.

Shahadeh (1999) conducted a study involving learners of English coming from different language backgrounds. The study examined the ability of these NNSs to modify their interlanguage utterances towards comprehensibility in response to self-initiated and other initiated NNSs/NNSs and NS/NNSs interactions. Two communicative tasks were used, namely picture dictation and opinion-exchange. The researcher hypothesized that:

1. NNSs/NNSs interaction would provide additional chances for other-initiated clarification requests and self-initiated clarification attempts to produce more comprehensible output than NSs/NNSs interactions.

2. More modified comprehensible output would be produced in NNSs/NNSs interactions.

3. Picture dictation tasks would generate more chances for self-initiation and other-initiation and more modified output would be produced during this task.

The findings indicated that with regard to the first hypothesis, NNS partners did provide greater chances for other-initiated clarification requests than NSs partners; however, the differences were not significant. This finding provides only partial support for what is hypothesized about NNSs/NNSs interaction and its potential to generate more chances of interaction and negotiation of meaning than NSs/NNSs interactions. The occurrence of self-initiated clarifications was almost evenly distributed between the two types of interactions. Extended negotiation routines were significantly greater in NNSs/NNSs interactions than in NS/NNSs interaction when attempting to produce comprehensible output. This finding might seem to contradict the finding mentioned above which stated that NNSs/NNSs interactions were not found to differ significantly with regard to other initiated clarification requests from NSs/NNSs' interactions. However, the focus of the first finding, as it appears, was on other initiated clarification requests while the later mentioned finding focused on the attempts to produce comprehensible input. The researcher was not very clear in distinguishing between the findings and what each meant.

Hypothesis (3) was confirmed because the findings showed that the picture dictation task offered a significantly higher occurrence of other initiated clarification requests than the opinion exchange tasks.

## NEGOTIATION OF MEANING, COMPREHENSION AND LANGUAGE ACQUISITION

Comprehension has been viewed as the access gate to second or foreign language acquisition. Without it, it is difficult to imagine acquisition taking place. Therefore, a positive relationship has always been inferred between acquisition and comprehension. Studies on different input types, including foreigner talk, teacher talk, and negotiated interaction and premodified input, actually provide some kind of evidence for the importance of comprehension in language acquisition. In addition, evidence also could be derived from studies on the hearing children of deaf parents. The input for these children comes from TV mainly, which was found insufficient for successful acquisition to occur due to the fact this kind of input is incomprehensible in many ways and unmodified to suit the developmental level of the hearing child. For example, Dutch children who learned German only through TV were found to have difficulty acquiring German (Loschky, 1994). Thus, it appears that interactions in natural communicative settings,

or at least simulated settings, are of vital importance to the acquisition process. Social interaction, in the Vygotiskian theory, is the basis of language learning. The role of the expert, whether it be a teacher, an older person such as a parent or a peer who possesses a better command of the language, in modelling behaviour and in scaffolding it is a key factor in comprehension and hence acquisition. Since negotiation of meaning happens in social, natural or semi-natural communicative settings, it involves the interaction of two or more people who aim to establish mutual understanding of a certain topic. Such characteristics are typical of social settings conducive to language learning.

In her review of research done in the area of negotiation and social settings, Pica (1994) states that research " illustrate[s] ways in which negotiation contributes to conditions, processes and outcomes of L2 learning by facilitating learners' comprehension and structural segmentation of L2 input, access to lexical form and meaning and production of modified output" (p.493). Thus, during negotiation, learners generate input or modified input provided by their interlocutors. The modification helps learners comprehend the meaning of the input produced during the process.

Despite the entire sound theoretical basis for the inferred positive relationship between negotiation and comprehension, no direct relationship has been traced until now. In other words, learners' and interlocutors' negotiation does not always lead to immediate comprehension. Due to this fact, learner variables and other variables involved in the context of interaction have to be put into perspective. Comprehension could occur after the negotiation, because some learners hold some unresolved issues in the back of their minds for further consideration and analysis. In other words, what works for one learner may not work for another and what works in one setting or one context may not be successful in another. This is a problem that prevails in the field of teaching, be it language teaching or just teaching in general. There is no one way that works for all.

Some studies were able to trace relationship types between negotiation and comprehension in the cases of moment-to-moment comprehension. Retention of the materials comprehended during negotiation, however, was found not to be affected by the amount of negotiation done. Ellis, Tanaka and Yamasaki (1994) reported two classroom studies that investigated the effects of modified interaction on comprehension and vocabulary acquisition among 79 and 127 high school students of English in Japan. The results indicated that interactionally modified input resulted in better comprehension than premodified input with no interaction and that interactionally modified input led to more words being acquired than premodified input. However, learners who actively participated in negotiating meaning did not understand any better than those who were simply exposed to modified interaction. Active participants did not learn more new words. In response to that, we would suggest a line of longitudinal studies that take into consideration all the variables that could interfere in the negotiation process. Such studies are rare right now (Bitchener, 2004), but they are greatly needed in the field.

One example of these studies is the one conducted by Bitchener (2004) who investigated the retention of linguistic knowledge gained through negotiation among ESL learners over a period of 12 weeks. Retention was measured after one week and 12 weeks of interaction. In both conditions, the study found a high retention rate. Another major finding was that vocabulary was negotiated more than pronunciation and grammar. It is important to note here that research on negotiating meaning is still gaining momentum with researchers such as Pauline Foster and Amy Synder Ohta continuing interest in the area and connecting it to "sociocultural and cognitive approaches to second language acquisition" (Foster and Ohta, 2005, p. 402).

## FACTORS AFFECTING NEGOTIATION

This section touches on what has been mentioned about variables affecting interaction and negotiation of meaning. The purpose of

including it here is to summarize the most important factors and to present them together rather than leaving them scattered throughout the paper. Among the variables that affect negotiation and the outcomes obtained from it are:

A. Learner variables: These are many and could be related to the age, personality type, gender, learning styles, and level of language proficiency of the learner. Pica (1994) states that if a learner is not yet ready for a new word, then he cannot acquire it, so negotiation can do little towards its internalization. Some learners are extroverts and out-going, so they like to participate and they learn through that; others are introverts and prefer to listen and internalize the language. Some female students may feel comfortable being put into groups with males, so they participate. However, in many Muslim and Middle Eastern cultures, many females do not feel comfortable working with males in the same group. For example, a study conducted in Indonesia by Hery (2001) found that dyads of the same gender produced more negotiation of meaning when working with information gap and jigsaw tasks. There are different learner types; visual students, kinaesthetic students, auditory students, and tactile students. Each learns in his own way, and if we are to do justice to negotiation and its effect, such factors should be considered and accounted for.

B. Type of tasks: The type of tasks used to generate input, output, and modified interaction has a potential effect on the amount of negotiation going on (Cheon, 2003; Hery, 2001; Pica *et al.*, 1989). Tasks are usually classified into:

1. Information gap tasks or one-way tasks. The success of this type of task is largely dependent on the ability of the participants to supply information to each other. To state that in other words, each student has a piece of information which the other participants do not have and has to share it with them in order to successfully complete the task. Such tasks are communicative tasks that require the participation of all the students in a certain group or pair. Jigsaw and picture dictations are examples of these tasks.

2. Two-way tasks are tasks in which the supply of information for the successful completion of the task is optional. A good example of such tasks is opinion exchange. Shahadeh (1999) found that picture dictation generated more clarification requests than opinion exchange tasks, which supports the idea that more communicative tasks generate or provide more opportunities for negotiation. Exceptions sometimes arise; however. Foster (1994) found that the grammar task, in which three dyads participated and which was expected to be unpromising in terms of negotiation since it did not require the exchange of information, produced low comprehension units for two dyads, but very many units for another dyad. This takes us back to what was said before about the fact that there is no one accurate way that could work for all with the same degree or potential for success.

C. Interaction in groups, pairs, and dyads: Small group interaction received a lot of support in the context of L2 teaching and learning. While interaction in groups was expected to generate a great amount of language production, some students were found to remain silent during group work when more proficient students dominated the discussions. Foster (1994) found that working in dyads engaged students in much negotiation of meaning when working on the information gap task. As for groups,

however, little negotiation was observed due to the dominance of one student or two in the group.

To conclude this section, the factors affecting language acquisition in general are those that affect negotiation of meaning as well. In addition to the factors mentioned above, setting, topic, mode of interaction, whether oral or written, the intention of the speakers, the style or register they use are all factors that can interfere and affect the process of negotiation of meaning and hence language acquisition (Maley, 1982).

## THE ADVANTAGES OF NEGOTIATION OF MEANING

Here is a list of some of the benefits that students may gain from negotiation. It can:

1. Generate comprehensible input and output (Yuan and Wang, 2006).

2. Develop strategic competence through trouble-shooting strategies that help the learner repair misunderstanding and a avoid breakdown in communication.

3. Develop sociolinguistic competence and social skills as learners try to find a place in the group and attempt to convey their ideas according to the roles they play in the group and in consideration to the roles played by other group members.

4. Generate feedback, negative, signalling non-understanding, or positive confirming understanding and thus providing positive reinforcement.

5. Develop cooperative learning habits, which were found to be better facilitators of language acquisition than competitive learning habits (Yuan and Wang, 2006).

6. Reduce levels of anxiety in students and provide a positive atmosphere for learning.

7. Teach students to work with others in order to achieve mutual comprehension.

## ARGUMENT AGAINST NEGOTIATION OF MEANING

There are two most common arguments against negotiation of meaning, as follows:

1. Students may learn from each other's interlanguage. We refuted that by saying that there are studies that showed that learners recognize the mistakes of each other, and when they attempt to modify their language, their modifications are directed towards more comprehensibility and more target-like forms.

2. Fillmore (1979, cited in Pica, 1994) suggests that social integration which the group achieved through a series of social strategies in N/NN interactions is the key to successful acquisition. Fillmore also suggests the following strategies for social integration in native conversations such as joining a group and acting as if the student understood what was going on, and counting on the assistance of group members. In our opinion, this goes against Swain's output hypothesis, which encourages students to produce language so that their oral language development will not lag behind their listening skills. Swain (1985) builds her hypothesis from the results she obtained from Canadian immersion programme where students were bombarded with input, but were not really successful in language acquisition due to the fact that they were not pushed to produce provide counter evidence against Fillmore's suggestion. Language acquisition requires comprehension as well as active participation if learners are to speak the language in a comprehensible way one day.

## CONCLUSIONS

Negotiation of meaning has been present in the field of language acquisition for over 20 years now (Bitchener, 2004). Presumably, its presence is going to continue due to the fact that negotiation is based on sound theoretical principles and the

value of many of its aspects has been proven by research. Negotiation of meaning is an interpersonal skill that emerges in conversational and communicative contexts that are natural or simulated. It helps learners to generate input, output, and feedback that inform them of their success in transmitting messages they intend to transmit, and it encourages them to employ strategies that help them to get their messages across when breakdowns in communication occur. Although no direct relationship has yet been established between negotiation and comprehension, future longitudinal studies may produce promising results.

Negotiation is a beneficial problem-solving strategy that teaches social skills, and helps students to learn from each other. Different factors come into play when reviewing what happens during negotiation. Learner variables, variables related to the context of interaction, the tasks used, the mode of interaction and the atmosphere in the classroom or in natural settings are all important considerations in conversational interactions. Arguments against negotiation do not appear to be very sound because there is research that goes against them. As long as the role of interaction is considered vital for language acquisition, negotiation will remain a good language teaching technique that can enhance language learning and push the process of language development further.

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# Coastal Port-towns and the Trading Network of the Straits-Malay Traders

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## ABSTRACT

The history of the Straits-Malay merchants and traders has not been fully written, documented, and researched. This article tries to evaluate the role and importance of the Straits-Malay traders from the early period until the mid nineteenth century. Their presence and network cover a vast area and their presence in many ports along the Straits was very important in shaping the economic history of Riau, Aceh, Melaka, and Penang. However, towards the mid nineteenth century, their presence was replaced with the incoming Chinese and the European companies.

Keywords: Malay, coastal port-towns, Straits of Melaka, trade, shipping

## INTRODUCTION

The Straits of Melaka is a strategically located at important waterway that links the East and the West. Also known as the *Sea of Malayu*[1], it is located in the heart of the Malayland.[2] Since time immemorial the Straits of Melaka or the *Sea of Malayu* has played a vital role as an important passage connecting the busiest trading route between the Indian Ocean and the Far East (Wolters, 1967). From the early period of the millennium, many coastal ports and towns emerged along the Straits. Most of these ports were located on the eastern coast of Sumatra and on the west coast of the Malay Peninsula. Although not all of these Malay ports and towns became important trading centres, some of them emerged as important regional exchange ports or entrepots. Ports which were strategically located and had the power to command local trade later grew into regional and inter-regional trading markets and became the foci of commercial wealth and exchange for the zones of economic activity that they serviced (Nordin Hussin, 2006, p.1-25).

Scholars' writings on early Malay history have identified a number of trading centres which dated from the first millennium B.C. to the early first millennium A.D. in both the coastal and inland reverine areas along the Straits of Melaka. Most of these were small trading centres and many were described as 'collecting centres'. Some of the early historic collecting centres along the Straits of Melaka were Kampung Sungai Lang and Kelang on the west coast of the Malay Peninsula. The archeological findings of

the prehistoric artefacts at these sites suggested that they were in commercial contact with the mainland and insular Southeast Asia (Leong, 1990, p. 17-38). The existence of these many collecting centres along the Straits of Melaka shows that the Malays had been active in trade and commerce since the early period. The Straits of Melaka, which lay astride the international trade routes between the Middle East, India to the west, and China to the east, soon found itself in the most enviable position. It was in this context of international trade, i.e. from about the second or the third century A.D., several trading polities along the Straits of Melaka first came to be documented in foreign literary sources (Leong, 1990, p. 17-38).

## COASTAL MALAY PORTS AND MALAY TRADERS IN THE EARLY PERIOD

There are many coastal ports and towns along the Straits which have a very long history and as important trading emporiums. The historic port-town of Srivijaya (8th – 13th centuries) was one of them.[3] This port, which was found during the eighth century AD, was the capital city of the Malay kingdom. It later became an important centre for the trade between the East and the West and also a centre for knowledge and culture. It was in this port-town that many traders and scholars converged for trade and to enhance their knowledge of Sanskrit.[4] Even before the fall of Srivijaya, there were many small Malay trading centres, such as Jambi and Temasik (old Singapore) which later became important Malay ports along the Straits of Melaka. Jambi and Temasik served as important trading centres before Melaka was transformed into the greatest trading centre in the East. Scholars also believe that the old port of Jambi became an important port on the Straits long before Srivijaya came to power. However, studies and archaeological research has yet to be conducted on the old Jambi port. Temasik was also a thriving port town. When Stamford Raffles arrived in Temasik in 1819, it was not merely a fishing village as claimed by

him. There were already permanent settlements and the port was a busy and flourishing centre with traders coming from the Straits, Malay Archipelago and also from India and China.

Further up on the west coast of the Malay Peninsula, there were the ancient port-towns of Langkasuka, Beruas, Kuala Selingsing and Kuala Muda Kedah which also served as important trading and commercial centres for the region (Nik Hassan Shuhaimi Nik Abdul Rahman, 1984). Although our knowledge of these port-towns is still scanty, scholars have proven that they had existed since the early millennium and were important trading centres in the *Sea of Malayu*.[5] Further on the northern coast of Sumatra, the ports of Samudra-Pasai and Pedir served as important entreports during the 11th and 12th centuries.[6] The ports served merchants from the Indian Ocean, Arabian Sea, as well as the Bay of Bengal and from the Malay Archipelago. Both port-towns played an important role in spreading Islam to the Malay Archipelago and they also served as a centre for knowledge to this region. In addition to the above, the port of Aceh on the northern tip of the island of Sumatra served as the gateway to the Straits of Melaka. The Kingdom of Aceh which was located on the north-east coast of Sumatra became an important entreport serving the northern region of the Straits during the sixteenth and seventeenth centuries.[7] Traders from as far as the Arabian Sea and Europe converged in Aceh every year to trade.[8] Aceh, during her heyday, was a cosmopolitan city where people of various races (Malay, European, Arabs, Indian, Chinese, Persians and Gujarati) and religions had made their home (Das Gupta, 1962, p. 37-49).

As Aceh was the gateway to the Straits of Melaka from the north, while Johor-Riau was the gateway from the south. The Malay port of Johor-Riau served as an important centre for trade from 1641 to 1784.[9] The expansion of Riau trade and commerce was further enhanced when the Johor Kingdom was ruled by the Bugis princes. As described in *Thufat al Nafis*, the Yang Dipertuan Muda Daeng Kamboja devoted himself solely to extending Riau's trade.

*Several trading perahu came from distant places, and scores of keci came from Bengal, bringing goods from there; scores of wangkang arrived from China with green or red bows; scores of tob came from Siam bringing Siamese goods; and as well as these, perahu from Java. There were scores of selub, senat, tiang sambung, and pencalang from the Bugis lands, pedewakan as well as perahu from the outlying territories, crammed like sardines in the Riau River from the estuary to Kampung China. Goods from China competed with those from Java, and Javanese goods competed with those from Riau, such as gambier, and there were numerous Chinese merchants as well as locally born Bugis merchants. During this period, there were many wealthy people in the country (Raja Ali Haji, 1982).*

The greatness of Riau as the major trading nation and port in the Straits later shifted to Singapore when the island was acquired by the British in 1819. Once again, the island was able to exploit the strategic location to her advantage. Since the Portuguese and Dutch occupations of Melaka, the restriction on trade was a policy and monopoly of trade was carried out on the major commodities traded in the Straits ports. This was contradictory to the trading policy which had been practiced by the early Malay kingdoms. For most parts of the Malay kingdom of Melaka and the kingdom of Johore-Riau, free trade was maintained throughout their era. The fall of Johor-Riau in 1784 saw another misfortune to the Malays by the British and Dutch schemes in Riau, Melaka, Penang and Singapore.[10] With their failures in Penang and Melaka, the English later acquired Singapore from the Malay and free trade transformed the island into a thriving port in the East.[11]

Besides the major port-towns mentioned above, there were many smaller Malay port-towns along the coast of the Straits. Many of these small ports-towns had existed since the early period and some still survived into the twentieth century. The most important of these are Barus, Panai, Kampar, Kota China, Siak, Indragiri, Jambi, Batu Bara, Serdang, Deli,

Kelang, Perak, and Selangor. All these Straits-Malay port-towns served the hinterland areas and acted as the distribution centre for goods from the major port-towns which also functioned as important collection centres for goods from the hinterlands to be traded at the major ports-towns on the Straits. The majority of these ports were located in strategic locations by the rivers which regulated and dictated the trading patterns and networks in the hinterlands and overseas (Nordin Hussin, 2006).

## COASTAL MALAY PORTS AND MALAY TRADERS IN THE EIGHTEENTH CENTURY

Since the first millennium A.D., many important commercial trading centres had existed along the coast of the Straits of Melaka. These were great seaports and foci of communications which developed in response to the increasing volume of seaborne trade in the Malay waters. Conveniently located on the east-west maritime route and possessing good natural harbours, adequate warehouse facilities for the merchants awaiting the next monsoon season and plentiful supplies of fresh water and food, these port-towns were popular meeting places for traders and merchants engaged in long-distance trade. It was in these Malay ports along the Straits of Melaka that merchandise from the Arabian Peninsula and Persia in the Middle East and goods from India, Sri Lanka, and China in the Far East were landed, sold and reshipped to their final destinations. Many foreign merchants found it more economical and reliable to purchase their goods from the ports along the Straits. Apart from being the main ports of transshipment, these entrepots were also major export centres for the local products from the Malay Archipelago. The cosmopolitan character of these port-settlements was often reflected in the mixed character of the material culture found in the vicinity of the settlements.[12]

The fact that along the Straits of Melaka where the heartland of the Malay region was blessed with natural resources such as gold and tin were already being exploited and that many of

these ports were the major outlets for the export of the minerals. There is also evidence to suggest that other mineral ore from the surrounding regions, such as gold, were also traded at these centres. Therefore, the Malay ports served not only as an important place for the transshipment of goods from China and the countries west of the Bay of Bengal, but also as the leading collecting centres for the local produce, especially forest products (sandalwood, rattans, teakwood, bird nests, ivory, and herbs from the forest), minerals (tin and gold), harvests from the sea (fish, tripang, and pearls), food stuffs (grains, paddy, and rice) destined for external or foreign markets. Hence, the Malay ports along the Straits of Melaka were a cosmopolitan in nature. Traders from many places converged and some even had made it as their home. Since life in the ports along the Straits was more cosmopolitan in nature, from at least the first millennium A.D., almost all our entire knowledge regarding the history of these ports derived from many foreign textual sources, particularly from the European travellers (Ptolemy, Tome Pires, Barbosa), Arabian seafarers and cartographers (Ibnu Batutta, Sulaiman al Mahri, al Masudi, Ibnu Majid), Chinese records, and Indian literary work and writings (Leong, 1990, p. 17-38).

It was in this environment that the Straits-Malay ports and the major port-towns on the Straits, such as Melaka and Penang, were able to tap the strategic location of the Straits to their own advantage. In fact, the Straits of Melaka was an integral part of the international sea route linking the East with the West. Its importance as a waterway and passage through which most of the trade between China and India and beyond was conducted had long been recognised. The arrival of the Europeans took this recognition to a different level for they were inclined to put into action the belief that whoever controlled the Straits would ultimately take control of the lucrative trade that passed through it (Nordin Hussin, 2006, p. 1-25).

Throughout the history, the role of the Malay merchants and traders in the Malay-Indonesian Archipelago was very imminent (Nordin Hussin, 2005, p. 215-237). Their presence was very important in the Malay waters since it was they who were the collectors and distributors of goods and commodities which arrived at many major port-towns in the archipelago. Although their presence in the intra-Asian trade is very clearly documented in the Dutch East India Company (VOC) and English records, research and writing on their role in trade have been neglected by scholars (Nordin Hussin, 2005, p. 215-237). Furthermore, the importance of the Malay merchants and traders was seldom highlighted and if they were ever mentioned, their roles were not given any significance detail. The Malay traders were an important group of traders from the archipelago and their presence was clearly seen right from the Srivijaya period until the nineteenth century. However, while trade and commerce expanded in Southeast Asia, the nineteenth century saw the decline of the Malay merchants and traders when fewer of them appeared to have had the means and resources to participate in long distance trade.

By the end of the eighteenth century, the two major ports in the Straits were Melaka (Dutch) and Penang (English). Besides these two main ports, there were many other ports on the coast of the Malay peninsula and the Sumatran east coast which were ruled by the European powers. These ports were sometimes called native or the Malay ports. Among the Malay ports, the most important on the Sumatran east coast were Aceh, Asahan, Batu Bara, Serdang, Deli, Langkat, Tamiang, Rokan, Indragiri, Siak, Kampar, and Palembang. The ports on the Malay Peninsula were Kedah, Larut, Perak, Selangor, Perlis, and Langkawi. These Malay ports were ruled by the Malay rulers and the majority of the traders who had come from there were Malays. These ports were connected to the major ports in the Straits, namely, the ports of Melaka and Penang, and later in the mid nineteenth century, Singapore.

Historically, the port-town of Melaka (which is located on the western side of the Malay Peninsula on the Straits of Melaka) was the main gateway between the East and the West.[13] During the Malay sultanate, it controlled a very wide empire which covered the parts of eastern Sumatra and the western Malay Peninsula. It

was during this period that the merchants from Arabia, Persia, India, further India, and China, as well as from the Malay world, flocked every year to Melaka which was then the centre of inter-Asian trade. The description on how trade and commerce were conducted in Melaka was recorded by the European travellers who had arrived in Melaka during the height of the trading season. Among other, Tome Pires reported that "the affairs of Melaka are of great importance, and of much profit and great honour. No trading port as large as Melaka is known, nor any

where they deal in such fine and highly-prized merchandise. Goods from all over East are found here; goods from all over the West are sold here."[14] It was Melaka's great wealth, strategic location, and the lucrative trade on the gateway between the East and West which finally led to her downfall to the Portuguese (1511-1641) and the Dutch (1641-1824) and later to the English in 1824-1957. However, during the Portuguese occupation of Melaka, they only controlled and occupied a small area, which included the fort of Melaka, as well as the town and its suburb.

TABLE 1
Traders arriving in Melaka in 1780-1793

| Ethnicity/ Year | 1780 | 1781 | 1782 | 1791 | 1792 | 1793 |
|---|---|---|---|---|---|---|
| Malays | 134 | 143 | 203 | 166 | 113 | 113 |
| Melaka Malays | 11 | 15 | 29 | - | - | - |
| Bugis | 64 | 68 | 46 | 17 | 47 | 36 |
| Java | - | 1 | - | - | 2 | - |
| Melaka Burghers | - | 2 | 1 | 2 | 1 | - |
| Melaka Chinese | 32 | 18 | 24 | - | - | - |
| Melaka Kelings | 2 | 1 | 1 | - | - | - |
| Melaka Moors | 3 | 4 | 2 | - | - | - |
| English | 51 | 20 | - | 48 | 81 | 90 |
| Portuguese | 28 | 17 | 26 | 14 | 15 | 15 |
| French | 2 | 2 | 7 | 2 | 6 | 3 |
| Danish | 6 | 2 | 3 | - | - | - |
| Spanish | 1 | - | - | - | - | - |
| American | - | - | - | - | 2 | - |
| Sweden | - | - | - | - | 1 | - |
| Burgher | 2 | 4 | 1 | 1 | 1 | 1 |
| Chinese | 28 | 20 | 41 | 44 | 30 | 27 |
| Moors | 4 | 7 | 6 | - | 3 | 3 |
| Persians | - | - | - | - | - | 2 |
| Kelings | - | - | - | - | 1 | - |
| Pegus | - | - | - | - | - | 1 |
| Arabs | 12 | 9 | 10 | 21 | 11 | 19 |
| Unknown | - | - | 2 | 2 | 4 | - |
| VOC | - | - | 14 | - | - | 1 |
| Total | 380 | 333 | 416 | 317 | 318 | 311 |

*Source*: Nordin Hussin, Melaka and Penang 1780-1830: A study of two port towns in the Straits of Melaka, Vrije Universiteit Amsterdam, 2002

Melaka's main asset was its trade and location rather than its hinterland which was left mostly uncultivated.[15]

Towards the last decades of the eighteenth century, Melaka was still an important centre of trade in the Straits of Melaka. The Dutch war with Riau had decimated the port and eliminated it as a rival in the Straits, while Penang which was founded in 1786, was not yet in a position to compete. In those days, around 300 ships bringing in traders from many different ethnic backgrounds and a huge variety of goods from various parts of Asia visited Melaka annually. This annual flow of traders into and out of Melaka followed a pattern that was determined by the winds and the monsoon. Thus, the trade in Melaka, as with many other ports, was seasonal with its high and low periods coinciding with the tropical monsoons.

Traders came to Melaka in almost as many types and sizes of ships as the variety of goods they brought for there were many kinds of ships which sailed the Southeast Asian waters during the late eighteenth century.[16] Ships from Europe were large and well equipped with cannons and weapons. These were mostly long distance ships which travelled from Europe to the Indian Ocean, the archipelago and China. Besides these, there were also ships which travelled within the archipelago, for example, from ports in the northern Java to the ports in the Straits of Melaka. Small ships normally travelled short distances between the ports in Sumatra and the Malayan Peninsular or within the Straits (Gerrit Knaap, p. 159-169).

The Malays, mostly from Sumatra and the archipelago, also travelled in a variety of ships of which the most popular were the *balo*[17], *banting*[18], *kakap*[19], *pantjallang*[20] and *pentjajap*.[21] The Bugis, who were mostly from Riau and Selangor, used the *padowakan*g, and *pantjallang*.[22] On the other hand, the majority of the Dutch burghers used the bark and the *brigantijn*. The Moors who travelled between India, Pegu, and Melaka sailed in fairly large ships, 80 to 200 lasten in size. The highest numbers of vessels trading in Melaka were the Malay and European ships, followed

by those brought in by the Bugis, Chinese, Melaka-Malays and Melaka-Chinese. In the European category, the English fleet (the EIC and the English country traders) was the largest (Nordin Hussin, 2002: 459-480). The English East India Company traders who visited Melaka were usually those travelling the India-Melaka-China route. The records showed that they were regular visitors although there is no record of the English ships calling at Melaka for 1782 (Nordin Hussin, 2002, p. 459-480). This was probably due to the outbreak of the Anglo-Dutch war in Europe when it was felt unsafe for the English ships to visit a port that was under the control of a hostile nation. No doubt, there would have been a constant flow of the VOC ships coming in and out of Melaka's harbour, but the records do not provide information on this, as it was mentioned earlier. The next biggest group of the European merchants were the Portuguese, followed by the Danes and the French (Nordin Hussin, 2002, p. 459-480).

The Malays represented more than 42% of the total arrivals in 1780/82 and 37% in 1791/93. Meanwhile, the Bugis made up more than 15% in 1780/82 and 10% in 1791/93 (Nordin Hussin, 2002, p. 459-480). The majority of the Bugis skippers who arrived in the years 1780/82 came from Riau, but after the Dutch-Riau war in 1784, most of the Bugis skippers came from Selangor, Terengganu, Trantan and Tembelan. Chinese ships made up more than 7% of the arrivals in 1780/82 and 8% in 1791/93. Most of them came from Javanese ports such as Surabaya, Semarang and Cirebon and less than 1% was recorded to have come from the Chinese mainland. The local traders from Melaka made up more than 12% of the total arrivals in 1780/82 and 7% in 1791/93. Out of these, the largest groups were the Melaka-Malays, followed by the Melaka-Chinese, but later their numbers declined in the 1791/93 period (Nordin Hussin, 2002, p. 459-480).

As can be seen, not only did the Europeans come in large ships and were involved in long distance trade, they also came in large numbers, and this clearly showed their dominance in the Asian trade as a whole. However, while they had

the lion's share of that the trade, the huge Malay and Bugis presence in the short distance regional trade goes to show that, at this stage, native traders remained an integral part of the trading activities of Southeast Asia. It should also be noted that while the number of the Melaka-Malay traders remained steady throughout the 1780/82 and 1791/93 periods, the Melaka-Keling and Melaka-Moors were not seen in the 1791/93 period (Nordin Hussin, 2002, p. 459-480). This could be because many of them had shifted to Penang as it is closer to the Indian subcontinent and it had attracted, right from its opening, a large number of Chulia traders and merchants to settle there. It was probable that the majority of the Melaka-Keling and Moors had also chosen to base themselves on the island (Arasaratnam, p. 126-143).

Traders from Java, who consisted of Java-Chinese, Java-Malays, and Java-Dutch burghers, often came to Melaka bringing with them agricultural produce, as well as food and forest products. In September 1780, nine ships from various ports of Java, 4 from Gresik, 1 from Surabaya, 3 from Semarang, and 1 from Cirebon arrived in Melaka. Two of the skippers were Java-Dutch burghers, 3 Java-Malays, and 4 Java-Chinese. Goods which came from Java consisted mostly of rice, salt, beans, oil, Java cloth, Java tobacco and Java sugar, while goods brought from Melaka by the majority of the traders from Java consisted of *gambir, amballo, damar* and *belacan/terasi* (Nordin Hussin, 2002, p. 62-63). The pattern of the travel appeared to have been one in which many sailed from their port of origin directly to Melaka, stopping at other ports in the Straits or in Batavia only on their homeward journey.

The majority of the Malay traders came from the Malay ports in Sumatra such as Siak, Batu Bara, Assahan, and Indragiri. The most common items brought by them were forest products (rattan) and food items, such as sago, rice, and paddy. Most traders tended to bring only one particular product on their journey to Melaka but returned to Sumatra with a variety of Indian clothes and other sought-after goods, such as salt, and Java tobacco. The Bugis traders

mostly came from Riau and Selangor but later in the 1790s, the majority of them came from Selangor, Terengganu, and Trantan. A regular route covered Riau, Melaka and Selangor. The majority of the Bugis traders, who came from Riau, Selangor, Terengganu or Trantan, brought Bugis clothes or came without any goods but bought various types of Indian clothes in Melaka.

The local traders from Melaka could be divided into five groups, and these were the Dutch burghers, Malays, Chinese, Moors and Keling. However, together, they formed a small group compared to the total number who traded in Melaka. Of this group, those who owned larger ships went as far as India, Pegu/Rangoon, and Mergui. Traders with medium-sized ships operated within the archipelago, covering places like Batavia, Riau, Cirebon, Gresik, Surabaya and Semarang. Those with even smaller ships traded within the Straits, visiting ports along the eastern coast of Sumatra, such as Siak, Batubara, Asahan, Indragiri, and Palembang and also other parts of the Malay Peninsula. All these ships were captained by various ethnic groups such as Malays, Keling, Moors, and Chinese.

Since Penang has no hinterland producing goods for exports, the arrival of the Malays traders and merchants from the Straits was very much awaited. The frequent arrivals of the Malay traders from Sumatra and the Malay Peninsula showed how Penang was dependent on the goods from these traders to feed their China and Indian trades. The Malay traders from the Straits mostly travelled in smaller size ships but they served most of the ports along the Sumatran east coast and the native ports along the Malay Peninsula. There were also Malay traders who had arrived from the archipelago servicing the native ports in the Straits and also the ports of Melaka and Penang. The Malays, who were mostly from Sumatra and the archipelago, travelled in a variety of ships of which the most popular were the *balo*, *banting*, *kakap*, *pancalang,* and *pencacap* (Knaap, 1996: 30-34). Meanwhile, the Malays, the Bugis, who were mostly from Riau and Selangor, used the *padowakang*, and *pancalang*.

For Penang, the earliest data on the shipping list were collected by Francis Light from 1786 to 1794, when he was the Superintendent of the island. These were followed by another document covering the years between 1799 to 1802, which was compiled by George Leith, the Lieutenant-Governor, during his term of office from 1800 to 1803 (Leith, 1805, p. 89). In addition to these, there are also complete data on the arrivals of the Malay traders or *prahus* to Penang, but only for the years from 1786 to 1787 and 1799 to 1802 (Nordin Hussin, 2002, p. 481-497). However, the shipping lists which had been compiled by Francis Light from 1786 to 1794 and the list on the arrivals of the Malay traders from 1786 to 1787 were by far the most detailed that the English produced in Penang. Although the shipping lists compiled by Francis Light are very detailed, the data on Penang trade are very useful as they provide a clear picture of the trends and trade networks which were developed in the early years before Penang was transformed into an important port on the northwest corner of the archipelago.

The early development of Penang's trade could be traced from 1788, that is, two years after the port was opened. Table 2 presents the initial growth over six years until 1794 and the subsequent development until 1802. The shipping list shows that the number of ships coming to Penang increased over the years.[23] Based on the data given in the table, it could be seen that the number of incoming ships increased from fifty four in 1786 to two hundred and sixty five in 1801. The decline in the number of incoming ships in 1794 was because the data for this particular year were only compiled from February to August. Similarly, the number of the incoming ships for the year 1786 was compiled from July to December and this was limited to the periods from January to July and October to December for 1787. The data for the period between 1786 and 1787 only give the number of the incoming large vessels or ships belonging to the English and the others (American and European) to Penang but they do not include the incoming Malay *prahus* so that the numbers would be much higher if the latter

were to be included. Meanwhile, the records by the English did not combine both types of ships in one document. Furthermore, the data on the Malay *prahus* were not regularly recorded and they only appeared in 1786-1787 and 1799-1802. The records by the English classified the vessels according to their sizes and weights. For instance, the vessels or ships which were more than 25 *lasten* (50 tons) were listed together while the *prahus* which had an average weight of more than 1.8 *lasten* or 60 *pikuls* (3.75 tons) but less than 50 tons were listed separately. Thus, the Malay ships, such as the banting (30 tons or 15 *lasten*) and the *penchalang* (37 tons or 18.5 *lasten*) were considered as *prahus* while larger Malay ships like *jong* (125 tons or 62.5 *lasten*), *kichi* (150 tons or 75 *lasten*) and the *pinis* (75 tons or 37.5 *lasten*) were considered as large vessels (Smyth, 1906, p. 79-115).

The total number of the incoming ships for the years 1786 to 87 and 1799 to 1802 was found to be very high. From 85 ships and Malay *prahus* in 1786, the number rose to 3,569 in 1802. In just a decade, Penang was able to attract more than 2,000 ships and Malay *prahus* to its port. The number of the incoming traders also showed a great achievement for Penang, as within a relatively short period, it was able to spread its trading network over quite a wide area. Regular accounts of the number of the incoming ships to Penang only showed the incoming vessels of 50 to 500 tons (25 to 250 *lasten*) which belonged to Europeans and Asian traders.[24] The largest ships to arrive in Penang were those of the English traders, with each ship averaging about 275 *lasten* or 550 tons in weight. This was followed by the American, Danish, and Portuguese traders whose ships were only slightly smaller at an average of 250 *lasten* (500 tons), while the Asian traders who were mostly from the Coromandel coast, China and the archipelago arrived in vessels weighing on the average of 113 *lasten* (226 tons) (Leith, 1985, p. 89; See also Arasaratnam, 1989, p. 20.

In 1786, only 54 ships arrived in Penang but their numbers multiplied rapidly and by 1792 more than 200 called in annually at the port.[25] Although some of the records did not

give the nationality of the commanders of the ships in detail, it is possible to conclude that the largest numbers of ships arriving in Penang were brought in by the English traders, followed by the Asians and other Europeans. Meanwhile, the most frequent arrivals were from the ports in the Straits of Melaka (38%), followed the by ships from the Indian sub-continent (35%).[26] This trend continued throughout the years from 1786 to 1794 with one exception, and that was for the year 1788, when more ships arrived from the Indian sub-continent. The ports in the Straits of Melaka, which had close trading relations with Penang, were Pedir, Kedah, Melaka, Aceh and Selangor. Pedir, in the east coast of Sumatra and Aceh, supplied Penang with pepper, betel nuts and forest products, while the traders from Selangor, Kedah and Melaka brought tin and food products to Penang.
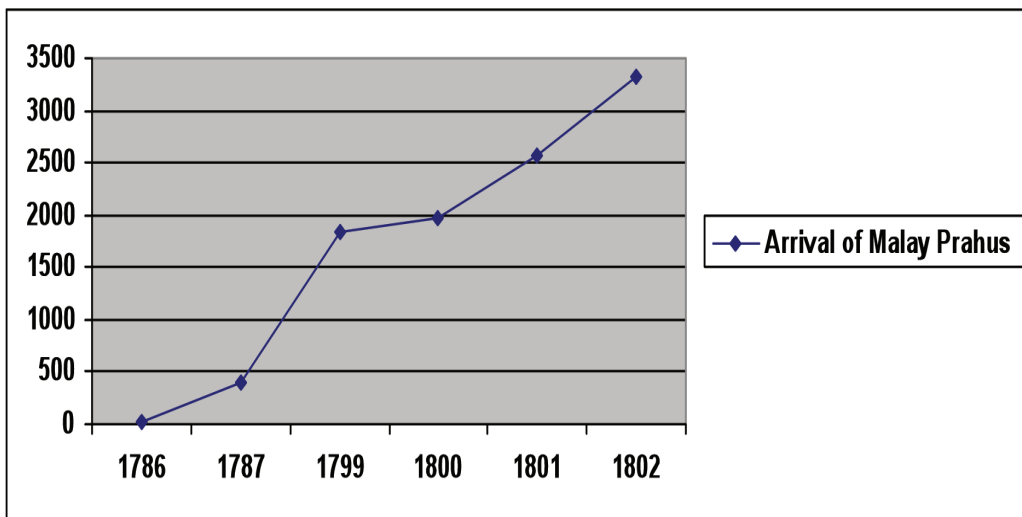
From 1788 to 1794, there were 1,097 ship arrivals in Penang and from 1799 to 1802, there were 867 ships. The highest numbers of traders were the English (66% with 1,286 ships), followed by the Asiatic traders (comprised of the Chulia, Malays, Bugis, Moor, Burmese, and Chinese at 19% with 381 ships) and the American, Portuguese, Dutch, French, Spanish, and Danish traders (at 15% with 297 ships). The volume of goods brought and carried by the English, American, Portuguese, and Danish traders was larger than that by the Asiatic traders. This was because the Europeans had larger ships and the majority of them were long-distance traders who travelled from India to China and the Archipelago.

The sailing pattern of these traders was predictable. Those who came from the Indian sub-continent travelled from the ports in the Coromandel Coast such as Porto Novo, Nagore or Nagapatnam, Calcutta and Madras.[27] They arrived in Penang and later sailed to Mergui, Tenesserim, Pegu, Junk Ceylon, Melaka, Pedir, Larut and Selangor. These long-distance traders would arrive in Penang from India and then sailed on to Batavia, Siam, China and Macao.

The same period also witnessed a steady increase in the numbers of the Malay and Bugis traders from the Straits in Penang. Most of these traders travelled in *prahus*. In 1786, thirty-one *prahus* were recorded to have arrived in Penang, the number increased to 403 but a year later. A decade later, the number of *prahus* arrivals in

TABLE 2
The arrival of the Malay merchants in Penang in 1786-1787 and 1799-1802



*Source*: Nordin Hussin, Melaka and Penang 1780-1830: A study of two port towns in the Straits of Melaka, Vrije Universiteit Amsterdam, 2002

Penang further increased by leaps and bounds. In more specific, 1,836 *prahus* traded in Penang in 1799, the number stood at 3,328 in 1802. These traders from the Straits normally brought limited number and quantity of goods due to the size of their *prahus* which could normally carry an average of 1.5 *Koyan* (60 *pikuls*) (Leith, 1805, p. 89; Arasaratnam, 1989, p. 20). The *prahus* brought in goods such as forest products (e.g. rattan and aromatic woods), as well as other items (e.g. rice, poultry, cattle, rice, and paddy), minerals (e.g. gold dust and tin) and took away goods from India and China which included Indian clothes, salt, sugar, and opium.

The majority of the incoming Malay *prahus* were from Kedah, Perlis, Kuala Muda, Perak, Larut, Selangor, Batubara, Kera, and Junk Ceylon (Southern Siam).[28] Meanwhile, the Malay traders from Kera and Junk Ceylon on the Southern part of Thailand came to Penang with loads of tin, bird nests, *tripangs*, and rice. The Malay traders from Larut, Perak, and Selangor were also important to Penang because they brought with them tins for the China tea trade.[29] Kedah, Batubara, Kera, and Perlis were important suppliers of food products. One significant development that emerged from the Penang trade with the Straits region in the first decade or so of its opening was the close trading link it succeeded in forging with Pedir, on the east coast of Sumatra. Pedir and its hinterland were important producers of pepper and betel nuts and these two items were the major exporter earners for Penang in the earlier period.[30] In the late 1800s, however, Pedir was replaced by Aceh as an important trading partner after the latter took control of the northern Sumatra.[31]

A few names of Malay traders appear in the documents and details of their business and trade are very scarce. Nonetheless, it is very difficult to establish the number of the Malay traders although there was a bazaar in Penang that belonged to, and was managed by, them. The name, Nakhuda Kechil, appears in the documents as a trader who had originally come from Kedah and later became the headman of the Malay bazaar for traders from Kedah. It was likely that his trading connections were between Penang and Kedah.[32] The commodities handled by him included rice, poultry, paddy, and cattle.[33] Since Penang is situated off the coast of Kedah, there was a close trading network between the town and Kedah with most of the trades consisting of food products from Kedah in return for opium and cloth from India.[34]

Additionally, there were significant trades between the island and Makassar and the Eastern archipelago conducted by the Bugis traders. They came in large numbers to the island, stopping in various Malay ports in the archipelago during their journey.[35] However, their names and their leaders are unknown. One name that came up in the documents is Haji Khussin who owned property in the town but whose origin is not clearly known and whose name does not sound Bugis.[36] As the number of Bugis traders and merchants trading in Penang increased, many settled in a small town on the Penang river (Leith, 1805, p. 51). In 1800, the majority of the Bugis who came to trade and settle in Penang were from Borneo and the Celebes. They were commonly considered as Malays although their language was quite distinct. In a report, Leith described the Bugis as 'bold, independent and enterprising, make good soldiers and if treated with kindness are attached and faithful'.[37] He also mentioned that the Bugis who had settled in Penang were mostly found in a small town on the Penang river and that their numbers fluctuated according to the trading seasons. The strength and the importance of the Malay trading communities on the island could be seen by the establishment of a small Malay town on the southern part of the port-town in Penang. This Malay town was inhibited by the Malay traders who had arrived in Penang according to the monsoon season.

The English had always admired the trading skills of the Bugis. In fact, they had a preference for the Bugis traders who were encouraged to trade in Penang.[38] They even attempted to stop the Bugis from trading with Melaka.[39] According to the English, the Bugis were excellent and trustworthy traders compared to the Chinese and Chulias who were considered shrewd and not to be trusted.[40] While the main

goods brought to Penang by the Malay and Bugis traders consisted of food, forest products and minerals (gold and tin), they also traded in slaves. Although the exact number of slaves brought in by them is not known, in 1792, they brought as many as 46 slaves to Penang which was valued at SpD1,840.[41] The number of slaves imported in 1790 was nine and seven in 1791. After 1792, however, no reports were written on the slave trade of the island.[42] Since the Eastern archipelago was known to be the main supplier of slaves to Melaka, they could have been supplying slaves to Penang as well.[43]

In the early decades of Penang's growth, the largest numbers of traders arriving at the island comprised of the Malay traders from the eastern coast of Sumatra and the west coast of the Malay Peninsula. These traders made up more than 60% of all arrivals in that period. The majority of the Malays traders from Sumatran came from the eastern ports of Sumatra, particularly from Aceh, Batu Bara, Assahan, Bila and also from Siak.[44] Other important Sumatran ports which had close connections with Penang were Kampar, Panji, Rokan, and Serdang. One of the main factors for the increase in the number of the Malay traders to Penang was the close relationship between Francis Light and the Malay traders. This relationship was forged when Francis Light was a country trader trading with many of the Malay ports along the Straits before he settled as an administrator on the island. Furthermore, the English administration in Penang had encouraged the Malays to come to Penang rather than to Melaka.

Apart from the Bugis, the Malay traders, including those from Sumatra and the Peninsula, brought mainly tin to Penang. In the early nineteenth century, the annual supply of tin from Palembang and Lingga was 1,300 pikuls. The interior state of the Peninsular also brought in tin to Penang but its supply was very irregular. The English administration in Penang saw the potential of the eastern coast of Sumatra as an important trading area, and it was for this reason that the EIC tried to forge a closer trading connection with many Malay ports such as Siak, Asahan, Bulu China, and Batu Bara.

Penang imported goods from abroad and then re-exported them to various places.[45] Nonetheless, little is known about the commodities which were imported to and exported from Penang in its early years. Six years after its foundation, a detailed report was compiled on the imports of Penang. By the end of the eighteenth century, the major goods imported came from the Indian sub-continent, China, northern Sumatra and the Malayan Peninsular and these comprised of Indian piece goods such as Indian cloth, opium, pepper, betel nuts, rice, tobacco, oil and ghee, tin, silk, liquor, salt, and various other items including the products from Europe (Leith, 1805, p. 83). The exports from the island were mainly the imported goods which comprised of Indian cloth, opium, tin, betel nuts, and pepper (Leith, 1805, p. 83).

In addition, the island had close trading connections with the Bugis and Malay traders who acted as the main carriers or conveyors of goods to Penang and out of it to ports in the northern half of the Straits of Melaka.[46] In 1792, the major goods brought to the island by these native traders were gold dust, bird nests, tin, Bugis cloth, rice, pepper, brimstone, aromatic woods, and rattan.[47] The main exports of Penang to the native ports of the Straits were opium[48], Indian piece goods, Spanish currency, Bugis cloth, raw silk, sticlac,[49] and cotton.[50] The trade pattern was therefore similar to that of Melaka, except that while the old port-town captured the markets of the southern end of the Straits, Penang was gradually attracting traders from its northern sector. Unfortunately, there are very few details available on the exports and imports with other major trading partners such as the Coromandel coast, Bengal and China, and as the nature of the trade would not have differed from that seen in Melaka, it could be assumed that the major imports from the Coromandel coast and Bengal were Indian cloth, opium, grains, salt, cotton, aromatic woods, oil and tobacco, as well as Chinaware, torches and other manufactured items, in small quantities from China (Leith, 1805, p. 83). It should be noted that the main attraction that China held for the European traders, especially the English, was its tea, which

had a growing market in Europe, but was not a major commodity for the Archipelago.
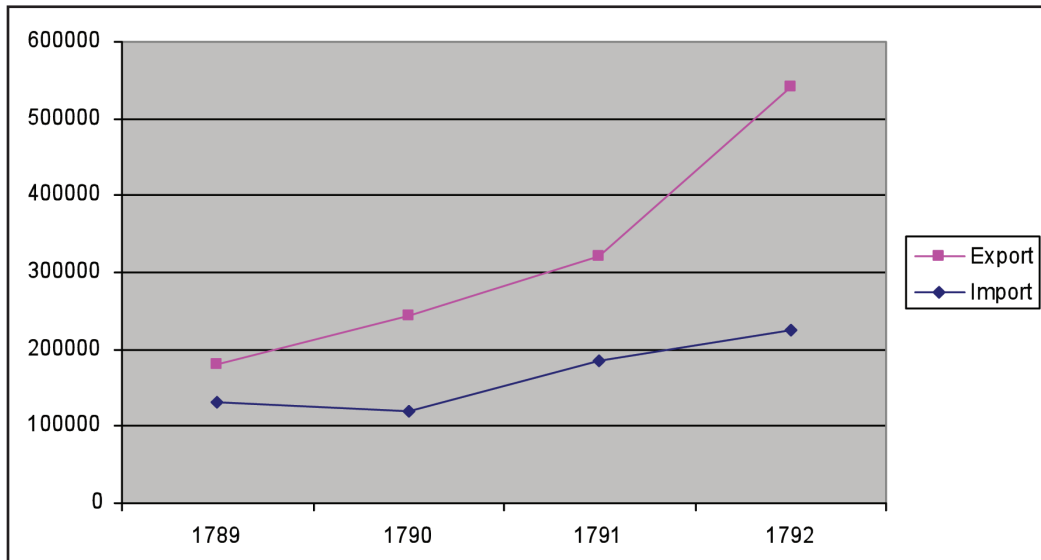
Table 3 shows the values of the goods imported to and re-exported from Penang from 1789 to 1792 by the Malay traders from Aceh, the Malayan Peninsular and the Archipelago.

Thus, it is evident that the Malay traders mainly exported gold dust (Spanish Dollars 38,422.00), bird nests (Spanish Dollars 32,804), tin (Spanish Dollars 27,614), Bugis cloth (Spanish Dollars 27,280), rice and paddy (Spanish Dollars 20,979), whereas, they mainly imported opium (Spanish Dollars 173,880), piece goods/Indian cloth (Spanish Dollars 67,920), currency (Spanish Dollars 28,251), and Bugis cloth (6,850) from Penang. As presented in the figures above, Penang had an import deficit of SpD92,880.35. All of Penang's exports consisted of goods which were imported from abroad such as opium, Indian cloth, and specie (Spanish currency). Specie was in great demand by the Malay traders from the Straits and the Archipelago.

In its early years, Penang relied heavily on the supply of food from abroad. Rice was therefore an important item of trade which was brought mainly by the native traders. In 1792, it constituted more than 7% of the value of all goods brought in by these traders to Penang. Although paddy was grown on the island, this was not sufficient to meet the needs of a growing population. Penang's dependence on imported food created a crisis in its early years when its major supplier, Kedah, threatened to stop sending rice due to unresolved political differences between the Kingdom and the administration in Penang.[51] In the later years and with the increase in the island's population, the supplies were also obtained from Burma and Bengal.

In 1792, gold dust was the major item brought in by the Malay traders, which stood at 17.11% of the total value of Penang's imports from these traders. Most of the gold dust came from the interior of Sumatra and the Malayan Peninsular and Borneo.[52] For as long as gold

TABLE 3
The values of the imports and exports to Penang by the Malay traders from 1789-1792
in Spanish Dollars



(*Source*: Nordin Hussin, Melaka and Penang 1780-1830: A study of two port towns in the Straits of Melaka, Vrije Universiteit Amsterdam, 2002)

dust from the Malayan Peninsular had been a commodity, its outlet was Melaka, to which it was brought from the interior.[53] The gold dust from the Peninsula, which found its way to Penang, was usually conveyed by the Bugis traders who traded from all over the Archipelago, including the principal gold producing areas or outlets, such as Borneo, Sumatra and Melaka.[54] A similar situation was seen in relation to Penang's import of bird nests (14.60%). The major bird nests producing areas were Borneo and Junk Ceylon.[55] Again, the Malay and Bugis traders brought bird nests to Penang from these places which were then exported to China, where it was a delicacy and therefore had a ready market.

The next most important commodity brought in by the native traders was tin (12.29%), which came mostly from the Malayan Peninsular and the island of Banka. Although the trade of tin was monopolised by the Dutch in Melaka, Penang still managed to overcome the Dutch's restrictions through smuggling activities and the Malay traders. Tin from Banka was also brought in by the Bugis traders. Tin was a vital commodity for the English traders whose desire was to capture the lucrative tea trade in China, whereby this also meant that they had to find a commodity that could be exchanged or otherwise suffered a bullion drain. Thus, the role of the native traders was vital in the tin trade, at least in the early years when the Dutch were still able to control the trade.

Although Indian cloth had found a ready market in the Archipelago for centuries, Bugis cloth was also an important item in the cloth trade in the region. Bugis cloth was introduced to Penang by the Bugis traders from Makassar and the Eastern Archipelago. However, the volume of the Bugis cloth exported was smaller compared to the Indian cloth. It is difficult to assess the difference in the price between the two types of cloth. Nevertheless, the value of Indian cloth was reported to be greater, as was its popularity, since it came in various forms and quality (Laarhoven, 1994). Some of the Indian cloth did not come directly to Penang from India but was brought in by the Malay traders who

had picked them up from the ports in the Straits which had been visited by the English traders and the Indian traders who came from the Indian sub-continent. The amount of the Indian cloth brought in this manner was rather small (1.01%) as compared to the Bugis cloth (12.14%).

The native traders were also important in the pepper trade. The major suppliers of pepper to Penang were Aceh and Terengganu (Cowan, 1950: 7). Due to the high demands for pepper in Europe, Penang made attempts to encourage the productions of pepper in the early years after its opening. In the first two decades, the enterprise was still in its infancy in Penang and the yields were too small for the purpose of export (Cowan, 1950, p. 53). The jungle in the hinterland was still being cleared at that time and the administration was trying its best to convince the new settlers, especially the Chinese and the Europeans, to cultivate pepper, clove and nutmeg. The process was naturally slow as it took more than one year for the ground to be cleared. Furthermore, there was a short supply of labour in the newly acquired colony. For this reason, Penang had to rely on the pepper brought in by the traders. As reported, the native traders brought SpD10,665 worth of pepper to Penang in 1792.

One of the main contributions of the Straits-Malay traders to Penang's trade was their roles in collecting a range of forest products, such as bird's nest, rattan, algewoods, elephant's teeth, dammar, sapanwood, and brimstones from the ports in Sumatra and the Malayan Peninsula and transporting them to the island for re-export to the Indian sub-continent and China. In fact, some products like sticlac and goods with medicinal properties (e.g. tripang) which they brought in went to the ports within the Straits as these were found in some areas but not in the others in the region. Thus, the native traders did not only bring in, from the archipelago, the commodities whose ultimate destination was either India or China, but they were also involved in a revolving trade chain within the Straits of Melaka. In 1792, the main exports of Penang to Aceh, Kedah, and the archipelago consisted of opium (54.78%), Indian piece goods (21.39%),

specie or Spanish currency (8.9%), Bugis cloth (2.15%), and raw silk (1.43%). Opium became the main item carried by the Malay traders from Penang. Although between 1790 and 1793, these traders took away 105 to 483 chests of opium from Penang, the report did not specifically mention where the opium was taken to, except it was said that it was exported to 'the surrounding areas'.[56] There were, however, some indications that the opium was sent to most ports in the Straits.

The second most important items bought by the Straits-Malay traders to Penang were the Indian piece goods/Indian cloth from the Coromandel coast and Bengal which, like opium, went to most ports in the Straits. In fact, cloth generally constituted a big item bought by the native traders in Penang. Despite the popularity and the availability the of Indian cloth, the Bugis cloth still remained marketable in the region adjacent to Penang, such as Aceh and the northern part of the Peninsula, and this was probably because it was cheaper yet distinctive. A clearer picture is obtained for the commodities imported by Penang in the early nineteenth century. However, the amount or the value of each item was not given (Leith, 1805, p. 83). Nevertheless, an analysis can be made of the most important commodities traded between Penang and the archipelago. Opium, rice/grains, Indian piece goods, pepper, gold dust, and tin remained the main imports of Penang. Most of these commodities were imported from the Coromandel coast, Bengal, Bombay, and the Archipelago, while tea, sugar, paper, Chinaware, and raw silk came mostly from China. It is important to note that the trading trends in the early nineteenth century had not changed to any significant degree from the situation in the early 1790s.

Since Penang has no hinterland producing goods for exports, the arrival of the Malays traders and merchants from the Straits was very much awaited. The frequent arrival of the Malay merchants and traders from Sumatra and the Malay Peninsula showed how Penang was depended on goods from these traders to feed their China and Indian trades. The Malay traders from the Straits mostly travelled in smaller ships but they served most of the ports along the Sumatran east coast and also the native ports along the Malay Peninsula. There were also the Malay traders who had arrived from the Archipelago servicing the native ports in the Straits, as well as the ports of Melaka and Penang.

## CONCLUSIONS

The Straits of Melaka, which is located in the international waterway systems, greatly transformed the Straits-Malays into a thriving and enterprising trading community. In fact, the Straits-Malay traders and merchants were the most important assets for the East India Company in shaping the early history of Penang into an important trading port. The distinctiveness of the Malayland, with its hinterlands rich in agricultural products, mineral ore, sea and forest products which could be exploited and exported to other regions to be exchanged with manufactured goods and other raw materials, had made the Straits into an important centre for trade. Such opportunities were fully exploited by many of the early Malay kingdoms and the Malay traders right until the mid of the nineteenth century, when the Straits fell into the Europeans powers. The drastic changes of the mid nineteenth century saw the Straits-Malay trading community faced with several challenges. The foremost among these were the ascendancy of the English in the region, the rivalries between the English and the Dutch, the coming of the Chinese century in Southeast Asia and the advancement in the shipping technology, as well as the advent of steam ships where sheltered harbours and monsoon winds were no longer important variables. These changes made the Straits-Malay trading community lose its advantage.

## ENDNOTES

[1] The first reference to the term "*Sea of Malayu*" was from an Arabic document dated c.1000, which noted that the travellers reaching the *Sea of Malayu* were approaching the area of China. For detail descriptions on the matter, see G.R. Tibbetts (1979). *A Study of the Arabic Texts containing Material on Southeast Asia*, London; G.R. Tibbetts (1956) "The Malay Peninsula as known to the Arab geographers, *MJTG*, 9, 21-60. See also J.V. Mills (ed.) (1997). Eredia's Description of Malacca, Meridional India and Cathay, *MBRAS*, 14. See also L. Andaya (2000). "A History of Trade in the *Sea of Malayu. Itinerario*, xxiv (1), 87-109.

[2] See for example, L. Andaya (2000) "A History of Trade in the *Sea of Malayu*, in, *Itinerario*, xxiv (1), 87-109; L. Andaya (2008). *Leaves of the Same Tree: Trade and Ethnicity in the Straits of Melaka*. Honolulu: University of Hawaii Press; Anthony Reid (2004). "Understanding Melayu (Malay) as a Source of Diverse Modern Identities. in T.P. Barnard (ed.), *Contesting Malayness Malay Identity across boundaries* (pp. 1-24). Singapore: Singapore University Press; Leonard Andaya (2004) "The search for the 'Origins' of Melayu. In T.P. Barnard (ed.), *Contesting Malayness Malay Identity across boundaries* (pp. 56-75). Singapore: Singapore University Press.

[3] See for example, O.W. Wolters, *Early Indonesian Commerce*, Cornell Indonesian Project Ithaca: New York, 1967; See also George Coedes, *The Indianized States of Southeast Asia*, Kuala Lumpur, 1968; Nilakanta Sastri, *History of Sri Vijaya*, Madras: University of Madras, 1949; O.W. Wolters, *The Fall of Srivijaya in Malay History*, Kuala Lumpur, 1970.

[4] In 671 AD a Buddhist scholar named I Ching visited Srivijaya as a pilgrim from China to India and he wrote: "In the fortified city of Fo-che (Srivijaya), Buddhist priests number more than one thousand, whose minds are bent on learning and good practices. They investigate and study all subjects that exist just as in Madhyadesa (India); the rules and ceremonies are not at all different. If a Chinese priest wishes to go to the west in order to hear (lectures) and read (the original Buddhist texts) he had better stay at Fo-Che (Srivijaya) for one or two years and practice proper rules, then proceed to Central India", in, J. Takakusu, *A Record of the Buddhist Religion as practiced in India and the Malay archipelago 671-695 A.D by I. Tsing*, Oxford, 1896, p. xxxiv.

[5] Nik Hassan Shuhaimi Nik Abdul Rahman, *Beruas Kerajaan Melayu Kuno di Perak*, Persatuan Muzium Malaysia: Kuala Lumpur, 1994. See also, J. Chandran, *Lembah Bujang- The Bujang Valley*, Persatuan Sejarah Malaysia: Kuala Lumpur, 1980.

[6] See Russell Jones, *Hikayat Raja Pasai*, Yayasan Karyawan: Kuala Lumpur, 1999; Jorge Manuel dos Santos Alves, "Princes Contre Merchants au Crepuscule de Pasai c. 1491-1521, in, *Archipel,* 1994, issue 47, pp. 124-145; Jorge Manuel dos Santos Alves, "The Foreign traders' management in the Sultanates of the Straits of Melaka: the cases of Melaka-Samudera-Pasai and Aceh 15th and 16th Centuries", in, *From Mediterranean to the China sea –Miscellaneous notes*, Wiesbaden: Harrassowitz, 1998, pp. 131-142.

[7] Denys Lombard, *Le sultanat d'Atjéh au temps d'Iskandar Muda, 1607-1636*. École française d'Extrême-Orient (EFEO): Paris, 1967; Arun Kumar Dasgupta, *Acheh in Indonesian trade and politics, 1600-1641*, Ann Arbor: University Microfilms International, Cornell University, 1962; Takeshi Ito, "A note on some aspects of the trade of Aceh in the 17th century", in, *Nampo-Bunka: Tenri bulletin of South Asian studies*, (1982), issue 9 (Nov.), pp. 33-60.

[8] Takeshi Ito, "A note on some aspects of the trade of Aceh in the 17th century", in, *Nampo-Bunka: Tenri bulletin of South Asian studies*, (1982), issue 9 (Nov.), pp. 33-60; A.K. Das Gupta, "Acheh in the Seventeenth Century Asian Trdae", *Bengal Past and Present*, January-June, 1962.

[9] See Nordin Hussin, *Trade and Society in the Straits of Melaka, Dutch Melaka and English Penang*, NIAS Press: Copenhagen, 2006; Leonard Andaya, *The Kingdom of Johor 1641-1724 Economic and Political developments*, OUP: Kuala Lumpur, 1975. See also Reinout Vos, *Gentle Janus Merchant Prince The VOC and the Tightrope of diplomacy in the Malay world 1740-1800*, Leiden: KITLV, 1993.

[10] Syed Hussin alAtas, *Thomas Stanford Raffles Schemer or Reformer 1781-1826*, Angus and Robertson: Singapore: 1971; Bonney, R., "Francis Light and Penang", in *JMBRAS* vol. 38, Pt. 1, 1965; Bonney, R., *Kedah 1771-1821; the search for security and independence*, Kuala Lumpur: Oxford University Press, 1971.

[11]See Carl A. Trocki, *Prince of Pirates The Temenggongs and the Development of Johor and Singapore 1784-1885*, NUS Press: Singapore, 2007. See also Wong Lin Ken The trade of Singapore 1819-69, *JMBRAS,* vol. 33, pt. 4, 1960.

[12]Khazin Mohd Tamrin, "*Merantau*" A study of Javanese immigration and settlements in the Malay peninsula, PhD Thesis University of Kent at Canterbury, 1987; See also Mochtar Naim, *Merantau pola-pola migrasi orang Minangkabau*, Universiti Gajah Mada: Jogjakarta, 1978.

[13]J.J. Sheehnan, "Seventeenth Century Visitors to the Malay Peninsular", *JMBRAS*, vol. 12, Pt. 2, 1934, p.100. See, also, Walter Caulfield Lennon, "Journal of a voyage through the Straits of Malacca on an expedition to the Molucca Islands under the command of Admiral Rainer", *JSBRAS,* Vol.7, June 1881, p. 64.

[14]Armando Cortesao, *The Suma Oriental of Tome Pires, An account of the East from the Read Sea to Japan written in Malacca and India in 1512-1515*, Hakluyt Society: London, 1967. See also Duarte Barbosa, *The Book of Duarte Barbosa, An Account of the countries bordering on the Indian Ocean and their inhabitants A.D. 1518*, Hakluyt Society: London, 1918.

[15]The many writings on the uncultivated hinterlands of Melaka include: James N. Anderson and Walter T. Vorster, "In Search of Melaka's Hinterlands: Beyond the entrepot", in, Dilip K. Basu (ed.) *The Rise and Growth of the Colonial Port cities in Asia,* Monograph Series No. 25, University of California: Centre for Southeast Asian Studies, 1985, pp. 1-5; F.L. Baumgarten, "Agriculture in Malacca", in, *JIA,* Series 1, Vol. 3, 1849, pp. 707- 723; and E.A. Blundell, "Notices of the History and Present Condition of Malacca", in *JIA,* Series I, Vol. 2, 1848, pp. 726-754.

[16]For further discussion on the various types of ships and their sizes in Southeast Asian waters during this period see: Gerrit Knaap, *Shallow Waters Rising Tide,* KITLV: Leiden, pp. 149-157. See also, S. Arasaratnam, "Coromandel Shipping and Seafaring in the Indian Ocean 1650-1800", *Journal of East-West Maritime Relations*, vol.3, 1994, pp. 19-41; P.Y., Manguin, "The Southeast Asian Ship: An Historical Approach", *JSEAS*, 11, 1980, pp. 266-76; H. Warington Smyth, "Boats and Boat-building in the Malay Peninsula", *The Indian Antiquary,* April,

1906, pp. 97-115; and A. Horridge, *The Prahu: Traditional Sailing Boat of Indonesia*, Oxford University Press: Singapore, 1985.

[17]H. Warington Smyth, "Boats and Boat-building in the Malay Peninsula", where the author describes balo or balok as "A single-masted boat. The model suffers from a mast which is too short to hoist the lugsail. The boat has beam and fairly flat floors. There are washboards at the quarters and a peculiar slightly outrigged grating or staying over the stern post. The rudder is very small and short, and had a yoke and lines", p. 102.

[18]Ibid. Where Smyth states that the Banting was frequently used by traders from Aceh and he further describes the boat as a two-masted trader type, built of *giam* wood. The boat's dimension was 90 feet by 27 feet by 7 feet with a 2 feet freeboard; it had a capacity of 12 *koy* and the number of on-board crew was 6. The length of the mainmast was 50 feet, it used cloth for its sail cloth but the size of the rig was uncertain, p. 102.

[19]Ibid. Smyth notes that kakap or kakap Jeram is a typical Malay fishing boat from Selangor. The rig is practically the same as that of the *nadir* (a shallow-draft Malay fishing-boat from Melaka and built from carvel with straight stem similar to those of the European type), p. 103-105.

[20]Ibid. Smyth mentions that Penchallang is a typical Bugis boat and a two-masted trader type built from hard *jati* wood. The dimension of the penchallang is 80 feet by 15 feet by 9 feet; 4 feet freeboard, a capacity of 15 *koy* and 30 crew, p. 105.

[21]Gerrit Knaap, *Shallow Waters*, pp. 30-43.

[22]A Padowakang is a large merchant ship and the size could reach up to 300 tons. For further information see, A. Horridge, *The Prahu*, p. 19 and H. Warington Smyth, "Boats and Boat-building in the Malay Peninsula", pp. 97-115.

[23]See, extract letter from Light dated 20 June 1788 in *Journal of the Indian Archipelago and Eastern Asia*, Vol. iv, 1850: "That the commerce of this port is annually increasing needs no proof. The Buggesse prows alone have brought gold and silver this year to the amount of two or three hundred thousand dollars to purchase opium and piece goods, and if they meet with such favourable markets as to induce them to continue the trade, I entertain little doubt from the information I have received of the

purchases they were accustomed to make formerly at Rhio, that they will in a few years import gold and silver annually to the extent of half a million of dollars, part of which will be carried in gold to the coast of Coromandel in payment of the coast piece goods and the other part will form a fund for the purchase of goods for the China market. Thus by encouraging this branch of commerce the coast of Coromandel will be benefited and the remittance to China be facilitated", p. 647.

[24]See, A List of arrival and departures of shipping at Prince of Wales Island, 1st Feb to 25th August 1794, in *SSFR,* G/34/6.

[25]List of arrivals and departures of vessels at Prince of Wales Island from July 1786 to Dec 1786, in *SSFR* G/34/2; George Leith, *A Short account of the settlement, produce and commerce of Prince of Wales Island in the Straits of Malacca*, p. 89

[26]See, Appendix: Penang: Incoming ships to Penang 1786-1794 and The Nationality of the Commanders of incoming vessel to Penang in 1788-94 in Nordin Hussin, *Melaka and Penang 1780-1830: A Study of Two port towns in the Straits of Melaka*.

[27]For further discussion on the trading pattern of the Chulia merchants, see, S. Arasaratnam, *Islamic merchant communities of the Indian sub-continent in Southeast Asia*, Kuala Lumpur: University Malaya Press, 1989, p. 18.

[28]An account of goods imported by Malay prows into Prince of Wales Island March 1789, in, *SSFR,* G/34/4

[29]An account of prows arriving at Prince of Wales Island between 1 May and 9th July 1787, in *SSFR,* G/34/2.

[30]A list of arrivals and departures of Shipping at Prince of Wales Island in *SSFR,* G/34/2; *SSFR* G/34/3; *SSFR* G/34/4; *SSFR* G/34/5 and *SSFR* G/34/6; See also An account of goods imported into Prince of Wales Island from 1st August to 31 December 1788, in *SSFR,* G/34/3.

[31]See Report on the trade of Prince of Wales Island 1828/29 in *SSFR* vol. 162; See also, C.D. Cowan, "Early Penang", p. 140, and also, Lee Kam Hing, *The Sultanate of Aceh*, *Relations with the British 1760-1824*, Kuala Lumpur: Oxford University Press, 1995, p. 249.

[32]*Journal of the Indian Archipelago and Eastern Asia*, 1850, Vol. iv, p. 630.

[33]See, report of the fire by the enquiry 8th October 1814 in *SSFR,* G/34/45, see also, *SSFR* 1850, vol. iv, p. 630; *Journal of the Indian Archipelago and Eastern Asia,* vol. iv, p. 641.

[34]*Journal of the Indian Archipelago and Eastern Asia*, 1850, Vol. iv, p. 630; See also, *Journal of the Indian Archipelago and Eastern Asia*, 1850, Vol. iv, p. 641.

[35]Extract letter from Governor Maclister to the Chairman and Deputy Chairman dated 7th November 1808 in *SSFR,* G/34/9 and also report by Raffles on 31st October 1808 in *SSFR,* G/34/9.

[36]See report of the fire by the enquiry 8th October 1814 in *SSFR,*G/34/45

[37]Ibid.

[38]Ibid.

[39]Extract letter from Governor Maclister to the Chairman and Deputy Chairman dated 7th November 1808 in *SSFR,* G/34/9 and also report by Raffles on 31st October 1808 in *SSFR,* G/34/9.

[40]Letter from Francis Light 25th January 1794 to Governor General: "The Bugesses the few inhabitants here at present yet as they come annually to trade and remain two or three months ashore to the number of one or two thousand they are during the time of their residence a part of our society, they are Mahomedans, proud warlike independent people easily irritated and prone to revenge .... they are the best merchants among the eastern islands ..... their cargoes either in bullion or goods with the quantity of opium and piece goods they export make their arrival much wished for by all mercantile people" in *SSFR,* G/34/6. See, also, Farquhar letters in Memoranda of Malacca: "They are certainly far more honest in their dealings than either the Chinese or Choolias", in *SSFR,* Vol. 10.

[41]*Journal of the Indian Archipelago and Eastern Asia*, vol. iv, 1850, p. 658

[42]*Journal of the Indian Archipelago and Eastern Asia*, vol. iv, 1850, pp. 600-647.

[43]See, Appendix: List of Registered Slaves in Melaka 1819-1824 and Appendix: List of Registered Slave Children in Melaka 1819-1824 in Nordin Hussin, *Melaka and Penang 1780-1830: A Study of Two port*

*towns in the Straits of Melaka.* See, also, Heather Sutherland, "Slavery and the slave trade in South Sulawesi, 1600-1800s", in Anthony Reid (ed.) *Slavery, Bondage and Dependency in Southeast Asia*, St. Lucia: University Queensland press 1983, p. 263-285.

[44]See, Appendix Melaka Shipping Lists 1780/82 and 1791/93 in Nordin Hussin, *Melaka and Penang 1780-1830: A Study of Two port towns in the Straits of Melaka.* See, also, J. Anderson, *Mission to the East Coast of Sumatra in DCCCXXII, under the direction of the government of Prince of Wales Island,* London: William Blackwood, MDCCCXXVI.

[45]See an extract letter from Captain Light dated 20 June 1788 in *Journal of the Indian Archipelago and Eastern Asia*, Vol. iv, 1850: "As the island produces nothing of a commercial nature in itself, but every article fit for the China market to be procured at it is brought from the surrounding countries by the Malays, whose chief inducement to visit it has been the great freedom of trade that inducement ceasing the imports would become too inconsiderable defray the expence of collecting duties on them", p. 647.

[46]See *Journal of the Indian Archipelago and Eastern Asia*, 1850 vol iv, p.658. See also Extract letter from governor Maclister to the chairman and deputy chairman dated 7th November 1808 in *SSFR,* G/34/9 and also report by Raffles on 31st October 1808 in *SSFR,* G/34/9.

[47]*Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 658.

[48]The quantity of opium imported by Malay traders from the surrounding area and the archipelago had increased annually at a rapid rate: from 105 chests in 1790 to 193 chests in 1791 and 483 chests in 1792, see, *Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 660.

[49]Sticlac: Secretion of insects obtained from the twigs and branches of trees; used either as a dye or a resin, see, C.D. Cowan, "Early Penang and the Rise of Singapore 1805-1832" , p. 113.

[50]*Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 658.

[51]Captain Light's letter dated 7th October 1787: "The King of Kedah at other times he seems to have an intention of starving us. The inhabitants here like all other Indians make no provision against accidents. I am therefore obliged to advance money to the King's merchant at Kedah to provide a continual supply of rice and this is retailed to the troops and others at the same price I purchase it" in *SSFR,* G/34/3. See also Light's letter dated 16th November 1787: "The king of Kedah has stopped the exportation of rice since the month of September. On the 10 instant I sent Lieut. Blair with letters to him requesting to know if he would supply me or not. The Raja sent word he would send rice in three days but at the former price. It is not from any scarcity of grain the king prevents the rice from being brought here but from policy he thinks his case desperate and that he shall not obtain anything from the Company. He has therefore laid a duty of 23 Spanish Dollars per coyan on rice for exportation. This deprives those who would deal in rice of all emoluments and is equal to prohibition. The country people find no purchasers for the surplus paddy(the king excepted) who buys it at a small price and sells it again at 50 Spanish Dollars per coyan to strangers. The consumption of this place is 25 coyan per month exclusive of foreign demands" in *SSFR,* G/34/3.

[52]Report by Raffles 31st. October 1808, in *SSFR,* Vol. 9.

[53]Ibid.

[54]Ibid.

[55]Ibid.

[56]*Journal of the Indian Archipelago and Eastern Asia*, 1850, vol. iv, p. 660.

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# Developing Learner Autonomy in the ESL Classroom Through the Use of Learning Contracts

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## ABSTRACT

The consensus among learner autonomy experts indicates that the parameters of today's teaching and learning processes have been significantly extended to ensure that our learners become autonomous lifelong learners. Such initiatives place a critical demand on educators to ensure they equip their learners with all the necessary learning tools and skills so that they can take responsibility for their own learning. This paper analyses the development of learner autonomy through the use of learning contracts which were used during a 15-week Strategy Training Programme. Specifically, the study explored to what extent learning contracts could help develop ESL students' abilities in managing their learning viz-a-viz, the planning, organization, and evaluation of the learning process. The main study (Sidhu, 2009) involved a trained TESL teacher and an intact ESL class of 42 students in an urban secondary girls' school located in Selangor, Malaysia. This paper details the learning progress of six of the 42 ESL students involved in the Strategy Training Programme. The data collection process employed the use of learning contracts, semi-structured interviews, and a feedback form. Findings indicated that the learning contract was seen as an effective tool in empowering students to take charge of their own learning. Students showed more confidence in planning and organizing as compared to evaluating their learning process. The implication of the results suggest that students must be provided with more opportunities to critically reflect and evaluate their own learning in order to enhance their learning progress towards becoming autonomous lifelong learners.

**Keywords: Learner autonomy, ESL classroom, strategy training, learning contracts, teacher perceptions, evaluating learning, lifelong learning**

## INTRODUCTION

Responsible learners are those who accept the idea that their own efforts are crucial to the learning process (Scharle and Szabó, 2000). Increasingly, in today's ESL classrooms, teachers are striving to inculcate this trait in their learners by being equal partners in the teaching and learning environment. Although learner autonomy has been one of the dominant topics in language teaching over the last three decades, an all encompassing definition has still to be achieved. Thang (2009, p.1) notes that despite the existence of a number of differing views, autonomy in language learning is principally concerned with providing learners with "strategies and techniques for learning a language in the absence of a teacher" or

alternatively "providing learners with the conditions and opportunities for exercising degree of independence". Bailly and Ciekanski (2006) point out that learner autonomy refers to various forms of independent or self-directed learning involving limited teacher intervention.

Other researchers (Wenden, 1998; Hiemstra, 2004; Holec, 2007; Brown, Smith and Ushioda, 2007; Balcikanli, 2008; Jiménez Raya, 2009) concurred in defining autonomy as the ability, power or capacity to do something and that an autonomous learner is one who is capable of taking charge of his/her own learning. These traits are not inborn and therefore, must be acquired either naturally or by formal learning. In many ESL classrooms, this 'formal learning' in language learning is often referred to as learner training. According to Wenden (1998), the history of learner training or the 'learning-how-to-learn' concept can be traced from the early 1900s and in today's contexts its goals (educational, personal, and social) are clearly outlined.

Holec (2007) suggests that autonomous learners are capable of managing their own learning in that they are capable of making the whole range of decisions necessary to plan and carry out a learning programme. Such decisions include choosing suitable learning objectives and deciding upon appropriate content and learning materials to accomplish the chosen learning objectives. It also involves making decisions about the methods and techniques to be used in successfully completing the task. As a manager of the learning process, autonomous learners have the capability to monitor and assess the outcome of their own performance (Benson and Nunan, 2005). Cohen (2000) and Cotterall (2009) concurred with these characteristics but emphasized that autonomous learners may not necessarily have external, observable features but they have some distinctive characteristics. They are learners who understand what is being taught, are able to formulate their own learning objectives, are able to select materials, make use of appropriate learning strategies and monitor and self-assess their own learning. Lamb and Reinders (2007) and Thang (2009) added that

students' preferences for these characteristics may be influenced by socio cultural factors.

Notwithstanding constraints in many ESL contexts, learner autonomy programmes encourage self paced learning and this addresses the fundamental aspect of individual differences with regards to ability, interest, personality, motivation, and learning style. Researchers (*see* Oxford, 1990; Aase, 2003; Aoki, 2003; Benson, 2001: 2007; Sidhu, 2009) have indicated that there is a positive correlation between learner autonomy and effective language learning. Adding to this discourse, Chia (2009, p. 37) states that in today's technological era, we are constantly being bombarded with new information and communication technologies making it even more pertinent for us to constantly 'update' and 'upgrade' our skills through self learning in order to stay relevant in today's increasingly interconnected and globalized work environments.

Proponents of learner autonomy, such as Oxford (1990), Benson and Nunan (2005), Loewen (2006), Benson (2007) and Sinclair and Thang (2009), emphasize that students can be trained to be autonomous learners through learner training. It refers to a process where learners are explicitly taught techniques of learning a language and awareness as to 'how' and 'when' to use strategies to enable them to become self-directed learners (Williams and Burden, 1997; Lamb and Reinders, 2007). Besides learner training, learner autonomy can also be encouraged through self access centres and learning tools, such as reflective journals and learning contracts.

According to Hammond and Collins (1991, p. 131), a learning agreement or a learning contract is "a detailed statement prepared by the learner, usually with support from a mentor or facilitator and it is developed after learning needs have been diagnosed". It is a written document on how a particular activity will be undertaken so that learning goals can be achieved.

Several researchers (e.g. Hammond and Collins, 1991; Atkins, 2005; Anderson, Reinders and Jones-Parry, 2004; Gao, 2006; Cotterall, 2009) acknowledge that learning agreements

prepare learners for lifelong learning skills. They accentuate that through learning agreements, learners not only experience increased levels of learner autonomy, empowerment and control, but personal growth and increased self-esteem, especially when they have succeeded in the learning process. Learning agreements also encourage learners to meet their own identified learning needs, rather than follow a pre-determined course of studies. As a consequence, learning contracts help students to cope with the management of the learning process especially during the transition period when learners move from teacher-directed learning to self-directed learning (Scharle and Szabó, 2000; Lamb and Reinders, 2007). By using learning contracts, learners are "free to work in their own preferred learning styles, at their own pace, using sequencing which is personally meaningful" (Hammond and Collins, 1991, p. 138). As learning contracts acknowledge individual differences, learning can be tailored to meet a learner's personal needs and goals in that they offer language learners greater opportunities to work towards, and achieve, individual goals (McGarrell, 2008).

Despite their advantages, learning agreements have also been known to present a number of limitations. Anderson, Boud and Sampson (1996) put forward some of the concerns that one may experience when trying to implement learning agreements. They state that learners are not always in the best position to judge what they need to learn, as many learners simply do not know what they do not know. Additionally, some learners may experience problems with their advisors and some learners and staff members may oppose this new method of assessment. Furthermore, the whole process is often time-consuming and academic standards could fall if learners choose their own assessment.

However, Lamb and Reinders (2007) contend that most of these limitations are usually experienced only in the initial stages of implementation and mainly occur due to inadequate orientation of learners and facilitators. Balcikanli (2008) points out that the ability to write contracts is a learned skill and facilitators must spend considerable time helping students to focus on realistic and manageable activities.

Fisher, Hafner and Young (2006) suggest that at the initial stage, the teacher should be present to provide help with the whole process especially with deciding how the learning task should be carried out, the kind of materials needed and how to assess achievement. At the beginning, learners' practice is restricted perhaps only to identifying objectives. Later, the task of contract completion can be simplified by dividing learners into small groups where each group is provided with a sample contract and a set of questions against which the learners evaluate the contract. Such a move would not only help learners become more reflective in their approach but also gradually help them in the writing of their own learning contracts.

Loewen (2006) points out that there is no limit to possibilities as to what a learning contract may look like. If a teacher is contemplating using contracts with learners, it is important to decide how much of the contract is going to be drawn up by the learner independently and how much will be completed collaboratively with the teacher. Hence, key questions may include: What are the learning objectives? What activities will help achieve the objectives? What is the appropriate time frame for achieving the objectives? What resources will be needed?

## METHODOLOGY

This study investigated the development of learner autonomy through the use of learning contracts in an intact ESL classroom during a 15-week Strategy Training Programme (STP hereafter). It explored the development of learner autonomy in helping students plan, organize and evaluate their learning process. The main study (Sidhu, 2009) involved an intact upper secondary ESL Malaysian classroom of 42 students in an urban all-girls school located in Selangor. These Form Four students were approximately 16 years old and had been studying English as a Second language (ESL)

for the past 15 years in schools. However, this paper outlines the experiences of six students. The teacher (referred with the pseudonym *Karen* hereafter) is a trained TESL teacher with twenty years of teaching experience. She had also undergone a Learning-how-to-Learn workshop conducted by the Ministry of Education. Besides that, she was also the resource person for learner autonomy in her district. In this study, data were collected through the use of learning contracts, semi-structured interviews and a feedback form.

During the 15-week Strategy Training Programme (STP hereafter), the students were required to write individual learning contracts with the aim of fostering learner autonomy. Prior to the 15-week STP, students underwent a two-week ice-breaking session, where they were introduced to strategy training and provided with ample practice in preparing learning contracts. Guidelines on writing learning contracts and an example of a completed learning contract were also given to students. Students were also briefed on the aims and benefits of learning contracts and they were encouraged to comment on samples of completed learning contracts. Then, students were encouraged to draw up a learning contract of an upcoming topic. The purpose of this activity was to raise awareness among students on how to write clear and realistic learning objectives and evaluate their own learning process. The learning contract framework used in this study required students to make decisions on a number of aspects in the management of learning, i.e. planning, organizing and evaluating their language learning process.

All students were required to complete three compulsory learning contracts within the 15-week STP. They were also encouraged to prepare their own learning contracts for self-study. The learning contracts of six students were analyzed. The selection was based on the students' pre and post strategy training scores obtained from the administration of Oxford's (1990) Strategy Inventory Learning (SILL) questionnaire. The scores revealed that a majority of the intact class of 42 students (92.8%) displayed an increase in the use of language learning strategies (LLS hereafter) whilst only 7.2% recorded a decrease.

Thus, three students who recorded the highest frequency use of LLS (referred to as Students A1, A2 and A3) and the three students who displayed a decreased use of LLS (referred to as Students B1, B2 and B3) were chosen for the case study.

This study employed a mixed method which included both qualitative and quantitative research instruments. Besides learning contracts, semi-structured interviews were also conducted with the six students and the TESL teacher (Karen) in order to investigate the effectiveness of learning contracts in helping them manage their learning process. The quantitative component involving some descriptive statistics was obtained from the Feedback Form which was distributed to all the 42 students. The main aim of the Feedback Form was to investigate students' perspectives on the use of learning contracts in enhancing their management of the learning process. Students were required to respond based on a 4-point Likert scale where a score of 1 indicated 'least successful' whilst a score of 4 indicated that they were 'most successful'.

The learning contracts were analyzed to investigate whether strategy training had an effect on developing learner autonomy in terms of helping them manage their learning. An example of the coding procedure used to analyse the learning contract is presented in *Fig. 1*. In investigating students' planning abilities, the learning contracts were analyzed to look into students' abilities to determine and formulate their own learning objectives based on their chosen topic of interest. To investigate how successful students were in organizing their own learning process, the analysis looked into the following aspects:

• Ability to decide and propose suitable learning tasks to achieve the identified learning objectives;

• Ability to determine and locate suitable learning materials to successfully accomplish the learning task(s), and;

• Ability to decide on the pace of learning, i.e. their ability to set and keep to proposed

target dates for completing the chosen learning task(s).

Finally, learning contracts were also analyzed to investigate the students' ability in self-evaluating their work or performance upon the completion of the learning tasks.

## FINDINGS AND DISCUSSION

The following section presents the findings based on the three main components of managing the learning process investigated in this study, i.e. students' planning, organizing and self-evaluation abilities.

| Name: *Student A1* | Date: *6 July* | Topic: *Information in reports* | | |
|---|---|---|---|---|
| **Objective(s)** • *To read and understand a story book and to write a report* → PLANNING • *To widen my vocabulary power while enjoying reading* | | | | |
| **Proposed Task/Activity** | **Proposed Resources** | **Target date of Completion** | **Evidence of achievement** | **Assessment of Performance** |
| *3. To scan for unfamiliar words and search their meanings using a dictionary.* *4.To jot down new and unique phrases for future essays* *5.To write a short account of the story for a Book Report* | *A horror story book "the 7th. Fontana Book of Great Horror Stories" by C.S. Forester* | *17July* *Completed 15 July* | *All ~~most my~~ these tasks had been done in my vocabulary book* | *I learnt a number of unfamiliar words and phrases that I'm positive will help me in my writing. Before searching for the meanings of the words I had tried to guess them by connecting to the words before and after like we learnt in class. I thoroughly enjoyed reading and ~~doing it~~ writing the synopsis of the story. Still a lot to improve on my vocabulary* |

Determining Learning Tasks

Determining Learning Materials

Pacing the Learning Process

EVALUATING LEARNING
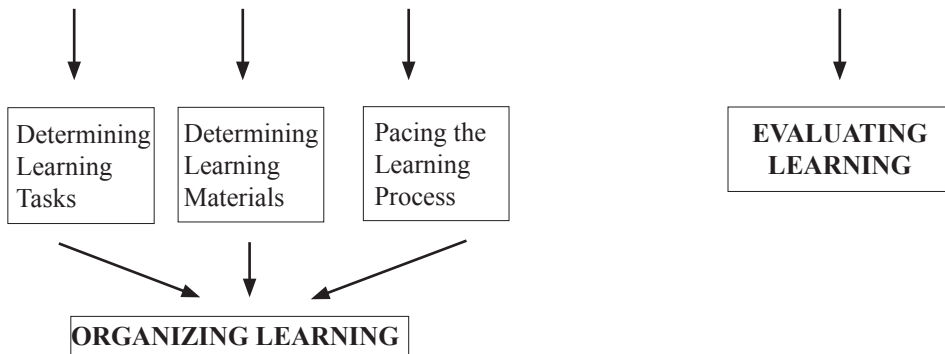
**ORGANIZING LEARNING**

*Fig. 1: Coding procedure used to analyze a sample learning contract*

*Legend*:
Planning – Ability to determine and formulate learning objectives.
Organising – Ability to decide on suitable learning tasks and learning materials to accomplish learning objectives and pace their learning.
Evaluating – Ability to self-evaluate their performance upon the completion of the learning task.

*Students' Language Planning Abilities*

Extracts of the six students' first learning contracts revealed that even though all students were able to express their general learning objectives, their specific learning objectives still left much to be desired. For example, the learning objectives of Students A3 and B2 who aimed to 'read and understand a story' may be perceived as rather general objectives. Meanwhile, Student A1's objectives such as 'to read for understanding, enjoyment' and 'to encourage the reading habit' may be interpreted as rather broad and ambiguous learning aims planned for a short span of time (in this case, she planned to complete the task within two weeks).

This limited planning ability evident at the beginning of week 2, however, saw some changes for both Students A2 and B3 who showed slight improvement in their planning abilities when they submitted their learning contracts in week 4. They were able to express both the general and specific objectives of their own learning. For example, Student A1 had two objectives - one for reading and one for vocabulary. Though she was not very focused in formulating her reading objective, she achieved more success in articulating her vocabulary objective which was to 'use a dictionary to locate meanings of words and learn to use them in different contexts'. Similarly, Student B3 also fell short in formulating her reading objective but her formulation of her vocabulary objective (to pick out descriptive words for use in essays) signified her slight improvement in her planning abilities.

It was also around this time that Student A2 by week 7 was able to determine both the general and specific objectives of Lesson 7B and her learning objectives for Learning Contract 3 displayed her ability and success in formulating rather clear and focused learning objectives. Her objectives to 'read, understand and summarize an article' and 'to find meanings of unknown words using a dictionary' can be seen as focused and explicit learning objectives. Similar success was also seen in the planning abilities of Students A3 and B3. Their learning objectives for Lesson 7B (*see* Table 1) when matched with the objectives provided by the teacher indicated that both of them were able to successfully articulate both the main and specific objectives of the lesson. Both also displayed their success in formulating rather focused learning objectives for the second learning contract.

*Students' Organizational Abilities*

Learning contracts were also analyzed to examine how successful students organized their own learning process. This aspect of managing the learning process involves students' ability to do the following: decide and propose suitable learning tasks to achieve the identified learning objectives, determine, and locate suitable learning materials to successfully accomplish the learning task(s), and decide on the pace of learning (their ability to set and keep to proposed target dates for completing the chosen learning tasks).

Students' ability to propose learning tasks (*see* Table 2) revealed that most of the students had the objective 'to read and understand' as one of their main objectives for Learning Contract 1. Yet, they failed to propose a tangible way to check their understanding of the materials read. However, these limited capabilities saw some marked improvement when the students stepped into the middle phase of the training programme (weeks 6-10). A closer analysis of the students' learning contracts revealed that by the end of the training programme, all six students were successful in determining suitable learning tasks to achieve their learning aims. The learning tasks proposed also indicated that at the beginning phase, the students seemed satisfied with proposing simple reading comprehension tasks but as they progressed into the strategy training programme, they were more willing to take on challenging and ambitious learning tasks. They took on tasks such as writing a talk (Student A1) and writing a summary (Students A2, A3, B2).

*Pacing the Learning Process*

An analysis of the students' first learning contracts revealed that, except for Student A2,

TABLE 1
Extracts from students' learning contracts indicating students' planning abilities

| Student | Beginning phase of training (Weeks 1-5) | Middle phase of training (Weeks 6 - 10) | Final phase of training (Weeks 11 -15) |
|---|---|---|---|
| A1 | Learning Contract 1-Week 4 To read with understanding, enjoyment and to search meanings of unfamiliar words. To encourage reading habit | Learning Contract 2 - Week 6 To read, understand and write a book report To widen my vocabulary power while enjoying it | Learning Contract 5 - Week 14 To read and understand two articles on 'Consumerism' and write two summaries To improve my word power by guessing meanings of difficult words |
| A2 | Learning Contract 1 - Week 4 Read and understand information in a book on environmental issues Use a dictionary to locate meanings of words and learn to use them in different contexts | Learning Contract 3 - Week 9 To read, understand and summarize an article on an interesting place of travel To find meanings of unknown words using a dictionary to widen my vocabulary | Learning Contract 5 - Week 11 To read, understand and summarize a passage on moral values To use a dictionary to locate meanings of difficult words and to use a thesaurus find similar meanings |
| A3 | Learning Contract 1 - Week 5 To read and understand a story | Learning Contract 2 - Week 10 To read and understand a passage by answering comprehension questions based on passage To use a dictionary to locate meanings of new words | Learning Contract 3 - Week 12 Read and understand a passage on moral values Answer questions based on the passage To write a summary of the passage |
| B1 | Learning Contract 1 - Week 5 To widen my vocabulary | Learning Contract 2 - Week 10 To improve my grammar and vocabulary | Learning Contract 3 - Week 13 To read and understand a story on moral values and do a comprehension exercise To find meanings of difficult words using a dictionary |
| B2 | Learning Contract 1 - Week 5 Read and understand information in a story | Learning Contract 3- Week 10 To improve composition skills by reading descriptions of places and jotting down interesting words and phrases | Learning Contract 4 - Week 13 To read and understand a passage on health To answer comprehension questions and write a summary |

continue Table 1

| B3 | Learning Contract 1 - Week 4<br>To read and understand a story and pick out descriptive words which can be used for essays and also to widen my vocabulary | Learning contract 2 - Week 8<br>To read and understand an extract from a book on tourism<br>To search for new words to improve vocabulary using a thesaurus | Learning Contract 3 - Week 13<br>To read and understand short stories as well as to locate the moral values behind the stories<br>To find meanings of difficult words using a dictionary |

TABLE 2

Extracts from students' learning contracts indicating their abilities to determine suitable learning tasks

| Student | Beginning Phase of Training (Weeks 1-5) | Middle Phase of Training (Weeks 6 - 10) | Final Phase of Training (Weeks 11 -15) |
| --- | --- | --- | --- |
| A1 | Learning Contract 1- Week 4<br>1. To read stories for enjoyment while understanding it<br>2. Learn new words from the story by jotting them down in the vocabulary book<br>3. Look for the meanings of these words and construct different sentences | Learning Contract 2 - Week 6<br>1. To scan for unfamiliar words and search their meanings using a dictionary<br>2. To jot down new and unique phrases for future essays<br>3. To write a short account on the story for a Book Report | Learning Contract 5 - Week 14<br>1. To learn new words from articles and find their meanings using a dictionary<br>2. To read and understand articles on Consumerism and then use information in the articles to write an essay (a talk) on "Consumerism" |
| A2 | Learning Contract 1-Week 4<br>1. To read and comprehend a book on how to save the environment<br>2. To learn 5 new words and construct sentences with them | Learning Contract 2- Week 6<br>1. To answer 60 objectives questions based on reading passages<br>2. To learn 5 new words in Reader's Digest and construct sentences with them | Learning Contract 4 - Week 11<br>1. To read, understand and answer comprehension questions based on story read<br>2. To summarise the story<br>3. To learn 5 new words used in the story by making sentences<br>4. To find similar meanings of the 5 new words using a thesaurus |

continue Table 2

| | | | |
|---|---|---|---|
| A3 | Learning Contract 1- Week 5<br>To read and understand stories | Learning Contract 2 - Week 8<br>1. To read and understand a passage and answer comprehension questions<br>2. To find meanings of new words using a dictionary | Learning Contract 4 - Week 12<br>1. To read and understand a passage on "Bravery Award for Student" and complete a comprehension activity<br>2. To write a summary of the passage |
| B1 | Learning Contract 1- Week 5<br>To read a fiction book to improve my word power | Learning Contract 2 - Week 10<br>1. To read and understand a passage on descriptions of places<br>2. To identify 5 new words and locate their meanings from the dictionary | Learning Contract 3 - Week 14<br>1. To answer comprehension questions based on a story<br>2. To locate meanings of 5 difficult words found in the story |
| B2 | Learning Contract 1- Week 5<br>To read a story to improve my English | Learning Contract 3- Week 10<br>1. To read tourist brochures and write a composition by the title, "Beautiful Places to visit in China"<br>2. To find meanings of difficult words by use of dictionary<br>3. To improve writing skills by jotting down interesting words and phrases from brochures | Learning Contract 4 - Week 14<br>1. To read a passage and do a comprehension exercise<br>2. To write a summary of the passage on health |
| B3 | Learning Contract 1- Week 4<br>1. To read and understand a story<br>2. To learn 5 descriptive words and phrases and to use them in sentences | Learning Contract 2- Week 9<br>1. To read and answer comprehension questions based on a description of a famous place<br>2. To locate the meanings of 5 new words and find their synonyms using a thesaurus | Learning Contract 3 - Week 13<br>1. To read a short story and give the moral value<br>2. To answer questions on the story<br>3. To list down new words and find their meanings using a dictionary |

TABLE 3
Students' ratings of their ability to organize their own learning

| Aspects of organizing the learning process | Mean score |
| --- | --- |
| Determining learning tasks to achieve learning objectives | 3.0 |
| Deciding how long you should spend on a learning task | 3.2 |
| Deciding and locating suitable materials to accomplish a learning task | 3.3 |
| Overall Weighted mean Score | 3.2 |

*Scale*: 1=least successful, 2= fairly successful, 3=successful, 4 = very successful

they failed to keep to their own assigned target dates for completing their learning task. Both Students A1 and B3 started working on their learning contract on 15 June but gave themselves slightly more than a week to accomplish the task. Both failed to keep to their proposed dates of completion. This could probably be attributed to their limited ability to pace their learning. They had set a rather unrealistic time (one week) to complete a task involving extensive reading. Both, however, they managed to achieve success after spending an additional week on the task.

Students A3, B1, and B2 set aside three weeks to complete their task but failed to keep to their target dates of completion. Student B2 only managed to complete her task five days later whereas Student B1 admitted that when she submitted her contract on 6 July, she had read only 15 pages in the three weeks. Her excuse was 'I have too much homework and tuition'. She, however, promised to read 'half an hour' everyday before going to sleep. This showed that by week 5, most students possessed rather limited abilities in pacing their learning. While some set unrealistic dates for completing learning tasks, others were not disciplined enough to keep to target dates that they had set for themselves. This limited capability of achievement, however, saw a change during the middle phase of the training programme (weeks 6-10). For example, Student A1 read a story and wrote a book report while Student B2 read brochures to get information for writing a composition. Meanwhile, Students A2, A3, and B3 answered comprehension questions based on

their reading materials. These five students were also successful in determining suitable tasks for their vocabulary component.

*Selection of Materials*

The findings also revealed that even though all the six students' written documents indicated that they entered the STP with rather limited capabilities in almost all aspects of organization of the learning process, it was not so where locating learning materials were concerned. For example, for Learning Contract 1, students were required to locate suitable reading material for extensive reading. The students' learning contracts indicated that all of them were successful in locating suitable materials. For example, Student A1 read stories from the book The Ghouls whilst Student A3 read short stories from the book, Twentieth Century Short Stories by Barnes and Egford. Students B1, B2, and B3 chose other books of fiction. Student A2 was the only student who chose to read a non-fiction book. She read a book entitled How to be Green by John Buttons (a book on how to save the environment). All these six choices are a clear indication that the students had no trouble locating appropriate materials for extensive reading.

The second compulsory learning contract given to students during the middle phase of the STP required them to locate suitable materials for the topic "Descriptions of scenes and famous places." Here again, all students were rather successful. The third compulsory learning

contract carried out during the final phase of the STP required students to carry out activities on the topic "Stories on Moral Values." All the six students displayed their confidence and success in locating stories on moral values. For example, Student B2 read Guy de Maupaussant's famous short story entitled The Necklace and Student B3 read The Lumber Room, a short story by Saki. Student A3 chose to get her material from a revision book and Student B1 located her material (extract from Robinson Crusoe) from her Form Four English language textbook.

The above findings indicated that the students initially came into the programme with rather limited organizational abilities but by the end of the programme, all students were successful in various aspects of organization of the learning process. This claim was further affirmed by the students during the interview sessions. All the six students claimed that strategy training helped them improve their organizational abilities. Responses also indicated that students felt most successful in locating learning materials followed by pacing their learning process, proposing suitable strategies and finally determining learning tasks to fulfil their learning objectives. Student B3 added that being a school librarian, she had easy access to the school library, whereas Student A2 indicated that that her parents had a well-equipped library at home so she never felt lost for learning materials. Student A1 confessed to being a *'Net Junkie'* and claimed she could get *'loads of information from the Net'*. Although Student B1 admitted that she had no trouble looking for suitable material, she felt that it was still the teacher's duty to bring supplement materials to class because *'not all students can find good materials - especially the weak students'*.

All the six students also expressed that they had no trouble setting and keeping to target dates. Student A1 said that '*with the learning contract I have become more conscious as to what I should do and when I should finish something, so I make it a point to finish it by the due date*'. Student A2 expressed great confidence in her ability to keep to target dates and claimed that the learning contract had made her more disciplined in her

learning. She said that if she had written down a certain date and when the date drew close she would feel '*rather guilty*' so she would quickly attend to the task. Student B2 felt she was successful in keeping to target dates because she felt that '*writing down due dates is like making a promise, so we must keep to our promises*'. Student B3 felt that though she would rate herself as successful, she admitted that she was not always successful because sometimes she had too much homework and tuition.

Students' success in organizing their own learning was further substantiated by findings obtained from the Feedback Form (*see* Table 3). The results indicated that students were rather confident (mean score 3.2) in organizing their own learning. The scores also revealed that they were more successful in locating suitable materials (mean score 3.3) and pacing their learning (3.2) as compared to determining learning tasks (mean score 3.0).

*Students' Self Evaluation of the Learning Process*

Finally, learning contracts were analyzed to investigate the students' ability in self-evaluating their work or performance upon the completion of the learning task. Like the previous aspects, students' limited capabilities in self-evaluation during the beginning phase of the strategy training programme were evident when they submitted their first learning contracts in weeks 4 and 5. Nevertheless, signs of progress in self-evaluation were displayed by all students during the middle phase of the STP. Students A2 and B3 who showed early success in self-assessment, continued to record advancement. They moved from providing general comments regarding their performance to giving themselves grades and marks. For example, Student A2 in Learning Contract 3 noted that she did 'okay' and gave herself a high credit for her summary writing. Besides evaluating her performance, she was also able to articulate the usefulness of the task in helping her increase her general knowledge. Likewise, Student B3 in Learning Contract 2 gave herself a score of 18 out of 20 for her

performance in the reading comprehension task and went a step further in self-evaluation to voice her awareness of her limitations '*I think I still need to improve my vocabulary as I find it difficult to give meaning of new words*'.

A marked improvement was seen in Student A1's abilities to self-evaluate her learning tasks. In Learning Contract 1, she only recorded her limitations and concerns in evaluating and said '*I am not good at marking my own work*'. Later in Learning Contract 3, she was not only successful in rating her summary writing as 'fair and moderate' but was also able to articulate her limitations. She commented that '*in grading summary, I find it difficult to give marks on my language and sometimes I do not know if my content is right*'.

Both Students A3 and B1 who had failed to assess their performance in Learning Contract 1, exhibited progress in self-assessment in Learning Contract 2. In fact, both were successful in scoring their reading comprehension tasks. Student A3 felt the exercise was easy, and Student B1 felt she did learn some new words. On the other hand, Student B2 still lacked the confidence to self-evaluate her own performance. Though she was able to grade her essay as 'moderate' and show her awareness of her limitation that she was '*still not good in grammar*'. She admitted she could not mark her work, so she asked a friend to grade it for her.

In the final phase of training, almost all the students were able to grade their own work and identify their weaknesses. Marked improvement was seen in Student B1 who all this while had stayed away from grading her work. In Learning Contract 3, which she submitted in week 12, she not only gave a score for her performance in reading comprehension but was also successful in locating her weakness in the vocabulary section. She even suggested that she would '*read more and do more vocabulary exercises*'.

Student A1 in Learning Contract 5 displayed her success in giving a grade to her essay. Before this, she had resorted to giving general comments, such as 'fair' and 'moderate.' Though she was successful in assessing her

performance, she indicated that she was still not comfortable in evaluating her work when she said '*I still have to learn much more about evaluating my work*'. This lack of confidence was also highlighted in her interview when she highlighted that '*I do not like to mark my own work because I do not know for sure whether my sentences are rightly constructed. Maybe I still have to get my tuition teacher to look at them*'.

The analysis of the students' learning contracts and learning journals revealed that the students did experience an improvement in self-assessing their own performance. Students' responses to the structured interview, however, indicated that only Students A2 and A3 were confident enough to admit that they had been successful in self-evaluation. The remaining four students felt that they were only fairly successful. Although the students admitted that they could judge and evaluate their own work, most of them felt they still lacked the confidence to grade their own work (with the exception of students A2 and A3). Student A1 acknowledged that it was important to grade her own work but nevertheless she liked others to grade her work so that she '*could receive different comments and views*' and these would help her work on her '*weak points*'.

### Students' Overall Ability to Manage Their Own Learning

Analysis of the students' written documents indicated that by the end of the 15-week STP, all six students were successful in managing their learning process. However, the rates of progress and improvement varied from one individual to another. Similarly, the rate of success of each component of the learning process also varied from one student to another. The approximate week during which each of the six students attained success in the three aspects of the learning process is shown in Table 4.

The results show that although Student A1 experienced success in organizing her learning in week 6, it was only in week 9 that she was able to self-evaluate her learning and in week 11

TABLE 4
Approximate week during which students achieved success in managing their own
learning

| Learning process | Planning | Organizing | Self-Evaluating |
|---|---|---|---|
| Student A1 | Week 11 | Week 6 | Week 9 |
| Student A2 | Week 7 | Week 6 | Week 4 |
| Student A3 | Week 7 | Week 8 | Week 8 |
| Student B1 | Week 11 | Week 14 | Week 10 |
| Student B2 | Week 11 | Week 10 | Week 13 |
| Student B3 | Week 7 | Week 13 | Week 10 |

she attained success in planning. Hence, it was only in the final phase of the training programme (week 11) that she was successful in managing her own learning. The results also revealed that both Students A2 and A3 were successful in managing their learning by the middle phase of the training programme (week 8). The rest of the students (Students A1, B1, B2, and B3) experienced success only in the final phase of the training programme.

Interviews conducted with the students also displayed a very positive response with regards to the use of the learning contract. All the six students declared that they found the learning contract useful in making them aware of the 'promise' they had made to themselves and they felt compelled to do the work that they had planned to do. It also helped them manage their learning more effectively and four students claimed that learning contracts gave them a chance to tailor their learning according to their own personal needs.

The efficacy of learning contracts was further acknowledged by the teacher in her interview. Karen corroborated the finding that the learning contracts proved to be slightly more acceptable and beneficial than the learning journals for her students. She felt that by using learning contracts, she was able to foster the development of learner autonomy among her students. She highlighted that '*by using learning contracts, the students were required to plan, organize and evaluate their own learning*' and this '*encouraged the students to take charge of their own learning'*. Karen also indicated that the learning contract had helped improve her students' self-assessment abilities. She, however, confessed that she knew '*for a fact, that they (students) do not like marking their own work*'. This was so because whenever she got them to grade their own work or their peers' she would '*hear a lot of moans and groans*' expressing their dissatisfaction with the activity. Karen strongly supported the use of students' learning contracts as she felt there was marked improvement in their ability to self-assess their own performance towards the end of the programme.

**CONCLUSIONS**

The findings in this study revealed that 81 per cent of the students perceived that they benefited from using learning contracts. Moreover, these students also claimed that by using learning contracts, they could concentrate on their weaknesses and carry out activities that could give them the freedom to work to suit their own needs. A majority of the students felt that working using learning contracts enhanced their planning and organizational abilities.

Furthermore, all the six students involved in the case study were successful in managing their learning process. Students also indicated that with help from the STP and the use of learning contracts, they felt more confident of taking charge of their own learning and the teacher need not always be there to tell them what, when, and how something ought to be learned or done. Towards the end of the strategy training, the students were capable of taking charge of their own learning. Students B2 and B3 can be regarded as students who are on the path of being autonomous. In contrast to these students, Student B1 despite showing improvement still lacked the confidence to take charge or responsibility for her own learning.

Generally, the six students in this study responded very positively towards the use of learning contracts. They highlighted that it made them more responsible and disciplined in taking charge of their own learning. For some, it was seen as a 'promise' they made to themselves and it consciously compelled them to do the work that they had planned to do. To others, the learning contract was a means to help them charter their personal learning path to suit their own interests, ability and potential. In fact, researchers like Anderson, Boud and Sampson (1996), Hammond and Collins (1991) and Knowles (1990) assert that learning contracts acknowledge individual differences and encourage personal growth.

At this juncture, it is perhaps pertinent to highlight that getting students to work with learning contracts comes with its share of challenges. Getting students to express themselves critically in writing can be a problem when they are limited users of the language. More importantly, students found it burdensome having to write down their thoughts after each lesson. The researchers in this study were aware of these problems when they embarked on the study. Therefore, they took some positive steps to overcome the challenges. Firstly, a two-week ice-breaking session was carried out to make students aware of the critical reflection and how this process would help them in their own learning process. Once they saw the learning gains, they became more committed. Besides that, the researchers closely monitored the students' progress and provided constructive feedback at all stages. The students highlighted that seeing the commitment of their teacher and the researchers made them feel obliged to do their best.

The findings of this study also imply that students can be helped to manage their own learning process if educators take steps to create a positive learning environment. Such an environment can be encouraged through the use of cognitive tools such as the learning contracts which emphasize reflection and self-diagnosis. Educators must understand that the learning contract provides a supportive framework and a sense of direction and evaluation through which learners could plan their own learning. When preparing learning contracts, students are required to identify learning objectives, determine learning tasks, select suitable learning materials, determine deadlines for completing work, and evaluate their own performance. According to Nunan and Lamb (1996) and Dickinson (1995), all these are crucial decisions in effective learning that will help learners to not only develop greater awareness of language learning but also help them develop learner autonomy. Wenden (1995, p. 190) notes that "it is these real life tasks that should be the focus of course development and lesson planning" in learner training programmes that seek to promote learner autonomy.

Galileo (1564 – 1642) stated that "You cannot teach a man anything; you can only help him to find it within himself". This thought succinctly sums what type of learning environment literacy educators can create for their ESL students.

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# English Language Skills Attrition in Speed and In-depth Reading Comprehension among EFL Learners

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## ABSTRACT

This study aimed to identify if learners experience any skills attrition in speed and in-depth reading comprehension over a two-month non-use of English language. One hundred and twenty-seven tertiary participants received both a pre-test and a post-test, whose contents were adapted from China's College English Test, Band 4 and Band 6, made up of four short passages to measure proficiency change in in-depth reading comprehension (DR) and one long passage to determine the proficiency change in speed reading comprehension (SR). The results did not indicate any statistically significant skills attrition in both modes of reading comprehension, though slight increase was found in SR, while slight skills attrition was obtained in DR. The results questioned the threshold theory in terms of subcategories and provided some possibly beneficial suggestions for English language learners.

*Keywords*: **Attrition, in-depth reading, speed reading, threshold hypothesis**

## INTRODUCTION

In China, after a two-month summer holiday, many university students feel hard to understand the documents carrying modern science and technology since they may have lost much of their English knowledge once gained in their universities or colleges. Thus, this situation is worrying and has led scholars to commit themselves to research into language attrition, which plays a significant role in language learning.

Language attrition, in this study, is defined as the process in which the acquired language knowledge degrades when bilinguals or multilinguals suspend or decrease their language learning. This process should be physiological rather than pathological. In other words, this process should belong to natural decline rather than unnatural decline (Ni, 2007b).

Four areas of language attrition are often discussed. They can be categorized based on what language (L1 or L2) is attrited and where (L1 or L2 context) the language is attrited. Based on these criteria, the description of language attrition is known as the "van Els taxonomy" ("language attrition," n.d.) (*see* Table 1). As illustrated in Table 1, L1 loss in an L1 environment can be observed among people with

dementia or those with aphasia in the situation of native language. L1 loss in an L2 setting can be observed amongst immigrants who lose their first language in their new environment. L2 loss in an L1 setting is usually observed in individuals who have lost the ability to use an L2 that was perhaps studied at school in their L1 setting. Finally, L2 loss in an L2 environment is most commonly observed amongst immigrant communities without any formal training in their L2 who lose that L2 as they age and revert to their L1 ("language attrition," n.d.). This study mainly focused on the attrition of L2 (English) learners in an L1 (Chinese mandarin) language environment.

There are a number of hypotheses in the area of language attrition. One well-known hypothesis, which is referred to as *threshold theory,* has been heatedly discussed and corroborated in literature. Neisser (1984) suggested that Bahrick's participants might have overcome a "critical threshold" which helped them to become more resistant against attrition, implying that there was "a critical point in *overall language proficiency*, below which attrition is rapid and extensive, but above which a large proportion of the initially acquired material is retained" (Clark, 1982, p. 58). The findings in Bahrick's study showed that after the first years in which all subjects lost equal amounts, the subjects who had received higher levels of training lost a progressively smaller proportion of their knowledge. Thus, it can be said that higher levels of proficiency in the long run aid retention (Xu, 2007, p. 6). So far, there has been a great deal of research devoted to this hypothesis, arguing that the threshold hypothesis should be taken into consideration in future attrition research (Grendel, 1993; Weltens and Grendel, 1993; Weltens, van Els and Shils, 1989;

Hansen, 1999; Murtagh, 2003). It is argued that those who have passed the threshold must have shaped a systematic ability to understand and internalize the knowledge structures, which is called a schema by Neisser (1984). He explained that this schema was much more resistant to attrition than isolated pieces of information.

An amount of research into language attrition over a holiday has been conducted in various linguistic elements. Smythe *et al.* (1973) conducted a study to investigate second language attrition over a summer vacation, during which no SL instruction was provided. 220 students from three secondary schools in Ontario were tested for the amount of loss in French skills they might suffer during the summer vacation between grades nine and ten. It was concluded that the loss in reading comprehension was slight but significant, while there was also a slight but significant gain in listening comprehension.

Cohen (1974) investigated the effect of summer vacation on Spanish oral skills. The selected 14 participants were Anglo children from the Culver City Spanish Immersion Programme. These children were taught exclusively in Spanish when they were in kindergarten and then gradually introduced into Mandarin in the 1st grade. The effect of summer vacation between the first and second grades on their spoken Spanish was studied, and it showed that a three-month summer vacation had reduced the chilren's Spanish oral skills. Utterances became shorter. At least one grammatical class (preposition) was slightly less used, while another (verbs) was more frequently applied. After the vacation, the participants made more errors than they had done before the vacation. Problems with articles and adjectives which learners used to misuse remained.

TABLE 1
Attrition taxonomy

| Van Els terminology: Possible attrition | | |
| --- | --- | --- |
| X | Language environment (L1) | Language environment (L2) |
| L1 loss | L1 (e.g. aphasia) | L1 (e.g. minority communities or immigrants) |
| L2 loss | L2 (e.g. language students) | L2 (e.g. older immigrants who revert to their L1) |

However, there are also different voices in the literature. For example, it was argued that the participants generally demonstrated little language attrition over eight months of non-use of Spanish. Although high retention of receptive abilities, such as reading and listening, was expected, the participants' productive sub-abilities, such as phonology, vocabulary and syntax, were better than expected (Mehotcheva, 2007).

In China, there has also been some literature regarding language attrition. Wang (2008) explored the vocabulary attrition and argued that vocabulary attrition was a significant phenomenon in language attrition. Moreover, according to the empirical investigation on the factors influencing foreign language attrition, it was proven that the Argument for the Superiority of Younger Learners in foreign language acquisition was a one-sided view (Cao, 2007). Cao (2007) argued that learners need to learn a foreign language only after they have possessed the basic skills of their mother tongue. It is not true that the younger the learners are, the more competent they will be in learning a foreign language. Young learners are vulnerable to foreign language attrition, especially in the contexts of their native language. The attributes of foreign language attrition were also summarized from eight aspects: exclusive inducement, physiological mechanism, independent attriter, selected linguistic elements, regressive attriting course, ununiformity speed, obscure performance, and accelerated relearning (Ni, 2007a).

Despite the fact that plentiful research into language attrition has been carried out, to the author's knowledge, there has not been any research devoted to language attrition in terms of speed and in-depth reading comprehension. Most of the research regarding reading comprehension only took the overall reading comprehension proficiency into account, instead of further subcategories. Accordingly, this study, which dipped into the attrition in reading comprehension at different rates, i.e. speed and in-depth reading comprehension, would possibly open a new window to further exploration of language attrition in reading comprehension.

The dawn of the new century is witnessing much research concerning the processes of reading comprehension, among which Steinberg's (Steinberg *et al.*, 2001) Universal Four-Phase Reading Program seems convincing and interesting. The programme comprises four phases, namely, the Word Familiarization, Word Identification, Phrase and Sentence Identification, and Book Reading. This programme focused on meaning-oriented reading activities. In this study, reading comprehension was measured through standardized tests rather than other instruments that could identify the four phases, so the four phases would be integrated into a whole, i.e. the overall reading comprehension ability, rather than the specific four phases, would statistically be measured in order to determine if the learners experienced any attrition in reading comprehension during the two-month break. Gough and Tunmer (1986) proposed the *simple view* of reading, in which reading comprehension is seen as the product of *Word Decoding* and *Listening Comprehension.* The formula is as follows:

*Reading comprehension= Word Decoding × Listening Comprehension*

Though simple, this approach does a remarkably good job of accounting for the data (e.g. Johnston and Kirby, 2006), and it indicates that the abilities to decode words and to understand oral language greatly impact reading comprehension ability. Learners whose word decoding ability is very poor or those with very low listening comprehension ability tend to be poor readers. In other words, in case that learners' listening comprehension is significantly raised and their word decoding ability remains stable, it is possible that they gain in reading comprehension. On the other hand, if learners' word decoding ability rises and listening comprehension ability remains the same, their reading comprehension ability may also climb up. This study would firstly identify

whether attrition occurs during the holiday and then analyze the results with this widely accepted formula.

This study aimed to explore if students, namely; tertiary students of Nanjing University of Posts and Telecommunications (NJUPT) experienced attrition in speed and in-depth English reading comprehension. The purpose of this study was to test the theory of language attrition that relates time span to English reading comprehension for the undergraduates at NJUPT. The time span, one independent variable, is generally defined as the period when participants receive no specific language training and have no immediate access to language use. The possibly attrited reading comprehension, the dependent variable, is deemed as the reading proficiency after the participants are beyond English learning for a certain period. The intervening variables such as testing environment and scoring criteria were statistically and properly controlled in the study. Apparently, there were some deficits in this study. On one hand, the sample group selected was merely from NUPT in China. This sample group might not represent all of the tertiary students in China since other tertiary students in different universities were not included. This might also cause or lead to biased results although the sample group was randomly selected from a large population, which was considered a compensation for this limitation. On the other hand, the time span between both tests was merely two months, and this might have left residues in the participants' mind and thus influenced the results obtained. In order to achieve the research purpose, a research question was raised, "Will students experience attrition in both speed and in-depth reading comprehension over a two-month holiday break?"

## METHODS

The design of this study involves two tests which were conducted before and after the holiday, respectively (referred to as pre- and post-tests). The performance scores of both the tests were analyzed by means of SPSS, a well-known programme with the full name *Statistical Product and Service Solutions*. Meanwhile,

the theoretical framework was based on the related theories in foreign language attrition and memory science, e.g., threshold theory and reading comprehension theory, which attempted to integrate quantitative with qualitative methods in order to gain reliable and plentiful results to a large extent.

### *Participants and Their Sampling*

First of all, the information on the EFL learners, such as matriculation numbers, and genders, was gathered to define the participants. In this study, 3 out of 9 classes were randomly selected to participate in both the tests and Classes A31, A38 and A 40 were finally chosen. The number of participants was 127, and this was basically representative since they were randomly selected according to their matriculation numbers. All of the participants had received two semesters' English education in NJUPT, in which both intensive and extensive reading courses were involved.

The participants, with Chinese and English as L1 and FL, respectively, were tertiary students from NJUPT. The sample of the study was from non-English major students. They were students from different faculties, majoring in different fields, out of which, male and female students were roughly proportioned (around 70% males to 30% females). Having learned English in NJUPT for two semesters, all the participants began to learn English in their junior middle school. Therefore, all of them have learned English for around seven years in the Chinese context. The age of the participants varied from 18 to 25 years old. Those aged from 18 to 20 accounted for 57.6%, followed by those aged 21 to 23 with 42.4%. The male participants accounted for 44%, and females formed the remaining 56%. There were a total of seven majors among the participants, namely, network engineering (0.8%), logistic management (8.8%), electronic business (22.4%), marketing (26.4%), information management and system (40.0%), communication engineering (imbedded system development) (0.8%) and automation (0.8%).

*Procedure*

In this study, the required data were collect longitudinally. At NJUPT, English is a compulsory course for students to register. Most of the students in the same grade select the same English course. Students are required to register for the same English courses during the first 4 to 5 semesters without exception. At the end of the semesters, they tend to take the same tests for the same English courses. Therefore, it is more convenient to conduct the tests twice on the same participants.

The two-month holiday is considered as an incubation time when students receive no formal training and have no immediate access to English knowledge. The timeline is graphically presented in *Fig. 1*, showing the specific time when the data were collected. The participants went through the pre-test in July 2008 (i.e. before the summer holiday) and the post-test in September 2008 (i.e. after the summer holiday) in the same classroom invigilated by the same two lecturers.

There are two pairs of pre- and post-tests. Pair 1 includes pre- and post-SR, and Pair 2 is made up of pre- and post-DR. Both pairs have different test items. They, however, are at the same difficulty level. The difficulty levels are set via sampled test takers' performance scores by the committee in charge of CET4 and CET6 every year. Both were adapted from the same CET 4 (China's College English Test Band 4) and CET 6 (China's College English Test Band 6). Furthermore, the number of words in both tests was almost the same. As for the pre-test, there were a total of 2459 words for the in-depth reading and 1299 words for the speed reading.

Similarly, the number of words for the in-depth reading in the post-test was 2461 and this was 1296 for the speed reading of the post-test. Another factor to support the same difficulty level is that both tests should be finished within the same time span, i.e. 50 minutes, during which 35 minutes is allotted to in-depth reading and 15 minutes to speed reading.

Considering the deficit that there might be some information remaining in participants' mind over the holiday, 127 participants took the Pair 2 tests with different test items but at the same difficulty level with Pair 1 tests. After both tests, the same two lecturers marked them under the same guidelines and using the same scoring criteria. All of the answers to both tests were objective, except for the last three blank filling in the part of speed reading. The answers to the last three blanks were also restricted to several words. In order to validate the scoring, the scorers were strictly trained to use the same judging criteria and the biased scorers were screened. In this way, the scores should be able to make unbiased judgments.

*Pre- and Post-tests*

In this study, two test papers, adapted from both CET 6 and CET 4, were used for both the pre- and post-tests. CET 6 and CET 4 should have strong reliability to test the participants' speed and in-depth reading comprehension. They have gone through approximately 20 years of validation ever since they were set in the 20th century. They are nation-wide, large-scale, and standardized tests in the charge of the Chinese Ministry of Education, whose aim is to objectively and precisely measure students'

Pretest July    Holiday 2 months    Posttest Sept.

*Fig. 1: Timeline of the study*

overall English proficiency, including speed and in-depth reading comprehension (Yang and Weir, 1998). To ensure that the difficulty level is the same each time, pilot studies were conducted before they could be taken as formal tests, which can guarantee that test takers' same score means the same level of English proficiency. Therefore, graduates with high scores in CET 6 and CET 4 are widely acknowledged and accepted by employers in China since they can objectively and indiscriminatingly show their overall English proficiency. It has also been evidenced that CET6 and CET4, internally and externally, are both highly reliable and valid to test participants' reading skills (Yang and Weir, 1998).

*Test Description*

**In-depth reading comprehension**

This part is a traditionally long-standing test type in China, which is supposed to be able to measure participants' in-depth reading comprehension. In this study, the participants were required to cover approximately 2500 words and complete 20 questions within 35 minutes. There are four passages in this part. Each passage is followed by five questions or unfinished statements. For each of them, there are four choices marked with A, B, C, and D. The participants should decide on the best choice and mark the corresponding letter on the ANSWER SHEET with a single line through the centre. There are a total of 20 questions in this part, and each question accounts for two points, adding up to the full mark 40 points.

This part requires the participants to read with intensive attention and in great detail, otherwise they may fail to choose the correct answer. Many answers lie in bits of details in the context, which aims to compel the participants to conduct in-depth reading rather than merely skimming and scanning. In addition, the main idea of a passage is also a frequent question, demanding students' holistic comprehension of the passage. There are also some questions concerning inferential abilities. The participants

would not be able to obtain the answer directly from the context, rather, they had to infer from the contexts until they managed to get the correct answer. Thus, this part can possibly test the participants' in-depth reading comprehension.

*Speed Reading Comprehension*

This part was designed to test the participants' ability to get the main points and obtain the key information by skimming and scanning the passage within a short time. In this part, the participants were given 15 minutes to go over one passage quickly and answer the questions. The number of words for the passage is around 1300, which forms a speed reading task for students to complete within 15 minutes. There are ten questions in total, each question accounting for one point, with a total of ten points. For the first seven questions, the participants were required to mark Y (for YES) if the statement agrees with the information given in the passage; N (for NO) if the statement contradicts the information given in the passage; NG (for NOT GIVEN) if the information is not given in the passage. As for the last three questions, three sentences are supposed to be completed with the information given in the passage. In this part, the participants' certain reading speed is required, which must be much faster than that for in-depth reading. In this way, this test item is supposed to be capable of identifying the participants' speed reading comprehension.

**RESULTS AND DISCUSSION**

The non-parametric two-related-samples tests compare the distributions of two related variables. If the data are continuous, normally or not normally distributed, the Wilcoxon signed-rank test (one kind of non-parametric two-related-samples tests) can be used because the test incorporates more information about the data, and it is more powerful than the sign test (Muijs, 2004, p. 89). The data in the tests were all found to be continuous, and thus, the non-parametric two-related-samples test (the Wilcoxon signed-rank test) was used to analyze

TABLE 2
A comparison between pre and post tests (N=127)

| Test | Mean Pre | Post | Difference (post-pre) | Percentage (%) | Z |
|------|------|------|------|------|------|
| SR | 5.06 | 5.17 | 0.11 | 2.2/0.97 | 1.73 |
| DR | 21.01 | 20.86 | -0.15 | -0.71/0.98 | 1.37 |

p<0.05, two-tailed

the data.  The test was aimed to test whether the observed differences between the means of the data samples were significant based on the statistical hypothesis testing approach.  The analyzed data include two pairs of data.  One pair is the pre-speed reading and post-speed reading, and the other is the pre-in-depth reading and post-in-depth reading.  The results are shown in Table 2 with the valid number 127, in which SR stands for speed reading comprehension, while DR means in-depth reading comprehension.

This table is quite revealing in several ways.  In the first place, the compared results between the pre- SR and post SR did not show any statistically significant change, although learners' SR after the holiday seemed to be slightly gained.  This is corroborated with the findings for the overall reading comprehension by Mehotcheva (2007), who argued that receptive skills (listening and reading comprehension) were well retained but not highly gained over 8-month non-use.  However, it did not corroborate Smythe's argument (1973), who reported slight but significant attrition in the overall reading comprehension.  In the second place (Table 2), it could be inferred that DR went through slight but not statistically significant attrition during the two-month holiday.  Since it was not statistically significant, the slight attrition might be due to random errors.  Accordingly, it could not be concluded that DR experienced significant attrition during the holiday, which seemed in conformity with Mehotcheva's argument on the overall reading comprehension.

Putting the statistical significance aside for a while, the focus can now be shifted to the percentage of the reading comprehension change.  According to Table 2, it could be easily identified that the post-SR gained 0.11 % over the pre-SR, which could be considered as having a slight gain.  By contrast, the post-DR lost 0.15 % compared with the pre-DR.  In other words, the interesting change found in this study was that learners' SR gained slightly but not significantly, while learners' DR lost slightly but insignificantly either.

It is most likely that some people may argue that the finding of this study is not that convincing.  However, the study is at least valid based on the present situation.  CET 4 and CET 6 are both standardized tests experiencing long practical operation and validation.  Both of them should be qualified to test SR and DR.  In addition, the study is also internally valid.  By way of Cronbach alpha formula, the internal consistency was also assessed.  The coefficient of SR was found to be 0.97, and the coefficient was 0.98 for DR.  Integrating SR and DR into a whole, the item-total Cronbach alpha is 0.75.  Therefore, the pre- and post-tests seemed to have both reached a satisfactory level in terms of internal and external validity.

It is evidenced that the results of this study are corroborated by some literature.  As mentioned above, reading comprehension is affected mainly by two factors, namely, listening comprehension and word decoding.  The listening abilities have been reported to slightly but significantly improve over a summer vacation (Smythe *et al*., 1973).  On the condition that the listening abilities have increased, the reading comprehension possibly at least remains stable if the word decoding skills have not fluctuated excessively.  Even if the word decoding ability has decreased, the reading comprehension could

still have remained unchanged or resistant to attrition as long as the listening skills increase, as reported by Smythe *et al.* (1973).

Another possible explanation for insignificant attrition in the reading comprehension over a two-month holiday could be explained from the memory theory and threshold hypothesis. In this study, since the participants have learned English for around seven years, they may have arrived at the critical point which made them resistant against forgetting. During the holiday, or when learners have no immediate access to English knowledge or have not received any formal language training, they may still store the acquired knowledge in their mind. When the school began and they received the post-test, their memory might have been stimulated and recovered (Hilgard and Bower, 1966). As a result, their test performance was not significantly poorer than it was before the holiday.

There is another important point worth highlighting. Table 2 indicates that SR increased by 2.2% while DR decreased by 0.71 %. This might reveal that learners had failed to retain DR but successfully retain SR, and this seems surprising and puzzling. One tentative reason is that the thresholds in both the SR and DR are at different levels. Learners might have reached the *critical point* of SR, but still remained away from the *critical point* of DR. The *critical point* of the SR may be somewhat lower than that of the DR. Hence, learners who reached the *critical point* of SR successfully retained SR but forgot the DR since they might have not reached its *critical point*. If this hypothesis is valid, Clark's argument (1982) that learners would become resistant against attrition if they attained to "a critical point in *overall language proficiency*" should possibly be changed to, "a critical point in *language proficiency of a specific linguistic element.*"

The threshold levels in different linguistic elements may vary. There may be a threshold level for the SR but a different level for the DR. Besides, the threshold levels in the short-duration and long-duration listening comprehension, as well as different types of writing and speaking,

may also be divergent. Admittedly, because the decease and increase in both the DR and SR are not statistically significant, the results might have been due to random errors as well.

## CONCLUSIONS

It is most likely that ESL learners benefit from this study in that they need not worry about the attrition in reading comprehension too much if they have no adequate language contact during their two-month holiday. They may alternatively become more alert towards other linguistic elements, such as the oral and writing skills, which have been found to suffer attrition (Mehotcheva, 2007), and thus, they can consciously practice and prevent attrition. This study may also be linked to the conceptual idea of the threshold levels in language acquisition. The study has revealed that attrition does not occur across all reading skills at the same time. This heterogeneity in attrition could be explained by the presence of different threshold levels in learning a language. It appears that different threshold levels may need to be established to give a meaningful account of how language is learned and retained. This effort may help to demystify some of the unresolved puzzles in language attrition.

This study also seems pertinent and it is also necessary for further work to be done on how attrition can be minimized or overcome. In order to minimize attrition during the two-month holiday, the authors suggest that a relatively concrete programme be designed to serve as holiday language activities to minimize attrition. Based on the overview of statistically significant results, the activities can be designed to take into account language skills which have attrited or otherwise.

Attrition can be explained from many perspectives. It can be linked to the process in language acquisition, language contact, language shift, code switching, and code mixing. In this study, attrition has been linked to a holiday period and data collection was concentrated on the use of standardized tests which could yield reliable data on language ability. While some

of the data were confirmatory of some existing studies, there were also findings which are rather provocative and peculiar. Thus, the data cannot be claimed as exhaustive but they can be used to attain advanced knowledge with regard to attrition and the learning of English as a foreign language.

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# Significance of Community in Malaysian Higher Educational Institutions Sustainability

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## ABSTRACT

Since the beginning of environmental movement, academicians and policy makers have been focusing on the institutions of higher learning. The first document on campus sustainability, the Talloires Declaration, which was ratified by 413 universities, including University Malaya, addressed the concept of community aspect of Higher Educational Institutions (HEI) sustainability. This article is a position paper with the objective to highlight the importance of community in the sustainability of Malaysian Higher Learning Institutions (MHLE). In carrying out this study, the archival and document analysis method was employed, whereby different scholars' articles, dissertations, and tools were reviewed. Further validation of the findings was accomplished by employing the questionnaire survey method. Various documents were analysed thoroughly to figure out how the issue of community and the effects on campus sustainability were addressed. Besides a literature review, observation and interview were also utilized to figure out the challenges faced by Malaysian Higher Educational Institutions. The results indicated that community and campus sustainability have a linear relationship. In the context of MHEI, ethnical polarization, poor command of English and imbalance distribution of gender are the challenges. Likewise, the community is one of the most important aspects and is given high priority. Thus, the findings of this study could serve as a reference for researchers, institutions, and universities that are working on topics related to sustainability in higher education.

**Keywords: Sustainability, higher education, community**

## INTRODUCTION

Sustainability is a topic that has been proposed in many conferences and agendas and has gained the attention of many scholars, academicians, policy makers, and business runners (Prugh, Constansa *et al*., 2000). However, the progress particularly in Higher Educational Institutions (HEI) is not only unsatisfactory (Lozano Garcia *et al.*, 2006) but also, according to Jenks-Jay (2000), has been extremely slow and frustrating. Shriberg (2002) declared that

despite the activist call for sustainability in HEI, the result remained not satisfactory. Based on the most popular definition of sustainability suggested by Brundtland (1987) in the Common Future's report, sustainable development is a development that meets the needs of the present and future generation simultaneously. Following the definition, this subject addresses the needs of the people. In addition, the concept encompasses three dimensions of needs, namely; environmental, social, and economic (Swart and

Raskin *et al*., 2004). The first official statement on campus sustainability is the Talloires Declaration, produced in 1990 (ULSF-a, 1990). This declaration, which comprises a ten-point action plan incorporating sustainability and environmental literacy among universities, was signed at an international conference in city of Talloires, France. It was signed by the presidents, rectors, and vice chancellors of the universities from all the regions of the world (ibid). The Talloires Declaration depicts the scientists' concerns over issues such as the unprecedented scale and speed of environmental degradation, as well as the depletion of natural resources and the significance of universities in combating those unsatisfactory situations (ibid).

On the other hand, Sustainable Higher Education (SHE) is defined by Velazquez *et al*. (2006) as a university or college which promotes minimization of negative effects of fulfilling the university responsibilities as a whole or as a part. According to Saadatian *et al*. (2009), Malaysia Higher Education Institutions (MHEI) have already recognized the concept of SHE and embarked into actions by taking different initiatives in different rubrics, such as (1) sustainability in policy, planning and administration, (2) courses and curricula, (3) research and scholarship, (4) university's operations, and (5) outreaches and services. Thus, the point of departure of this study is its objective which is to play up the gravity of community in sustaining MHEI.

## SUSTAINABLE HIGHER EDUCATION (SHE)

The first campus sustainability assessment began with an audit performed at the University of California, Los Angeles (UCLA) in 1988 (Creighton, 1988). However, at the international level, the assessment started from the Talloires Declaration in France, with more than 265 universities as its signatories in 1990 and proceeded to Johannesburg Summit in 2002. Consequently, the importance of education in aiding worldwide societies to move towards sustainability was emphasized. Thus, to support this agenda, the United Nation Educational, Scientific and Cultural Organization (UNESCO) took the first initiative on a worldwide basis to foster this trend. A framework entitled, "Decade of Education for Sustainable Development" was launched in January 2005, which was expected to be completed by December 2014 (Lozano *et al*., 2006). Many popular books like *Ecodemia* (Keniry, 1995), *Earth in Mind: On Education, Environment and the Human Prospect* (Orr, 1994), *Greening the Ivory Tower* (Creighton, 1998) and *Sustainability on Campus: Stories and Strategies for Change* (Barlett *et al*., 2004) have addressed the importance of this topic.

## ROLE OF COMMUNITY IN SHE

Community has been defined as a group of individuals who gather in a place and is organized around common values and possesses social cohesion (Keniry, 1995). Community is one of the most important aspects of SHE (Cole, 2003). Besides, the communities of universities are influential in planning, building, and modifying universities actions to promote sustainable living (Orr, 1994). Among other, university communities can bear responsibilities for the knowledge and awareness enhancement of their own community members while boosting the current technologies and tools towards sustainability. The university communities can have influential roles in other surrounding communities through partnerships and working for more sustainable life (Barnes and Phillips, 2000). Campuses have a direct relationship with their neighbourhood community and their own community has an essential role in its sustainability rating, whereby in the first document of campus sustainability in the Talloires Declaration (1990), the importance of community was considered in the sixth statement of the document. A review of the literature has shown that the existence of social challenges in the communities of the Malaysian Higher Educational Institutions (MHEI), such as the ethnic-based polarization, seem to be a strong barrier to SHE trend in the country (Saadatian *et al.*, 2009). The subject of community is even

more important for MHEI than the other parts of the world since Malaysia is a country which has different ethnic groups and different religions. These include Malays, Chinese, Indian and indigenous people who are interacting in the MHEI with the different mindsets, various values and diverse goals which are not very easy to converge in the single aim of having SHE. Furthermore, Malaysia has experienced the rapidity of development which causes the increase in Malaysians' incomes at every level and thus further which lead to rapid economic growth, industrial development, urbanization process, increasing population, and a changing lifestyle (Haron *et al*., 2005). This lifestyle change will directly affect the community and alter the traditional values. The community in MHEI is very significant since they are one of the most influential agents of change in reaching the goal of the 1 Malaysia programme, which is aimed at enhancing solidarity and unity among all ethnic groups.

## METHODOLOGY

Archival method and document analysis were selected as the methodology for this study. The archival research method was chosen because it includes a broad range of activities applied to facilitate the investigation of documents and textual materials produced by and about organizations (Dane, 2010). Those textual materials are SHE approaches. Archival research has been cited in the most classic sense as an appropriate tool for the study of historical documents in a limited period of time (ibid). This study also aimed at investigating the SHE trend and its relevancy to community from Talloirs declaration as a starting point of SHE approach up to the present. Besides, archival method has its own merit in non-historical investigations of documents and texts produced by and about contemporary subject, often as tools to supplement other research strategies, such as document analyses (ibid). Likewise, archival method has been introduced as a suitable method for analysis of digital texts including electronic databases (ibid). Many of

those SHE assessment tools have been derived from electronic database. Finally, the theoretical topics and substantive areas of investigation to which this archival method applied is even broader than the domain of organization science itself which is suitable for exploratory studies such as this study (ibid).

On the other hand, document analysis involves a systematic examination of instructional documents such as tools and frameworks (Lazar and Hochheiser, 2010) which are referred to as approaches in this study. Document analyses have been prescribed for the research which investigates tools and instructions (ibid). Moreover, if the focus of the analysis is on critical examination, rather than a mere description of the documents, it has been highly recommended for exploratory studies (ibid). Thus, document analysis is a suitable technique when the purpose is to gain insights into an instructional approach (ibid). Besides, a document analysis is a low cost technique which suits the financial constrains of this study.

In this regard, several important and popular approaches of SHE were identified and their relationships with the community was also explored. On the other hand, in the realm of SHE and to validate the findings, a questionnaire survey (using the Likert scale) was conducted among Malaysian professionals who attended the 3rd International Conference on Sustainability in Higher Education, which took place in USM, Penang, Malaysia on 20 – 22 November 2009.

Moreover, to explore specific challenges of Malaysian HEI and to investigate their relevancy to different rubrics of SHE, namely; community, wealth, governance, health, knowledge, etc., a literature review, observation, and interview were conducted.

### *Validation*

The analysis of data using the SPSS software revealed the same results, which had already been presented by archival research. Likewise, in the aspect of Malaysian HEI, literature review, observation, and interview techniques function as a triangulation strategy to validate the finding.

## Questionnaire survey

The study employed another validation method to capture the opinions of Malaysian experts who are working in the realm of MHEI across the country. The 3rd International Conference on Sustainability in Higher Education, which took place in USM, Penang, Malaysia, on 20 – 22 November 2009, was selected as the venue to conduct the questionnaire survey.



*Fig. 1: The 3rd International Conference on Sustainability in Higher Education, 2009*

Altogether, 59 papers were submitted and 112 experts attended the conference. A random sample method was used, whereby population = 114, percentage = 50, confidence interval = 12.54 and the confidence level was 95%, and thus, N = 40. Hence, 43 sets of questionnaire were distributed, out of which 40 were returned. The objective of the questionnaire was to grasp the perceptions of the experts on the importance of different aspects of sustainable campus.



*Fig. 2: Sampling calculation*

## Sample characteristics

The majority (72.5%) of the respondents were Malay, with 48 percent males and 52 percent females (*see* Table 1). The sample's average age was 39 with a standard deviation of 7.23 years. A large percentage of the samples research interest was social sustainability (43%), followed by economic sustainability (20%), and environmental sustainability (37%). The majority of the respondents (56%) possessed a doctorate degree and 27% were with a Masters degree; only 17% were bachelor holders. A high percentage of the PhD holders, as compared with lower education level participants, reflects the high quality of conference which embedded more high quality academicians rather than students.

### Observation

The study employed the observation technique for a strong validity whereby Trochim (2001) has enumerated this technique as the best available approximation to the truth of conclusion. "Unobtrusive Observation" has been selected in order to not affect the behavioural of individual in Malaysian universities. In order to increase the external validity, four universities known as UM, UPM, UKM, and USM were observed in the time span of 36 months, starting from December 2006 to December 2009. The type of "Unobtrusive Observation" has been "Behaviour Trace studies." The type of recording followed the "Descriptive Variable Analyses" which is to observe a phenomenon and to write it down.

### Interview for Validation of Malaysia HEI Challenges

The purpose of this interview was to validate the findings on Malaysia's specific challenges and its effects on SHE. A face-to-face, open-ended interview was conducted from 10 high authorities and very experienced lectures of UM, USM, UKM, UPM. In this regard, an interview protocol was made to avoid the wrong interpretation and bias in the procedure of research. Thus, the interview followed the

TABLE 1
Sample characteristics

| Variables | n = 40 | (Frequency (%) |
|---|---|---|
| Ethnicity | | |
| Indian | 1 | 2.5% |
| Chinese | 10 | 25% |
| Malay | 29 | 72.5% |
| Gender | | |
| Male | 19 | 48% |
| Female | 21 | 52% |
| Research interest | | |
| Sustainable environment | 15 | 37% |
| Sustainable economic | 8 | 20% |
| Social sustainability | 17 | 43% |
| Educational level | | |
| Bachelor | 7 | 17% |
| Master | 11 | 27% |
| PhD | 22 | 56% |
| Respondents' age | 38.67 (mean) | (7.23 standard deviation) |

guideline of Kvale (2007) in seven steps, as follows:

Step 1: "Thematization the interview", i.e. formulating the purpose of interview.

Step 2: Designing the interview questions and the type of questions,

Step 3: Conducting the interview (inclusive of getting permission, tape recording, or writing)

Step 4: Transcript of recording verbatim

Step 5: Analyses, whereby the "interview analyses focusing on meaning" as the style of interpreting and the "Meaning Condensation" as the mode of interpretation which is "very prevalent and valid technique in analyzing the interview" (Kvale, 2007, p. 108) were utilized.

Step 6: Verifying, i.e. checking the reliability of the analyses. In this regard, the research has verified the analyses of interview by resending the interpretation to interviewees via email or calling.
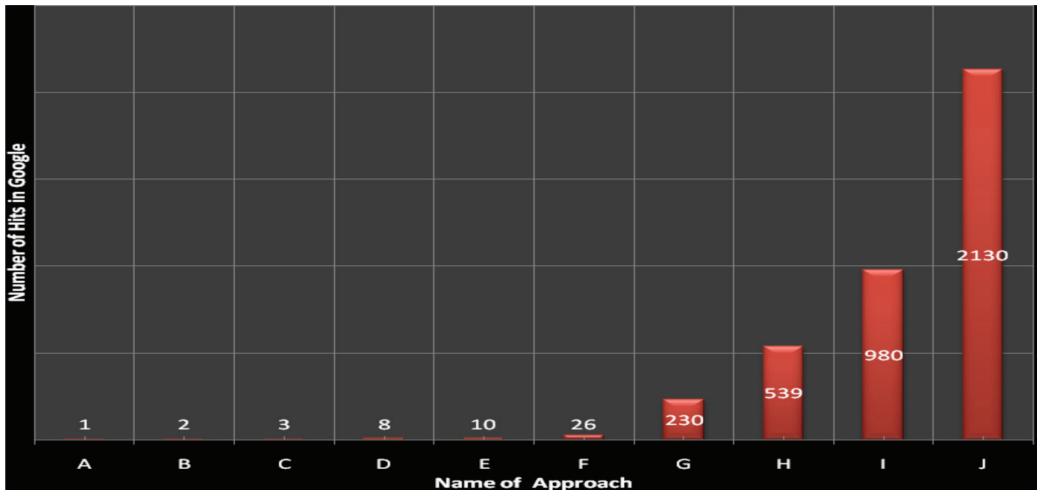
Step 7: Reporting, i.e. the final stage of the interview.

**Sampling in interview**

The saturation point theory was utilized in sampling the interview. The fact that the interview and observation are forms of the qualitative research, the issue of sampling is therefore not very significant, and thus, it is better to employ saturation method (Kumar, 2005). This means that in a qualitative research, it is not necessary to determine the extent of the diversity, while the qualitative aspect only supports the archival research. Therefore, the interview was kept on conducting upon the time no new knowledge was gained.

**RESULTS AND DISCUSSION**

Ten different approaches have been found to be popular in SHE, especially in North America and Canada. Their popularity is based on Google hits for a span of six months (four times

A    A Simple Audit at University of California, Los Angeles (UCLA) in 1988

B    MacLean's Magazine Annual Guide to Canadian Universities

C    Canadian Centre for Policy Alternative Missing Pieces Reports I, II and III in 1999

D    National Wildlife Federation of the State of Campus Environment

E    Good Company's Sustainable Pathways Toolkit

F    Campus Sustainability Assessment Review Project

G    Penn State Indicators Report

H    Association for the Advancement of Sustainability in Higher Education  Sustainability Tracking, Assessment and Rating System "STARS"

I    University Leaders for a Sustainable Future Sustainability Assessment Questionnaire "(SAQ)"

J    Campus Sustainability Assessment Framework, "CSAF"

*Fig. 3: The mean number of hits in the Google search for each approach for a period of 6 months, i.e. between Jan 2008 - July 2009 (four times every month )*

every month), as shown in the following figure. Among the ten approaches, the four most popular approaches are discussed and analyzed in this section.

*Association for the Advancement of Sustainability in Higher Education Approach (AASHE)*

This new approach has gained the interest of many higher educational institutions.  AASHE is an association which was founded in 2006 with a mission to promote sustainability in future campuses (STARS, 2008).  This institute proposes a rating system, known as Sustainability Tracking Assessment and Rating Systems STAR (ibid).

*University Leaders for Sustainable Future Approach (ULSF)*

The Association of University Leaders for a Sustainable Future is an institute, which attempts to support sustainability at colleges and universities worldwide via publications, research and assessment (ULSF-b, 1992).  It functions as the secretariat for the signatories of the Talloires Declaration.  More than 350 university rectors in more than 40 countries had signed this declaration (Ibid), including University Malaya (UM).

*Campus Sustainability Assessment Framework Approach (CSAF)*

Campus Sustainability Assessment Framework was created by the Sierra Youth Coalition and Lindsay Cole (2003) in Royal Roads University. CSAF is a systematic formula used in analyzing the "sustainability" of Canadian campuses.

*Penn State Indicator Reports Approach*

Penn State Green Destiny Council in USA first performed this approach in 1998 and completed it in 2000. A team of 30 undergraduates, graduate students, several faculty members, and professionals had conducted this approach.

## RESULTS AND DISCUSSION ON THE ROLE OF COMMUNITY ON SHE

AASHE has grouped different subjects pertaining to sustainability into three categories. These are: (1) Education and Research, (2) Operation, and

(3) Administration and Finance. On the other hand, Community Relationship and Partnership, which has been suggested in the Administration and Finance part, is a topic with a direct effect on SHE. Those five items are; (1) Community Service Infrastructure (AF Credit13), (2) Student Participation in Community Service (AF Credit14), (3) Student Hours Contributed in Community Service (AF Credit 15), (4) Financial Incentive for Public Service Careers (AF Credit 16), and (5) Outreach and Partnerships Carnegie Designation (AF Credit 17).

Based on the points given by AASHE, it was observed that the most important issue in Administration and Finance is community. To calculate the importance of different issues, the following formula was used: (I=P/(TP) where I = importance of issue, P = possible points of any issue, and TP = total points of the factors in the same category.

University Leaders for Sustainable Future (ULSF) provide a set of questionnaire for



A: Planning
B: Trademark Licensing
C: Sustainability Infrastructure
D: Investment
E: Diversity Access and Affordability
F: Human Resources
G: Community

*Fig. 4: The importance of different subjects on campus sustainability based on AASHE's (STARS Ver 5) points in the Administration and Finance category*
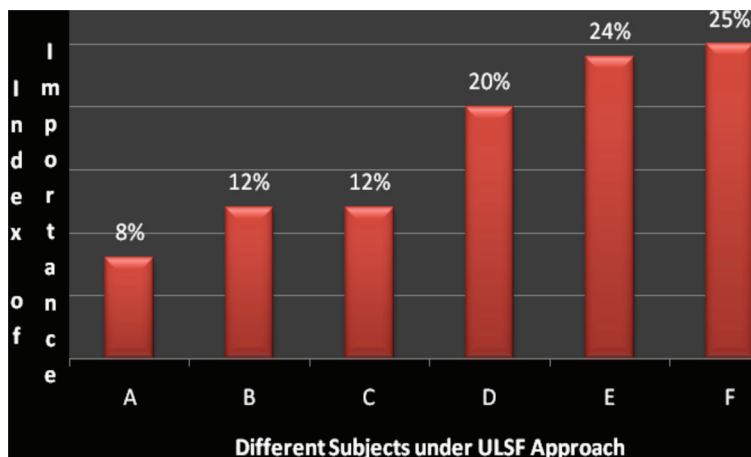
evaluating the level of SHE. It divides the factors into seven categories, namely: (1) Curriculum, (2) Research and Scholarship, (3) Operations, (4) Faculty and Staff Development and Rewards, (5) Outreaches and Services, (6) Student Opportunities, and (7) Institutional Mission and Structure. Among these categories, two groups directly address community related issues. The Outreach and Services category focuses on the relationship between community sustainability and higher educational supports in its local and surrounding region. On the other hand, the category of Student Opportunities focuses on the opportunities provided for the student groups as a small community. Meanwhile, in the Faculty and Staff Development and Rewards category, two out of three questions address the issues affecting the regional community (ULFS-a, 1999).

If we assume the number of questions as the indicator for the importance of that issue, and Outreaches and Services and Student Opportunities as the community indicator, the significance of community can be made obvious. Based on the formula; $I = NQ/ TNQ$, where $I$ = importance of issue, $NQ$ = number of questions in that field, $TNQ$ = total number of questions, the result illustrates the significance of community (see *Fig. 5*).

Lindsay Cole (2003) from the Royal Roads University in Canada proposed the Campus Sustainability Assessment Framework (CSAF), which was constituted based on several different indicators; these are the people and ecosystem. The ecosystem indicator includes; (1) air, (2) water, (3) land, (4) materials, and (5) energy, whereas the people indicator comprises of; (1) knowledge, (2) community, (3) governance, (4) health, and (5) wealth and economy.

Addressing the term community in a separate category is an index for showing its importance. As the topic is more important, it therefore attracts more people's attention (Ann, 2003). Hence, the number of indicators is assumed as the index for the importance of this issue, the result will indicate that Community



A: Research and Scholarship
B: Faculty and Staff Development and Rewards
C: Institutional Mission, Structure and Planning
D: Operation
E: Curricular
F: Community (Outreaches and Services, Student Opportunities)

*Fig. 5: The importance of different subjects in campus sustainability based on the sustainable assessment questionnaire of ULSF*

Sustainability is the most important issue for achieving sustainability in the CSAF. This formula was used, "Ip = Npi/ Tnpi", where; Ip = importance of an issue in the people category, Npi = total number of indicators in the people category (see *Fig. 6*).

The results indicated that even in the CSAF, community activities played a very important role in the assessment process. Penn State Indicator Report started the community issue by using this slogan: "All stakeholders in the university – students, faculties, staff, administrators, trustees, parents, and the public have the right to expect that the university will strive to be a civil community of learning; all have an obligation to make it happen". Hence, the following formula was used, "Ip = Npi/ Tnpi", where Ip = importance of the people category, Npi = total number of indicators in the people category (see *Fig. 8*).

*Fig. 8* shows how important the community issue is in comparison to other factors in this approach. Penn State has declared that it emphasizes more on the community since it believes that this factor is one of the important efforts which should be concentrated constantly. It also states that maintaining a sustainable campus requires maintaining a healthy community. Moreover, it emphasized the role of education in producing successful and responsible students who are parts of the society.
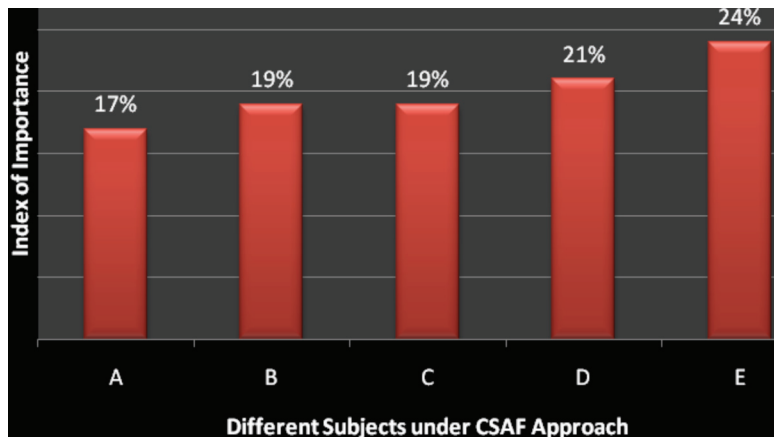
*Descriptive Analysis of the Questionnaire Results*

A descriptive analysis was utilized in the analysis of this study. Nonetheless, multiple regressions were also used to analyze the factors influencing respondents' answers about the factors of SHE in MHEI.

The variation in the respondents' answers towards the importance of community in MHEI (ICMHEI) could be hypostatized by an array of independent predictor variables. The equation for the empirical model is as follows: f (ICMHEI) = f {ethnicity, gender, research interest, educational level, age).

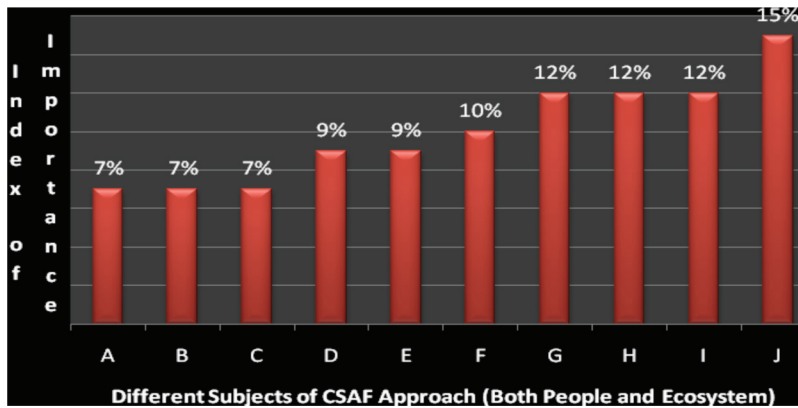*Reliability Test of Results*

Cronbach's alpha coefficient was used to determine the internal consistency reliability of the answer of this study (*see* Table 2). The respondents' perception on People and Ecosystem formed the dependent group. The remainder of the above variables is our independent variable.
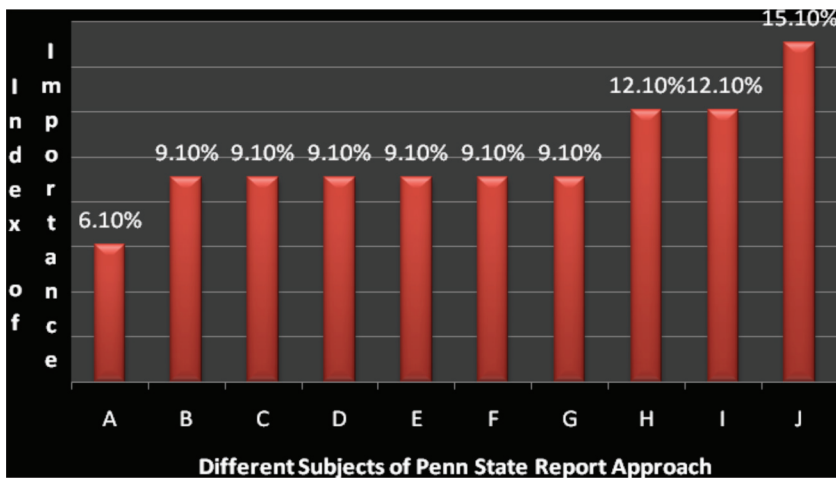


A: Wealth and Economy  B: Governance  C: Health  D: Knowledge  E: Community

*Fig. 6: The importance of different subjects in the CSAF, based on the ratio of specific category indicators to all people category indicators*

F: Wealth and Economy       G: Governance       H: Health       I: Knowledge       J: Community
A: Water       B: Energy       C: Land       D: Air       E: Materials

*Fig. 7: The importance of the different subjects in CSAF based on the ratio of specific
category indicators to all the ecosystem and people category indicators*



A: Decision Making  B: Built and Environment       C: Energy       D: Food       E: Material
F: Transport       G: Water       H: Land       I: Research and Scholarship
J: Community

*Fig. 8: The importance of different subjects in campus sustainability based on Penn
State Indicator Report*

*T-test and ANNOVA Test*

In order to test whether the other nominal variables, such as gender, ethnicity, research interest, educational level and age, have significant differences, a T-test for gender and four ANNOVA tests for ethnicity, research interest, educational level and age were conducted. For the variables with less than 5% significant difference, a table of description has been provided.

It shows that there is only significant difference (p = .001) between the males and females, with regard to "water is necessary", whereby the mean value for males (mean = 1.68, sd= -1.86) was found to be significantly higher than that of the females (mean = 1.85, sd = -2.41).

### ANNOVA TEST

As for the effects of ethnicity, research interest, educational level and age on respondents, four ANNOVA tests were performed, whereby none of the results had a significant difference or with the P value lower than 5%. An example of the tests is shown in Table 5.

*Experts' Perceptions Diagrams*

This section discusses the analysis of the experts' opinions in the realm of SHE who ratified the importance of the community aspect by voting 97.5% as "strongly agree". It also showed that the experts were aware of the structure and challenges of MHEI and the role of the campus community in contributing to sustainability of higher education.

*Discussion on Malaysian HEI Challenges*

A review of the literature indicates that the Educational System in Malaysia varies from other parts of the world due to different socio-political background. Hence, it is essential to look at it in details. Education is an important portfolio in the Malaysian government structure, as reflected by the fact that all Prime Ministers, excluding the first Prime Minister, were once the Education Minister. Malaysia has its own particular challenges in its HEI, such as racial polarization, gender issues, and poor command of English as the major medium of international communication.

*Racial Polarization*

Malaysia has many different ethnic groups. Hence, racial polarization is a reality and it is very prevalent in the Malaysian HEI, whereby students tend to group together according to their ethnic background (Malaysia National News Agency, 2008). Malaysian universities have taken many initiatives to bring about integration of all its ethnic groups together such as organizing cultural shows, sport carnivals, student orientations, competitions, and supporting "One Malaysia programme" which is aimed at enhancing solidarity and unity among all its ethnic groups. For example, various ethnic students of Universiti Putra Malaysia gathered on 17th January 2010 to commemorate the Indian festival called Ponggal. The observation ratified this subject, too.

### Gender issues

Based on a report by Dr. Richard Leets for UNDP (2004), Malaysia's ranking in the UNDP gender index is not as high as it should be. The ratio between the females to males in Malaysian universities, except for Polytechnic, is 2:1. Generally, there are more females than males in the campuses. This gender imbalance does not satisfy the world's standards. This imbalance proportion does not only endanger the future job market of the country, but it will also create some problems in terms of campus management. This can be observed even in the simplest subjects in the campuses, such as possessing the same number of toilets or hostels for the males and females, of which the former is being underutilized and the latter is over utilized. The observation also ratified this particular subject.

TABLE 2
Descriptive statistics

| | N statistics | Range statistics | Minimum statistics | Maximum statistics | Mean statistics | Std. errors | Std. deviation statistics | Variance statistics |
|---|---|---|---|---|---|---|---|---|
| Knowledge will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8750 | .0639 | .40430 | .163 |
| Community will be very necessary | 40 | 1.00 | 1.00 | 2.00 | 1.0250 | .0250 | .15811 | .025 |
| Governance will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.7750 | .0758 | .47972 | .230 |
| Economy and wealth will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8750 | .0639 | .40430 | .163 |
| Well-being of health will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8250 | .0706 | .44650 | .199 |
| Air will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.8750 | .0639 | .40430 | .163 |
| Water will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.9250 | .0553 | .34991 | .122 |
| Land will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.9250 | .0553 | .34991 | .122 |
| Materials will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.9000 | .0599 | .37893 | .144 |
| Energy will be very necessary | 40 | 2.00 | 1.00 | 3.00 | 1.2500 | .0780 | .49355 | .244 |

TABLE 3
Cronbach's alpha coefficient of the answers

| Scales | No. of items | Alpha value |
|---|---|---|
| People group | 5 | 0.69 |
| Ecosystem  group | 5 | . 59 |

TABLE 4
T-test

| Ecosystem group | Gender | Mean | Std.dev | T value | Significant |
|---|---|---|---|---|---|
| Water is necessary | Female | 1.6842 | +1.7895 | -2.4797 | .001 |
| | Male | 1.8571 | +2.0476 | -2.407 | .001 |

TABLE 5
ANNOVA test between different ethnic backgrounds

| | | Sum of squares | df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| Knowledge is necessary | Between groups | .237 | 2 | .119 | .715 | .496 |
| | Within groups | 6.138 | 37 | .166 | | |
| | Total | 6.375 | 39 | | | |



*Fig. 9: The percentage of the respondents who strongly agreed on different subjects*
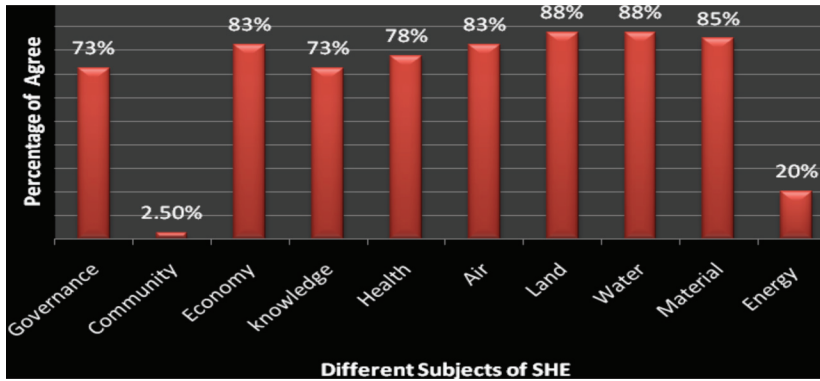
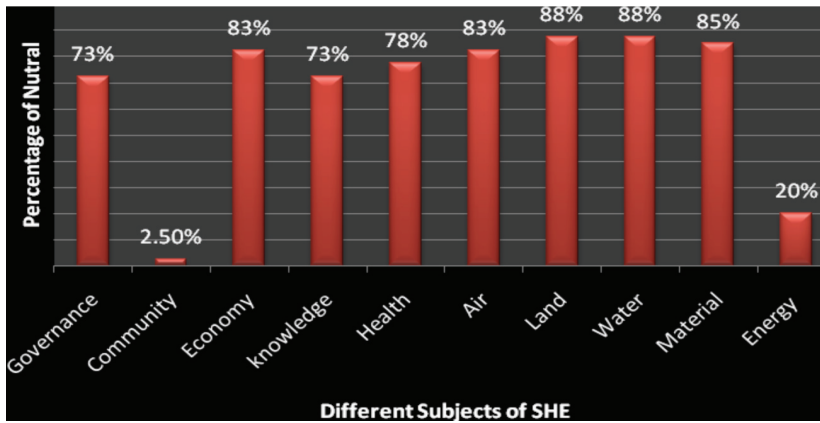Fig. 10: The percentage of the respondents who agreed on different subjects



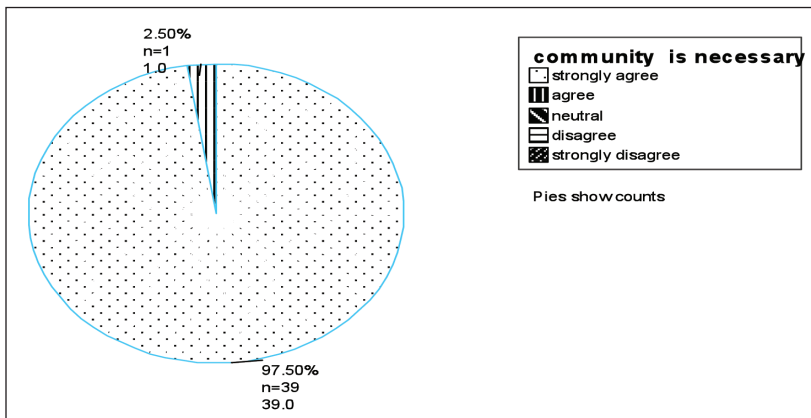Fig. 11: The percentage of those who were neutral on different subjects



Fig. 12: The percentage of the respondents who agreed or strongly agreed on
the importance of community

*Fig. 13: Malaysian universities' depolarization efforts via social events*



(*Source*: UPM website, 2010)

*Fig. 14: UPM students of different races attended "Ponggal" (Indian celebration)*

**Poor command of the English Language**

Another challenge in Malaysia's HEI is the poor command of English as an international medium used to connect everyone together, apart from their ethnic groups and own mother tongue (Crismore *et al*., 1996). The poor command of the English language is very prevalent not only among the international students but also among the local students, and even university staff (ibid). The observation also ratified this particular subject as well.

*Discussion on the Malaysian HEI Challenges Based on the Interview*

The interview included many probing as well as the main questions. The answers were analysed and transcribed in 98 pages. The summary of the analyses were done based on the three categories, namely; (1) existence and effects of Imbalance Gender Distributing (IGD), (2) existence and effects of Ethnical Polarization (EP), and (3) existence and effects of Poor Command of English.

TABLE 6
Results from the interview on gender

| No | Affiliation | Have a clear perception of SD and SHE | IGD exist in Malaysia HEI | IGD is a challenge | IGD affects the SHE |
|----|-------------|----------------------------------------|----------------------------|---------------------|----------------------|
| 1 | UKM LESTARI | Yes | Yes | Yes | Yes |
| 2 | UM, Chancellery | Yes | Yes | Yes | Yes |
| 3 | UPM Chancellery | Yes | Yes | Yes (But has period of 30 years to revert) | Yes |
| 4 | Ministry of Higher Education | Yes | Yes | Neutral | Some how |
| 5 | USM, Chancellery | Yes | Yes | Yes | No |
| 6 | UPM, Faculty of Human Ecology | Yes | Yes | Yes | Yes |
| 7 | USM Faculty of Humanity | Yes | Yes | Yes | Yes |
| 8 | UPM, Faculty of Food Science | Not very well | | | |
| 9 | UM Development Dept. | Not very well | | | |
| 10 | USM Chancellery | Yes | Yes | Yes | Yes |

The results from the interview indicate that all the interviewees believe that the IGD exists in Malaysian HEI and majority (except one who was neutral) took it as a threat to SHE.

The result from the analyses of the interview indicate that all the interviewees believe that ethnical polarization exists in Malaysian HEI, and all (except for one) interviewees considered it as a challenge. Besides, all the interviewees also believe that EP is a threat to SHE (*see* Table 7).

The results from the interview analyses indicate that all of interviewees believe that poor command of English exists in Malaysian HEI, except for one interviewee who was neutral, whereas the rest considered it as a challenge. Besides, except for one interviewee who was neutral, the rest considered PCI as a threat to SHE (*see* Table 8).

## DISCUSSION AND ANALYSES

As sustainability concerns with issues of social, economic and environmental, all of them should be addressed sufficiently and fairly. However, these concerns differ from one country to another in the world. In this regard, the most important documents which can identify the most important subjects at the national and international levels have to be reviewed. Hence, employing the archival analysis as the methodology for this study would lead to an acceptable result. In addition, by conducting a comparative analysis on the frequency of different approaches using the Google search engine, as an indicator, had also enabled this study to find out which approach has been widely used. It has been argued that the comparative statistical analysis of the four most popular sustainable campus approaches could give the evidence of the importance of community-related topics in campus sustainability. In this comparison, the

TABLE 7
Result from the interview on polarization

| No | Affiliation | Have a clear perception of SD and SHE | EP exist in Malaysia universities | EP is a challenge | EP affect the SHE |
|----|-------------|---------------------------------------|-----------------------------------|-------------------|-------------------|
| 1 | UKM, LESTARI | Yes | Yes | Yes | Yes (but not sure about all universities |
| 2 | UM, Deputy Vice Chancellor | Yes | Yes | Yes | Yes |
| 3 | UPM, Chancellery | Yes | Yes | Yes | Yes |
| 4 | Ministry of Higher Education, | Yes | Yes | Neutral | Yes |
| 5 | USM, Chancellery | Yes | Yes | Yes | Yes |
| 6 | UPM, Faculty of Human Ecology | Yes | Yes | Yes | Yes |
| 7 | USM, Faculty of Humanity | Yes | Yes | Yes | Yes |
| 8 | UPM, Faculty of Food Science | No | | | |
| l9 | UM Director of Development | No | | | |
| 10 | USM Chancellery | Yes | Yes | Yes | Yes |

community's important values in accordance with the approaches are as follows: ULSF (25%), CSAF (24%), Pen State Report (15.10%), and STARS (24%), which were the first highest important values as compared to the second highest important values, which were 24%, 21%, 12.10% and 18%, respectively (see *Fig. 8*).

Apparently, the Malaysian professionals' opinions imparted that community is the most important issue in sustaining MHEI, whereby 97.5% of the respondents declared their strong support of addressing the subject of community in research and initiatives. Likewise, the literature review, interviews, and observations have also indicated that Malaysian HEI encounters three challenges, namely; ethnical polarization, imbalance distribution, and poor command of English which apparently are affecting the community aspect of SHE. All these reflect that Malaysian higher learning institutions need to become more sustainable particularly in issues concerning its community.

## CONCLUSIONS

In higher educational institutions, community emerges as an effective factor, implying an important role in the total sustainability of campuses. It has been concluded in order to work or fulfil research on SHE, particularly in Malaysia, emphasizing the community issues is a logical decision. Malaysian experts believe that the community aspect is the most important issue which should be addressed promptly. Thus, through community services, volunteerism, engagement and partnership, universities and colleges will not only enhance their own sustainability level but also empower their students' leadership skills.

TABLE 8
The result from the interview on the command of English

| No | Affiliation | Have a clear perception of SD and SHE | PCE exist in Malaysia Universities | PCE is a challenge | PCE affects SHE |
|----|-------------|---------------------------------------|------------------------------------|--------------------|-----------------|
| 1 | UKM LESTARI | Yes | Yes | Yes | Yes |
| 2 | UM, Chancellery | Yes | Yes | Yes | Yes |
| 3 | UPM Chancellery | Yes | Yes | Yes | Yes |
| 4 | Ministry of Higher Education, | Yes | Yes | Neutral | Yes |
| 5 | USM, Chancellery | Yes | Yes | Yes | Neutral |
| 6 | UPM, Faculty of Human Ecology | Yes | Yes | Yes | Yes |
| 7 | USM Faculty of Humanity | Yes | Yes | Yes | Yes |
| 8 | UPM, Faculty of Food Science | No | | | |
| 9 | UM | No | | | |
| 10 | USM Chancellery | Yes | Yes | Yes | Yes |

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# The Syntactic Structure of a Noun Phrase: Austroasiatic vs. Austronesia

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## ABSTRACT

The indigenous people of Malaysia consist of 18 ethnics who have their own languages. These people can be classified into three main categories, namely; Negrito, Melayo Proto, and Senoi. Each of these categories can be further sub-divided into different groups. For example, Negrito consists of six races, which are Kensiu, Kintak, Lanoh, Jahai, Mendriq, dan Bateq. Each of these races has its own language which is named after the respective race. The indigenous languages are of the Austroasiatic stocks. In Malaysia, however, the Malay language, which is one of the Austronesian stocks is the national language of Malaysia. The status of the Malay language being in a different stock lays a large implication on the native children who are trying to learn and acquire the language. Due to this, it is vital for us to be aware of the differences of word order between the two stocks, especially at the phrasal and sentential levels. This article discusses and analyzes the differences between the Malay and Kensiu noun phrases. The analysis on the noun phrase of these languages revealed that there are differences in the words that precede the head noun and the words that follow the head noun in the noun phrase of the Kensiu and Malay languages. Surprisingly, some of the word orders in the noun phrases in the Kensiu language are similar to the word order in the noun phrases of the Malay language although they are from different stocks.

*Keywords: Kensiu language, Malay language, indigenous, noun phrase, Austroasiatic, Austronesian*

## INTRODUCTION

Generally, a noun, as a part of speech, can be divided into three types. The first type is the language without nouns, while the second type is the language with no identification of the nouns and the third is the language with a clear identification of the nouns (Rijkhoff, 2002, p. 12). Kensiu and Malay languages can be categorized into the third type. This is because the nouns in these two languages can be identified easily. The nouns in the Malay language can be identified easily using a test which uses determiners and adjectives. Other parts of speech, such as the verbs and adjectives, are also recognizable with distinctive tests without any problem in Kensiu and Malay. Therefore, the nouns in Kensiu and Malay are very distinguishable. Nouns are also known as lexical categories because these words are unlimited in numbers.

The lexical category, noun, can also be grouped into a phrase known as a noun phrase (NP). However, the noun which is a part

of a noun phrase does not necessarily stand independently without any words that lead or follow it to form a noun phrase. On the other hand, a noun can be attended by some other words which may lead and follow it. Those words combine to form a phrase known as NP. Hence, the formation of a NP needs to be described and analyzed deeply in order to justify the position of all the possible words which follow and lead in the NP syntactic structure of both the languages.

The discussion starts with the word order in the NP itself. The ordering of the word that follows and precedes a noun was analyzed using a framework known as Determiner Phrase (DP) Hypothesis to represent the syntactic structure of a NP in Kensiu and Malay. The syntactic structure will clearly show the differences or similarities between the two languages, while explaining them in a very systematic way.

## KENSIU NOUN PHRASE (NP)

In order to explain and compare the differences in the NP of the Malay and Kensiu languages, this article first discusses the NP of the Kensiu language. This section elaborates and explains the noun phrase and all the lexical elements which form the NP. The formation of this NP involves all the lexicals, which follow and lead the NP of the head noun of the Kensiu language. Thus, to seek for relevant data, a field research involving five informants aged between 50 to 70 years, was conducted.

## LEXICALS THAT PRECEDE NOUN IN THE KENSIU LANGUAGE

Generally, a noun in a language may be preceded by several unique elements to form a noun phrase. This discussion argues that the Kensiu language may be preceded by two types of elements, namely; numerals and classifiers. This writing assumes that numerals also include quantifiers. This discussion starts with identifying all the elements that precede a noun.

Universally, as a part of speech, nouns can be divided into three types. First, language without noun; second, language where noun

cannot be identified and third language with clear identification of noun (Rijkhoff, 2002, p. 12). The Kensiu language is a language which possesses a clear noun, such as:

(1) a. *hihuk*
stick

　　b. betiu
water

　　c. penyuk
cloth

　　d. cebak
hill

　　e. kawau
bird

　　f. hiyak
house

From the data in example (1) above, it can be seen that the noun could not be pluralized with any affixes. On the other hand, this language uses numerals (i.e. quantifiers) like *jenuh* to mean *many* as a means of pluralizing a noun. Subsequently, all the nouns in example (1) can be pluralized using numerals, as in example (2):

(2) a. *jenuh hihuk*
many sticks

　　b. jenuh betiu
a lot of water

　　c. jenuh penyuk
many clothes

　　d. jenuh cebak
many hills

　　e. jenuh kawau
many birds

　　f. jenuh hiyak
many houses

This phenomenon is a scenario that has been discussed in the Malay language (Fazal Mohamed Mohamed Sultan, 2008). The distinction between the two languages is the absence of reduplication in the Kensiu language. However, the word order of the quantifier and noun is very firm because a quantifier always precedes its noun. Any other word orders are not acceptable in this language, as given below:

(2')  *a'.  *hihuk jenuh*
      *b'.  *betiu jenuh*
      *c'.  *penyuk jenuh*
      *d'.  *cebak jenuh*
      *e'.  *kawau jenuh*
      *g'.  *hiyak jenuh*

This article will continue to explain words that precede a noun in the noun phrase of the Kensiu language. A noun in the Kensiu language may also be preceded by a numeral and a classifier. The Kensiu language uses only one type of classifier and does not seem to have any types of agreement between them, as indicated in example (3) below:

(3) a.  *biya kebek    naka*
        two classifier jackfruit

        biya kebek    lembu
        two classifier cow

        biya kebek    kawau
        two classifier bird

        biya kebek    hiyak
        two classifier house

Nevertheless, this language also borrows a few classifiers from Malay. These loan words mostly involve modern objects which are not used in their language, as illustrated in (4):

(4) a.  *biya* batang    kayu
        two  classifier stick

        *biya* helai      *penyuk*
        two  classifier cloth

*nai* ules    *naka*
two classifier jackfruit

These differences clearly show that the Malay language has already started to have great influence on the Kensiu language when the words, *batang, helai* and *ules,* are used in NP (4). Phrases (3) and (4) illustrate that the classifiers precede the nouns in this language. However, the order of the classifiers and numerals is very strict, whereby the classifiers always precede the nouns. The opposite order of these words, on the contrary, is not accepted in this language:

(5)  *a.  *biya naka kebek*
     *b.  *biya* lembu *kebek*
     *c.  *biya kawau kebek*
     *d.  *biya hiyak kebek*

Besides that, the presence of a classifier is also not mandatory in the phrase. Its presence is optional. This means that the presence of a classifier is not influenced by the type of noun. All are optional as in data (6) (Note that the optional properties are described in parentheses):

(6) a.  biya (kebek)   naka
        two   classifier jackfruit

        *biya (kebek)*   lembu
        two   classifier cow

        biya (kebek)   kawau
        two   classifier bird

        biya (kebek)   hiyak
        two   classifier house

From the discussion above, it is clear that the sequence of numerals and classifiers in a noun phrase has a constant order, as pointed out in (3) until (6). A classifier always precedes a noun, while a numeral always precedes a classifier in the Kensiu noun phrase. This analysis can be outlined in (7):

(7)  numeral - classifier – noun

The word order in the Kensiu noun phrase forms a sequence, which can be summarized into three facts, where great attention should be given. The first fact is that the classifier and the numeral which form the NP of Kensiu language has a strict ordering, where a numeral precedes a classifier before a head noun, as described in (7). Secondly, a classifier cannot exist without a numeral; on the contrary, a numeral can still exist without a classifier. The third fact is that there could be an absence of agreement between the head noun and the classifier that precedes it. This phenomenon is contributed by the existence of a single classifier in this language, which is known as *kebek*.

## WORDS THAT FOLLOW THE NOUN

The head noun in this language also allows words to follow their head noun in order to form the noun phrase in the Kensiu language. This head noun can be followed by pronoun and determiners. The use of pronouns is quite limited in this language. This language does not exhibit any complex or creative use of pronouns as it is in the Malay language. The existence of pronouns is illustrated in example (8):

| (8) | Pronouns in the Malay Language | Pronouns in Kensiu |
|---|---|---|
| | Saya 'I' | yek |
| | Dia 'him' | tak (male) yak (female) |
| | Kami 'we' | yam |
| | Kamu 'you' (singular) | bok |

This language does not utilize one word translation for the pronouns like *aku, engkau* and so on, like in the Malay language. However, the pronoun *him* for male and female is clearly distinguished. Hence, the language utilizes gender differences partly in its pronoun system. This shows that this language clearly marks the genders in as in the pronoun '*him*'. For example, (9) shows the gender difference in the third person singular:

(9)  a.  tak        Nasir
         [+male] Nasir

         yak        Aminah
         [+female]  Aminah

Therefore, the uses of *tak* and *yak* can distinguish the referent in a conversation as a male or female, as further illustrated in the following example:

(10)  a.  *Tak cit   nasik*
          He  eats rice

      b.  *Yak cit   nasik*
          She eats rice

This construction shows that a noun phrase in the Kensiu language is not only preceded by other words before the head noun, but there are also words which can follow the head noun, as in the possessive in phrases (11) and (12) below:

(11)  *heyak yek*
      hut      my
      (my hut)

(12)  *cas   yek*
      hand my
      (my hand)

This language is very strict in its ordering of the head noun and the possessive:

(13)  *\*yek heyak*
      my  hut

(14)  *\*yek cas*
      my  hand

The phrases in (11) and (12) prove that there are no words being inserted to show any agreement with the possessive and the head noun or vice versa in this language.

Other than this type of ordering, this language also has a determiner. It seems that there is only one determiner in this language,

and it is known as *on*. This determiner has a permanent position in the noun phrase. It always follows the head noun as given in (15):

(15) a. *awe      on*
           bamboo the
           (the bamboo)

           *menek on*
           people the
           (the people)

The word order between the determiner and the head noun is always strict. In other words, any wrong ordering between the determiner and the head noun is considered as ungrammatical, as follows:

(16) *a.  *on awe*
               the bamboo

     *b.  *on menek*
               the people

The discussion for phrases (11) until (16) illustrates a very interesting order. The order can be divided into two types. First, the determiner and the pronoun follow the head nouns. Second, the Kensiu language does not allow the presence of both words at the same time in any order:

(17) *a.  *yak cas on*
     *b.  *yak on cas*

In summary, it is claimed that the NP of the Kensiu language consists of a numeral, a classifier, a noun, a possessive, and a determiner. All the four classes of words have a very strict order in the Kensiu language. These orders can be summarized as follows:

(18)  numeral – classifier – noun – possessive/
        determiner

**THE NOUN PHRASE (NP) STRUCTURE IN MALAY**

The nouns in the Malay language can be preceded by numerals (*dua* 'two', *tiga* 'three', *empat* 'four'), quantifiers (*beberapa* 'a few',

*kesemua* 'all', *setiap* 'everyone') and classifiers (*buah*, *biji*, *seulas*, etc). This N can also be followed by determiners like *itu* 'the/that' and *ini* 'the/this'.

Meanwhile, numerals, quantifiers and classifiers have a strict word order in the Malay language (Fazal Mohamed Mohamed Sultan, 2008). Among other, numerals and quantifiers cannot exist at the same time or precede the nouns, as it is in the following phrase (19c):

(19) a.  *beberapa* (batang) pen
          few         (class)   pen
          'a few pens'

     b.  *dua orang manusia*
          two class.  people

     c.  **beberapa dua orang manusia*
          a few       two class. people

The noun can be preceded by a quantifier *beberapa* as in (19a) or a numeral *two* as in (19b). NP (19c) shows that the presence of a quantifier and a numeral at the same time in a NP in the Malay language is not acceptable. This is because the quantifier and the numeral observe complementary distribution. The brackets for the classifier in (19a) mean that the classifier is optional. However, the usage of certain classifier is compulsory while the others are optional because according to Ramli Hj Salleh (1995, p. 4), the existence of classifiers in Malay is dependent on the semantic features [±alive, ±human] of the classifiers. Therefore, the discussions for the numeral and classifier can be summarized into an ordering, such as in (20):

(20)  $\left\{ \dfrac{\text{numeral}}{\text{classifier}} \right\}$ - classifier - noun

As for the phrases that follow the head noun in the Malay language, the phrases are genetive NP, adjective phrase (AP) and prepositional phrase (PP), as given in the following examples:

(21) a.  [$_{NP}$Kain [$_{NP}$Ahmad]] telah koyak.
          cloth Ahmad    has  torn.
          'Ahmad's cloth is torn'

b.  [$_{NP}$Kain [$_{AP}$biru]] itu telah dibuang.
    cloth    blue  the  has   thrown
    'The blue cloth has been thrown away'.

c.  [$_{NP}$Kehancuran [$_{PP}$di Iraq]] tidak boleh
    dihentikan.
    destruction      in Iraq  cannot
    stopped.
    'Destruction in Irqa cannot be stopped'

In short, the NP in the Malay language consists of lexicals and one or more than one lexical units. These lexical units are non-phrase like determiner, quantifier, numeral, and classifier that precede the noun in a NP, while the possessive and adjective follow the noun. Therefore, the order of the whole noun phrase can be summarized as follows:

(22)  $\left\{\dfrac{\text{quantifier}}{\text{numeral}}\right\}$ ; (classifier); N; possessive; determiner

## SIMILARITIES AND DIFFERENCES BETWEEN THE NP IN THE KENSIU AND MALAY LANGUAGES

As a whole, the NP in the Kensiu language consists of numerals, classifiers, nouns, genitives, and determiners. These four elements form a concrete word order in Kensiu. The order of the words can be summarized as follows:

(23)  $\left\{\dfrac{\text{quantifier}}{\text{numeral}}\right\}$ - classifier - noun – genitive/ determiner

Meanwhile, the distribution in (23) is similar to other languages in the same group of Mendriq, such as Kensiu and Bateq (Fazal Mohamed Mohamed Sultan, 2009). However, Malay language seems to have almost the same word order as well:

(24)  $\left\{\dfrac{\text{quantifier}}{\text{numeral}}\right\}$; (classifier); N; genitive; determiner
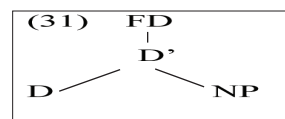
Nonetheless, it is crucial to note that there are differences before and after the nouns, such as in the type of classifiers and the choice of classifiers, determiners, and genitives.

Meanwhile, the Kensiu language does not differentiate the type of classifiers that can be used as it is in the Malay language. The Kensiu language uses only the word *kebek* as its classifier, while various classifiers are used in Malay, depending on the type of nouns. Furthermore, the Kensiu language does not allow the presence of genitive and determiner at the same time, as they are both in the complementary distributional situation. On the contrary, the presence of these elements is allowed in the Malay language. The differences in relation to the latest rebranding of NP to determiner phrase (DP) are discussed in the subsequent section.
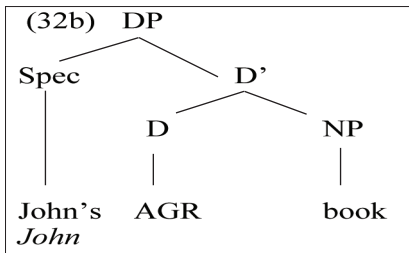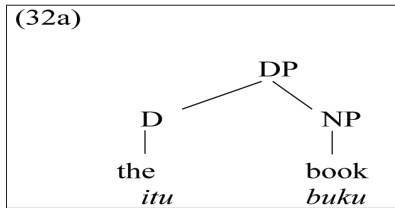
## THE STRUCTURE OF DETERMINER PHRASE (DP)

Since Abney (1987) presented his work on noun phrase sentence, linguists have changed their views on the structure of NP. Abney argues that the head of a nominal phrase is a functional category. He also claims that noun phrase is a determiner phrase. His claim was made based on the symmetry between the NP and clausal projection. A clause has a VP which is dominated by a functional projection, tense phrase (TP). Therefore, Abney assumes that NP has to be viewed as an N projection that is dominated by a functional projection, as in (31).
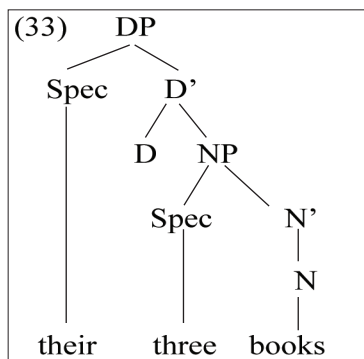


Introducing a functional category into a NP is widely accepted when his idea was implemented in various papers around the world (Ritter, 1987; Delsing, 1988; Ouhalla, 1988). However, those papers mostly involved studies on Roman languages. Therefore, in order to increase the DP analysis in Asian languages, the DP structure of Kensiu and Malay was analysed.

Abney also claims that there is AGR in D in every NP. Therefore in the English language, the determiner *the* will have a structure as in (32a),
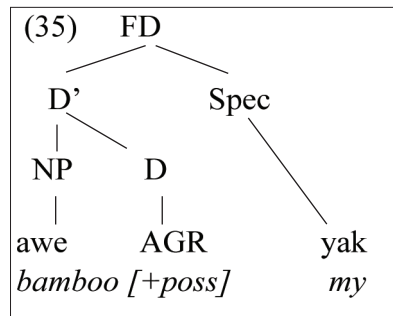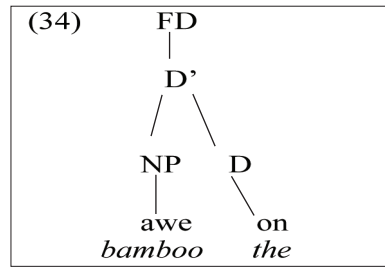
while the existence of a possessor in a NP is structured as in (32b).

(32a)

```
              DP
         /         \
       D             NP
       |             |
      the           book
      itu           buku
```

(32b)

```
        DP
      /     \
   Spec      D'
    |      /     \
    |     D       NP
    |     |        |
  John's AGR      book
  John
```

Abney attempted to construct a structure which should be able to solve the puzzle of the word order involving numerals and classifiers in English, such as in the phrase like, *their three books*. He suggested two scope positions which are occupied by a pronoun and a numeral or a classifier. The numeral and the classifier are named as a numeral phrase (NUMP). He even suggested that the NUMP stays at the Spec NP. This suggestion means that all the possessives and numeral phrases describe the head nouns, as illustrated in (33).

(33)

```
           DP
         /     \
      Spec      D'
       |      /     \
       |     D       NP
       |          /     \
       |       Spec      N'
       |        |         |
       |        |         N
       |        |         |
     their    three     books
```

If the structure in (33) is applied on the possessives and the determiners in phrases (28) and (29), the following structure will then be obtained.

(34)

```
              FD
              |
              D'
            /     \
          NP       D
           |         \
          awe        on
        bamboo       the
```

(35)

```
              FD
            /     \
          D'       Spec
        /    \        \
      NP      D         \
       |      |          \
      awe    AGR        yak
   bamboo [+poss]        my
```
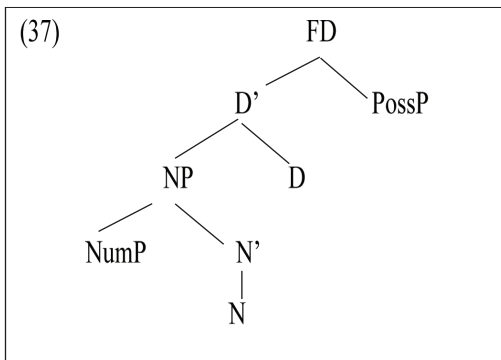
The structure illustrated in (35) shows that AGR does exist in the structure of DP in the Kensiu language. In fact, the presence of AGR proves that the possessives are different. This also proves that the presence of AGR is important so as to verify the presence of a feature. It is claimed that AGR has a feature [+possessive]. The appearance of *on* at *D* made the unavailability of a feature [+possessive] which eventually blocked the possessive from presenting in that position. This further explains the ungrammaticality of the phrase in (36).

(36) *a.  hiyak  yak on
             hut    my   the

     *b.  hiyak on   yak
             hut    the my

The above structure has also portrayed that the sequence of possessive and determiner displays a strict order. Furthermore, the word order of Kensiu is rather different from English language. However, the DP has the advantage in explaining the differences without any problem.
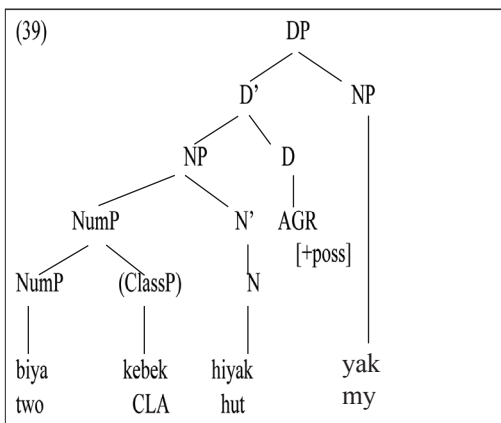
## THE POSSESSIVE AND NUMERAL PHRASE OF KENSIU AND MALAY

The syntactic analysis on the NP of Kensiu and Malay reveals that the word order of their NPs is strict. The word order in the NP shows that the head noun can be preceded by a numeral and a classifier, whereas the head noun can be followed by a determiner and a possessive. These differences can be explained if a structure that can accommodate all the characteristics discussed above could be proposed. Therefore, the structure illustrated in (37) is proposed to accommodate the NP of the Kensiu and Malay languages.



This structure can be applied to the phrase in (38) which provides the structure as illustrated in (39).

(38)　*biya kebek hiyak yak*
　　　two clas　hut　my
　　　'My two huts.'



The whole DP structure of Kensiu is portrayed in (39). The brackets for ClassP indicate that the phrase is optional. If there is an overt existence of ClassP, there will be adjunction of ClassP. On the contrary, if there is no classifier, there will no ClassP available, as in the structure given in (41).



## CONCLUSION

This article has discussed the noun phrase of an Austroasiatic and an Austronesia language. The Austronesia stock is represented by the Malay language, while the Kensiu language represents the Austroasiatic stock. In brief, the discussion above focuses on the word order of the NP of both languages. The analysis of the two languages reveals that there are differences in the words that follow and precede nouns. Other than that, there are also differences in the classifiers and the type of classifiers which are used in both languages. There are words are similar to those in Malay even though they are from a different language. Finally, a syntactic structure that can accommodate the differences between the languages has been proposed to solve the distinguishing characteristics of the two languages undertaken in this study.

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