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# Journal of Social Sciences & Humanities

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# Musical Fit and Willingness to Pay for Utilitarian Products among University Students

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## ABSTRACT

This study investigated the impact of musical fit on consumers' purchase intentions regarding utilitarian products. Participants were shown pictures of products and asked to state the maximum they would be willing to pay for each item. Following that, participants were also shown pictures of two competing utilitarian products, one being a more 'upmarket' (e.g. Duracell batteries) version than the other (e.g. Eveready batteries), and they were asked to choose one of the two while being exposed to either Malay music, pop music, classical music or no music condition. Participants were not influenced to pay more for utilitarian products when being exposed to the different musical styles (and no music) condition. Participants also did not necessarily choose the more 'upmarket' product when exposed to different musical styles (and no music) condition. This suggests that musical fit may not influence purchase intentions for utilitarian products.

Keywords: Choice, consumers, music, preference

# **INTRODUCTION**

Studies concerning the effects of musical genre, rhythm, tempo, and modality on consumer behaviour have become increasingly common in the consumer behaviour literature over the past 20 years. For example, in perhaps the most regularly cited study in the field, Milliman (1986) found that the fast tempo background music could significantly affect the pace of restaurant patrons (North and Hargreaves, 1996a). Research concerned specifically with the notion of musical fit in commercial contexts is a relatively recent phenomenon, however. Musical fit refers to the process by which customers associate a certain piece of music with particular products, leading to the selection of one product over the other, or with particular patterns of spending, leading to customers being prepared to spend less or more for the same products. At present, although the published research discusses musical fit as though it was a universal phenomenon, all the research has been carried out in the West; and although North, Hargreaves, and McKendrick (1999) investigated the effects of musical fit on the selection between competing alternative products, all the remaining research has focused on the impacts of the Western classical music on the amount that the customers are prepared to pay. Music is an intrinsically cultural object and research must account for this. Unfortunately, there is hardly any research on how music affects people living in an Asian culture. Among only a handful of studies that have been carried out in the Asian market are those concerning how Chinese brand attitudes are affected by the match between script associations and brand associations (Pan and Schmitt, 1996); the

Received: 2 September 2009 Accepted: 2 February 2010 attitudes of university students in Taipei towards classical music concerts; one study of general consumer behaviour (Chen and Hu, 2006); and the application of the Mehrabian-Russell model to two types of CD stores in Hong Kong (Tai and Fung, 1997). This paper investigates the effects of musical fit in Malaysia. Firstly, it considers the maximum amount that customers are prepared to pay for utilitarian products, and secondly, whether they select an 'upmarket' or 'downmarket' version of the selected utilitarian products.

There have been some studies which have compared consumer culture between Asian countries and the West. Many marketers assume that a similar marketing mix and strategy would be correct to take in all their markets. However, Wee (1999) argues that the truth is far more complex and concludes that each generation of teenagers has its own global culture shaped by the familiar Western themes and values brought via the mass media. In addition there is the national culture and shared historical experiences which can only heighten social and cultural complexity in understanding the consumer culture of teenagers in Asia. Hence we have Asian teens who are influenced by a complex mix of East Asian, Western, and their own cultures. Singhapakdi, Rawwas, Marta and Ahmed (1999) argue that marketers must take into account consumers' culturally-based ethical values. It was noted that consumers from Malaysia and the USA have significant differences in their perceptions of marketing ethics situations, their attitudes toward business and salesperson and their personal moral philosophies. However, there is nothing comparing eastern and western cultures concerning the impact of music on consumer behaviour.

When considering the impacts of music on consumers, musical fit is perhaps the best approach to adopt in a Malaysian context since it explicitly recognizes the role of cultural factors in determining the impacts of a given piece of music. For example, it acknowledges explicitly that there are culture-based stereotypes of differing musical styles that influence consumers, and emphasizes that it is the individual's response to the music, rather the properties of the music per se, that are crucial. This recognition of cultural factors is particularly relevant when investigating music in a culture such as Malaysia which contains three major ethnic groups, each with their own quite distinct musical heritage. Furthermore, unlike approaches such as the servicescape model, the notion of musical fit implicitly allows researchers to make very specific predictions about the impacts of a given piece of music in a given commercial setting. Nor, however, does the present work assume that musical fit is a perfect model. Rather, the approach adopted in this study was to question the generality of any effects of musical fit, and use the opportunities offered by a strongly multicultural society to test the possible limitations of the approach.

To date, research on musical fit has shown that consumers have the propensity to spend more when background music implied notions of affluence or wealth. For example (Areni and Kim, 1993; North and Hargreaves, 1998) showed that playing classical music in a wine cellar led to customers buying more expensive wine than when Top 40 music was used. Similarly, North, Hargreaves, and McKendrick (1999) found that musical fit could prime the selection of certain products: customers were more likely to buy French wine than German wine when French music was played from a supermarket display, whilst German wines were select when the display featured German music. Both these studies illustrated how music could prime consumers' choices. In the former study, the authors argued that classical music 'fitted' a stereotype involving notions such as 'expensive' and 'luxurious', which was why consumers bought the more expensive wine when classical music was being played. In the latter study, music primed or activated consumers' knowledge related to the products displayed. For example, German music primed knowledge associated with German wines and French music, French wines. Implicit to all these studies is the notion that music that fits the product raises the salience of product attributes. and it is this raised salience that facilitates

recall of the product. The practical, applied basis of this existing work (that has emphasized collection of data in the field and a focus on practical outcomes) means that a precise definition of 'raised salience' remains somewhat fuzzy. However, implicit to all the existing work is the well-known concept of spreading activation (Anderson, 1983; Collins and Loftus, 1975), in which priming of one cognitive concept (e.g. identification of the music as representative of 'classical music') primes all those concepts related to it (e.g. stereotypes of classical music as 'upmarket'), which in turn primes the behaviour observed (e.g. spending).

In addition to North, Hargreaves and McKendrick (1999), several other studies investigating into the impacts of music on consumer behaviour point to the influence of musical fit in commercial contexts. For example, North, Hargreaves, MacKenzie and Law (2004) constructed adverts for a range of products which featured music that either did or did not reflect aspects of the products concerned. For example, the music for a sports drink is itself dynamic, quick-paced, and otherwise energetic. Such music is able to facilitate recall of the brands concerned. Similarly, North and Hargreaves (1998) argued that musical fit influenced the purchase intentions of participants in a cafeteria. Participants were prepared to pay more for the same food items when classical music was played compared to pop music, easy listening music, and a no music condition. In response to a questionnaire, customers stated that classical music expressed notions such as sophistication and luxury (Lammers, 2003; North, Shilcock and Hargeaves, 2003; Wilson, 2003). Similarly, Grewal, Baker, Levy and Voss (2003) found that classical music made a jewellery store seemed more luxurious.

As noted earlier, several consumer psychologists (e.g. MacInnis and Park, 1991) have argued that music that fits the advertised product influences subsequent purchase intentions because it primes superordinate knowledge structures which relate to relevant product information. It is interesting though that a similar argument can also be found commonly

in the literature on the effects of rap and rock music on young people. Several researchers in the field of consumer psychology have drawn explicitly on cognitive priming theory (e.g. Berkowitz and Rogers, 1986) in arguing that exposing people to violent or sexist music videos should prime cognitions concerning related violent or sexist acts, such that the latter are subsequently regarded as more acceptable or are more likely to be displayed (Anderson, Carnagey and Eubanks, 2003; Hansen, 1989; Hansen and Hansen, 1988: 1990: 1991; Hansen and Krygowski, 1994; Johnson, Jackson and Gatto, 1995; Ward, Hansbrough and Walker, 2005). Although carried out independently, this research itself mirrors studies within experimental aesthetics carried out during the same period, indicating that liking for a given piece of music is influenced by the extent to which it activates related knowledge structures. Several studies have supported various manifestations of this approach; for example, Martindale's preference for prototypes model (e.g. Hekkert and van Wieringen, 1990; Martindale and Moore, 1988; Martindale, Moore and Borkum, 1990). In short, studies within consumer psychology, media psychology, and experimental aesthetics suggest that music that fits a particular product or commercial behaviour is effectively a type of cognitive prime that activates superordinate knowledge and therefore raises the salience of certain aspects of consumers' knowledge of the world.

Although representing an apparently consistent set of findings, the existing consumer research on musical fit overlooks one obvious potential caveat. The majority of research on the phenomenon has investigated the ability of (classical) music to prime purchasing of more expensive alternative products. Only one study to date (North, Hargreaves and McKendrick, 1999) has shown that music may influence consumers' preferences between similar products. This raises several interesting questions. First, can North, Hargreaves, and McKendrick's (1999) findings concerning the effects of music on preferences for otherwise similar types of wine be replicated outside Western culture? Second and more interestingly, would such an effect apply for all types of products? Based on the concept of heuristics, because utilitarian products are used more regularly, they are therefore more familiar to consumers, and consumers would be less likely to rely on external and bias cues in making their judgements. This means that it should be much easier for them to put a price on utilitarian products than on non-utilitarian products. This is because non-utilitarian products are dependent on the 'experience' consumers get from purchasing such products. As such, the present research represents a much stricter test of the musical fit hypothesis than has hitherto been attempted.

No research has so far investigated the possibility of corresponding effects in non-Western cultures. Previous research on musical fit has focused on the impacts of classical music on the sales of 'upmarket' products, and it is by no means clear that corresponding effects would be found in other cultures where classical music may not have the same meaning to customers as in the West. Accordingly, the present research aims to investigate if Western classical music would prime Malaysians to perceive associated products as expensive and luxurious and therefore influence the maximum amount that they would be willing to pay for them. Furthermore, the emphasis in the existing research on classical music means that the work has focused on the 'upmarket' products such as wine sales or restaurant meals. We know nothing about the impacts of musical fit on preferences between competing versions of *utilitarian* products (e.g. umbrella, dish wash, batteries). If music primes the salience of related products then participants should choose a luxurious version of a utilitarian product over a cheaper alternative when Western classical music is played.

The present study employed three different musical styles and a 'no music' control condition over a period of five weeks in a large study room in a Malaysian student dormitory. On each evening, either Western classical music, Western pop music, ethnic Malay music or no music was played. The participants were shown pictures of the products and asked to state the maximum amount that they were willing to pay for each item. Following this, the participants were also shown pictures of two competing utilitarian products, one being a more 'upmarket' (e.g. Duracell batteries) version than the other (e.g. Eveready batteries), and they were also asked to choose one of the two products. Western research leads us to expect that Western classical music will lead to participants being prepared to pay more for the products and to them selecting the more 'upmarket' of the two alternate products with which they are presented. However, Schlosser (1998) found that purchase intentions concerning social identity products (i.e. greeting cards, jewellery, perfume) were influenced more by store atmosphere than those of the utilitarian products (i.e. aspirin toothbrushes). In more specific, the perceptions of the social identity products were more positive when the store's atmosphere conveyed notions of 'prestige' versus 'discount'; while perceptions of utilitarian products remained unaffected. Following this, an alternate hypothesis is that the different types of music employed here might have no influence on the amount the customers are willing to spend on utilitarian products or on preferences for 'upmarket' versions of those products.

# MATERIALS AND METHODS

#### Pilot Study

A pilot study was carried out to ensure that the music that was to be used in the main experiment was clearly identifiable as either ethnic Malay, Western classical or Western pop music by a sample of 20 participants drawn from the same general population as the sample used in the main experiment. Each participant in the pilot study was played three types of music and they were asked to state what genre of music was playing. All the participants were able to clearly distinguish between the three pieces of music as either ethnic Malay, Western classical or Western pop music, respectively. The participants were also asked to write down as many utilitarian items as they could think of. The 35 most frequently listed items were employed in the present research.

#### Participants

One hundred and twenty participants took part in the study, and they had been divided into four groups comprising of 30 participants each. Each group comprised 10 Malays (5 males, 5 females), 10 Chinese (5 males, 5 females), and 10 Indians (5 males, 5 females). All the participants aged between 18-24 years (Mean = 20.05, SD = 1.37). The participants were students from Universiti Putra Malaysia. Testing was conducted in groups of 5-10 in a quiet room on campus.

# Design

The research used a within subjects design in which Malay, Indian and Chinese participants were played either 'no music', Classical music, pop music or Malay music. Equal numbers of participants from each of the ethnic groups were exposed to each of the four different music conditions.

Apart from the 'no music' condition, participants heard music in each condition while they completed the questionnaire. These music conditions employed a CD representing one of three musical styles, namely ethnic Malay music, Western classical music, and Western pop music. The Western classical music was taken from 101 Classics – Classical Highlights from the Great Composers Vol.1. The tracks used from this CD were Bach's Brandenberg Concerto No. 3 in G major, Handel's Concerto Grosso No.6,  $2^{nd}$  movement in F major, and Bach's Jesu, Joy of Man's Desiring. The Western pop music was taken from 1. The tracks used from this CD were U2's Beautiful Day, Sheryl Crow's Everyday is a Winding Road, and Vanessa Carlton's A Thousand Miles. The ethnic Malay music was taken from the CD Muzik Tarian Malaysia. The specific tracks used were Puteri Ledang, Serampang Pantai and Bunga Bunga Di Taman. These pieces of music were selected as they were clearly identifiable as either Western classical, Western pop or ethnic Malaysian music. The music (or no music) was played through a portable CD player with speakers positioned at the back of the room at a comfortable background volume level.

The products used in this questionnaire were bought from a local hypermarket. The pictures were then taken with a Casio digital camera. Once the pictures of all the products were taken, an Adobe version of the questionnaire was designed.

# Procedure

The study was carried out between 8.30 p.m. and 10.30 p.m. over a period of five weeks in July and August. The room chosen was a huge study room at one of the dormitories in Universiti Putra Malaysia, and this time of day was chosen because most students would be back at their dormitories. The participants were recruited via posters asking people to volunteer for a research in which they would complete a questionnaire in return for Five Ringgit. The participants were required to answer all the questions in the questionnaire and they were given unlimited time (of approximately 20 minutes) to complete it while music (or no music) were being played at a comfortable background volume level. The questionnaire had four introduction questions. Question 1 asked the participants about how often they went shopping for household items, and for this, they were given three options, once a week, once a fortnight or once a month. Question 2 asked the participants about the type of store they normally shopped at for household items. They were also given four options, namely hypermarket, supermarket, local shop, and other. Question 3 asked the participants to indicate the amount they spent the last time they went shopping for household items and to give an estimate to the nearest 10 Ringgit. Following this, the questionnaire was then divided into two sections. Section 1 of the questionnaire consisted of 18 utilitarian household products with accompanying pictures (for example, cooking oil, a photo frame, and an umbrella) asking the participants to state the highest price they would be willing to pay for each item to the nearest Ringgit. Section 2 of the questionnaire had accompanying pictures comprising of 17 other utilitarian products asking them to choose either an 'upmarket' version of a utilitarian product or a 'less upmarket' version (for example, Duracell batteries versus Eveready batteries; Carrefour detergent powder and Trojan detergent powder). A complete list for the utilitarian product is attached in Appendix 1.

# **RESULTS AND DISCUSSION**

The questionnaire items gave rise to a Cronbach alpha of 0.723. A MANOVA was carried out to investigate the differences between the three musical genres and no music in the maximum amount that the participants would be willing to pay for the utilitarian products listed in the question. The result of this question, however, was not significant (F (57, 297) = .95, p = 0.579). Univariate tests indicated that two of the items were associated with significant differences between the conditions. These were the Ikea wastepaper basket (F (3, 115) = 3.07, p = .031) and the High Sierra knapsack (F (3, 115) =3.43, p = .019), which gave rise to higher values when the Western classical music was played. The results for the wastepaper basket and knapsack are arguably better attributed to a type 1 error, a false positive based on the number of products tested. A chi square test of independence was also carried out to investigate any association between the frequency with which the participants selected the upmarket or less upmarket alternatives and the type of music (or no music) playing in the background. Similarly, the result gathered for this item was also not significant, and the frequencies are shown in Table 1.

The results of this experiment provide a clear evidence that different musical styles (and no music) did not influence the highest price participants would be willing to pay for utilitarian products. The results also indicate that musical fit might not influence the participants to choose the more 'upmarket' version of these products. As these results are non significant, it is of course impossible to state their cause with confidence. However, one particular possibility seems to be a strong candidate. The utilitarian products shown in this questionnaire were everyday items. As noted earlier, Schlosser (1998) found that

	Genre			
"Upmarket" utilitarian products	Classical	Ethnic	Рор	Silence
1.2L plastic container made in Germany	14	8	18	13
1kg Jasmine brown rice	7	6	9	7
3kg Trojan Detergent powder	20	27	26	24
4AA Duracell batteries	7	11	10	11
10 packets of Royal Gold handkerchief tissue	16	15	13	16
20 rolls of Scott toilet roll	19	18	24	22
240gms organic noodle	22	24	20	23
250gms Darlie fluoride toothpaste	28	27	27	29
400gms Axion dishwash paste	22	23	24	23
440 sheets A4 Double A multipurpose paper	22	25	24	25
660ml Spritzer mineral water	16	20	18	23
1000ml Sunlight dishwashing liquid	24	23	20	23
A4 hard cover ring file	23	26	25	23
Scott tissue paper	21	19	23	23
Nokia 7390	20	22	21	20
Ballpoint Parker pen	10	10	7	10
Silver cutleries	28	28	27	27

TABLE 1 Choice of 'upmarket' version x music conditions

purchase intentions concerning social identity products (i.e. greeting cards, jewellery, perfume) were influenced more by store atmosphere than by the intentions concerning utilitarian products (i.e. aspirin, toothbrushes). Following this, different musical styles would have no bearing on the maximum price the participants would be willing to pay in the present research, since the items themselves were not social identity products.

This explanation cannot be ruled out. However, it is important to note that balanced against it is the finding by North and Hargreaves (1998) that classical music played in a cafeteria increased the amount that the customers were prepared to pay for rather mundane items of food and drink, such as chocolate bars or cans of pop. In this case, classical music was found to have influenced the participants even though the products were arguably utilitarian and not clearly associated with the music. This then raises another possibility, namely that the effects of classical music identified in the Western studies do not apply to the non-Western participants. This may be due to the fact that they regard classical music as 'Western' rather than 'upmarket', and so the music does not encourage them to pay more or favour the more expensive of the two alternative products.

# CONCLUSIONS

The implication here is that musical fit might not have any effect on utilitarian products. Hence, retailers in hypermarkets, supermarkets or local shops perhaps need not concern themselves with ensuring that the music they play fits with most of the products that they sell, and should instead focus on only the more luxurious products that they also stock. Secondly, this study illustrates that musical fit did not operate when the participants were already regular users of or had other pre-existing preferences for one particular product over the other. Rather, the effect was apparently limited to those cases where the participants had no criteria to otherwise select between the products in question. This is consistent with the recognition heuristic which states that a known alternative will be selected over an unknown one. Thirdly, because Malaysians do not necessarily have a unifying culture as they are still tied up to their own 'small' culture. As a result, they may not find a 'personal relevance' or significance when the ethnic Malay music was being played. For this reason, the researchers have also conducted another study concerning this issue, which is currently under review.

The most obvious limitation is that the samples consisted mainly of students from a particular cultural group(s), and as such, they cannot be considered as a truly representative of the populations elsewhere in the world. The introduction in this research noted that it was not clear that research from the West could be generalised to consumers elsewhere, and a similar criticism could be made of the research reported here, i.e. the one which was carried out exclusively in Malaysia. Music that primes certain knowledge and beliefs among Malaysian students may not have similar effects among other groups of people. Further studies should be conducted with different groups living in different areas, and it seems that there is at least a possibility that different music genres may be needed to produce the same effects among them as identified in the present study. The sample in this study used university students and because university students are assumed to have limited financial resources, this could have had an impact on the maximum amount that they would be willing to pay for utilitarian products. Further research may investigate if the Malaysian student population represents the general population in terms of consumer behaviour.

Future research may also investigate a range of personality traits that could have mediated the effects identified here. For example, those scoring higher on innovativeness or sensationseeking may be more willing to try products and therefore be prepared to pay more to try a product, whereas those scoring higher on the need for cognition may be prepared to pay more for 'intellectual' products, and those scoring higher on self-esteem may be willing to pay more for products related to their self-identity, and so on. Investigation of such possibilities is beyond the scope of the present research, but they may be interesting hypotheses for future work in this area.

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#### Joanne Yeoh Pei Sze

# **APPENDIX 1**

List of items in Section 1 of Questionnaire

- 1. 1.5L Tupperware water bottle
- 2. 2kg Naturel cooking oil with omega 3 & 6
- 3. 5" x 7" photo frame
- 4. 100% cotton black shirt
- 5. 500ml liquid soap
- 6. 1.2kg organic papaya
- 7. 700ml Dove shampoo
- 8. 1000ml Dove cream shower
- 9. A4 size Campus spiral notebook
- 10. A pair of Nike socks
- 11. Bath towel
- 12. Ikea wastepaper basket
- 13. High Sierra knapsack
- 14. 1kg organic carrots
- 15. 150gms organic spinach
- 16. Floor rug
- 17. Made in Malaysia slippers
- 18. Umbrella

List of the items in Section 2 of Questionnaire

- 1. 1.2L plastic container made in Malaysia and 1.2L plastic container made in Germany
- 2. 1kg Jasmine brown rice and 1kg Jasmine white rice
- 3. 3kg Carrefour detergent powder and 3kg Trojan detergent powder
- 4. 4AA Duracell batteries and 4AA Eveready batteries
- 5. 10 packets of Carrefour handkerchief tissues and 10 packets of Royal Gold handkerchief tissue
- 6. 20 rolls of Carrefour toilet rolls and 20 rolls of Scott toilet rolls
- 7. 240gms organic noodles and 240gms non-organic noodles
- 8. 250gms Darlie Flouride toothpaste and 250gms Carrefour Flouride toothpaste
- 9. 400gms Axion dishwash paste and 400gms Carrefour dishwash paste
- 10. 440 sheets A4 Carrefour multipurpose paper and 440 Sheets A4 Double A multipurpose paper
- 11. 600ml Spritzer mineral water and 600ml Carrefour mineral water
- 12. 1000ml Carrefour dishwashing liquid and 1000ml Sunlight dishwashing liquid
- 13. A4 hardcover ring file and A4 manila cardboard ring file
- 14. A box of Carrefour tissue paper and a box of Scott tissue paper
- 15. Nokia 1110 and Nokia 7390
- 16. Ballpoint Parker pen and ballpoint Kilometrico pen
- 17. Plastic cutleries and silver cutleries

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# **Changes in Chinese's Political Involvement in Malaysia**

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# ABSTRACT

Malaysian Chinese is the second largest group in the country's population and has been actively involved in politics since their mass immigration during the middle of the 19<sup>th</sup> century. The main objective of this article is to examine the political involvement of the Chinese, their voting behaviour, bureaucratic participation and reaction to Malay dominance in the country in different periods, i.e. pre- and post-1970, and post-2008 General Elections. This writing is greatly contingent upon a content analysis on secondary data collected from reports, journal articles, book chapters, and newspaper articles. In short, Chinese's involvement and reaction in politics in Malaysia significantly depend on the discourse of Malay dominance. Malaysian Chinese's political participation in the period from 1970 to 1990 indicated both continuity and change. Chinese electorate's voting patterns seem to demonstrate a swing to the opposition candidates, while the parties in the Barisan Nasional government continue to enjoy the confidence of the Malay communities as well as the elites. Meanwhile, the so-called politic tsunami on 8 March 2008 has opened a new phase in the Malaysian political development. The nature of politics is said to have shifted from communal-based politic to multiethnic-based.

Keywords: Bureaucratic participation, Malaysian Chinese, Malay dominance, Chinese's political involvement

# **INTRODUCTION**

Malaysia is a highly plural society since ancient times, i.e. the pre-colonial period, in contrast to most scholars theorizing the phenomenon as a product of colonization. As a plural society, nation building has always been a great challenge for Malaysia (Shamsul, 1997). The ethnic composition of this country comprises two major constitutional categories, namely Bumiputera (literally means 'prince of the soil') and non-Bumiputera. Of the total population of Malaysia in Census 2000, Bumiputera made up 65.1 percent. The Bumiputera category consists of the Malays and the indigenous peoples of Peninsula Malaysia, Sabah and Sarawak (for instance, Orang Asli, Kadazan, Iban, etc.). On the other hand, the Chinese (26.0 percent) and Indians (7.7 percent) form the majority of the non-Bumiputera category.

The ethnic distribution has not altered considerably in view of the rapid growth of the Malaysian population. The two main demographic categories of the population, i.e. Bumiputera and non-Bumiputera, have been regarded as critical in sustaining ethnic balance in Malaysia. In particular, the Sino-Malay relationship plays a pivotal role in the politics of Malaysia's nation building. The politics of nation-building in Malaysia is basically the politics of mediating identities. The politics of identity in Malaysia illustrates the prevailing

Received: 16 March 2009 Accepted: 20 October 2009 contradictions of various notions of *nation-of-intent* both inter and intra ethnic groups (Shamsul, 1996).

The issue of ethnicity characterizes the very basis of Malaysian politics. This is reflected by the fact that political struggles are often fought on an ethnic basis and the tendency of most political issues to be perceived in terms of ethnics. This is a prevailing phenomenon in Malaysian politics since its independence in 1957. Thus, the main objective of this article is to examine the Chinese's political involvement, both their bureaucratic participation and reaction to Malay dominance in the country in the different periods, i.e. pre- and post-1970, and post-2008 General Elections. This writing is greatly contingent upon a content analysis on the secondary data collected from the reports, journal articles, book chapters, and newspaper articles.

There are four main parts in this paper. The first part is to examine the Chinese's involvement in politic before 1970. The second part scrutinizes Malaysian Chinese's political involvement after the implementation of the New Economy Policy after 1970. In the third part, the author looks further into some critical ethnic-related issues prior to the 2008 general election. In the final part, the author analyzes some latest trends emerging in the Malaysian Chinese's reactions in the midst of the Malay dominance.

# CHINESE'S POLITICAL INVOLVEMENT IN THE PRE-1970 PERIOD

In order to understand the Chinese's political involvement prior to 1970s, the concepts of "horizontal solidarity" and "vertical division" are useful (Ho, 2002). In Ho's analysis, the coalition of the three ethnic communities in the Alliance which formed the pre-1970 Malaysia a quasi-consociational state happened only at the elite level. Within the political organization of the United Malays National Organisation (UMNO), Malayan Chinese Association (MCA) and Malayan Indian Congress (MIC), the top elites had, albeit disagreements and conflicts of interests, attempted to strengthen a "horizontal solidarity" among them. They were mostly western-educated, conservative, strongly nationalistic, and deeply committed to communal interests. They shared an experience that was unique in the Malaysian political history. In the framework of "horizontal solidarity", decisions were made with the participation of these leaders, although their roles in policy-making might not be equally significant. Apparently, the Alliance during the initial period of its association was more broadly based in terms of ethnic participatory decisions. Besides this, the coalition of ethnic elites functioned at two levels of the bargaining process: internal and external. The former was the internal bargaining among the ethnic elites themselves. This happened, for example, in the negotiations of the Constitution in 1957. The latter was a united group with an external entity. This was illustrated in 1957 when the UMNO-MCA-MIC Alliance claimed independence from the British.

On the other hand, in the context of "vertical division", the various ethnic groups were segregated in a plural society. Political interactions and communications were extremely limited at individual, group, and organizational levels. While ethnic groups accommodated each other in their daily lives, there was very little exchange of political views. Besides, there were also internal divisions among the ethnic Malaysian Chinese. Indeed, the Malaysian Chinese elites were not homogeneous. There were divided by circumstances and traditions, cultural heterogeneity, and class. Intra-Chinese divisions were also accelerated by pro-Malay policies. UMNO's dominance within the Alliance made the MCA less capable of delivering rewards to their ethnic-group client. While bargaining existed, the decisions were usually in favour of the UMNO. Hence, the MCA consistently failed to satisfy the demands of its Chinese electorate. It, therefore, became alienated from the Chinese grass roots that began to withdraw their support. Indeed, the MCA's inability to deliver cultural, political and economic goods led to elite-mass political divisions within the Chinese community (Ho, 2002).

Meanwhile, Chinese-based opposition parties emerged. They were Democratic Action Party (DAP) and Gerakan Rakyat Malaysia (Gerakan) (Lee, 1987). DAP was a consistent critic of MCA. Gerakan was inaugurated in 1968 and it brought together key leaders from two other non-Malay opposition parties, United Democratic Party and Labour Party. These two political parties were highly vocal in criticizing the Malay-dominated state and its policies, and championed non-Malay rights in terms of education, language, and culture. With these alternatives, the Chinese voters were able to have a choice in terms of selecting their own representatives. Political divisions within the Chinese community, in particular among the voters, were intensified.

The most distinguishing feature in the Malaysian political system, as far as ethnic Chinese political participation is concerned, was the representation they enjoyed at the elite level. Important cabinet positions, such as the portfolio of the finance ministry, were held by MCA politicians traditionally. However, many important issues were decided in the UMNO's favour. The appearance of the political representation remained as an important selling point for the MCA to its supporters and sympathizers.

# CHINESE'S POLITICAL INVOLVEMENT AFTER 1970

There are two important aspects in the understanding of the Chinese's political involvement after 1970, i.e. the shifting of the Chinese votes and the Chinese representatives' bureaucratic involvement in the government administrative system or bureaucratic participation. The shifting of the votes indicated the response of the Chinese voters towards establishment and the role of MCA in representing the Chinese society. The May 13 riot and the 1969 general election have brought notable impacts on both the Malay and Chinese politics. Compared to the previous general elections, the percentage of votes received by the Alliance for the first time went below 50 percent. The significant shift of the Chinese votes to the opposition in many ways continued in the next two decades with only one or two exceptions (see Table 1).

As stated in Table 2, MCA emerged from this election with one of its worst results in the 1986 general election. It contested for 32 parliamentary seats but won only 17. Of the 69 state seats the party contested, it won 43. The 17 parliamentary seats that the MCA won accounted for only 9.6 per cent of the total 177 seats in the parliament, and this was the lowest percentage the party had won in any election.

		F	Percentage of	votes	
Year	Alliance/BN	DAP	PAS*	Independents	Others
1959	51.8	-	21.30	4.80	22.1
1964	58.5	-	14.60	0.70	26.2
1969	44.9	11.9	20.90	1.80	20.5
1974	60.7	18.3	-	6.00	15.0
1978	57.2	19.1	15.50	4.60	3.4
1982	60.5	19.6	14.50	3.80	1.7
1986	57.6	21.1	15.30	3.20	3.0
1990	52.0	16.5	6.57	3.08	14.4**

 TABLE 1

 Percentage of votes in Malaysia's parliamentary elections, 1959-90

\* Pan Malaysian Islamic Party (Parti Islam Se-Malaysia)

\*\* Semangat 46

(Source: Ho, 2002)

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Year	Parliamentary seats won	Total number of parliamentary seats	Percentage of representation
1955	15	52	28.85
1959	19	104	18.27
1964	27	104	25.96
1969	13	104	12.50
1974	19	114	16.67
1978	17	154	11.40
1982	24	154	15.58
1986	17	177	9.60

TABLE 2
MCA's performance in the parliamentary elections, 1955-86

*Source*: Ho (2002)

According to Ho's analysis on 1986 general election, one way to look at the response of the ethnic Chinese voters to MCA and examine its implications for the political process was to look at the support of the ethnic groups in the constituencies (Ho, 1988). The results indicated that of the 17 seats won by MCA, 15 were in the constituencies where Malay voters constituted more than 34 percent. The margin of votes enjoyed by the MCA candidates showed that the seats were won on the strength of the Malay votes. Only two candidates were elected in the Chinese majority constituencies, where ethnic Chinese voters constituted more than 50 percent of the voting population. The analysis also revealed that the 15 parliamentary seats lost by MCA were all won by the DAP candidates. It is worth highlighting the fact that the voter composition of these constituencies consisted of more than 49 percent Chinese voters.

In short, Ho (2002) suggested that the MCA candidates were elected on the basis of the Malay votes. This pattern was repeated in the past few general elections and it likely appeared to be so. The MCA candidates in Chinese-majority constituencies were defeated. This showed that the Chinese voters seemed to have forsaken MCA and a protest movement in the Chinese community against the establishment was taking effect. The Chinese community was less than happy with the administration and the votes of protest by Chinese voters against the government inevitably were cast against MCA because of the perception of the community at large of growing Chinese helplessness and political impotence to influence policy within the administration.

In spite of the lack of grass-roots Chinese support, MCA appeared to have done well in terms of representation in the coalition government at the cabinet level. Table 3 shows the MCA representatives in the government from 1955 to 2000. The number of the Chinese ministers appeared to be consistent (4), except in 1980-81 and 1986-87 (5 and 6, respectively). The number of deputy ministers increased over the years, and this seemed to be the portfolio which the UMNO was more willing to assign to MCA representatives. The bureaucratic involvement of the MCA in the government increased marginally over time as compared with its popular electorate support which at best remained constant. However, after 1969, important portfolios in the government like finance, international trade and industry, and education were no longer assigned to MCA representatives and this further signified the impotency of MCA in influencing policy making in the administration although the number of their representatives in the government was unchanged.

Besides MCA, Gerakan is another Chinesebased political party. However, the support of the Chinese towards the party was rather inconsistent. In 1969, Gerakan participated in

Year	Minister	Deputy Minister	Parliamentary Secretary
1955-58	4	1	0
1958-63	4	1	0
1964	4	2	2
1964-66	4	2	2
1967-68	4	3	1
1968-73	4	1	0
1973-74	4	1	0
1974-76	4	3	1
1976-78	4	3	2
1979	4	6	0
1980-81	5	5	1
1982	4	6	1
1983-85	4	6	1
1986-87	6	6	1
1988	4	6	1
1989-90	4	6	1
1997-94	4	6	2
1995-99	4	6	2
2000	4	6	2

TABLE 3MCA representatives in government, 1955-2000

Source: Ho, 2002

the general election for the first time and won 8 out of the 14 seats contested. The number of parliamentary seat reduced to 5 after they joined BN and it won only 4 seats in 1978 elections. In 1982 elections, the number increased by one to 5 and this number retained for 1986 and 1990 elections. It received votes from both the Chinese and non-Chinese, as witnessed in the state voting in Penang, although its image was essentially a Chinese-based party. Its influence in government remained limited, as its political leaders were given less important ministerial portfolios.

In comparison with the MCA and Gerakan, DAP as an oppositional party is not much different from the aspect of parliamentary and state elections. Based on the data for the 1969 general elections presented in Table 4, DAP achieved a big win with 13 parliamentary seats and replaced Pan Malayan Islamic Party (PAS)

Year	Parliamentary seats	State seats
1969	13	31
1974	9	23
1978	16	2
1982	9	12
1986	24	37
1990	20	44

 TABLE 4

 Performance of DAP in general elections, 1969-90

Source: Ho, 2002

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as the biggest oppositional party in the country. In the 1974 election, DAP won only 9 seats and in 1978, we witnessed a shift, i.e. the support went back to DAP as it won 16 seats which were mainly from Penang. Nevertheless, the support for DAP was decreased in 1982 and it was able to maintain only 6 seats. In the 1986 election, DAP won 24 seats, more than the ones won in combination for MCA and Gerakan. In the 1990 election, the number of seats it won slightly decreased to 20.

Even though DAP is a multiethnic party, in reality, majority of the party members are Chinese. Therefore, besides fighting issues on civil rights and promoting corruption free government, DAP plays important role as a defender and fighter for the rights and needs of the Chinese community. With that, DAP is said to continuously exist as a champion of urban and Chinese rights, and is unlikely to shed its image of a Chinese-based party.

Based on Thock's research, the Chinese politic elites in BN were facing a dilemma and this caused the Chinese association (Huatuan) leaders to stand out to fight for the Chinese fate in the form of political protest. The indirect involvement of Huatuan in politics had been identified prior to the independence of Malaya. Before this, Huatuan heavily contingent upon Chinese political parties to fight for the Chinese's right. The failure of the Chinese political parties in fulfilling their mandate had caused the Huatuan leaders to make a decision to be indirectly involved in politic (Thock, 2005).

The implementation of the 3M Scheme (*membaca, menulis* and *mengira*) in 1983 was perceived by the Chinese community as a mean to change and dilute the cultural characteristics of the Chinese schools. This had triggered the Huatuan, especially Dongjiaozong, to protest aggressively to the implementation. The fact that the Chinese politicians failed to convey the needs and appeals of the Chinese in the parliament and to the government had driven the leaders from Dongjiaozong to take a drastic step and become directly involved in politics.

By involving themselves in politics, Dongjiaozong leaders aimed to unite the forces among the Chinese political parties from multilevels, i.e. inside (the government), outside (the oppositional parties), and Huatuan, as a strong political coalition to fight for the Chinese's right. This combination of the three main political forces in the Chinese community was named as *Sanjiehe* (Thock, 2005).

In the 1982 election, a group of Chinese education activists in Dongjiaozong was represented by Kerk Choo Ting, Koh Tsu Koon, Kang Chin Seng, and Ong Tin Kin who joined Gerakan individually. The mission entrusted by Dongjiaozong to these candidates was "Enter the Barisan, Modify the Barisan." They were hoped to win in the election and enter the parliament. They were given the mandate to speak and defend for the Chinese's right, and to prevent the policies which might bring injustice to the Chinese community in general, and to the Chinese educational system, in particular. Among the four, only Koh Tsu Koon won in Tanjung, Penang, but the involvement of Dongjiaozong in the elections had influenced the electoral pattern among the Chinese electorates, especially towards MCA and Gerakan. Both parties won tremendously compared to the previous elections.

Huatuan politics of protest was also manifested in a few events. In 1983, they forwarded the Cultural Declaration and National Culture Memorandum to protest against the implementation of National Cultural Policy which was perceived by them as Malay-centric and a threat to the survival of the Chinese culture in Malaysia. During the 1986 election, they suggested the Joint Declaration by Chinese Guilds and Associations of Malaysia 1985 (PBPCM) and the Civil Right Movement (CRC) was formed by 15 Huatuan to achieve PBPCM's purposes. Similar action was taken by the Huatuan in the 1999 election when they submitted "Suqiu", i.e. "Election Appeals", a 17 points memorandum on 16 August 1999 to BN.

At that time, the 15 Huatuan was considered by the main Chinese association to function as a leader in playing pivotal role in protesting against the administration of BN/UMNO. To contest the political power of BN/UMNO, CRC once suggested Two Parties System so as to enhance a better democratic environment in Malaysia. The effort to achieve the system was evident when 27 leaders and activists of Huatuan joined DAP during the 1990 election, i.e. after the mass political arrest through *Operasi Lalang* in 1987.

As a conclusion, it can be said that after the 1970, the Chinese community has been sidelined in politics. The Malay dominance under UMNO's flagship and the reign of Dr Mahathir were the main factors that contributed to their position remaining in the sidelines only (Thock, 2008). This has resulted in the Chinese community facing many difficulties in the sectors of economy, education, and culture. The degradation of the Chinese's right in these areas has given rise to the dilemma among the Chinese community in Malaysia.

# POLITICAL SCENARIO PRIOR TO THE 2008 GENERAL ELECTION

In 2004, the governing coalition was able to achieve one of its greatest victories in more than 50 years (Wong, 2005). BN won 198 out of 219 seats in the national parliament and 505 of 552 seats at the state level. In total, BN won 64.4 percent of the votes, i.e. 7.2 percent more points than in 1999. The UMNO candidates came first in 109 of 117 constituencies (93.2 percent). PAS, on the other hand, lost the election in the state of Terengganu and has since had only seven seats in the national parliament (six after by-elections). PKR (People Justice Party or Parti Keadilan Rakyat) had only one Member of Parliament (MP), while DAP was the only opposition party that reached its goal, with twelve delegates in the national parliament (Ufen, 2008).

The main reason for the BN success in 2004 was the popularity of the Prime Minister Abdullah Badawi, who had taken over the PM office in October 2003. He maintained a leadership style which is different from that of his autocratic predecessor, Dr. Mahathir Mohamad. Abdullah is an orthodox Muslim and comes from an influential Malay family of *ulama*  (Islamic scholars). Soon after assuming office, he introduced a number of reforms. After 2004, however, it became obvious that he had failed to deliver his promises of fighting corruption and poverty, as well as improving the tensed relationship among religious and ethnic groups. More importantly, expensive prestige projects were mostly not cancelled (Ufen, 2008).

Abdullah has been criticized by his predecessor, Mahathir since 2006. In August 2006, Mahathir even demanded for Abdullah's resignation. Such criticism probably contributed to the weakening of the Prime Minister's position. Furthermore, the opposition criticized the Prime Minister for his half-hearted fight against corruption. Indeed, there was hardly anyone from the political and business elites charged or sentenced for corruption.

In addition, the deterioration of interethnic and interreligious relations was widely debated in the Malaysian public. During the last few UMNO congresses, the Minister of Education, Hishammuddin Tun Hussein, chairman of the UMNO Youth Organization, wielded a *keris* (Malay dagger) as a sign of Malay supremacy (*Ketuanan Melayu*). This was interpreted by the non-Malays, especially the Chinese, as an act of Malay chauvinism. Ethnic minorities have regarded such development with a strong feeling of inquietude.

Brown (2008) suggested that there were three broad sets of political issues which had raised popular discontent to the levels not seen since the political turmoil, following Mahathir's dismissal and the imprisonment of his popular deputy, Anwar Ibrahim, in 1998. The first set of issues revolved around political corruption, particularly two scandals that had dominated the previous year. First, the publicization of a video apparently showing a senior lawyer, V.K. Lingam, brokering the appointment of judges, and secondly, the trial of Abdul Razak Baginda, a political commentator linked to the deputy premier Najib Razak, on the charges of being an accomplice to murder. The victim was a Mongolian citizen - who had seemingly acted as a translator on a defence deal brokered by Abdul Razak Baginda - who had been killed;

the prosecution claimed, by two policemen acting at the defendant's behest. Eventually, Razak Baginda was sentenced not guilty and released in 2009.

The second set of issues related to the startling mobilization of the country's Indian minority. Increasingly seen as politically marginalized, with high poverty rates but lacking access to the affirmative action policies that benefit the majority Malay community, the Indian population has nonetheless been largely politically compliant. However, provocative actions by the government, including the destruction of Hindu temples standing in the way of development projects, provoked a dramatic response, with tens of thousands turning out in a protest rally in November 2007. The responses to this protest - five of its leaders were detained without trial under the country' Internal Security Act (ISA) and 30 protestors were charged with the attempted murder of a policeman - further alienated many Indians from the government.

The third set of issues related to the basic bread-and-butter economic issues which had risen to the fore, particularly the spiralling rate of inflation, largely a product of global oil price hikes. While the Malaysian government subsidized the cost of fuel - to the tune of some RM40 billion (US\$12.44 billion) in 2007, over 10 percent of the government expenditure pump prices have risen annually by some 10 percent in the recent years, with effects for other prices, particularly for basic goods and services. In January 2008, a protest organized by the NGO 'Coalition Against Inflation' was violently broken up by the police, with some 50 protestors and opposition activists arrested. Rising international prices have also led to shortages in basic goods, including flour, sugar, and cooking oil.

Prime Minister Abdullah Badawi dissolved the parliament with the consent of the King on February 13, 2008. The Election Commission scheduled the elections for March 8. While BN over and over again highlighted its economic successes throughout the campaign, the opposition highlighted numerous examples of government's neglect, particularly the still prevalent corruption, the high crime rates, and the government's refusal to reform the police force against the advice of the Royal Commission.

# THE CHINESE'S REACTION AFTER 8 MARCH 2008

The outcome of the 2008 general elections revealed that Malaysians were seeking for a drastic change. BN has failed to maintain its two-thirds majority seats in the Parliament. It is the worst ever loss in history for the ruling coalition led by UMNO since the 1959 general election. BN only managed to secure 140 seats out of the 222 seats, i.e. 63 percent seats (BN lost another parliamentary seat in a by-election in Kuala Terengganu on 17 January 2009). The only election which was close to this in its outcome was that of 1969. The then governing coalition under the banner of Alliance won 66 percent of the seats in the Parliament.

The three opposition parties, People's Justice Party (or Parti Keadilan Rakyat, PKR), DAP and PAS, formed an electoral pact with each other prior to the poll, harvested 37 percent of the seats. At present, the three parties formed a post-election alliance, unofficially called as Barisan Rakyat (People's Front). If the outcome is based on total ballots for the seats in the Parliament, BN only gained 51.5 percent of the popular vote from the 7.9 million ballots cast on 8 March.

In the 2008 election, the opposition parties won five state assemblies. These were Kelantan, a poor Malay-dominated state controlled by PAS since 1990; Kedah, another largely Malay state which the opposition had come close to capturing in 1999; Penang, an affluent, Chinesedominated state that had often voted for the opposition but had fallen to the opposition control only in 1969; Perak, a large ethnically mixed state on the west coast; and Selangor, the urbanized state surrounding Kuala Lumpur, the capital. In addition, BN was roundly defeated in the Federal Territory of Kuala Lumpur, which does not have a state assembly, winning only one of the 11 parliamentary seats. In general, BN lost the popular vote in West Malaysia (49.8 percent), winning exactly the same number of votes as the three main opposition parties combined, as shown in Table 5.

According to an analysis by Brown (2008) on the dynamics of the ethnic voting in Malaysia, BN has traditionally done best in ethnically mixed constituencies, losing support to PAS in the predominantly Malay constituencies and to DAP in predominantly Chinese constituencies. Meanwhile, the urban Chinese-dominated constituencies, the bedrock of DAP support, swung even further away from BN, and in the multi-ethnic seat, where BN typically excelled, the drop in BN support was most evident, for instance, in Wangsa Maju (Kuala Lumpur), Kelana Jaya (Selangor), and Balik Pulau (Penang).

Brown's analysis also showed that the swing to the opposition was smallest among the Malay population, i.e. around 5 percent, but between 20-25 percent of the Chinese voters switched to the opposition. A survey conducted at the end of January 2008 by Merdeka Centre illustrated that only 38 percent of the Indian and 42 percent of the Chinese population was satisfied with Abdullah Badawi's performance (Brown, 2008). According to Ong (2008), 58 percent of Malays but only 35 percent of Chinese and 48 percent of Indians voted for BN candidates in West Malaysia. The swung votes from BN to the opposition amounted to 5 percent of the points among the Malays, while these were 30 and even 35 percent of the points among the Indians and the Chinese, respectively. However, it is not apparent whether the results are due to protest votes or whether they signify a genuine change in their electoral behaviour (Brown, 2008).

In view of Chinese's bureaucratically involvement in the government administration, although majority Chinese candidates in BN failed in 2008 elections, but the number of Chinese representatives assigned to ministerial post was not reduced. While MCA remained its number, i.e. 4 ministers and 6 deputy ministers, Gerakan was only assigned one deputy minister

			Year		
Party	1990	1995	1999	2004	2008
Barisan Nasional	127	162	148	198	140
UMNO	71	88	72	109	79
MCA	18	30	28	31	15
PBB	10	13	10	11	14
MIC	6	6	7	9	3
Gerakan	5	7	7	10	2
Opposition	49	30	45	20	82
PAS	7	7	27	7	23*
PKN (since 2004: PKR)	-	-	5	1	31
DAP	20	9	10	12	28
PBS (since 2004 part of BN)	14	8	3	**	-
Semangat 46***	8	6	-	-	-
Total	180	192	193	219	222

 TABLE 5

 Seats in the national parliament since 1990 (Most important parties)

(Source: Ufen, 2008)

\* Become 24 seats when won another parliamentary seat in a by-election held in Kuala Terenganu on 17 January, 2009.

\*\* Four seats for BN

\*\*\* Breakaway party from UMNO. Most of its members returned to UMNO in 1996.

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post. At the state level, albeit Penang has been traditionally dominated by the Chinese representative, Perak has increased the number of the Chinese representatives as the members of the Perak State Executive Council (Exco). Six out of 11 state executive council members are Chinese representatives. This number has increased in double compared to the previous one, which there were only three Chinese in the council but, the number of Chinese representatives was reduced to one in the new state executive council when BN seized power from Pakatan Rakyat in February 2009.

However, most political observers and analysts deem the number of Chinese representative in bureaucratic participation is no longer significant because the country's political pattern is moving towards multiracial (Raviechandren, 19 March 2008). Communalbased politic has become insignificant in its influence to the country's politics. In the 2008 elections, we could observe that the Malays were no longer hesitant in supporting DAP, the Chinese were brave in casting their votes to PAS and the Indians wore PAS t-shirt and supported PAS openly (Thock, 2008).

A political new wave in 2008 elections showed weaknesses in UMNO's performance. This led to BN's component parties, namely MCA and Gerakan have become more vocal in expressing their dissatisfactions. They have started to question about the parties' subordinated position in BN in comparison with UMNO. For examples, the ex-president of Gerakan, Dr. Lim Keng Yek in a newspaper interview had illustrated the status of other BN's component parties is like a beggar compared to UMNO. The formal Minister of Human Resource and formal Vice President of MCA, Dr. Fong Chan Onn too urged for MCA to have an equal position or status as UMNO has. Meanwhile, the formal Minister of Health, Dr. Chua Soi Lek suggested that the rest twelve BN component parties, except UMNO and Parti Pesaka Bumiputera Bersatu (PBB) from Sarawak, to form an alliance to contest against UMNO in BN. Related to this, the formal member of Penang Executive Council, Dr Toh Kim Woon, said that if UMNO continually suppressed Gerakan, it was better for Gerakan to leave BN during the immediate aftermath of the general elections (Thock, 2008).

The new stand of MCA has become noticeable in its discourse on the issue of "Ketuanan Melayu" or Malay dominance. The former president, Ong Ka Ting openly advocated that he is strongly disagreeing with the Malay political dominance. In the first Parliamentary meeting, in a loud voice, Ong Ka Ting requested the government to ensure larger religious freedom for the non-Muslim and to build new Chinese school in a more systematic and institutional manner. The new elected president of MCA, Ong Tee Keat also criticized that the issue of the Malay dominance is no longer relevant in today context and it should not be manipulated by the Malay politicians. The new MCA leader further illustrated that the manipulations of Malay dominance brought the denotation that the unequal relationship between the Malays and the non-Malays was like master and slave relationship.

Another new trend found in post-2008 general election is the changing of direction in BN's Chinese-based component parties. In a post-elections post-mortem meeting, MCA leaders identified that the previous direction, to be low profile, was no longer useful, and had caused a losing of support from Chinese community. Therefore, in the meeting, the leaders reached a consensus to change the direction of the party struggle to be more vocal and to fight for not only the right of Chinese community but also other racial groups. The then vice president, Ong Tee Keat suggested MCA to change its direction towards multiethnic.

Meanwhile, former Gerakan president, Lim Keng Yek threw the idea that the non-Malay component parties in BN needed to be combined into a single multiethnic party in responding to the new political scenario in Malaysia. The party veteran also said that the 8 March political tsunami had created a new political scenario which had triggered competition between the Malay parties and multiethnic parties. In actual fact this idea is not new since the party youth leader Mah Siew Kiong had suggested the idea to combine all parties in BN into one multiethnic party in the party 2007 annual assembly. However, the idea was totally rejected by UMNO deputy president, Najib Tun Razak and its youth chief, Hishammuddin Tun Hussein.

### CONCLUSIONS

In the context of Malaysia, the delicate demography balance between the Bumiputera and immigrant populations inevitably constructed its political reality, in the form of Bumiputera versus non-bumiputera. At the micro and everyday levels, it is dominated by the culture of difference but, at the macro level, it is dominated by a homogenizing ideology. As Shamsul (1997) concludes, there is a clear tension between these two levels articulated in various forms. Hence, Malaysia could be described as a state in stable tension.

Hitherto, the Chinese's involvement and reaction in politics in Malaysia are significantly contingent upon the discourse of the Malay dominance. The Chinese's political mobilization and bureaucratic participation in the governmental administration are important in to be studied in order to understand their political behaviour. The so-called politic tsunami on 8 March, 2008 has opened a new phase of the Malaysian political development. The nature of politics in this country is said to have shifted from communal-based politic to multiethnic-based. It is more interesting now to see how different the Chinese representatives struggle in this 'more open' political environment.

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# Entrepreneurship Behaviour amongst Malaysian University Students

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## ABSTRACT

Entrepreneurship today is recognized as a crucial catalyst to innovation and increased productivity, essential not only to the growth of the national economy but also to ensure that competitive edge in the global market. Set to become a full industrial nation and be a main global player, Malaysia gives serious attention to the development and training of this important human capital, namely, university students. Considering the fact that Malaysia is a young country with over 42.3% of the population in the 0-24 year age group, the need to inculcate entrepreneurial skills amongst young people is justifiable. Furthermore, entrepreneurship is a quality, and a skill that can be developed early in a cultural environment conducive to its development. To this end, numerous policies and programmes to encourage entrepreneurship at all levels have been initiated, including schools through the inclusion of entrepreneurship studies in the curriculum. However, the achievement of these programmes has fallen short of their target. This paper, based on the findings of a study on over 1524 university students in Malaysia, recommends that for an entrepreneurial programme to be effective, certain factors like cognitive and non-cognitive aspects of entrepreneurial behaviour that are considered important should therefore be included.

Keywords: Entrepreneurial behaviour, cognitive dimension, non-cognitive dimension, entrepreneurial acculturation, entrepreneurship education

# **INTRODUCTION**

By the year 2020, Malaysia hopes to achieve its full industrial nation status. In achieving this aim, the country recognizes the importance of having a productive, knowledgeable and skilled workforce that can contribute towards national growth. Included in this workforce are the entrepreneurs, considered as a critical catalyst to increase productivity and ensure the competitive edge in the global market. Entrepreneurship is a quality, and a skill that can be inculcated early (Gallup, 1994). As Malaysia has a high percentage of its population in the 0-24 year age group (42.3%), a good planning and strategy to tap and develop the entrepreneurial potential of this young age group is particularly crucial. During the Seventh Malaysia Plan 1996-2000, the thrust of youth development was on developing skills necessary for them to contribute towards effective nation-building (Malaysia, 1996). In the Eighth Malaysia Plan 2001-2005 and the Ninth Malaysia Plan 2006-2010, the emphasis was to prepare the youths with positive attitude, knowledge, and skills so as to enable them to face the challenges and adjust to the economic changes brought about by globalization (Malaysia, 2001: 2005).

In 2000, around 52.6% or 2.3 million of the 4.37 million youths are employed. The remaining youths (i.e. 47.4%) consisted of those

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who had completed their education or training, applying for work, and students who are still in the secondary schools, attending preparatory courses and in tertiary education. By 2005, the total youth population increased to 4.98 million. Data indicated that the prospects are bright and encouraging for the young to be in business in the manufacturing and agricultural sectors. Nevertheless, to take advantage of these opportunities, these youth need to be educated and trained to have entrepreneurial skills.

# ACCULTURATION OF ENTREPRENEUR AND ENTREPRENEURSHIP

There is no single definition of an entrepreneur. Starting with Cantillon, a French economist, an entrepreneur is a person who bought factors of production for the production of goods to be sold. Meanwhile, Schumpeter (1934) regarded an entrepreneur as someone who is profit-motivated and always innovative in using new technologies or finding new resources in production of goods and services. On the other hand, an entrepreneur is brave in risk-taking, dynamic and enthusiastic, responsible, firm in decision-making, can forecast and possess organizational skills (McClelland, 1961). Furthermore, an entrepreneur always looks forward to, recognizes and seizes opportunities, discards obsolete ideas, and techniques for the new ones so as to meet future demands (Drucker, 1974). Ronstadt, 1991, cited in Kuratko and Hodgetts, 2004 stated that an entrepreneur is an innovator or developer who recognizes and seizes opportunities, converts those opportunities into workable/marketable ideas, adds value through time, effort, money, or skills, assumes the risks of the competitive marketplace to implement theses ideas, and realizes the rewards from these efforts.

Entrepreneurs have significant roles in the economic growth of a country. Through their entrepreneurial skills, they help to solve many problems and take steps to correct market deficiencies (Leibenstein, 1998). Entrepreneurs not only provide new goods and services, they also create more and newer jobs (Prang and Ophen, 1995). In this sense, job opportunities increase not only in number but also in diversity.

Based on the various definitions of entrepreneurs, it is thus indicated that entrepreneurs have much to offer in the economic development of any country. In order to ensure that entrepreneurship programmes take off successfully amongst the young people, two aspects, namely entrepreneurship knowledge and culture, should therefore be given serious attention. The Ministry of Education, Ministry of Higher Education and the Ministry of Entrepreneurship and Corporative Development (MECD) are among the ministries which are responsible in developing entrepreneurial culture and behaviour among Malaysian youths. Entrepreneurship acculturation is one of the major programmes offered by the ministry, especially MECD. The main objective of the entrepreneurship acculturation programmes is to inculcate and strengthen the value of entrepreneurship amongst the youths. Programmes implemented under entrepreneurship acculturation include:

- Young Entrepreneur Programme: This programme is one of the many acculturation programmes implemented by the Ministry of Entrepreneur Development, at the secondary school levels throughout Malaysia, as a means to create awareness on various entrepreneurship activities amongst the students.
- Undergraduate Entrepreneur Development Programme (PPUS): This programme has been extended to students of public institutions of higher learning. The objectives are to provide undergraduates with insights into entrepreneurship activities.
- Undergraduate Entrepreneurship Training: The objectives of this training are to expose undergraduates on the entrepreneurship acculturation from an early stage and provide continuity on the entrepreneurship development programme at the tertiary level for students who have joined Young Entrepreneurs Programme, as well as produce more potential entrepreneurs

among undergraduate with necessary knowledge and skills in entrepreneurship.

Basic Course for Undergraduates: This course, targeted at final year students, aims to encourage and prepare graduating students to become entrepreneurs, enhance entrepreneurship programmes implemented at all public universities, and lower the unemployment rates among graduates.

Besides the above programmes on acculturation, MECD also offers Graduate Entrepreneur Scheme. This scheme can only be attended by those who have already attended the six-day course of Basic Entrepreneur Training.

# ABSENCE OF ENTREPRENEURIAL CULTURE

The present socio-economic conditions in modern Malaysia are largely the outcome of historical factors. Although much has been done to redress the situation since the days of independence and the 1969 May racial incident, entrepreneurship and economic power has been dominantly in the hands of the non-Bumiputra. The New Economic Policy which was introduced in 1970 has somewhat failed to achieve the 30% equity in businesses by Bumiputras, in spite of numerous policies, strategies, and 'headstarts'. There has been some research on the effectiveness of such entrepreneurship programmes (Norasmah and Halimah, 2003; Norasmah, 2002) of which the results indicated that while the participants were high on items like interest and motivation, they were nonetheless low on many relevant skills such as planning and management skills, formulating goals and objectives, finance and budgeting, and problem-solving skills. Perhaps one of the main reasons why success in entrepreneurship seems to elude the Bumiputras is the particular absence of an entrepreneurial culture for the inculcation of appropriate attitude, thinking, and behaviour.

In Malaysia, there has been effort done to develop and inculcate an entrepreneurial culture and entrepreneurs through various training programmes and models, such as by MEDEC (1992) and Norasmah (2002). All these models show that in order to successfully inculcate the entrepreneurial culture amongst the young people, it has to be started from an early age. The model developed by the National Centre for Research in Vocation Education (NCRVE) in 1987 explained the stages for an individual to become an entrepreneur; beginning from exposure and attempts in business from an early age. Core to the entrepreneurial culture is the natural behaviour which is associated with being an entrepreneur. In their study, Zaidatol Akmaliah and Habibah (1997) identified 42 characteristics of a successful entrepreneur; according to these researchers, however, it is not necessary that a successful entrepreneur to possess all these characteristics. Among the important ones, however, is the fact that an entrepreneur requires appropriate thinking, beliefs, and practices which are internalized. Fortunately, as shown by research, these aspects can be developed in individuals with potential through entrepreneurship education in schools, institutions or training programmes (Zaidatol Akmaliah et al., 1998; Nor Aishah, 2002; Norasmah, 2002). The fact remains, however, is that there must be a conducive entrepreneurial culture to nurture the appropriate qualities.

# THE IMPORTANCE OF ENTREPRENEURSHIP EDUCATION

Another way to inculcate entrepreneurship culture amongst youths is through entrepreneurship education. Faioite *et al.* (2003) and Norasmah *et al.* (2006) stated that entrepreneurship education and training are important for economic development, particularly in improving the quality and quantity of future entrepreneurs. There has been great interest in entrepreneurship education and training in the recent years (Galloway and Brown, 2000). This is based on the findings of the growth in the number and types of programmes offered at universities. Realizing the importance of entrepreneurship education, many universities all over the world have been offering entrepreneurship education.

In Malaysia, entrepreneurship education at higher learning institutes is also expanding in the forms of academic and practical aspects (Malaysia, 1996; Za'faran, 2003; Armanurah et al., 2005). There is a growing number of academic courses offered, either as the core course or elective (Mohd. Khairuddin and Syed Azizi, 2002). Most of the public universities in Malaysia are offering entrepreneurship course as a core subject at the first degree level. Apart from academic programmes, entrepreneurship education is also offered to students at higher learning institutions in the forms of co-curriculum activities and programmes which are financed by the Ministry of Entrepreneurship and Corporation Development such as Graduate Entrepreneurship Training, Graduate Basic Entrepreneurship Course, and Graduate Entrepreneur Development Programme.

Although many efforts have been carried out to create entrepreneurs among graduates, their number is still relatively low. The question arises is that if the students are ready to enter the business world upon graduation, the issue of unemployment among these graduates should not arise since they have the alternative to start their own businesses rather than working for others.

Notwithstanding that entrepreneurship education is offered in public institutes of higher learning, few graduates are interested in becoming entrepreneurs after graduation. This is shown by the study conducted by Morshidi et al. (2004) which indicated only 30 out of 2275 (1.3%) graduate respondents are involved in business activities. The results of a graduate trace study in 2004 showed that out of 19,000 undergraduate respondents, only 74 persons are working as employers whereas 147 graduates are working on their own (Kementerian Pengajian Tinggi) (Ministry of Higher Education, 2005). Another graduate trace study, conducted among the first undergraduates of Business Administration Programme, showed only 6 out of 1469 (0.4%) graduates were involved in business. These studies indicated that graduates from public institutes of higher learning have the tendency to work for other people than

becoming entrepreneurs (Zolkafli *et al.*, 2004). Why is this so? Why do graduates prefer to be employees, receiving pay/wages, rather than be self-employed? What attributes are lacking in our graduates that they appear to be reluctant and unmotivated to become entrepreneurs?

# **RESEARCH AIM**

The purpose of this research is to determine the level of entrepreneurial behaviour among Malaysians university students.

# **RESEARCH METHOD**

# Sampling

The population of this study involved students from all the 18 public universities in Malaysia. Samples were drawn from ten universities selected using a stratified sampling method with geographical zones as a basis. These universities were categorized as follows:

- North Zone Universiti Sains Malaysia (USM), Universiti Utara Malaysia (UUM).
- Middle Zone Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM) and Universiti Malaya (UM).
- South Zone Universiti Teknologi Malaysia (UTM) and Kolej Universiti Institut Teknologi Tun Hussein Onn (KUiTTHO).
- East Zone Universiti Institut Teknologi Mara (UiTM).
- East Malaysia Universiti Malaysia Sabah (UMS) and Universiti Malaysia Sarawak (UMS).

A total of 2000 students were targeted for this study, with 200 students representing each of the ten selected universities. All the students involved were in their final year of studies and were chosen using purposive sampling. Out of the 2000 questionnaires sent out, only 1524 were fully answered. For this reason, the sample was counted as 1524 students.

#### Research Instrument

This study used the Entrepreneurial Index of Students in Malaysia (EISM) which was developed by Norasmah et al. (2006). EISM is an instrument to measure the entrepreneurial behaviour among students aged between 16-24 years. The instrument measures two aspects of entrepreneurial behaviour, namely cognitive entrepreneurial behaviour and non-cognitive entrepreneurial behaviour. The cognitive entrepreneurial behaviour consists of four dimensions, i.e. the individual's knowledge on career function (KCF), goal development (GD), planning (PN), and problem solving (PS). Meanwhile, the non-cognitive entrepreneurial behaviour comprises of five dimensions, namely external control factor (ECF), controlled by something (CS), internal self control (ISC), tolerance toward ambiguity (TTA), and self evaluation (SE).

The instrument consists of 211 items in total. All the items were measured on a 5-point scale from "not at all agreeable" (1) to "totally agreeable" (5). The Cronbach Alpha values for the cognitive entrepreneurial behaviour and the non-cognitive entrepreneurial behaviour were found to be very satisfactory at 0.969 (107 items) and 0.963 (104 items), respectively. Table 1 summarizes the dimensions of entrepreneurial behaviour for Malaysian youths.

# DATA ANALYSIS

Data were analyzed using the SPSS 14.0 software. The index was measured using descriptive statistics. Based on Norasmah *et al.* (2006), the guidelines used in the interpretation of the results are as presented in Table 2.

#### **RESEARCH FINDINGS**

## Demographic Profiles

As indicated earlier, only 1524 out of 2000 questionnaires sent out were returned, recording a return rate of 76.2%. *Fig. 1* shows the respondents' composition based on the universities they represented. The highest percentages were from UNIMAS and UUM (13.1% each) while the lowest was from KUITTHO at 6.8%.

Sub-dimension	Number of items
Cognitive	
Knowledge on career function (KCF)	26
Goal development (GD)	11
Planning (PN)	46
Problem solving (PS)	24
Total items	107
Non-Cognitive	
External control factor (ECF)	14
Controlled by something (CS)	11
Inner self control (ISC)	29
Tolerance toward ambiguity (TTA)	23
Self evaluation (SE)	27
Total items	104
Number of Items	211

TABLE 1 Dimensions of entrepreneurial index of students in Malaysia (EISM)

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TABLE 2		
Interpretation of index – Percentage of score		

Percentage of score	Level
100	Excellent
91-99	Very Good
72-90	Good
40-71	Moderate
Under 40	Not Satisfactory

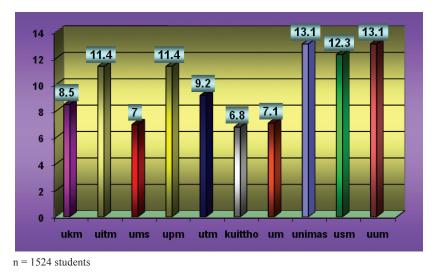


Fig. 1: Respondents' composition based on universities (%)

Table 3 summarizes the respondents' profile. Majority of the respondents were Malays (63.7%), followed by Chinese (21.9%) and Indians (6.3%). In terms of gender, 33.7% of the respondents were males and 66.3% were females. Majority of the respondents (47.6%) were in the age bracket of 22 to 23, followed by 37.9% in the age range of 20 to 21 years old. More than half (57.9%) of the respondents indicated that they did not have any experience in business, whereas 61.9% of the respondents expressed their interest in becoming entrepreneurs in the future.

Table 4 shows the results for both the cognitive and non-cognitive entrepreneurial behavioural level of Malaysian university students. The data gathered indicate that Malaysian students achieve good entrepreneurial

level (i.e. score between 72 to 90). Detailed results of the findings are given in Table 4.

Furthermore, an interesting outcome of the research study occurred at the planning and pilot stages, where some items for the cognitive entrepreneurial behaviour and the non-cognitive entrepreneurial behaviour dimensions were eliminated after being subjected to factor analysis, as their values were less than 0.3. Interestingly, these eliminated items indicated the lack of in-depth understanding of young people, namely the students, of the reality in the business world. In other words, there is a gap between theoretical knowledge and reality. In the dimension of cognitive entrepreneurial behaviour, the items eliminated were on knowledge on career functions (2 items), goal Entrepreneurship Behaviour amongst Malaysian University Students

Profiles	Percentages (%)		
Ethnicity:			
Malay	63.8		
Chinese	21.9		
India	6.3		
Iban	2.0		
Kadazan	2.0		
Others	4.2		
Gender:			
Male	33.7		
Female	66.3		
Age:			
18-19	2.3		
20-21	37.9		
22-23	47.6		
24-25	8.9		
26-27	1.4		
28-29	0.7		
30-31	1.2		
Experience in business:			
Ŷes	42.1		
No	57.9		
Interest in entrepreneurship:			
Yes	61.9		
No	38.1		

TABLE 3 Respondents' profile

TABLE 4 Score for each cognitive and non-cognitive entrepreneurial behaviour

Dimension	Score	Interpretation
Cognitive		
Knowledge on career function (KCF)	86.15	Good
Goal development (GD)	76.32	Good
Planning (PN)	82.48	Good
Problem solving (PS)	79.12	Good
Non-Cognitive		
External control factors (ECF)	81.62	Good
Controlled by something (CS)	77.28	Good
Internal self control (ISC)	84.12	Good
Tolerance towards ambiguity (TTA)	79.05	Good
Self evaluation (SE)	82.33	Good

development (5 items), planning (2 items), and problem solving (8 items). For example, in relation to knowledge on career functions, the items were on the functions of manager as well as financial management and development activities of a corporation. The elimination of these items reflects the lack of experience and exposure among university students to the reality of the organizational set-up, which is similar to items on problem solving, planning and risktaking and goal development.

In the non-cognitive entrepreneurial behaviour dimensions, the items eliminated were external control factors (12 items), can be controlled by something (14 items), internal self control (8 items), tolerance towards ambiguity (12 items), and self evaluation (20 items). Based on the students' perspective, there are many factors which can be considered as not important if someone wants to venture into business. Among the factors are:

- role of the local authorities in business
- self-confidence; to be far-sighted
- astute in finding opportunities
- deferred gratification (sacrifice now for the future)
- confident and capable of looking for capital
- knowledge on e-business
- self-determination

## DISCUSSION

The results gathered in this study showed that there were both positive and negative gaps between the cognitive dimensions and norms. The positive gaps were found in knowledge on career function and problem solving, while the negative ones were indicated for planning and goal development. The positive gap found in knowledge on career functions is an indicative that the university students possess higher knowledge compared to the norm of Malaysian students in general. This finding is consistent with the finding by Zolkafli *et al.* (2004) who reported that the higher the level of education, the more knowledgeable the person is in applying that knowledge in his or her daily life. In fact, their commitment in the field is much greater than those who are not widely exposed to the body of knowledge in that particular field. These can be seen in the non-cognitive dimension where all the dimensions recorded positive gaps.

Both cognitive and non-cognitive indexes were found to have influenced the students' entrepreneurship behaviour. However, the cognitive component exerted a more powerful influence than its non-cognitive counterpart. This finding indicated that dimensions related to knowledge on career functions, goal development, planning, and problem solving were among the primary contributors which influenced ones' entrepreneurship behaviour. This finding is supported by Ab. Aziz and Zakaria (2004), Mohd Salleh (2002), Shapero (1985), Kuratko and Hodgetts (2004) who have reported that entrepreneurs can be nurtured through education. Thus, more serious attention should be given to the development of entrepreneurship curriculum and training.

In among the university students was higher. This finding, however seems to contradict with the finding by Mohd Salleh (1992: 2002) relation to cognitive factors, the planning dimension was found to be the most important factor in explaining the variance between entrepreneurship behaviour and norm. This finding indicated that university students tend to face problems in planning which would further lead to difficulties in goal development, and subsequently to solve the problem in hand. This finding is supported by Norasmah *et al.* (2006) who reported that university students have lower planning index compared to the norm.

As for the cognitive factor, all the five dimensions of the non-cognitive factor also significantly contributed to the gap. The dimension of tolerance towards ambiguity appeared to be the most important in creating the gap. This explained the tolerance towards ambiguity, who found that most university students were highly dependent on the external

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assistance and were incapable of practicing the knowledge and skills acquired at the universities. Nevertheless, these students believe that fate and external powers play important roles in their lives. This outlook could explain the reason for the failure of the New Economic Policy and National Development Policy in achieving the 30% Bumiputera equity.

## IMPLICATIONS FOR EDUCATION

This study has shown that the difference between the theoretical knowledge and reality of the business world does exist, as perceived by young people. In our efforts to create a conducive entrepreneurial culture to transmit appropriate values, thinking and practices of successful entrepreneurs, it is imperative that policymakers be aware of this difference between 'what should' to 'what is'. Listed below are some suggestions as to how entrepreneurship education can be useful in opening up the minds and interests of potential entrepreneurs.

- The reality and hands-on approach: the business world is complex and challenging. Students need to be exposed early to this real situation for better understanding and to build up their self-confidence in business. This form of socialization will widen their life-space experiences and reinforce learning from textbooks.
- Smart partnership between institutions and the business sector. Staff/personnel from the business sector can be mobilized to offer insights into the business world through case studies and projects and as mentors to students during this period. Students can also spend some time in firms as part of the training or practicum programme so as to introduce them into the business culture.
- Interaction with local authorities and enforcement agencies to create awareness, understanding, and respect for the laws and regulations.

#### CONCLUSIONS

Further efforts to inculcate entrepreneurial skills among young people will be futile unless development of entrepreneurial culture are included in educational institutions. Practices like setting up business operations run by students on campuses will give them the necessary handson experience and entrepreneurial culture in the inculcation of entrepreneurship.

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# **Raising Exposure and Interactions in French through Computer - Supported Collaborative Learning**

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#### ABSTRACT

This case study is part of an action research conducted in a Malaysian public university aiming to develop a computer supported collaborative learning (CSCL) interface for learners of French as a foreign language at the bachelor level. A real task-based CSCL assignment was implemented in a blended learning setting with online activities added to the curriculum without reducing face-to-face contact hours. In line with engaged learning and learner-led theories, 24 learners were asked to collaborate to carry out a complex task that challenges their linguistic and communication skills as well as their organisational aptitude. This study focuses on an analysis of the learners' perceptions of the CSCL assignment. Questionnaires and guided interviews were carried out to assess the learners' evaluation of the online support, the relevance of CSCL in a foreign language acquisition and the benefits of real task based assignments. The increased exposure and interactions in the target language and culture resulted in learners' higher motivation, confidence, and participation. The majority of learners enjoyed this assignment and admitted the benefits of being increasingly challenged. The tutorial was very well received. However, some learners also confided having suffered from too much stress due to zealous team leaders. The learners' comments and suggestions provided precious feedback on how to improve the implementation of CSCL in the future.

Keywords: Engaged learning, learner-centred, computer supported collaborative learning, e-learning

# ABBREVIATIONS

CALL	:	Computer Assisted Language Learning
CMC	:	Computer Mediated Communications
CSCL	:	Computer Supported Collaborative Learning
IT	:	Information Technology
ICT	:	Information and Computer Technology

## **INTRODUCTION**

Considering the lack of opportunities to interact with native speakers and the scarcity of documentation in French in Malaysia, information and communication technologies (ICT) can provide learners with unlimited resources and effectively reduce linguistic and cultural distances. However, learners need to be trained in order to benefit from accessing the Web in French as effectiveness requires communication and language skills as well as

Received: 26 May 2009 Accepted: 22 January 2010 \*Corresponding Author strategies. Greater exposure can, for instance, be achieved by introducing web browsing and searching tasks, as well as by engaging learners in online collaborative work through forum discussions, a research field known as computer supported collaborative learning (CSCL).

Furthermore, higher education must provide courses of excellence enabling learners to be competent and confident in their specialty by providing knowledge as well as professional expertise based on the job market demand (Razak and Ahmad, 2008). In the context of the present study, fluency and accuracy in French are necessities, particularly in a globalised professional world. Companies are looking for qualified and responsible personnel who are able to handle projects, to come up with new ideas, cope with challenges and meet deadlines. Computer literacy plays a key role in contemporary economy and human resource head hunters will spot the resume of anyone well versed in Information and Communication Technologies (ICT). Therefore, any CSCL project would have to include this reality in order to prepare students to enter the job market with the best possible advantages.

#### CONTEXT

This study was carried out in a Malaysian public university. It was part of an action research initiated in 2006 with the primary objective of designing a learning interface for French as a Foreign Language at the bachelor level. The research project sought to raise the learners' motivation through active participation in projects that require the use of ICT.

Learners majoring in French joined the Bachelor degree program as absolute beginners. The programme is carried out over three years in six semesters. During this time, the learners must master the language and enough cultural as well as communicative competence to be able to adapt to a French environment. The curriculum focuses on language courses during the first two semesters, and it then progressively introduces content and specialty courses taught in French to increase language exposure. Every semester, learners go through intensive training in the target language amounting to ten hours a week. This places the learners in a situation of semi immersion, particularly as French communication patterns are also emphasised in daily face-to-face classes. The cultural exposure often results in confused and anxious learners due to the distance between western and eastern cultures, with the former based on individualism and the latter on collectivism (Chia, 2007).

Such a linguistic and cultural challenge necessitates continuous motivation to sustain interest and efforts. However, French is at best the third choice of major for the current students after management, economics or English. This factor is crucial for it has a major impact on motivation, the driving force behind any learning effort (Arnold, 2006). Consequently, motivational issues were to be tackled first. It was previously observed that a learner-centred approach was the best method to cater to the learners' needs in keeping them satisfied with their progress and thus motivated. The first task for the lecturers was, therefore, to get to know the students to design the ideal project framework. Previous studies had demonstrated the need for incentives to maximise the learners' participation (Gabarre and Gabarre, 2007). Therefore, various combinations of assignments were implemented. As noted by Tan (2006), earlier analysis conducted on the learners' performances and preferences clearly demonstrated that authentic collaborative activities obtained the best results. The learners' already tight weekly schedule meant any additional tasks had to be carried out outside the classroom. For that reason, CSCL appeared as the ideal solution to meet the research's objectives due to its dual potentials of raising motivation and participation.

# LITERATURE REVIEW

Since learners' anxiety was intimately related to ethnicity, a reassuring environment had to be created in order to raise participation. As the present study involved learners of Chinese background, the work of Bouvier (2002), Choong (2008), Tu (2001) and Robert (2002) were analysed. The findings of these studies stressed the behavioural patterns linked to a Chinese community. Chinese learners were afraid to ask questions or speak in class as it represented a sign of individualism perceived as dissociation from the group or worse, as an act of criticism towards the teaching of the lecturer.

On the contrary, the Western culture emphasizes the necessity for learners to become independent, to free themselves from any model and develop their own way of thinking (Tweed and Lehman, 2002). Such an attitude, however, is close to insubordination in the Chinese perception. The lecturers' role was to understand these patterns in order to progressively insert the western ways of interacting within discussions (Chia, 2007).

In addition, the researchers also aimed to expose the learners to the target language and culture in order to train them to interact in a foreign environment, where there might be no local community to rely on. Success achieved in the previous collaborative learning and real task-based projects convinced the researchers to follow this path.

As the learners' next compulsory course was Communication Skills, a challenging assignment developing greater interactivity along with linguistic and cultural awareness needed to be implemented. Computer literacy in using forums and chats was also targeted in line with today's communication trends in the professional sphere (Arnold, 2006).

The task of creating a bicultural on-line multimedia magazine was opted for the multiple challenges it implied (Salengros, 2006; Trebbi, 2000). The learners were asked to collaborate using specifically created group forums on the faculty's e-learning platform in order to find suitable information relevant to their topics. This implied a construction of knowledge leading them to analyse and select the documents (Develotte, 2005), and then to produce pedagogical content aimed to help their juniors.

The whole process of communicating, while searching and selecting information, was derived from engaged learning theories culminating in the design of multimedia materials for other students which is also called learner-led activities (Conrad and Donaldson, 2004). The Internet plays an ever significant role in the delivery of information and most companies build their own websites to convey their corporate image to the world. The magazine project presented the double advantage of raising the learners' motivation and participation, while representing a showroom of what they were capable of. Their commitment to the project gave them the opportunity to manage new responsibilities and facilitated their entrance into the professional sphere (Cohen-Scali, 2001; Dupuy and Le Blanc, 2001). The sense of community was strong among all students and they were highly motivated as this activity not only improved their French, but also benefited other learners.

The analysis by Tu (2001) on the Chinese social presence in Computer Mediated Communications (CMC) revealed how these learners performed better through this medium, and this confirmed the adoption of CSCL in the present study. A blended learning environment was selected to implement CSCL in order to increase the learners' exposure and participation without altering the course schedule (Salleh and Razak, 2006).

In blended learning is also referred to as hybrid learning, a variable amount of online teaching is introduced to a course schedule. In its implementation, e-learning can either serve to reduce in-class contact hours or be introduced in addition to the existing course schedule. In the context of this study, the learners' need for language exposure ruled out the first option. In meeting the learners' already intensive schedule, the CSCL activities were planned to avoid stress related inhibitions due to work overload following the recommendations from Levinsen (2006), Pallof and Pratt (2005), and White (2003).

#### **OBJECTIVES**

Embedded in an action research, the aim of this study was to investigate the learners' perception of CSCL in a blended environment on the following issues: a) evaluation of the online tutorial and technical support, b) relevance of CSCL in foreign language acquisition, and c) benefits of real task-based assignments in developing autonomy and responsibility.

# METHODOLOGY

The CSCL assignment was implemented in the Communication Skills course offered in the fifth semester of the French bachelor's degree programme. The pilot group consisted of 24 learners.

The reasons for choosing this course were threefold. Firstly, the assignment coincided perfectly with the course objectives. Secondly, the learners already reached a reasonable proficiency level in French and were, therefore, capable of studying autonomously. Furthermore, all the subjects had already attended the Reading and Writing Skills course, which strongly emphasized interactive and communicative competences. Lastly, the two lecturers involved in the action research were also in charge of both courses, and this facilitated the following-up of the learners' progress.

Results from the surveys and focused interviews conducted throughout the Reading and Writing Skills course earlier on showed that after the course, the learners felt positive about their knowledge of the language, but still pointed out their distress in expressing themselves. During the interviews and discussions, they stated that their inability to interact was due to their lack of practice, and their helplessness in finding resources. However, on top of all their anxiety was the main obstacle.

The CSCL assignment for the Communication Skills course was, therefore,

planned in order to address these issues. In this collaborative task-based project, learners needed to study outside the class to gather and synthesise information. E-learning collaborative work was introduced in order not to overload the learners' already packed schedule. During the span of one week, the learners attended 14 hours of French classes, not counting the time spent for their minor courses.

As stipulated in the synopsis of the Communication Skills course, the total faceto-face time was eight hours per week. As attendance was compulsory, a solution was found to enable students to work inside and outside the classroom (*see* Table 1).

A weekly two-hour tutorial session was conducted by one of the lecturers in a computer laboratory. Learners could, therefore, work on their assignments, and ask the lecturer for assistance whenever necessary. This solution provided learners with immediate help whenever they encountered organisational, language, and technological problems. It also guaranteed that they had access to a computer connected to the Internet at least once a week.

Online moderation and tutorial were carried out by the two course lecturers plus one additional lecturer who is also from the French bachelor's degree programme. Guidelines for moderators were inspired by Salmon's suggestions (2003) regarding the lecturers' computer literacy, knowledge of course content and motivation to participate. The project's success and the level of interactivity inside the e-learning group forums were intimately related. As the task was based on online collaborative work, a virtual community was created so that each group member could feel encouraged and motivated. Learners faced an unprecedented

 TABLE 1

 Course schedule for the Communication Skills course

	Monday	Wednesday	Thursday	Friday
2 hour session	Course	Course	Tutorial	Course

freedom in terms of task management. They could make use of their creativity, choose topics in their scope of interests and work according to their schedules. Yet, at the same time, they were also going through a completely new experience using communication tools they had not entirely mastered. Therefore, the entire project relied on moderators and the face-to-face weekly tutorial class. Learners were encouraged to perceive moderators as accessible persons willing to give them assistance and guidance. Freedom and technology were not to be considered as burdens.

E-learning facilities were available to learners through the faculty's managed Dokeos e-learning platform. Learners had previously connected to this platform in a non-interactive way to collect course documents or submit assignments, and they were, therefore, familiar with the environment. Yet, they had never used the forum and the chat facilities.

The faculty's e-learning platform was a perfect tool to implement the project as it combined public and private spaces as well as instruments for lecturers to monitor exchanges (*see* Table 2). Course information, assignment description and announcements could be posted by lecturers and viewed by all course members. General forums and chats enabled communication among all members, while group forums and document sharing facilities gave learners more privacy to work on their respective projects. E-mails were not to be used except to communicate with the lecturers regarding private matters. As illustrated in Table 3, the project guidelines consisted of three mission objectives and three obligations. Learners were to contribute written, audio, or video materials to a French content-based cyber magazine. They were to bear in mind that the site aimed to help other Malaysian students learn French. Each group of three learners had twelve weeks to complete their assignments in the form of two contributions presenting Malaysia and France on a similar topic.

French was the only authorised language on the platform and for the assignment. Even though motivation to participate in the project was high, an incentive was added to make sure learners actively used the communication tools of the platform. The marking scheme for the task was 60% for on-line exchanges inside the group forums, 20% for data collection, and 20% for quality to the cyber magazine. Learners were assessed collectively by the lecturers.

Data were gathered from monitoring the e-learning platform and the screening of exchanges between learners and moderators throughout the assignment. In addition, surveys, semi-guided interviews, and free discussions were also conducted.

This research study was limited as the findings did not include subjects from the rest of Malaysia. First, the number of learners and lecturers involved in this project was too small to generalise the results to a national scale. Second, this project was designed to address difficulties faced by learners in our institution based on a cultural analysis. In the pilot group, the majority

Tools	Public space	Private space	Asynchronous	Synchronous
Document	$\checkmark$	$\checkmark$	$\checkmark$	×
Forums	$\checkmark$	$\checkmark$	$\checkmark$	×
E-mails	×	$\checkmark$	$\checkmark$	×
Chat	$\checkmark$	×	x	$\checkmark$
Announcements	$\checkmark$	×	$\checkmark$	x

TABLE 2 Communication tools available for the assignment

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 TABLE 3

 Summary of guidelines for the CSCL assignment

Mission objectives	Search and synthesise relevant information on the topic Analyse the information using an intercultural approach Present the results in two pedagogical multimedia contributions
Obligations	Use the course e-learning platform to communicate Use French in all communications Submit the contributions on week 12
Marking scheme	60% for on-line exchanges inside group forums 20% for the selection of relevant information 20% for both multimedia intercultural contributions to the cyber magazine

of the students were Chinese (71%) while Bumiputeras<sup>1</sup> accounted for 29%. Our situation was specific to the French bachelor's degree programme at this public university and did not reflect the Malaysian population composition (Bumiputera 66% and Chinese 25%), as stated in the statistics provided by the Department of Statistics Malaysia (2007).

#### **RESULTS AND DISCUSSION**

## *Evaluation of Online Tutorial and Technical Support*

Moderators were expected to provide learners with a safe and appealing interactive environment. To avoid social, academic and technological inhibitions, as defined by White (2003), moderators connected at least twice a day to the platform. They inquired if everything went smoothly, answered distress messages, reassured learners, provided guidance, and assistance in all fields. To avoid distress, the moderator's response had to be posted within 24 hours after a learner's message.

In the case of this study, participating lecturers were strongly committed to the research project. Their dedication and willingness to cope with the extra work was exemplary, especially when considering that on-line teaching and consultancy easily amounted to between two to four hours per week. To become moderators, lecturers also had to adapt to a new environment and acquire blended learning skills, as well as technological competence on their own.

*Fig. 1* gives one example of an on-line technical help on how to insert a link inside a message posted in a forum. As the platform environment was in French, the moderators had to insert screen captures in forum postings to better illustrate explanations. They also had to provide immediate solutions such as modifying links that did not work directly in the learners' messages and informing them of the action taken. This considerably contributed to a decrease in the learners' anxiety.

Thankful and relieved messages always immediately followed the moderators' responses. Even if a solution could not be found within 24 hours, acknowledging and giving sympathetic messages would inevitably convey encouragement to the learners.

Results from the surveys indicated the learners' perception of the e-learning tutorial. As shown in *Fig. 2*, students were generally satisfied with the on-line support. Twenty one out of 24 learners found the tutorial useful for getting information and advice, and 11 mentioned its flexibility. The platform enabled the learners to work on their assignments from different locations and contact their moderators whenever necessary.

<sup>&</sup>lt;sup>1</sup> The term Bumiputera refers to the definition used by the Department of Statistics Malaysia (2007) which classifies the Malays and other Bumiputera ethnics under the Bumiputera category (p. 9).

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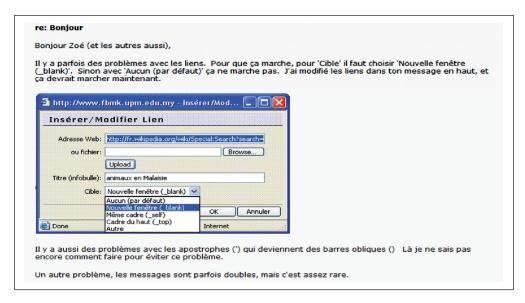


Fig. 1: Online technical help imbedded in the lecturer's response

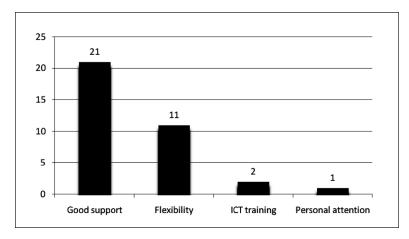


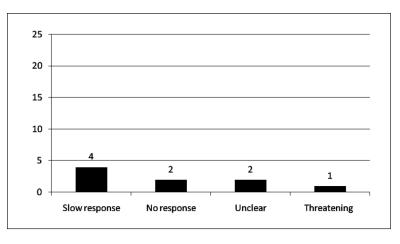
Fig. 2: Positive comments on the online tutorial (N = 24)

Very few responses were negative (*Fig. 3*), and most of them concerned with the lack of immediacy of the platform. Even though moderators were connected to the platform every day, the responses were seldom instant. Forums were asynchronous and a discussion was, therefore, slower. Furthermore, written messages lacked the precision of oral interactivity.

Mistakes were indirectly corrected unless learners had expressly requested help with a structure or a word. Each answer from the moderators showed a positive feedback and brought a feeling of personal care to the group members. The face-to-face tutorial provided an alternative source of help and was used intensively by the learners for complex technical issues pertaining to the creation of multimedia files.

The negative responses came from two groups whose moderator encountered

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*Fig. 3: Negative comments on the online tutorial* (N = 24)

technological problems with the platform. As pointed out in an earlier section, all the lecturers participated on a voluntary basis. No specific training or equipment was provided by the institution. Teaching French using ICT in a blended learning environment also implicated new skills compared to face-to-face delivery. Learners expected a reply within 48 hours at the latest, which indirectly put tremendous pressure on newly appointed moderators who still lacked practice in forum management.

# *Relevance of CSCL in Foreign Language Acquisition*

Forums, as illustrated in *Fig. 4*, are perceived as tools facilitating interactions. Nineteen out of 24 learners said forums could help them build language and communication skills by raising exposure through active practice. As expected, the asynchronous factor gave students sufficient time to prepare their answers which benefited less confident learners.

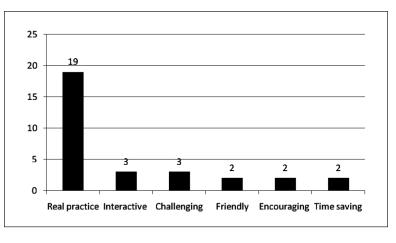


Fig. 4: Learners' perception of forums (N = 24)

The interviews revealed that the 60% incentive in the marking scheme of the assignments did motivate the learners' participation. Most learners expressed language difficulties in communicating at the early stage of the project because they lacked the vocabulary to discuss their topics on-line. Moreover, they were also frustrated with the time consuming efforts spent on posting simple messages. They were also anxious about writing incorrect messages. They feared that their self-image would be affected and were therefore afraid to make mistakes. However, the majority mentioned their willingness to go on with the project because it represented a challenge to test their ability in French. Intense dictionary search, as well as Internet browsing, helped them acquire new terms and structures which in turn were useful for interacting with other group members. Learners preferred numerous short messages to long single messages. Short messages were easier to understand and the time saved enabled them to concentrate on their replies.

Building up of learners' confidence could also be directly linked to the e-learning environment created. Thus, all the moderators introduced themselves at the group forums and encouraged learners to do the same. Getting to know each other helped to build a virtual community. Participants felt closer to their moderators and hence were less afraid to ask questions, and make comments or even jokes.

Interestingly, as on-line exchanges increased, so did the classroom interactions.

The virtual community had a great impact on the face-to-face learning environment. It was as if forums had opened the door to oral interactivity, an observation which was also made by Tudini (2003). The chat became truly popular especially during the face-to-face tutorial sessions. The whole class wanted to take part and a time schedule had to be set up to avoid crossed conversations. Anxiety linked to self image had disappeared.

By practising on the platform, the learners realised that not every written message required formality. They had learned to adapt their language style to the context and their interlocutors. Thus, messages to the moderators were more relaxed in the forums compared to those in e-mails which were perceived as more academic. On-line tutorial and participation in forums were therefore a success in boosting exposure, which was the first objective of the research study.

*Fig. 5* displays the learners' self evaluation regarding their improvements in French. Progresses were marked as important regarding vocabulary, grammar, and culture.

Interviews and discussions revealed that learners had achieved cognitive and metacognitive skills throughout their assignments. The learners developed faster reading techniques, such as skimming and guessing the meaning from the context, the text structure as well as from words having similar spelling in English. They also applied learning methods acquired from learning their own languages and used them in learning

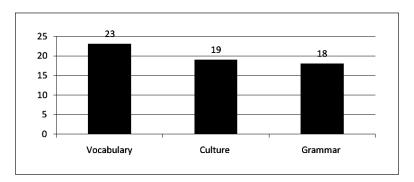


Fig. 5: Learners' self evaluation of their improvements in French (N = 24)

French. The majority of the group found the intercultural approach stimulating. Working on the same topics for both countries, the focus of this class project was an interesting way to reflect on their similarities and differences. Knowledge gained in vocabulary and culture clearly helped the group improve communication skills in terms of spontaneity while a better understanding of grammar usage truly gave them confidence.

#### Benefits of the Real-task Based Assignments

*Fig.* 6 shows the learners' comments regarding the ICT nature of the project. Due to the reality of the assignment, all the participants were motivated and put in a lot of efforts. They enjoyed the challenge, adapted themselves to the new tools and learned to carry out many tasks at the same time. They responded professionally and complied with all the new requirements such as file formats and copyrights.

When asked how the project had helped them professionally, 50% of the learners mentioned the use of ICT. Learning how to communicate using forums and chats, as well as manipulating sound and video files were often cited as beneficial. However, one learner admitted to have experienced difficulties with the on-line part of the CSCL assignment. The fact that all messages in the forums were permanently recorded and visible put considerable pressure on the less active members. The on-line forums provided proof of insufficient participation and seemed to justify criticism from other members. This learner had been more involved with the creation of the multimedia content and thus missed the communicative side of the CSCL assignment.

Autonomy was appreciated but six learners admitted being often tired as freedom also brought its share of responsibility. These learners explained that group pressure and competition for high marks could be exhausting. During individual interviews, a few students mentioned the intense competition which had taken place between all groups during this assignment to obtain the highest mark. This might be due to the public nature of the e-learning platform, where productions could be seen by all. Points were allocated according to the originality and creativity of the multimedia content which definitely contributed in motivating learners to reach perfection. In fact, all the groups compared their works before submitting them on-line just to be sure that they would not be left behind. Consequently for the majority of learners, commitment went far beyond the guidelines and marking scheme provided. Some team leaders really exhausted their counterparts by actually pushing them harder than their moderators. This could not be seen in the on-line exchanges as it also happened during the groups' face-to-face meetings.

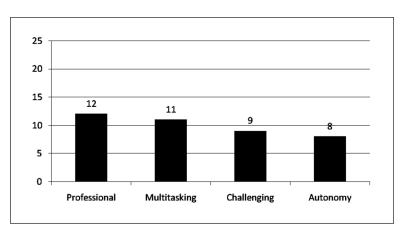


Fig. 6: Learners' perception of ICT project (N = 24)

Raising Exposure and Interactions in French through Computer - Supported Collaborative Learning

#### CONCLUSIONS

This research study was remarkably rewarding especially in terms of the interactions between learners and lecturers. Twenty three out of 24 learners suggested that similar assignments should be introduced in other courses. Although the whole experience was gratifying, the role of the moderators and the amount of time necessary to provide learners with quality and efficient support should not be underestimated. CSCL not only demands technological facilities and know-how but also a lot of dedication. Implementing a similar project on a larger scale and on a long-term basis will inevitably raise the question of human resources. If lecturers are to become moderators or web designers, appropriate training and technical assistance should be recommended.

Answers to the questionnaire given after the completion of the assignment indicated a high level of satisfaction among the learners. The CSCL assignment succeeded in pushing them to practise their language skills and thus in raising their confidence, and this coincided with their comments made prior to the course. Online exchanges as well as in-class interactions had significantly increased. Exposure to authentic sources and communication triggered or reinforced learning skills and strategies.

As for autonomy, most of the students admitted to having gained enough confidence and competence to better carry out similar tasks in the future. They also suggested that the implementation of another assignment, (i.e. where the tutorials would be progressively decreased) could help them gain the ability to work as a team. In order to avoid ingroup conflicts related to participation, clearer guidelines and perhaps role attribution could help team members get evenly and efficiently involved in the project. Self evaluation combined with peer evaluation could also be added to the lecturers' evaluation to reflect what happened inside the teams better. The evaluation of the online participation should also be on an individual basis as it was regarded to be much fairer to the more active learners

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# A Framework of Safety Culture for the Malaysian Construction Companies: A Methodological Development

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#### ABSTRACT

This research presents the methodological development of a framework for promoting safety culture for the Malaysian construction companies. There is no framework that has that been established in this context. The development will enable professionals to quantify and analyze safety culture in a consistent manner. A mixed methodology of qualitative and quantitative was adopted, in which sample for the study was limited to selected building contractors (Grade 7) in the Klang Valley. The preliminary survey identified leadership, organisational commitment, management commitment, safety training, and resource allocation as practices which embed safety culture into organisational culture. Hence, the development of the main survey includes the identification of these behavioural factors and their further expansion to include the aspects of psychological and situational factors' characteristics. Semi-structured interviews were also conducted to provide new insights on the importance of communications which are founded on mutual trust, shared perceptions between the Senior Management, Safety Officer, and Site Supervisor within the organisations. The safety related representatives from the industry players are validated based on the appropriateness, the ease of use, and the coverage of the framework.

Keywords: Framework, safety culture, Malaysian construction companies

## **INTRODUCTION**

The incident rate of fatal accidents in the construction industry is higher than any other industries (Suraji, 2001). The high rates of accidents involved in the construction industry in many parts of the world have given it a poor image. According to Mohamed (1999), a zero-accident culture can only prevail if contractors

are committed to realizing fundamental change in the industry. A prerequisite for such improvement is to treat safety as an important and integral constituent of daily work routine, rather than as an appendage. In Malaysia, about 4% of all industrial accidents are contributed by the construction sector. Annually, an average of eighty workers was killed in the accidents (Chan Onn, 2006).

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The introduction of self-regulation, through the enactment of the Occupational Safety and Health Act (OSHA) in 1994, was to promote safety culture. On the other hand, no measurement has been established to enable the industry players to gauge their current state of safety culture. Thus, this paper presents the development of a framework to promote safety culture within construction companies so as to achieve a good and uniformed understanding of the concept and the current status which is being evaluated.

The following discussion focuses on the methodological development of the framework, the components, and the validation approach that leads its way to the main findings and discussion before drawing conclusions.

## A REVIEW ON SAFETY CULTURE FRAMEWORK

A review on the earlier safety culture models and research sought to describe what an effective safety culture and its characteristics look like rather than explaining on the development of such a culture by an organisation. The review of these models is also a consensus view of the safety culture at the organisational level, either in part or as a whole. IAEA (1991) considered the management system, whereas Grote and Kunzler (2000) concentrated on the organisational and external factors, and AEA Technology (1993-1994), as revealed by HSE (1999), emphasized on organisational variables which influence the work environment and group processes, as well as individual behaviour (Cox et al., 1997). On the other hand, a combination of the three elements, namely subjective psychological factors, observable on-going safety-related behaviours and objective situational features, was established by Cooper (2000). In this context, the characteristics of the factors were used to capture the various terms used in studies on safety culture as indicators, dimensions, features, factors, approaches, and characteristics. Moreover, these will be presented in descriptive form and tabulation (framework) or illustrated as models.

The development of the framework, which was adapted in this study, is the Reciprocal Safety Culture Model by Cooper (2000). This is due to the fact that the characteristics of these factors constitute Psychological, Behavioural, and Situational factors which allow triangulation of the perspectives in the context of safety culture within an organisation. These three elements also mirrored those accidents causation relationship found by a number of researchers (e.g. Heinrich et al., 1980; Weaver, 1971; Suraji, 2001). Furthermore, the model itself promotes self-regulatory processes which are consistent to the definition of safety culture as 'the product of shared values, beliefs, attitudes, and patterns of behaviour, based on a top-down approach practices that are concerned with minimizing the exposure to conditions considered dangerous or injurious to the entire group members on a self-regulatory basis', as established from the literature (Faridah et al., 2004).

The literature review on safety culture shows that there are numerous indicators or practices of good safety culture. However, the specifics that characterize their excellence and the measurement were descriptive and do not show the process on how safety culture can be improved, leading to improved safety behaviour. While safety management system reflects the competency of the organisation to manage safety, safety culture reflects the actual commitment throughout the organisation (Eurocontrol, 2005). Safety culture theory reveals that individuals' behaviour is influenced by the values of their superior (particularly the top management), and peers, and the basic assumption on how safety works in their organisation. Values are those "espoused" by management (the 'talk'), or the actual acts (e.g. praising someone for safety conscious) which can be seen as "symbols" because they are visible (the 'walk'). Thus, the framework also includes the three safety components;

The psychological factors which are the values and beliefs that underlie their behaviour.

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- The behavioural factors which are brought to the surface through the observable practices.
- The situational factors which are portrayed through an internal organisation's environment that reinforced the desired behaviour and the adaptability to the external changes and demands on the safety requirement.

## THE METHODOLOGICAL DEVELOPMENT OF THE FRAMEWORK

#### The Unit of Analysis

The target respondents involved in this study were grade 7 contractors registered with CIDB (CIDB Directory 2003-2004). The underlying focus for the present research was delimited to an examination of the organisational safety culture from an individual perspective, as proposed by Kristof (1996) and Van Vianen (2000). The approach is consistent with the proposition that the top management is in a position to influence cultural identity, a top-bottom approach as established by IAEA (1991), Cox *et al.* (1997) and Mohamad (2003).

## The Process

The literature review indicates that the psychological factors covering the aspects of beliefs since the safety culture is a cognitive factor itself. The behavioural factors comprised of factors identified via the Preliminary Survey, namely leadership, management commitment, organisational commitment, resource allocation, and training. The characteristics of the situational factors consist of both the internal and external factors. The internal factor refers to the safety management system, whereas some of the external factors influencing the organisations are the government policies, enforcement, rules and regulations.

The development of the framework involved the sequencing of the three research methods, namely the Preliminary Survey, the Main Survey and the Semi-structured Interviews. Hence, the components of the framework focused on the outcome of these research methods.

## The Characteristics

The development of the Safety Culture Improvement Matrix which is based on Business Excellence Model (BEM) for used by Nuclear Installation Inspectors, possessed the following criteria in its development (HSE, 1999). Thus, the development of the framework to promote safety culture in the context of the Malaysian construction organisations adapted the needs to fulfil the following characteristics:

- Allow users to recognize what is required to promote or improve safety culture.
- Be applied via self-assessment basis.
- It must be theoretically sound.
- It must be applicable to a range of organisation types.
- Be sufficiently detailed to allow specific areas of improvement to be highlighted.
- The framework must be progressive, directing progressive improvement.

### THE METHODOLOGY

#### The Preliminary Survey

This forms the first stage of the methodological development of the framework. These involved the identification of the management practices that embed safety culture into the organisational culture. The characteristics of good safety culture practices form the basis for the development of the questionnaire. The 24 organisational and safety implementation statements in the second part of the questionnaire were designed to enable responses to identify and add on to a given list, the management practices that facilitate the embedding of safety culture into the organisational culture. Five factors were identified, and these include Leadership, Organisational Commitment, Management Commitment, Safety Training and Resource Allocation (Faridah et al., 2005). The preliminary survey was directed to a total population of 866 (overall total population in the Klang Valley is 1,171) construction companies in the Klang Valley that undertake building works.

## The Main Survey

The formulation of the Main Survey formed the second stage of the framework development. Since safety culture is a concept, it needs to be operationalized. Sarantakos (1998) stated that operationalization is an indispensable tool of quantitative measure but its methodological aspect should not be overestimated. The three major elements of operationalization according to Sarantakos (1998) are:

- *Selection of indicators* which reflected the presence or absence of the elements the researcher set out to measure.
- *Quantification of the indicators*, identification of the continuum of values the indicators can assume, and *assignment of scores* that represent the degree of presence.
- *Quantification of variables*, identification of the continuum of values the indicators can assume, and *assignment of scores* that represent the degree of presence.

Generally, a seven-point likert scale with seven items for each was used to measure all the dimensions of these three factors. This led to the development of the Main Survey measuring the psychological, behavioural, and situational factors of the Malaysian construction companies (Faridah *et al.*, 2006).

The questionnaire survey was divided into three main sections. The first section solicits the background of the respondents, while the second focused on the priority given on the characteristics of the three main factors, as well as the psychological, behavioural, and environmental factors. The final section solicits on the safety performance of the companies. The main survey was directed to 117 respondents who had responded to the Preliminary Survey undertaken prior to this survey.

### The Semi-structured Interview

In the third stage, the semi-structured interviews identified and established the importance of communication, mutual trust, and commitment between the senior management, safety officers, and site supervisors within the organizations for practical promotion of safety culture.

Therefore, the safety officer and the site supervisor of the same organizations were interviewed for the following reasons:

- To validate the perception of the Senior Manager about the organizations.
- To compare the perception against the Senior Manager's perceptions.
- To determine and establish how the Senior Manager's communicate based on the mutual trust and commitment into action down the line to the Site Supervisory level.

The 48 organisations formed the sample for the interviews. These 48 respondents, who had responded to the main survey, were further invited to participate in the interview. Out of the 48 organisations, eleven (11) had participated in the semi-structured interview which was represented by the top management, middle management and the first line management. This made up a total of 33 personnel being interviewed.

## The Industry Validation

The developed framework to promote safety culture was face validated by the panels representing the Public Works Department (PWD), Master Builders Association Malaysia (MBAM), KLIA Training and Research Consultant (KLIATR), National Institute of Occupational Safety and Health (NIOSH), Department of Occupational Safety and Health (DOSH), and academicians in a local university.

These panels of the validations were selected based on their proactive involvement and contribution in enhancing safety at the national level. However, the validation was limited to the aspects of appropriateness, ease of use, as well as coverage in terms of its content, components, elements and items, and soliciting comments for future improvement.

# FINDINGS AND DISCUSSION

This research adapted the useful framework based on the work of Cooper (2000) who distinguished the interrelationship between the characteristics of the psychological, behavioural, and situational factors of safety culture. Cooper used different sets of research methods and dimensions to measure the psychological, behavioural, and the situational factors. However, in the context of this research, a mixed method was employed. Furthermore, the examination of safety culture was done from the individual perspectives of the senior executives to form its data source. The approach is consistent with the definition of safety culture, i.e. 'the product of shared values, beliefs, attitudes, and patterns of behaviour based on a top-down approach practices that are concerned with minimizing the exposure to conditions considered dangerous or injurious to the entire group members on a self-regulatory basis', as established in this context.

Nevertheless, only a few studies have been conducted to discover what managers (especially senior management) really think about health and safety (Gadd *et al.*, 2002). In order to enhance the practicality of the research, the development of the framework involved the sequencing of three research methods covering the preliminary survey, the main survey and the semi-structured interviews which were supported by a comprehensive literature review.

The first stage of the development process involved the identification and establishment of the management practices that embedded safety culture into the organisational culture. This was followed by summarizing a total of five testable factors identified in the Preliminary Survey. These factors are described as follows:

- Leadership
- Organizational Commitment
- Management Commitment

- Safety Training
- Resource Allocation

The second stage was the operationalization of the concept of safety culture. The literature review indicated that the present research should include scales dealing with the characteristics of the aspects of psychological, behavioural, and situational factors against traditional measurements of safety performance, i.e. accident rates and loss time injuries. This is consistent with the finding by Sekaran (2003), who termed operationalization as defining a concept to render it measurable and was done by looking at the behavioural dimensions, facets or properties denoted by the concept. The psychological factors cover the aspects of beliefs since safety culture itself are cognitive factors. The behavioural factors comprised of factors identified via the preliminary survey, namely leadership, management commitment, organizational commitment, resource allocation, and training. The characteristics of the situational factors consist of the internal, i.e. the safety management system of the organization and the external factors influencing the organizations such as the government policies, enforcement, rules and regulations, etc. Generally, a sevenpoint Likert scale, with seven items each, was used to measure all the dimensions of the three factors. This led to the development of the main survey which was meant to measure the psychological, the behavioural, and the situational factors of the Malaysian construction companies.

In the third stage, the semi-structured interviews identified and established the importance of communication, mutual trust, and commitment between the senior management, safety officers, and site supervisors within the organisations for practical inculcation of safety culture.

The developed framework fulfils the following characteristics;

 It allows users to recognize what is required to develop or improve an organisation's safety culture.

- It provides guidance on those processes and steps required to develop a "good" safety culture.
- It portrays the definition of safety culture in its context.
- The framework is able to be applied on the basis of self-assessment.
- It constitutes the common elements of safety culture found among investigators.

Previous research (Turner, 1989; Hofstede, 1991; Pidgeon, 1991; Ostrom, 1993; Geller, 1994; Guest, 1994; Berends, 1996; IAEA, 1997; Cooper, 1998: 2002; Clarke, 1999; Fleming, 1999; Cox, 2000; Lee, 2000; Wilpert and Naosuke, 2001; Gadd, 2002; Vredenburgh, 2002; Weigmann, 2002; Zhang Hui, 2002; Mohamed, 2002; Stewart, 2002; Schein, 2004; Teo, 2005) do not show the process how safety culture can be improved so that an improved safety behaviour can be achieved. Thus, in order to understand the process, the framework to promote safety culture for the Construction Companies is illustrated in Fig. 1 (Appendix A). The phases involved components, elements, and items which were identified and established through the preliminary survey; the main survey and the semi-structured interview.

# CONCLUSIONS AND RECOMMENDATIONS

The approach in the development of this framework is consistent with the postulation that only the top echelons of leaders are in a position to significantly influence cultural identity and change. The three safety components should run concurrently for successful results. However, to understand and simplify the framework, the activities were divided into three phases.

Phase 1 of the processes requires the senior management to in-built strong safety values and beliefs, followed by transforming these values and beliefs into observable behavioural practices which are demonstrated and characterized by leadership, organisational commitment, management commitment, safety training, and resource allocation. Furthermore, creating an internal environment that reinforced the desired behaviour, adapting and aligning to the external environmental factors formed Phase 2 of the Framework.

Since the ability to communicate assumptions and values is an important enabler for achieving shared perceptions, the vision which lays out the desired safety culture is then clearly communicated, portrayed through the behavioural actions, implemented via mutual trust and commitment to safety officers and site supervisors. The senior management leads through the visible actions of these personnel to align the attitudes and behaviour of the workforce towards the vision and this formed Phase 3 of the framework.

The validation exercise acknowledged on the appropriateness, the ease of use, and the coverage of the proposed framework. The suggestions for future improvements set out new avenue for future research.

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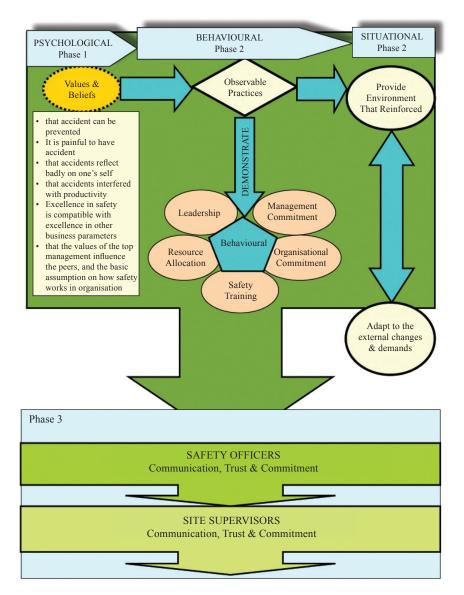
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A Framework of Safety Culture for the Malaysian Construction Companies: A Methodological Development



# APPENDIX A

Fig. 1: The framework to promote safety culture

# PHASE 1

# Psychological

The cognitive towards safety is developed by

- Strong beliefs that accident can be prevented
- It is painful to have accident

Faridah Ismail, Hasmawati Harun, Razidah Ismail and Muhd. Zaimi Abdul Majid

- A belief that accidents reflect badly on oneself
- A belief that accidents interfere with productivity
- Excellence in safety is compatible with the excellence in other business parameters such as quality, productivity, and profitability; they are mutually supportive
- A belief that the values of the top management influence the peers, and the basic assumption on how safety works in their organisation

## PHASE 2

### Behavioural

The values and belief is translated into observable behavioural practices which are characterized through the elements of leadership, organisational commitment, management commitment, safety training and resource allocation.

## Situational

The situational comprise the internal and the external factors. The characteristics of the situational factors consist of the internal, i.e. the safety management system of the organisation and the external factors influencing the organisations such as the government policies, enforcement, rules and regulations, etc.

### PHASE 3

## Safety Officers' and Site Supervisors' Level

- Communicate safety concern clearly
- Create mutual trust
- Demand commitment

# Different yet Similar: A Study on *Mongindong* Performed by Diris, Gustimin, Pariama and Tulai from Murok Village and Baba Village on the Labuk River, Sabah

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#### ABSTRACT

The oral traditions of the Dusun Labuk include *tangon*, *runsai*, *mongindong*, *mansuak*, and *kurilang*. *Mongindong* [cradle song] is typologically informal yet functionally important in the traditional daily life of the Dusun Labuk. Seven *mongindong* were collected from four Dusun Labuk community members in Beluran, located in the east part of Sabah, Malaysia. It is important to note that the informants were reluctant to perform more than one *mongindong* for documentation purpose because they perceive that each of them owns only one *mongindong*, and therefore, two *mongindong*, although different in musical structure, are perceived as "*sama*" [the same] when they are performed by one informant. Furthermore, under certain circumstances, the informants perceive the *mongindong* performed by one person is "*sama*" [the same] as the *mongindong*, the researcher perceives each *mongindong* to be different from one another. Taking this into consideration, this paper describes the *mongindong* of the Dusun Labuk and suggests a possible way to analyse them. Findings from the analysis lead to an understanding of the similarity between the *mongindong* held by the informants. Nevertheless, further study on the culture of Dusun Labuk and the community members' knowledge of oral traditions is necessary for a deeper understanding of *mongindong*.

Keywords: Cradle song, culture, Dusun Labuk, mongindong, oral traditions

### **INTRODUCTION**

Dusun Labuk, according to article 6(1) in the constitution of Kadazandusun Cultural Association [KDCA], is one of the sub-groups of Kadazandusun in Sabah, Malaysia. Joshua Project, a research initiative since 1995, has listed three sub-groups of Kadazan and 15 subgroups of Dusun. Dusun Labuk is categorized in the sub-group of Kadazan Timur, due to the reason that Kadazan Labuk-Kinabatangan language is spoken in the community. In this paper, Dusun Labuk is considered as a sub-group of Dusun due to the reason that shifting dry paddy cultivation is practiced traditionally by the community, according to the senior community members (Personal interaction, 2008). At present, the population of Kadazandusun in Sabah is approximately 479,944 (Yearbook of Statistic Sabah, 2005). Meanwhile, the population of Dusun Labuk in the district of Beluran is approximately 6,449 (Yearbook of Statistic Sabah, 1998). Dusun Labuk is named after Labuk River which is located in the district of Beluran, in the division of Sandakan, Sabah of Borneo Island, where the location is extended from Beluran (88 km from Sandakan

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town) to Telupid (132 km from Sandakan town). Traditionally, Dusun Labuk practiced shifting dry paddy cultivation and believed in Kinorhingan, i.e. the Dusun creator (the belief was then termed as 'momolianism'), the Kadazandusun primal belief system (Benedict Topin, 2004).

#### **ORAL TRADITIONS OF DUSUN LABUK**

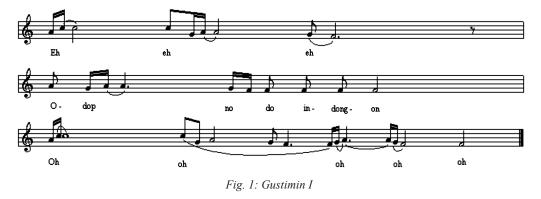
Traditionally, a majority of the Dusun Labuk's rites were performed by bobolian, the priestess, as in other Dusun areas. Music of the gong ensemble, comprising of three hanging gongs and a set of kulintangan, is a part of the ritual of Ka'amatan [Harvest], that is, the cerebration after mangatam [paddy reaping]. Apart from the instrumental tradition, the oral tradition of story telling, folksongs, and cradle song singing were carried out at home in an informal manner. The oral traditions include tangon [folktale], runsai [poem with more serious topic], mongindong [cradle song], mansuak and kurilang [poems with less serious topic]. In contrast to the ritual related tradition which ceased from being practiced after the conversion to Christianity and other religions, the informal oral tradition remains in practice among the Dusun Labuk community, although it has declined due to the existence and influence of mass media such as radio and television.

During the researcher's fieldtrip to search for the oral traditions of the Dusun Labuk in several villages in the District of Beluran, in Sandakan, Sabah, from June to September 2008, a total of 30 examples of various oral traditions were collected, including seven *mongindong* [cradle song] from Diris Sa'at (59, male), Gustimin Benjamin (50, male), Pariama Linggis (53, female) and Tulai Tuki (64, female) in Murok Village and Baba Village. Information about these *mongindong* is as follows:

Informant	Length	Identity term
Diris Sa'at	2:50	Diris
Gustimin Benjamin	0:17	Gustimin I
Gustimin Benjamin	0:26	Gustimin II
Pariama Linggis	1:03	Pariama I
Pariama Linggis	1:19	Pariama II
Tulai Tuki	0:57	Tulai I
Tulai Tuki	0:30	Tulai II

## SAME VERSUS DIFFERENT: THE CASE OF *MONGINDONG*

In the process of collecting *mongindong*, the number of *mongindong* that the researcher collected from an informant was one, and at the most two. According to Diris (Personal interaction, 4<sup>th</sup> December 2007), he owns only one *mongindong*. Gustimin (3<sup>rd</sup> December 2007) said that he knows only one *mongindong* (*Fig. 1*). He said that he owned no other *mongindong* upon the researcher's request (*Fig. 2*). It is evident that there are structural differences observed between the two transcriptions above.



*Note*: The notation does not indicate the actual pitch frequency of the informants. Indeed, each informant sings in different pitch frequencies each time he or she sings

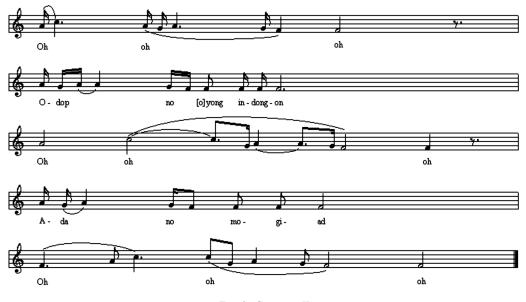


Fig. 2: Gustimin II

Upon the researcher's request, Pariama and Tulai sang their *mongindong* for the second time. Pariama indicated that what she sang for the second time was "*sama*" [the same] to the first one which she had sung about one month before (Personal interaction,  $13^{th}$  August 2009), despite the structural differences which were observed between the two singing (compare *Figs. 3* and *4*).

At a later time of the day, Tulai attempted to sing the same *mogindong* that Pariama had just sung, claiming that she had no other *mongindong* to sing (Personal interaction, 13<sup>th</sup>) August 2009). Tulai's singing turned out to be yet different in musical structure as compared to Pariama's second singing [compare *Figs. 4* and *5*]. Interestingly, Pariama supported Tulai's statement by saying that both of their second singing of *mongindong* are "*sama*" [the same].

Despite their second singing of *mogindong* that displayed different musical structure from their first singing, Pariama and Tulai both said that they have no *mongindong* other than the ones that they had sang for the first time (i.e. about one month earlier). In fact, they seemed reluctant to sing for the second time for my

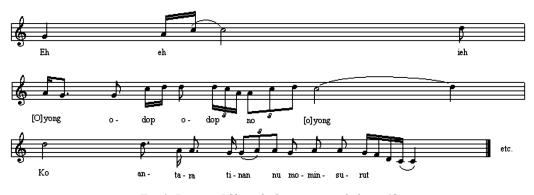


Fig. 3: Pariama I [from the beginning until phrase 3]

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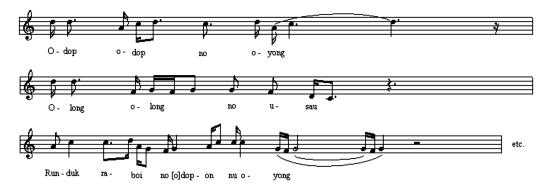


Fig. 4: Pariama II [from the beginning until phrase 3]

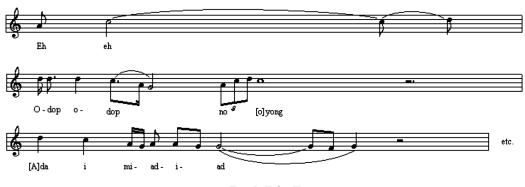


Fig. 5: Tulai II

documentation. According to them, if they were requested to perform the *mongindong* again, they would perform the "same *mongindong*". In my documentation project, Pariama and Tulai perceived that they had performed the same *mongindong* for their second time of singing.

When they said "sama" [the same], they might be referring to the genre as well as the individual songs. Generally, each oral tradition has its distinctive characteristic that makes it recognisable. However, I perceive mongindong as a highly individualised oral tradition and each mongindong has its own individuality which is different from one another. Therefore, the individual songs are regarded as not entirely the same, in other words, they are different. The statements by the informants and the researcher are to be clarified when a study on texts and tunes of these mongindong is conducted.

Some questions are raised as this paper intends to describe the mongindong of Dusun Labuk and examines a possible way to analyse them in order to understand the oral tradition better. What is mongindong? What is essential in understanding mongindong? What does mongindong signify? On contrary to ritual performance which takes social form for musical expression, mongindong is an informal and intimate expression which serves a means of communication between individuals. As such, the matter of social maintenance of the text in this context refers to the musical text of mongindong, which is different as compared to the ritual tradition in terms of control, maintenance, and modification of the text. In this regard, the mongindong of Pariama, for example, is solely hers.

To study these *mongindong* also means to study a highly individualised oral tradition which has the least formal restriction. There is no accompanying musical instrument, no ritual, and no particular group of participants. However, there is a room for freedom and an appropriate space for the singers to express their feelings or to formalise their emotions. It cannot be denied that *mongindong*, although was traditionally sung to the children, also has an element of self-serving in its function. Although it is not different from the above description or discussion, the context of *mongindong* of Dusun Labuk can be seen in the following aspects.

## THE CULTURE OF THE DUSUN LABUK

Firstly, part of the culture of the Dusun Labuk was observed, particularly their occupation and lifestyle. Traditionally, the community of Dusun Labuk were farmers who started working in the fields from break of day until the work was done, either at noontime or in the evening. Men were responsible for the work in the fields while women were responsible for the housework at home. However, the men were also trained to help at home, and the women in the fields, too. Night time was meant for rest, leisure, or sometimes hunting for nocturnal animals. Playing musical instruments, singing folksongs, and telling folktales were the activities during free time. During bedtime, mongindong [cradle song] was sung to cradle babies and toddlers, while tangon [folktale] was told to the children. The task of cradling children is not specifically for men or women; instead, each family member is responsible for this task as long as he or she is free to do so. This is probably one of the reasons for the fact that both the men and women can sing mongindong. Along with urbanisation and advancement in technology in the region, the traditional life style of the community has somewhat changed, at least since 1970s. Shifting dry paddy cultivation is gradually replaced by long-term oil palm plantation. Besides farmers, there are also businesspersons, government servants, professionals, and others in the community at present. The singing of *mongindong* and telling of *tangon* at home have declined and even ceased in many cases. In most of the families, these have been replaced by pop songs and movies on television.

Secondly, changes could also be seen in the belief system and language use. In former times, the bobolian [priestess] played an important role in transmitting the ritual related traditions while other senior people in the community held the informal oral traditions. The Dusun Labuk language was and for some still is the only medium of communication. Most of the community members think, communicate, and sing in this language. Since the coming of Christianity, the role of transmitting the ritual related tradition has been transferred to the church and the ritual related tradition has been replaced by church music. Singing is carried out in church during Sunday worship service, Sunday school, various activities, and fellowships where western hymns like Amazing Grace and praise songs like You Lift Me Up are sung in either Malay or English language. Since the 1970s, the Dusun Labuk language has gradually been replaced by the use of Malay and English at home, because these two languages are the medium of communication in school and other places in the country and some parents even mistakenly think that their children will not be able to shift into these other languages if they hear their own language at home. The decline in the use of the Dusun Labuk language has also indirectly contributed to the decline in the singing of mongindong and the telling of tangon.

#### **MESSAGES IN MONGINDONG**

*Mongindong*, as one of the Dusun Labuk oral traditions, serves as a means for the poetic communication of thought and feeling. Just as messages are delivered through words in normal spoken communication, messages are also conveyed through the words sung in the context of *mongindong*. In the examples given below, it can be seen that when the *mongindong* are sung as cradle songs, their lines are usually structured around variations of the word *modop* ["to sleep"]

and they convey the message of encouraging a beloved child [*oyong* = "dear" or "darling"] to sleep soundly [*molong*].

"mogot no oyong do **modop**, mogot no usau do **molong**"

[*lebih baik bah sayang* \_ *tidur, lebih baik bah sayang* \_ *nyenyak* / better dear \_ **sleep**, better dear \_ **soundly**]

Phrases 6-7, Diris

"odop no oyong indongon"

[*tidur bah* sayang mengayun / sleep dear swinging]

Phrase 2, Gustimin II

"poodop poolong oku dikou oyong"

[kasih tidur kasih nyenyak aku kau sayang / make to sleep make to be soundly I you dear]

Phrase 4b, Pariama II

"odop no pogi usau, olong no pogi odu odopno"

[*tidur bah* [*dengan maksud arahan*] sayang, **nyenyak bah** [*dengan maksud arahan*] sayang tidurbah / **sleep** [with meaning of command] dear, **soundly** [with meaning of command] dear sleep]

Phrases 2-3, Tulia I

The example shows that the different ways of conveying the message lead to the different adoption of words, e.g. "modop" is adopted by Diris, "odop no" by Gustimin and Tulai, while "poodop" by Pariama. "odop" [tidur / sleep] is the root word for "modop" and "poodop", which is also a word used to persuade the child to sleep especially when the suffix "-no" is attached to the word. "modop" [tidur / sleep] is a word to describe the act of sleeping. "poodop" [kasih *tidur* / make to sleep] is a word to describe the act of adult persuading a child to sleep. This identical principle on the adoption of word is also applied to the word "*olong*" [*nyenyak* / soundly].

This is similar to the messages of "odop no" and "olong no", i.e. other messages are also delivered in the different ways of conveying the message in different words among the informants. The messages include "ada no mogiad" [jangan bah menangis/don't cry], "onuon no pominsurut" [ambil bah tumbuh besar/take growth], "onuon pomutotogui" [ambil sihat yang kekal/take persistent health], "ada koborui" [jangan selalu sakit/don't fall sick often]. Just like the former example, the message "olong no" [nyenyak bah/soundly] does not appear in the mongindong by Gustimin, and there is also an exception for the message "ada no mogiad" [jangan bah menangis/don't cry] in the mongindong by Pariama.

From the researcher's observation, she found that the message, "odop no" [tidur bah/sleep], and then "olong no" [nyenyak bah/soundly] is delivered in two continuous phrases as in the previous example, compared to the message, "ada no mogiad" [jangan bah menangis/don't cry] which is repeated in two continuous phrases, as follows:

"ada no oyong mogiad, ada no usau tumangi"

[jangan bah sayang menangis, jangan bah sayang menangis/don't dear cry, don't dear cry]

Phrases 4-5, Diris

"ada i miadiad, ada kou mangitangi usau"

[jangan itu menangis-nangis, jangan kau menangis-nangis sayang/don't cry continuously, don't you cry continuously dear]

Phrases 3-4, Tulai II

Different words appear in two continuous phrases that deliver identical messages - "ada no mogiad" and "ada no tumangi" in Diris, whereas "ada miadiad" and "ada mangitangi" in Tulai II. "mogiad" [menangis/cry] is a word to describe the act of crying. Meanwhile, "tumangi" [menangis dengan suara yang rendah, tidak sampai teriak-teriak/cry softly, i.e. not to the extend of shouting] is a word to further describe the state of crying. "miadiad" [menangisnangis/cry continuously] is a word that doubles the word "mogiad". "mangitangi" [menangisnangis dengan suara yang rendah, tidak sampai teriak-teriak/cry softly continuously, i.e. not to the extend of shouting] is a word that doubles the word "tumangi".

## UNCOMMON PHRASES AND SYMBOLIC EXPRESSIONS

Besides the above mentioned phrases that appear in the *mongindong* by all the informants, there are some expressions which only appear in the *mongindong* by certain informants, such as follows:

"okui oyong no kojuan, okui oyong olumkodis"

[aku sayang bah mengasihi, aku sayang tidak membiar/I dear love, I dear not forsake]

Phrases 21-22, Diris

"miontong okui agayokgayok po oyong, ikou no oyong monunggamit torigi i do rumundunou usau"

[harap aku besar-besar sudah \_sayang, kau bah sayang mewarisi tiang itu \_ rumah sayang/hope I have grown up already \_ dear, you dear inherit the pillar [of] \_ the house dear]

Phrase 13-15, Pariama II

The phrase "to inherit the pillar of the house" in *Pariama II* symbolises inheriting the

family's property [*mewarisi harta keluarga*] and to hold the authority in the family [*berkuasa dalam keluarga*]. By inheriting the pillar of the house, Pariama actually asks her child to inherit the family's property and hold the authority in family or to be the leader in family.

Besides Pariama, Diris also uses symbolic words in his *mongindong*. For example,

"kumuut oyong do gamut tavan, kumuut usau do gamut tavavo"

[pegang sayang \_ akar langit, pegang sayang \_ akar tavavo/hold dear \_ root of the sky, hold dear \_ root of tavavo]

Phrases 17-18, Diris

"gamut tavan", the root of Heaven [literally "root of the sky" or "root of the highest realm"], is a symbol of God, hope, safety and success. "gamut tavavo", the root of tavavo [a species of plant], was traditionally for external use to "buang angina" [release the gas in stomach]. It was also believed to be able to chase away the evil spirits. Therefore, it is a symbol of health, healing, protection, and longevity. These two "roots" symbolise God's blessing, and it was hoped that the child would grow healthily and quickly, without sickness and be kept away from danger, and that it might also be a person full of courage and it might have a long life.

## **MELODIC MATERIAL**

The melodies of the *mongindong* are based on the tonal series of four or five pitches. The tonal series of the four pitches can be described in sol fa as "do, re, mi, so" which can have its range expanded to an octave as "<u>so</u>, do, re, mi, so". The series based on five pitches resembles "do, re, mi, so, la" in sol fa which can also have its range expanded to an octave as "<u>la</u>, do re, mi, so, la". These can be combined and expanded over the range of a ninth as "<u>so</u>, <u>la</u>, do, re, mi, so, la" (note that the underlined tones are pitches at the octave below). This can be illustrated in the western staff notation as shown in *Figs. 6*, *7*, *8* and *9*. Susan Ang Ngar Jiu and Chan Cheong Jan

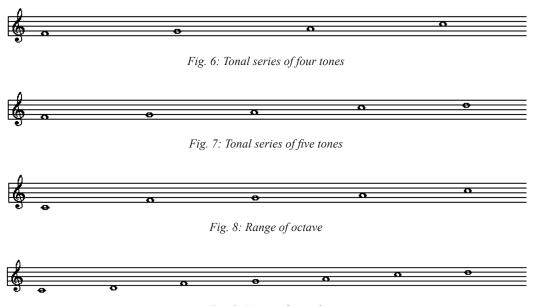


Fig. 9: Range of a ninth

The *mongindong* by Diris and Gustimin from Murok Village are based on four tones, with the range of an octave, whereas the *mongindong* by Pariama and Tulai from Baba Village are based on five tones, with the range of a ninth. The data are too limited to be able to generalise whether each village has different tonal series and tonal ranges. However, it appears that there may be slight changes in the tonal series and ranges from one village to another.

### REOCCURRING MELODIC PATTERNS IN VOCABLE PHRASES

Besides the melodic phrases of the song text, part of the *mongindong* performance consists of vocable phrases. The use of vocable phrases is a distinctive characteristic of *mongindong*. A vocable phrase is a phrase that is sung with solely the vocable "eh" or "oh", which is not found as frequently in the *mongindong* as in the other Dusun Labuk oral traditions. In the *mongindong*, a vocable phrase may be long with 13 tones to a phrase or short with two tones to a phrase. It may also progress in ascending, descending or static pattern. It may occur at various points of a tune – in the beginning, middle or at the end, depending on the singer.

Each informant has his or her own pattern[s] of vocable phrases. The vocable phrases by Gustimin in his two times of singing are taken as the examples for observation, as shown in Figs. 10, 11, 12, 13 and 14. A reoccurring melodic pattern is observed among these vocable phrases. The researcher suggests that Gustimin's reoccurring melodic pattern for his vocable phrases is "mi-so-so-re-mi-re-do" as illustrated in Fig. 15. This is an ascending pattern and it then becomes static followed by descending and then slightly ascending before gradual descending pattern. This basic pattern is found the most in the mongindong by Gustimin among all the collected mongindong. In addition, these phrases are consistent in terms of their reoccurring melodic patterns and their occurrence in the tune, that is, in alternation between the phrases of vocable utterances and phrases of song text.

Vocable phrase – songtext - vocable phrase [*Gustimin I*]

Different yet Similar: A Study on Mongindong

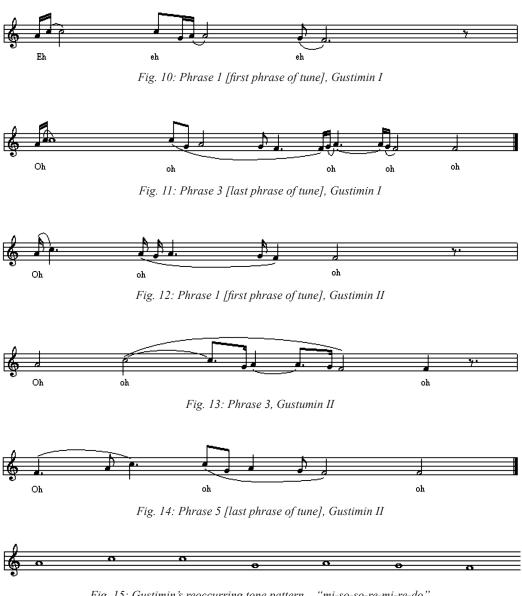


Fig. 15: Gustimin's reoccurring tone pattern – "mi-so-so-re-mi-re-do"

Vocable phrase – songtext – vocable phrase – songtext – vocable phrase [*Gustimin II*]

Other examples of vocable phrases occur in the *mongindong* by Tulai. The vocable phrases extracted from her two times of singing are shown in *Figs. 16, 17, 18, 19, 20* and *21*, respectively. The researcher suggests that Tulai's reoccurring melodic patterns for her vocable phrases are [1] "so-la" for beginning of both tunes [*Fig. 22*]; [2] "la-mi-re" with flexibility that the tone "la" may be substituted by the tone "so" to become "so-mi-re" in phrase 9 of *Tulai I* [*Fig. 23*]; [3] "re-do-la" [*Fig. 24*]. Pattern [1] is an ascending pattern while patterns [2] and [3] are gradual descending pattern. Tulai's patterns

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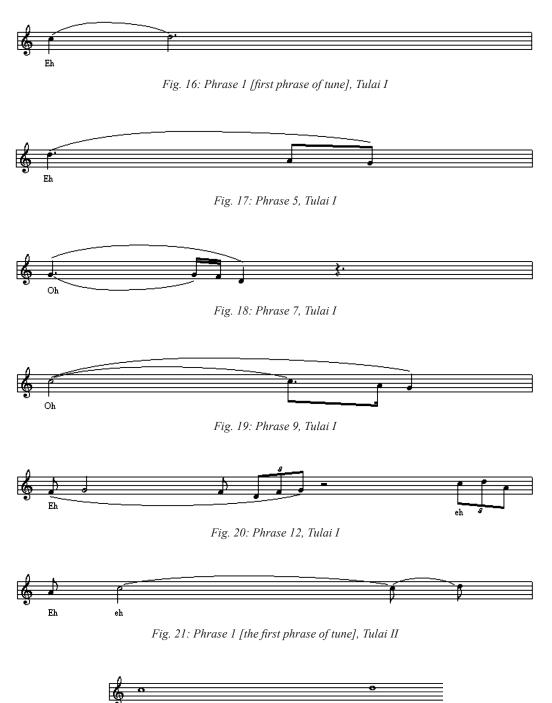


Fig. 22: Tulai's reoccurring tone pattern – "so-la"

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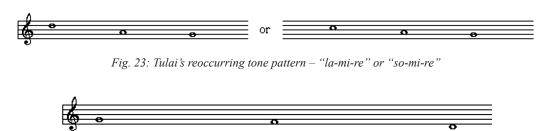


Fig. 24: Tulai's reoccurring tone pattern – "re-do-la"

seem to vary, however, there is consistency in that an ascending pattern appears at the beginning of both melodies, while gradual descending patterns occur in the middle of melodies.

The patterns by Gustimin have a contour of ascending followed by descending, whereas the patterns by Tulai are either ascending or descending. Similarly, the patterns by Gustimin are rather long, while the patterns by Tulai are short. Vocable phrases occur at the beginning and the end of melodies by Gustimin but they rarely occur at the end of the melodies by Tulai.

#### DIFFERENT YET SIMILAR

The song text of the *mongindong* contains some messages that are shared among the informants, such as "odop no" [tidur bah / sleep], "olong no" [nyenyak bah / soundly] and "ada no mogiad" [jangan bah menangis / don't cry]. However, each informant adopts different words and means to convey the messages. Besides, some messages and symbolic expressions are found in the mongindong by certain informants, making the mongindong distinctive in terms of the song text. The melody of mongindong is based on the tonal series of four or five tones within a relatively narrow range of octave or a ninth. Slight differences of tonal series and range of tones between Murok Village and Baba Village were observed. The reoccurring melodic pattern[s] in the vocable phrases by each informant reveals the informant's basic melodic pattern for vocable phrase and the Dusun Labuk's concept of sound in the mongindong.

What is *mongindong*? What is essential in understanding *mongindong*? What does mongindong signify? The researcher suggests that the *mongindong* is a weave of differences and similarities. Based on the findings of this study, the researcher views the mongindong as a tool for self expression, besides as a tool to soothe a child to sleep. As typologically the least formal and functionally the most fundamental oral tradition, the singing voice of mongindong displays individuality, flexibility, and casualness. Although there are certain common messages observed in the singing of the mongindong, each individual singer determines the exact message, the ways of conveying the messages, and the choice of words in their singing. It is notable that the abundance of Dusun Labuk's vocabulary contributes to the manifold appearance of the song texts. Mongindong are further characterised by the use of uncommon phrases and symbolic expressions. In addition, each individual singer has his or her own melodic pattern[s] that reoccur[s] throughout the performance although the basic melodic material is based on four or five tone series. The mongindong sung by different individuals are similar due to their identifiable structural commonalties; and are yet different due to the idiosyncratic styles of individual performers.

An understanding of the Dusun Labuk culture, their thinking, language and behaviour, as well as the ethnosemantics of the Dusun Labuk music are essential in understanding the *mongindong*. The researcher has tried to understand the culture, thinking, language, and behaviour of the community, and thus hopefully

will discover the knowledge of the Dusun Labuk music. It is undeniable that the above findings may be influenced by my own language background and my prior training in the western based music education, and therefore, may not reflect the Dusun Labuk's concepts of oral traditions. An example in the aspect of language may help to make this clear. Due to the reason that the Malay language is the only shared language among the informants and the researcher, we communicated in this language. However, the Malay language is not our mother tongue since Dusun Labuk language is theirs and Mandarin is mine. Due to the reasons such as some words are found in our respective mother tongue but not in the Malay language or limited Malay vocabulary within ourselves, we attempted to adopt Malay word that has the closest meaning to the meaning we intended to make. This, sometimes, may lead to the differences in terms of understanding among the informants and the researcher. Besides, along the process of communication, our respective mother tongue and perception may also influence our speech in various aspects including the adoption of words, meaning of certain word [a word may means differently to the informants and the researcher], the extent of emotion, means of communication, etc. When the informants mentioned that all their mongindong are "sama", the researcher perceived that all their mongindong are "the same". However, my perception toward the word "sama" may not be the same to theirs, as they may have the word "sama" with different meaning and extent of similarity. Therefore, further clarification of the word and understanding of the culture and knowledge of the Dusun Labuk oral traditions is necessary.

Perceptions of similar and different are both true concerning what is the reality of *mongindong*. The informants' perception reveals the perceptive reality of the *mongindong* that a few *mongindong* performed by one person are considered as "*sama*" [the same] and a few *mongindong* performed by a few persons under certain circumstance are considered as "*sama*" [the same], too. The researcher's perception reveals the structural reality of the *mongindong* that song text and sound of *mongindong* performed by different persons or even the same persons are not always the same. These realities help us to have a deeper understanding of the *mongindong*, beyond the superficial notion of similarity and difference.

Besides understanding the community members' culture and knowledge of oral traditions, different methods of analysis, especially the ones proposed by ethnomusicologists in South-East Asia, are to be studied and adopted or adapted for the study on the mongindong, in order to have a better understanding of the mongindong. Collecting *mongindong* from more community members may also enhance the understanding of the mongindong. The initiative to interact with more community members and encourage them to sing the mongindong will hopefully increase the collection of mongindong. Through interaction with more community members and study on more mongindong, it is possible to have a clearer picture of the culture of the Dusun Labuk and the perception of the community members towards their oral traditions, especially the mongindong.

As discussed in the previous section, there are other oral traditions in the Dusun Labuk community including *tangon*, *runsai*, *mansuak* and *kurilang*, besides the *mongindong*. Collecting these oral traditions may be done for documentation and revitalisation purposes. A study on each oral tradition is to be followed by for a deeper understanding of each of them and their interrelationship.

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# Foot Anthropometry for Shoe Design among Preschool Children in Malaysia

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## ABSTRACT

Foot anthropometry provides statistical data on the distribution of foot dimension in the population used to optimize products. Foot anthropometry plays an important role designing good fitting footwear. Changes in life styles, nutrition, and ethnic compositions of the populations have led to the changes in the distribution of foot dimension and thus it requires regular updating of foot anthropometry data collection. This study examined foot anthropometry data of preschool children in Malaysia. The purpose of this study was to develop fit size to shoe design. The data were collected from twelve pre-schools in Selangor, Malaysia. Three-hundred and three pre-school children (129 boys and 174 girls) were randomly selected for this study. Standard anthropometric technique and tools were used. The respondents' foot lengths (left and right), foot widths (left and right), as well as ankle circumference and foot heights were measured and analyzed using SPSS program. The results showed that there were significant relationships among all the foot anthropometry measurements. The results also revealed there that was no difference between the foot anthropometry among the urban and rural pre-school children. The study found that there was a significant difference between the length of the right and left foot. The study also revealed that there was a significant difference between the width of the right and left foot. The data gathered in this study could be further used to develop footwear sizing system.

Keywords: Anthropometry, children, foot, shoe

# **INTRODUCTION**

The human foot is a flexible structure of our body that consists of 26 bones. Shoes are necessary apparatus used to cover feet and protect them from injury. Shoes sizes which are not based on foot anthropometry measurement will cause pain to the consumers when they are worn. Moreover, improper shoes sizes will result in foot injury and deformity. One of the causes of strain in foot muscle and tendons is improper shoes size (Luximon dan Goonetilkels, 2005).

Shoes and stockings are used to protect foot from injury. In the production of shoes

and stocking, standardization of size is an important concern. In order to satisfy a wide range of consumers, it is necessary to develop a standard that will enable choice of footwear sizes applicable to individual and group needs (Ujevic and Herzanjak, 2004).

Anthropometry as an anthropology method is concerned with the measurement and testing of the human body and the relationship of dimensions among its individual parts (Ujevic *et al.*, 2006). Anthropometry measurement is a necessary tool in developing standardized sizes. In the production of fashionable clothing

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and footwear, the anthropometric measurements are applied in the field of construction and modelling processes. Shoes and stockings design use anthropometric measurements in the foot area. Foot anthropometric measurements which are applied to design shoes and stockings should represent a sample of specific population which includes children, youth, and elderly. Malaysia is one of the Asian countries whereby residents have small body sizes. Southeast Asians and African children have smaller foot shape compared to Australian children (Kouchi, 1998). For Malaysian children, it is difficult to get clothing and shoes that could fit them well because of their relatively smaller body size and shape. Thus, Asian clothing size is relatively smaller than European clothing size because Asians have smaller body sizes (Naimah et al., 2007). Furthermore, children clothing and shoes in the Malaysian market are based on the foreign sizes such as US and UK standard sizes. The imported standard shoe sizes are adjusted to fit the Malaysian children. Unfortunately, these adjusted sizes still do not fit well with the foot shape and size of Malaysian children (Naimah et al., 2007). Other groups, such as the elderly and youth, also face similar problem in finding the right shoe size. There are many shoe designs in the Asian market that do not follow the standard or real foot anthropometric standard. According to Chaiwanichsiri, Tantisiriwat dan Janchai (2008), many individuals of the older generation could not find shoes that could fit to their feet well. Parents who have children aged 5 and 6 years old are also facing problem in finding fit clothing and footwear sizes for their children. According to Naimah et al. (2007), there is currently no standardized sizing system for children in the clothing industry in Malaysia.

Nowadays, studies related to foot anthropometric data for Malaysian children are still limited. These studies include "Malaysian Sizing" by Prof Dr. Amir Feisal Merican from CRYSTAL, University of Malaya, "Sistem Pensaizan Kanak-Kanak dan Remaja di Malaysia" by Puan Naimah Mohd. Salleh from Universiti Putra Malaysia and "The Importance of Body Sizing System" by Puan Norsaadah Zakaria from Department of Textile Technology, UiTM. Nevertheless, the studies did not focus on gathering foot anthropometric data, and were more generally on anthropometric measurements. The fact that there are possible differences in the foot anatomy across different nationalities, it is essential to define Malaysian children anthropometric data. The present study was aimed to collect foot anthropometric data of Malaysian children, in order to determine the proper shoe size for the shoe design.

## **OBJECTIVES OF THE STUDY**

## General Objective

This study was conducted to collect foot anthropometric data for Malaysian children, aged between 5 and 6 years old, for the purpose of designing shoe sizes that better fit their feet.

## Specific Objectives

In more specific, this study was undertaken to:

- obtain children foot anthropometric measurements.
- measure the relationship between foot anthropometric measurements.
- measure the differences in the foot measurements between the rural and urban children.
- measure the differences in the foot measurements between the right and left foot.

## LITERATURE REVIEW

#### Anthropometric Measurements

Human beings have unique body shapes and different levels of body development. Although they may have biological relationship such as between siblings or twins but their body shapes and sizes are not exactly the same. Therefore, the construction of consumer products need to fit various human body shapes, so as to give and provide consumers with comfort and satisfaction, especially footwear products. In addition to several industries (e.g. furniture, tools, mechanical engineering, road building, personal protective wear and work safety equipment, and automotive), the garment and footwear industry are particularly interested in the results of the anthropometric measurement studies (Ujevic and Hrzenjak, 2004). Anthropometric measurements have become a reference to clothing and footwear manufacturers because these measurements are capable of providing them with the accurate measurements based on body shapes (Beazley, 1997). As a consequence, they tend to provide perfect products for consumers.

Three groups of information essential for the production of clothing and footwear are determined by systematic mass measurement and statistical treatment, such as the systems of clothing and footwear designation, standard and proportional measurements and share of individual clothing and footwear (Ujevic et al., 2004). Shoe and stocking designation system is has become foundation for manufacturers, consumers, and the entire population. The system prescribes shoes and stocking sizes and determines methods of size designation. There is no universal footwear size labelling system, but each country prescribes them based on the anthropometric measurements. Measurements are made every 10 to 15 years so as to improve and promote standardization (Beazley, 1997). This is necessary because changes in the life style and environment directly affect the measurement of the human bodies. The desire of each footwear and garment manufacturer is to meet the demand of unknown consumers. Therefore, shoes and stockings are made according to the specific standards and in as many sizes as possible.

Footwear designers normally use foot length, foot width, foot height, and ankle circumference to design shoes (Waterson and Sell, 2006). These measurements are ergonomic inputs which are necessary to design footwear products that offer comfort and flexibility to the users when their bodies are in motion (Waterson and Sell, 2006). However, girths are rarely measured for fitting footwear. The differences in girth measurements between foot and shoes can cause significant mismatch if the corresponding widths and heights are not accounted for in the foot shape (Rossi, 2000). The height measurement in the mid foot region is important for designing the vamp of shoes (Janisse, 1992). On the other hand, the forefoot shape depends on the fashion of shoes (Cheng and Perng, 1999). Therefore, it is important to have a system that relates foot height to foot length to provide an ideal platform for shoe design.

# Significance of the Anthropometry Measurements

The health of our feet is largely affected by the shoes that we wear. An accurate choice of shoe size and shape will be able maintain the health and vitality of feet. On the contrary, improper choice of shoe size is a common cause of foot and ankle problems (such as blisters and hardened heels) (Chaiwanichsiri, Tantisiriwat and Janchai, 2008). Meanwhile, wrong shoe size is also another cause of foot injury, pain, and deformity. A detailed knowledge of foot shape and foot structure is particularly important for those involved in the design and construction of shoes (Mauch et al., 2008). Furthermore, small variations in foot shape must be incorporated into shoe design to meet the requirement for shoe fit comfort. According to Rossi and Tennant (1984), a one-sixth inch difference in the ball of foot measurement can create a faulty fit in the forefoot region of a shoe.

Children must wear proper shoe sizes according to their foot measurement and shape. It is very important that children's shoes fit properly because ill fitting shoes can impede the normal development of maturing foot (Echarri and Forriol, 2003). Although foot shape consideration is important to produce comfortable shoes, comprehensive studies investigating foot morphology tend to emphasize on adults, particularly military personnel (Hawes and Sovak, 1994). Footwear manufacturers apply foot shape as their reference to develop shoes and stockings (Kouchi, 1998). Studies concerning the morphology of children's feet are limited. The data are also limited to dimensions of the foot (foot length and ball circumference) and leg (tibial and femur length and calf circumference) to monitor childhood growth rates (Kok, Bax and Smits, 2005).

A study by Stavles *et al.* (2005), which examined the dynamic footprints recorded both feet of 5866 Mediterranean boys and girls, aged between 6-17 years, found that the proportion of high and low arched foot types decreased with increasing age in boys and girls. Although critical changes of the foot occur during preschool development, considerable changes in foot shape also take place during school age up to late adolescence. These changes are important data to produce suitable and comfortable shoe sizes for consumers.

Variability of foot shape is due to numerous factors. Factors contributing to this variability include genetics, environmental, socio-economic, lifestyle, and different manners of wearing shoes (Razeghi and Batt, 2002). Kouchi (1998) analyzed foot shape characteristics to identify differences due to ethnic backgrounds. Kouchi found that the Japanese feet are much similar to the feet of Indonesians than the Caucasoid or Australoid's feet. The Japanese typically have a wider foot for foot length as compared to the Caucasoid and Australoid, but a smaller foot length for height than those of the Southeast Asians and Africans (Kouchi, 1998). These differences occurred due to both genetic and environmental factors. According to the study by Wunderlich and Cavanagh (2001), adult foot shapes vary based on gender differences. In the study, all foot anthropometric data of each gender were separately analyzed. The study by Chaiwanichsiri et al. (2008) found that the foot dimensions between genders demonstrated that at the same foot length, men had larger foot width and circumference, as well as upper ball, ach, toe depth and ankle height than women, while the arch length had the same proportion with the foot length in both genders. Therefore, measurements need to be taken for both genders because they have differences in the foot measurement.

## The Development of Children's Body Shape

Designers of children's clothes and footwear should be aware that a child's body shape changes as they grow and that they should also be able to recognize the body shape of a child at a particular age. Well-designed children's clothes and footwear take into account the continuous changing body shape. Good designers focus on the body parts which are rapidly and continuously changing when designing proper sizes for children's products (Aldrich, 1999). A child's rapid growth and changing shape from birth to adulthood mean that small increments in size have to be made. This is usually done in monthly intervals. The decrease in the rate of growth varies from approximately eight cm per year at three years of age to five cm per year at ten years old (Aldrich, 1999). Aldrich also stated that manufacturers have decided to accept a six cm height growth interval as a base for a coding scheme. This interval is approximately the average growth per year for this period. As a consequence, manufacturers should have the knowledge about the real measurements of children's bodies before designing their shoes and garments in accordance to their rapid growth and development for a certain age. Therefore, this study is important to meet the need of children's shoe sizes which continuously change because of their rapid growth and development.

# METHODOLOGY

The sample of the study consisted of 303 children aged between 5 and 6 years old selected through the-stratified random sampling. Five Tabika Kemajuan Masyarakat (KEMAS) located in the urban area and seven in the rural area in the state of Selangor were selected as the location of the study. The Tabika KEMAS located in Puchong were selected to represent the urban area whereas the Tabika KEMAS in Hulu Langat represented the rural area. Information was obtained from Jabatan KEMAS Selangor.

Area	Name of Tabika	Number of respondents	Percentage (%)
Urban			
Puchong	T.K Al-Ikhsan	29	9.57
-	T.K An-Nurindah	29	9.57
	T.K Bt.13 Puchong	40	13.2
	T.K Ibnul-Quyum	25	8.25
	T.K Permai Bistari	32	10.56
Rural			
Hulu Langat	T.K Anggerik A	24	7.92
	T.K Anggerik B	15	4.95
	T.K FASA 1, B.B.B	25	8.25
	T.K Seksyen 2A	24	7.92
	T.K Seksyen 2B	18	5.94
	T.K Seksyen 4A	22	7.26
	T.K Seksyen 4B	20	6.6
	Total	303	100

TABLE 1 Location and sample

Note: T.K = Tabika Kemas

#### Study Instrument and Data Collection

A questionnaire was used for data collection. The research questionnaire consists of two main parts, i.e. (i) Demographic characteristics of the respondents (age, gender, ethnic, and family income) and (ii) Foot anthropometric measurements (foot height, ankle circumference, right foot plantar surface length, left foot plantar surface length, right foot plantar surface width, and left foot plantar surface width). The measurements were recorded in the metric unit - centimetres (cm).

The respondents were required to take off their shoes and stockings when the measurements were made. Foot height and ankle circumference were measured using the standard tape measurement. Both the measurements were taken on the right side of the body (Carter, 2002). The length and width measurements were taken by sketching both the right and left feet on an A4 paper. The measurements were marked using a pencil and were measured with a ruler. The mean measurement was also recorded. All the measurements were taken by the researchers who were trained in foot anthropometric measurements. The measurements were taken according to the procedures described in the American Standard for Testing Material (ASTM, 1970), Anthropometric Standardization Reference Manual (1991) and Anthropometry Procedures Manual (2004).

#### Data Analysis

All data were analyzed using the SPSS software for window version 13.0 (Statistical Package for Social Science 13.0). Descriptive statistic was also used to get the mean, standard deviation, as well as maximum and minimum values. Pearson correlation test was computed to identify the relationship between foot anthropometric measurements. Both feet were compared using the paired t-test to determine the differences for both. Meanwhile, t-test was also used to identify the differences in the foot measurements between the rural and urban children.

#### **RESULTS AND DISCUSSION**

This section discusses the findings for the respondents' demographic, mean, standard deviation, maximum and minimum values, relationship between female and male children's foot anthropometric measurements, differences between the right and left feet, as well as the differences in the foot anthropometric measurements between the rural and urban children.

Table 2 shows the respondents' sociodemographic information. The number of female children (57.4%) was found to be higher than the number of male children (42.6%). A total of 234 (77.2%) respondents aged 6 years old, whereas the rest aged 5. The monthly income of the respondents' families was found to range between RM800 and RM6500, with an average income of RM2549 per month. Most (24.7%) of the respondents' families had the monthly income in the range of RM1500-RM2000. Meanwhile, 17.5% of the respondents had the family income below RM1500, while the rest of the families earned more than RM2001 per month.

# *The Foot Anthropometry of Male and Female Children*

Tables 3A and 3B show 6 foot anthropometric measurements for the male (boys) and female (girls) children aged 5 and 6 years old. The foot anthropometric measurements were reported in

terms of their means, standard deviation, as well as maximum and minimum values.

Table 3A presents the foot anthropometric measurements for the boys aged 5 and 6 year old, indicating that the foot height of the 6 year-old boys was bigger than those aged 5. On the other hand, the 5 year-old boys had the maximum foot height measurement i.e. 7.7 cm, as compared to the 6 year-old group, with the maximum value of 7.5 cm. For the ankle circumference measurements, the 6 years-old group was reported to have the mean value of 16.43 cm compared to that of the 5 years-old group, i.e. 16.36 cm. This is also similar to the trend in the foot height measurements, whereby the maximum value for the ankle circumference was reported to be 29 cm for 5 year-old group. As for the right and left feet plantar surface width measurements, 5 year-old group reported to have 7.23 cm for both the measurements. The left and right feet plantar surface length measurements for 6 years old boys had the highest mean, i.e. 17.82 cm for both feet.

Table 3B shows the foot anthropometric measurements for the 5 and 6 years old girls. Based on the data presented in the table, the mean foot anthropometric measurements for

Variable		n=303	(%)
Ethnic group	Malay	297	98
	Chinese	1	0.3
	Indian	5	1.7
Gender	Boy	129	42.6
	Girl	174	57.4
Age (Years)	5	69	22.8
	6	234	77.2
Area	Rural	148	48.8
	Urban	155	51.2
Family monthly income (RM)	$\leq 1500$	53	17.5
	1501-2000	75	24.7
	2001-2500	60	19.8
	2501-3000	55	18.2
	$\geq$ 3001	60	19.8

TABLE 2 Respondents' socio-demographic background

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	5 years (n=27)			6 years (n=102)				
Measurements (cm)	Min	Max	Mean	S.D	Min	Max	Mean	S.D
Foot height	3.9	7.7	5.52	0.7	4	7.5	5.87	0.69
Ankle circumference	12.5	29	16.36	1.73	13.05	20.7	16.43	1.33
Left foot plantar surface width	5.2	8.6	7.23	0.65	5.65	8.4	7.19	0.49
Right foot plantar surface width	5.65	8.7	7.23	0.64	5.2	8.6	7.19	0.5
Right foot plantar surface length	14.6	20.65	17.12	1.22	14.9	19.9	17.82	1
Left foot plantar surface length	14.8	20.5	17.18	1.18	14.9	19.9	17.82	1

TABLE 3A
Mean, standard deviation (SD), minimum and maximum of boys foot
anthropometric measurements

the 6 year-old group was bigger than that of the 5 years-old. For all the measurements, the 6 years-old group was reported to have a higher minimum value, while the 5 years-old group was shown to have higher maximum values. The differences in these measurements might be affected by several factors such as the environment, socio-economic status, as well as genetic and lifestyle factors (Razeghi and Batt, 2002).

## The Relationship between Foot Anthropometric Measurements of Boys and Girls

Table 4 shows the relationships between foot anthropometric measurements. Results from the analysis show that there are significant relationships between each foot anthropometric measurement. Based on the Davis Relationship Strength Description Value, there is a very strong relationship between the right foot plantar surface width measurement with the left foot plantar surface width measurement  $(r = 0.928^{**}, p < .001)$  and the right foot plantar surface length measurement with the left foot plantar surface length measurement ( $r = 0.929^{**}$ , p < .001). Meanwhile, there is a strong relationship between right foot plantar surface length measurement with the right foot plantar surface width measurement ( $r = 0.668^{**}$ , p < .001), the left foot plantar surface length measurement with the right foot plantar surface width measurement ( $r = 0.665^{**}$ , p < .001), the left foot plantar surface width measurement with the right foot plantar surface length measurement (r =  $0.621^{**}$ , p < .001) and the ankle circumference measurements with the left foot plantar surface width measurement  $(r = 0.529^{**}, p < .001).$ 

TABLE 3B
Mean, standard deviation (S.D), minimum and maximum of girls foot
anthropometric measurements

	5 years (n=42)			6 years (n=132)				
Measurements (cm)	Min	Max	Mean	S.D	Min	Max	Mean	S.D
Foot height	3.7	7.7	5.41	0.7	3.8	7.45	5.76	0.74
Ankle circumference	12.3	27	16.31	1.49	13.05	20.7	16.43	1.49
Left foot plantar surface width	5	8.5	7.01	0.46	5.65	8.3	7.1	0.46
Right foot plantar surface width	5.45	8.6	7.03	0.56	5.2	8.5	7.12	0.5
Right foot plantar surface length	14.6	22.15	17.23	1.03	14.9	19.9	17.81	1.03
Left foot plantar surface length	15	22	17.2	1.03	14.9	19.9	17.81	1.01

	Measurement	1	2	3	4	5	6
1	Foot height	1					
2	Right foot plantar surface width	.342**	1				
3	Left foot plantar surface width	.354**	.928**	1			
4	Right foot plantar surface length	.472**	.668**	.621**	1		
5	Left foot plantar surface length	.498**	.665**	.688**	.929**	1	
6	Ankle circumference	.231**	.420**	.529**	.317**	.470**	1

TABLE 4 Children foot anthropometric measurement correlation coefficient

\*\* Correlation is significant at the 0.01 level (2-tailed)

There are moderately strong relationships between the foot height measurement with the right foot plantar surface width measurement  $(r = 0.342^{**}, p < .001)$ , the left foot plantar surface width measurement ( $r = 0.354^{**}$ , p < .001), the right foot plantar surface length measurement (r =  $0.472^{**}$ , p < .001), and the left foot plantar surface length measurement  $(r = 0.498^{**}, p < .001)$ . Similarly, there are moderately strong relationships between foot circumference measurements with the right foot plantar surface width measurement ( $r = 0.420^{**}$ , p < .001), and the right foot plantar surface length measurement (r =  $0.470^{**}$ , p < .001). The findings also reported a weak relationship between the foot height measurement with ankle circumference (r = 0.231\*\*, p < .001). These relationships indicate that the growth and foot bone development are parallel in both feet (right and left). When the measurement changes at one side of the feet, the same measurement will also change for the other foot. Therefore, it is important that both feet are measured for shoe design.

These measurements are related to each other because they are usually used for construction of shoes. According to Waterson and Sell (2006), shoe designers need these measurements in order to produce sizes that can fit their consumers. Meanwhile, Pearson correlation tests are used to identify the measurements that have relationship with each other for creation of garment sizes, including shoe size (Beazley, 1997).

## Differences in the Left Foot Anthropometric and Right Foot Anthropometric Measurements

Table 5A shows there is a significant difference between the right foot plantar surface width measurement with the left foot plantar surface width measurement (t = 2.096, p < .05). However, the difference can be dismissed as it is at the weak level. On one hand, these differences do not change consumers' shoe sizes. The consumer shoe size is still within the same range or the same size. On the other hand, researchers ought to give an important attention to these measurements because a one-sixth inch difference in the ball of foot measurements can create a faulty fit in the forefoot region of a shoe (Rossi and Tenant, 1984).

Table 5B shows there is a significant difference between the right foot plantar surface length measurement and the left foot plantar surface length measurement. However, the difference in the value is at the weak level (t = 2.361, p < .05). At the same time, the difference also does not change the shoe sizes of consumers. Nevertheless, researchers still need to pay attention to these minor differences in the measurements in order to produce the best fit for consumers' shoes.

All the measurements must be elaborated for fit design and suitable shoe sizing to accommodate all individual needs. Therefore, these measurements are important in designing footwear products, particularly for a more accurate design of shoes, stockings, and artificial feet. Foot Anthropometry for Shoe Design among Preschool Children in Malaysia

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Differences between the right foot plantar surface width and the left foot plantar surface width

Width surface	Mean	SD	t	р
Right foot	7.05	0.57	2.096	0.037
Left foot	7.07	0.55		

 TABLE 5B

 Differences between the right and the left foot plantar surface lengths

Length surface	Mean	SD	t	р
Right foot	17.54	0.56	2.361	0.019
Left foot	17.59	0.55		

# The Difference between the Foot Anthropometric Measurements of the Rural and Urban Children

The paired simple t-test was computed to identify the differences in the foot anthropometric measurements between the rural and urban respondents. The results show that there is no significant difference for all the foot anthropometric measurements between the rural and urban respondents. As a result, the mean values for all the foot anthropometric measurements of the rural and urban children aged 5 and 6 years old are statistically similar. The results gathered in this study show no difference because most of the respondents are from the Malay ethnic group. It is important to note that those in the Malay ethnic group normally have a similar lifestyle, regardless of whether they are from the urban or rural areas. According to Razeghi and Batt (2002), environment and individual lifestyle will cause changes in foot shape.

## CONCLUSIONS

This study found that boys have larger foot anthropometric measurements than girls, whereas children of 6 years of age have larger foot anthropometric measurements than those aged 5. However, majority of the measurements for the 5 years old boys and girls gave higher maximum values as compared to those of the 6 years old children.

The study also concludes that all the foot anthropometric measurements have a relationship with each other based on the natural factor. These measurements are important in designing footwear products, especially the shoes. The findings from the paired t-test showed a significant difference between the right and left foot plantar surface width. Subsequently, the test shows that there is a significant difference between the right and left foot plantar surface length. However, both these differences are relatively small. As a consequence, consumers do not need to change to another size of shoes. These measurements are also reported in this study to produce an accurate measurement which will result in proper shoe sizes for children.

From this study, it is concluded that no differences are found in the foot anthropometric measurement between the rural and urban children. According to Chaiwanichsiri *et al.* (2008), t-test was used to determine the difference for the measurements between the individuals living in both areas. Similarities in the measurements are positive results which indicate that it is desirable to develop only one standard size for both areas.

Foot anthropometric data are particularly important to be used in producing shoe sizes that fit the feet shape of Malaysian children. Designing proper shoe sizes will solve problems related to feet comfort and health. Thus, foot anthropometric data will help to produce ergonomic footwear products.

## IMPLICATIONS OF THE STUDY

An implication of this study is the results could be utilized for better footwear product designs. The measurements represent real consumers' foot shapes, and the utilization of these measurements will definitely provide comfort to consumers' feet and produce products which can suit or fit their foot shape better. Foot anthropometric measurements are valuable to those involved in the product design line such as researchers, manufacturers, the government, university students, and medical officers. They can understand variations in the 3-D shape and structure of the feet. This is because of a detailed knowledge in foot shape and structure is particularly important for those involved in designing and construction of shoes (Mauch et al., 2008). Mauch et al. (2008) further added that the knowledge about foot is a fundamental prerequisite for a pair of shoes to be comfortable.

The foot anthropometric survey in the aimed population would produce accurate measurements. Accurate measurements are important in the process of products design. Moreover, these measurements can help consumers in making purchasing decision wisely. Foot anthropometric could be used not only to design footwear, but also to design other consumer-related products. It is important to note that an inaccurate measurement in the consumer product designs could result in a negative implication to consumers' health. Narrow shoes are significantly associated with corns, while short shoes are significantly associated with lesser toe deformity (Chaiwanichsiri et al., 2008). In addition, ill fitting shoes can alter the underlying bone structure through continual pressure, especially during childhood, resulting in severe foot deformities at old age (Echarri et al., 2003). Therefore, accurate and fitting shoes with foot shape in childhood could lead to complete foot development in the future.

## RECOMMENDATIONS

Sample size needs to be extended to represent all the children in Malaysia. Other ethnic groups, such as Chinese and Indian, should be involved in the follow-up study. The study should also be extended to Sabah and Sarawak. This is to ensure that the data available will reflect the whole population of Malaysian children much better.

According to Xiong, Goonetilleke, Witana and Lee Au (2008), midfoot girth will give more accurate data to design shoe sizes. In this study, however, this measurement was not made. It is hoped that other researchers will include this measurement so as to produce better fitting shoe sizes to increase consumers' satisfaction and comfort. The much advanced technology available nowadays has provided better measurement tools to give more accurate and effective foot measurements. Moreover, advanced technology will reduce mistakes involved in measurements and therefore improve accuracy.

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# Stress in Music Teaching: Identifying the Level and Sources of Stress in the Context of Malaysian National Primary Schools

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#### ABSTRACT

This study was designed to examine the level of stress according to selected stressors experienced by primary school music teachers. The stressors undertaken in this study were categorized into six sub-scales which are 'student characteristics', 'teacher characteristics', administrative procedures', 'social support', 'facilities and equipment' and 'music syllabus contents'. Respondents for this study consisted of 326 trained and untrained music teachers in Selangor. Music Teacher Stress Inventory was developed based on problems faced by Malaysian music teachers, with 44 stressors extracted from 99 sources of stress, collected from various sources. Findings of the present research indicate that music teachers in this study were generally experiencing mild stress in teaching music. Among particular item of stressors, 'lack of trained music teacher', 'lack of music resources and books', 'lack of skill in playing musical instrument', 'inadequate allocation to buy costumes for music performance' and 'lack of recognition for music education' were rated by the teachers as the main sources of their stress.

Keywords: Stress, music teaching, Malaysian National Primary Schools

# INTRODUCTION

Music teaching in school is a challenging task. The variety of tasks required as a school music teacher may cause stress in their profession. Music teachers are required to teach both theoretical and practical components of music, and each component requires a different set of teaching skills and strategies. In music teaching, knowledge is transmitted in both oral and literal forms, which involve various transmission mediums including audio recording, live sound, written words, and music notation. They is a vast array of equipment one needs to handle in the music classroom as well, ranging from musical instruments, audio visual devices, computers, to teaching aids like charts, diagrams and so on. Meanwhile, music teaching is also complicated by various issues related to cultural representation. Among these issues are the differences between the music taught in school and the music preferred by students, the social perceptions towards music as a subject of education, and the global trend of multiculturalism in education.

School music teachers in Malaysia are not exempted from the work characteristics mentioned above. While the working environment of a school music teacher varies depending on the school type, school characteristics and the location of the school, some concerns are commonly shared by the society. Teachers'

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competency in guiding both theory and practical components in the music class hour has been a concern held by the education departments, parents, and music related organizations. Some teachers may have problems in understanding, as well as implementing the syllabus of the music curriculum. Teachers who are untrained in the music education being assigned to teach music has become a common practice in many states in Malaysia. Many teachers, both in urban and rural area, have to cope with inadequate facilities and equipment to teach music. The negative perceptions towards music education held by certain groups of parents are a well known fact in the country. Under such circumstances, are the music teachers in Malaysia experiencing stress in their teaching career? How stressful are they? What are the main sources of their stress? This study was designed to examine the level of occupational stress experienced by the school music teachers in Malaysia, and determine the stressors associated to their profession of music teaching.

In Malaysia, the concern over job-related stress, experienced by school teachers, has been periodically raised by the National Union of the Teaching Profession or NUTP (Abdul Muin Sapidin, 2005). From local research literature that covers both primary and secondary schools, the percentages of teachers who experienced high stress, in each research, were 36.8% (Suseela Malakolunthu, 1994), 17.5% (Mokhtar Ahmad, 1998) and 21.3% (Mohd Razali Othman and Abd. Mat Abg. Masagus, 1998), with various sources of stress identified including students' attitude, workload, and having to teach poorly motivated students. Nevertheless, there is yet an attempt to measure the stress involved in music teaching in the country.

Stress is the outcome of a psychological process that involves stages of stress accomplishment. Kyriacou and Sutcliffe (1978) viewed this process in six stages, progressing from 'potential stressors', to 'appraisal', 'actual stressors', 'coping mechanism', 'teacher stress', and finally, 'chronic symptoms'. On the other hand, the source of stress, or stressor, is what may predict the possibility of stress accomplishment. Dorman's (2003) Model of Teacher Burnout, which was extended from Byrne's (1994) Maslach Burnout Inventory, depicts eight predictors to different stages of stress manifestation, namely 'role overload', 'role conflict', 'classroom environment', 'school environment', 'work pressure', 'teaching efficacy', 'self-esteem' and 'external locus of control'. Stress predictors in Dorman's model were referred to in identifying the actual stressors of the present study.

Past studies of music teacher's stress covered a wide range of stress factors. As early as 1987, job-related factors unique to music teacher burnout were examined, and these covered items like workload, deadlines, desire to change careers, career contentment, administrative support, job recognition, and lack of peer support (Hamann, Daugherty and Mills, 1987). In a more recent study, Bechen (2000) covered the categories of classroom management, environmental factors, personal concerns, and program management. Meanwhile, Scheib (2003) covered role conflict, role ambiguity, role overload, underutilization of skills, resource inadequacy, and non-participation.

Among various stressors, students' behaviour was found to be the main stressor to band directors (Heston, Dedrick, Raschke and Whitehead, 1996), and this finding is consistent with other research which discussed students' apathy (e.g. Brown, 1987; Hamann, 1985), students' disruptive behaviour and violence (O'Hair, 1995), and negative attitudes and inappropriate behaviour of the students (Brown, 1987; Gordon, 1997), with the latest addition to this by Gordon's (2002) paper that focuses on classroom discipline.

Gordon's research in 1997 was unique among the research literature for her inclusion of physical stress manifestation in her instrument, in addition to the usual items of job related stressors. In all the literature reviewed, a 5 to 7 point Likert scale was used to determine the stress level. Meanwhile, past research also looked into the demographic characteristics of the teachers, such as gender, training background, teaching experiences, location of schools, in relation to their stress manifestation, as shown in Bechen's (2000) study.

Existing stress inventories to measure teacher's stress had been applied to the Malaysian context. Suseela (1994) adapted the Occupational Stress Inventory for Teacher or OSIT of Okebukola and Jedege (1989), which in its original form was a 31-item questionnaire covering the five factors of 'student characteristics', 'teacher characteristics', 'school environment', 'administrative procedures' and 'conditions of service'. Vickneasvari's (1997) research on stress of science teachers in Malaysia adapted another instrument from Okebukola and Jedege (1992), which is the Science Teacher Stress Inventory or STSI. The STSI consists of the same sub-scales of the OSIT but has 40 items.

As for the demographic characteristics, studies in Malaysia showed that there were no significant differences between the male and female teachers in term of their level of stress (Suseela, 1994; Mokthar, 1998). However, various findings were obtained concerning years of teaching experience. Siti Rohani Sharif (1991) found that experienced teachers were more stressful compared to less experienced teachers. In contrast, Mokthar Ahmad (1998) found that teachers with more than 21 years of teaching experience to be less stressful compared to novice teachers. However, experience was not found to be a stress factor in Suseela's (1994) research.

#### **METHOD**

A questionnaire survey was used in this study. The dependent variable is the stress level experienced by music teachers according to the selected stressors. The independent variables are the demographic characteristics of the respondents, namely gender, training, teaching experience, and music qualification.

A total of 326 music teachers from the government primary schools in the state of Selangor were involved as the respondents in this study, of which 50% or 163 specialized in music during their teacher training. 23.9% of

the respondents were males and 76.1% were females. At the time this study was carried out, the total population of the teachers who were teaching music in the Selangor was 3200, out of which 163 were trained with specialization in music (Selangor Education Department, 2006).

The questionnaire consists of both structured questions and open-ended questions, and is termed as Music Teacher Stress Inventory (MTSI) by the researcher. The construction of the questionnaire went through a few stages. First, a total of 99 sources of stress in music teaching were identified by analyzing the sources below:

- Research report on the implementation of music education in KBSR, produced by the Ministry of Education (EPRD, 2000).
- Resolution of the First Malaysian National Conference for Music Education 2002 (MusEd, 2002).
- Localized version of Okebukola and Jegede's (1989) Occupational Stress Inventory for Teachers or OSIT by Suseela Malakolunthu (1994).
- Localized version of Okebukola and Jegede's (1992) Science Teacher Stress Inventory or STSI by Vickneasvari Krishnasamy (1997).

The list of stressors was put through a screening process conducted with five school music teachers. By extracting items that scored an average mean of 3 (moderate stress) and above, 44 stressors were short-listed. These 44 stressors were then grouped into six sub-scales, namely 'students characteristic', 'teachers characteristic', 'facilities and equipment', 'administrative procedures', 'social support', and 'syllabus content'. In the following sections, these sub-scales are also expressed using initials as SC, TC, FE, AP, SS, and SyC. Social support and syllabus content were the categories which were derived from the EPRD (2000) report and the MusEd (2002) resolution, reflecting the current problems of music education in Malaysia. The respondents were asked to indicate the degree of stress caused by each stressor on a five-point Likert scale, ranging from 1 to 5, with '5' as extreme stress, '4' as much stress, '3' moderate stress, '2' mild stress, and '1' no stress.

A pilot test was conducted utilizing 20 music teachers from five primary schools in Puchong district, Selangor. It was found that the music teachers did not have any difficulty in understanding the items and did not find any of these items irrelevant. The internal consistency reliability of the MTSI sub-scales was determined by using the Cronbach-alpha analysis. The C value for each sub scale was 0.7211 (SC), 0.7606 (TC), 0.8800 (FE), 0.7796 (AP), 0.8948 (SS), and 0.8860 (SyC), respectively. The questionnaire was found reliable as the value for all the sub-scales exceeded 0.70, which is the standard acceptance point for the reliability adapted for this study. The data were first analyzed by calculating a mean score for the overall and each MTSI subscale. This was followed by the t-test conducted for each demographic variable against each subscale. The stress level was interpreted according to the Likert scale description, which were referred to as 'extreme', 'much', 'moderate', 'mild', and 'no' stress.

## FINDINGS AND DISCUSSION

In the sections that follow, numbers appearing in brackets refer to the mean value, unless otherwise mentioned. The overall means for all the sub-scales recorded a mild stress level for the respondents, ranging between 2.56 to 2.81, with the 'syllabus contents' as the lowest and 'social support' the highest (refer to Table 1a for the discussion on the results for the sub-scales of SC, TC, FE, and AP). 'Student characteristics' appear to be the second lowest in its overall mean (2.63), indicating that students are not among the most prominent stressors for music teacher. The two highest individual items within this subscale, however, deserve attention, and these are 'students too noisy during teaching' (2.78) and 'not interested in music theory' (2.74). It is a challenge for the teachers to retain their students' attention on the learning topic during their music classes. The reason that students were noisy in music class could be that they were relaxed as music hour in school is the time of relief for students to break away from the pressure of studying the examination subjects, or that they were restless when they were not motivated to learn, or having difficulty to understand what is being taught. The reason for the low interest in music theory learning is plain, i.e. the current approach in the curriculum that teaches theory as knowledge aims mainly at imparting the rudiment of music notation to the students, instead of understanding and experiencing the principles of musical sound, will not motivate the students to learn the subject.

The sub-scale 'teacher characteristics' (2.79) reveals the problem pertaining to the lack of expertise in music teaching in the government primary schools. The problem seems applicable to both specialized and non-specialized teachers. There is a need for music teachers to improve their proficiency in instrumental and ensemble teaching, as shown in the items, 'lack of skill in playing musical instrument' (2.98) and 'lack experience to train choir and brass band' (2.90). Meanwhile, teacher training in *maktab* or teacher training college was found not sufficient (2.87) to equip the teachers to teach music with confidence.

Among the eight items listed under the sub-scale 'facilities and equipment', the 'lack of music resources and books' has the highest mean (3.06, moderate stress), but its standard deviation is also large (2.57). This means some were concerned over the lack of resources for music teaching, but there are differences among them regarding how serious this matter is. Among the items with a smaller standard deviation, i.e. around 1.00, are 'inadequate musical instrument and facilities'(2.71), 'inadequate allocation to buy additional musical instrument' (2.72), 'inadequate cassette supply' (2.78) and 'inadequate of teaching aids for music subject' (2.60). The standard deviations for these four items are smaller, i.e. at around 1.00. A conducive music room, equipped with sufficient number of instruments for the class size, is also

#### Stress in Music Teaching

# TABLE 1a Music teachers' stress according to selected stressors

Sub-scales and items	N	Mean	Std. de
Student Characteristics (SC) (overall)	320	2.63	.75
Students do not give full attention in class	325	2.36	1.01
Music is not an important subject	326	2.61	1.00
Students do not respect musical instrument	324	2.56	1.11
Not interested in the music theory	326	2.74	1.01
Take longer time to master	325	2.66	.91
Too many students in a class	325	2.67	1.04
Students too noisy during teaching	325	2.78	1.20
Feacher Characteristics (TC) (overall)	326	2.79	.87
Lack of skill in playing musical instrument	326	2.98	1.15
Too dependent on radio and cassette to assist	326	2.58	1.01
Lack experience to train choir and brass band	326	2.90	1.05
Lack of confidence in teaching music	326	2.55	.99
Teachers' training in Maktab is not sufficient	326	2.87	1.15
Having to teach others who are not trained	326	2.87	1.15
Cacilities and Equipments (FE) (overall)	313	2.71	.86
Inadequate musical instrument and facilities	326	2.71	1.00
Inadequate allocation to buy additional musical instrument	321	2.72	.99
Inadequate cassette supply	323	2.78	1.06
Inadequate of teaching aids for music subject	326	2.60	1.02
Lack of music resources and books	326	3.06	2.57
Musical instrument are not well maintained	324	2.66	1.10
No special room for music lessons	326	2.56	1.35
Music room is not suitable for teaching and learning music	323	2.58	1.21
Administrative Procedures (AP) (overall)	310	2.78	.78
Having to teach different subject than music	326	2.62	1.21
Having to cover lessons for absents teachers	326	2.58	1.11
Having to cope with too much workload	326	2.85	1.06
Having to cope with non-music duties	319	2.86	1.06
Weaknesses from impartial administration system	326	2.67	.98
Inadequate allocation to buy costume for music performance	326	2.98	.90
Not enough time to practice for music performances	322	2.91	.99
Lack of co-operation and support from headmaster, colleagues, parents and students	326	2.59	1.37
Lack of trained music teachers	319	3.04	1.04
Lack of opportunity given to attend related courses	326	2.88	1.03

vital to make the music learning enjoyable and hence effective for both teachers and students.

As for the sub-scale 'administrative procedures', the mean value for the item, 'lack of trained music teacher' is the highest (3.04), contributing moderate stress to music teachers. This reflects the present situation of the state of Selangor, whereby only 163 out of 3200 teachers who are teaching music specialized in music education. This finding is consistent with the problem in term of the lack of expertise in music teaching revealed by the sub-scale, 'teacher characteristics' discussed in the earlier paragraph. On the other hand, when only a handful of teachers are trained and are therefore capable of teaching music, 'having to teach others (teachers) who were not trained' (2.87, item listed under the sub-scale 'teacher characteristics') has become a source of stress to them.

(Refer to Table 1b for the discussion of results for SS and SyC). Among the items under the sub-scale 'social support', the 'lack of recognition for music education' (2.98) and the 'society's negative perception towards music education' (2.95) have the highest mean values. This confirms the presence of negative social perception towards music education, which is related to religious practice, as shown in the item, 'fear of music for going against the Islamic values' (2.89, standard deviation 1.05).

Finally, the lowest mean score for the overall stressors was obtained for the sub-scale of 'syllabus contents' (2.56, standard deviation .81). The stressors with the highest mean score within this sub-scale are 'most of the songs in the syllabus are not attractive to students' (2.69) and 'music education curriculum contents do not consider current development' (2.61), revealing room for improvements in curriculum planning and design for the *Kurikulum Bersepadu Sekolah Rendah* Music.

As for the comparison of demographic characteristics, the t-test analysis (Table 2) shows that no significant difference exists between the male and female teachers in the overall level of stress, which has a significant value of .31 that is larger than .05. This outcome is consistent with the findings by Suseela (1994) and Vickneasvary (1997).

The t-tests were also run to determine the difference between the male and female teachers for each sub-scale (not shown in table). Similarly, there were no significant differences found for all the sub-scales, except for 'social support' (Table 3), which has a significant value of .04, therefore smaller than .05, indicating that the male music teachers felt significantly more stressful as compared to their female counterpart in terms of social support. This finding implies that the male teachers are more concerned with or are more aware about the recognition and social support they receive as music teachers. The male teachers may feel out of place with their career as there are only a few male music teachers, who made up only 23.9% of the total

Sub-scales and items	Ν	Mean	Std. dev
Social Support (SS) (overall)	320	2.81	.80
Lack of recognition for music education	326	2.98	1.03
Society's negative perception towards music education	326	2.95	1.01
Fear of music for going against the Islamic values	325	2.89	1.05
Lack of recognition and support from headmaster to implement music in school	325	2.67	1.00
Lack of recognition and support from parents	326	2.81	1.02
Lack of co-operation from other teachers to allow students to practice for performance	324	2.62	.93
Student are not allowed by parents to attend rehearsal	324	2.73	.96
Syllabus Content (SyC) (overall)	322	2.56	.81
Difficult to understand, actualize and realize the objectives of music education	325	2.54	.90
Most of the songs in the syllabus are not attractive to students	326	2.69	1.08
The songs supplied are of low quality	323	2.52	1.03
Music education curriculum contents do not consider current development	326	2.61	.98
Music syllabus cannot be completed within one year	326	2.53	.88
Difficult to follow the topics in guidebook	326	2.48	.93

TABLE 1b Music teachers' stress according the selected stressors (continued)

#### Stress in Music Teaching

Demographic characteristic		N	Mean	Std. dev.	t	df	Sig. (2-tailed)
Gender	Male Female	69 212	2.79 2.69	.73 .59	1.03	98.25	.31
Training as music teacher	Trained Untrained	151 130	2.66 2.77	.56 .69	-1.44	249.67	.16
Teaching experience	Novice Experienced	205 76	2.75 2.61	.61 .66	1.72	279	.09
External qualification	With Without	21 260	2.48 2.73	.57 .63	-1.78	279	.08

TABLE 2 T-test comparisons for demographic characteristics in the overall stress level

TABLE 3		
T-test comparisons of male and female music teachers in	n the	level of stress related to
social supports		

Gender	Ν	Mean	Std. dev	t	df	Sig. (2-tailed)
Male	75	2.99	.90	2.07	108.62	.04
Female	245	2.75	.76			

number of respondents, as compared to the females. In addition, negative perceptions towards music career that are associated with religious perspectives held by the society (discussed in the earlier paragraph) also affect their self-esteem as music teachers.

As for their training background, no significant difference was found between the trained and untrained music teachers in their overall level of stress (Table 2, sig. = .16). The t-test for each sub-scale (not shown in table) for the trained and untrained teachers also revealed no significant difference in the stress level, except for the sub-scales of 'teacher

characteristics' (Table 4, sig. = .00). Meanwhile, the trained music teachers indicated a mild stress (2.50) for this particular sub-scale, and the untrained teachers revealed a moderate level of stress (3.09). This finding indicates that as far as teacher's efficacy is concerned, the untrained music teachers do feel significantly more stress compared to the trained music teachers. This is because many of the untrained music teachers do not have the skills required in playing musical instruments and they have to depend on cassette players as a substitute for live accompaniment in delivering their teaching. Moreover, the untrained music teachers also felt stressful

TABLE 4 T-test comparisons of trained and untrained music teacher in the level of stress related to teacher characteristics

Training	N	Mean	Std. dev	t	df	Sig. (2-tailed)
Trained	163	2.50	.74	( 5 (	314.21	00
Untrained	163	3.09	.89	-6.56	314.21	.00

because they lacked confidence in teaching music and had no experience to train students for choir and brass band.

On the other hand, there was no significant difference found between novice music teachers (below three years of teaching experience) and experienced music teachers in the overall stress level (Table 2, sig=.09). Significant differences were however observed in the t-test results for the sub-scale, 'teacher characteristics' (Table 5, sig.=.00) which concerns classroom management and music teaching skills, as well as 'facilities and equipment' (Table 6, sig.= .01) which concerns the availability and application of equipment and resources. The findings indicate that the novice music teachers do feel more stressful in these two areas of music teaching as compared to the more experienced music teachers.

The t-test conducted to compare between teachers with external qualification of musical instrument proficiency and those without it yielded a similar result with the comparison of trained and untrained teachers (Table 2, sig.= .08). No significant difference was found in the overall stress level, but teachers without external music qualification indicated to feel more stressful for the sub-scales, 'teacher characteristics' (Table 7, sig.= .00) as well as 'facilities and equipment' (Table 8, sig.= .01).

The results gathered from open-ended questions revealed matters that teachers regarded as stressful to them in music teaching. 43.9% of the respondents responded that the 'lack of skills in teaching music' was stressful to them. Other items given were relatively small in their response rate, including the 'lack of co-operation from students' (10.4%), 'problem with student's discipline'(7.1%), 'no special room for music'(6.4%), 'too much teacher's workload'(3.7%), 'not enough time', 'lack of recognition and support' (3.1%), 'inadequate musical equipments', and 'lack of music teaching aids' (1.5%).

TABLE 5 T-test comparisons of teaching experience in the level of stress related to teacher characteristics

Training	Ν	Mean	Std. dev	t	df	Sig. (2-tailed)
Novice Experienced	246 80	2.89 2.51	.89 .74	3.74	158.44	.00

TABLE 6
T-test comparisons of teaching experience in the level of stress related to facilities
and equipment

Training	Ν	Mean	Std. dev	t	df	Sig. (2-tailed)
Novice Experienced	234 79	2.79 2.48	.82 .94	2.82	311	.01

TABLE 7

T-test comparisons of external qualification in the level of stress related to teacher characteristics

Training	Ν	Mean	Std. dev	t	df	Sig. (2-tailed)
With Without	22 304	1.71 2.87	.66 .83	-6.44	324	.00

#### Stress in Music Teaching

TABLE 8 T-Test Comparisons of External Qualification in the Level of Stress Related to Facilities and Equipment

Training	Ν	Mean	Std. dev	t	df	Sig. (2-tailed)
With	22	2.24	.80	-2.66	311	.01
Without	291	2.75	.86			

#### CONCLUSIONS

Despite the prevailing problems in music teaching in Malaysia, in terms of teaching competency, facilities and school support which are evident in the literature such as the EPRD report (2000) and the MusEd resolution (2002), the findings revealed that music teachers experienced mild stress in music teaching in general, as only three out of the 44 items were rated with a mean above 3.0 which is a moderate stress level. This means that music teachers in the primary school are somewhat contented with their work demand and work environment. A possible reason for this is that music teachers do not face pressures from the school management to produce results as in other examination subjects. As music is not an examination subject in the primary school, a measurable outcome is not emphasized for this particular subject. It is a well-known fact that music hours have been frequently used to give supplementary tuition for other examination subject in Malaysia, indicating that music is perceived as a less important subject in school. The low demand for music teaching explains well why the music teachers only have mild stress despite half of them are untrained music teachers. In other words, teacher's stress level, in the case of Malaysia, is very much dependant on the demand of the teaching results imposed by the school authorities towards the teachers, beside other factors. While the result of mild level of stress shown in this study implies a comparatively good state of the music teachers' well-being, this is not to be confused with a high level of teaching effectiveness. As much as the music teachers are only as stressful as the level of demand on the subject given by the school, the quality of music teaching is most probably also only as high as the level of demand on the subject, judging by the fact that teaching competency, or lack of expertise has been repeatedly found to be one of the main problems in music teaching in this study.

By looking at the items with higher means, i.e. with a cutting point of 2.75 and above, it is found that there are three main stressors in music teaching, namely 'teacher characteristics', 'administrative procedures' and 'social support'. If one is to apply loosely Kyriacou and Sutcliffe's (1978) model of stages of stress to the findings of this study for a better picture of understanding music teachers' stress, the three items mentioned above can be considered as equivalent to the 'actual stressors' while the other sub-scales like 'student characteristics', 'facilities and equipment' and 'syllabus content'' may well be considered as 'potential stressors'.

Teacher characteristics, which deal with teachers' competency in music teaching, appeared to be the common stressor both in quantitative rating and in open-ended questions. Among the items with the highest means, several are related to teaching competency and have a small standard deviation value of <1.15, these include the 'lack of trained music teacher', 'lack of skill in playing musical instrument', 'lack experience to train choir and brass band' and 'teacher training in Maktab is not sufficient'. By associating these items to the findings of the open-ended question (where 43.9% rated 'lack of skills in teaching music' as stressful to them), it is obvious that teachers' competency is one of the common stressors. This also reflects the report of EPRD (2000) that only 65% of the music teachers in its research are able to prepare proper music lessons plan.

In addition, teaching competency is also the determining stressor for inexperienced teachers with limited training, as there were significant differences found between the trained and untrained, the novice and the experienced, as well as those with and without external music qualifications. In other words, teaching competency is a factor which causes the teachers who are lacking training and experiences to feel more stressful than the other music teachers.

However, two questions can be raised from the results related to teaching competency mentioned above. Why are teachers who are untrained in music education assigned to teach music in school? As for the trained music teachers, "why was the training program provided by the teachers' training colleges not sufficient to equip them to teach music effectively in school?" The first question is related to the administrative procedure of posting of music teachers to schools by the School Division (Bahagian Sekolah) of the Ministry of Education. It is necessary to investigate if the problem is due to the lack of music teachers or the ineffectiveness found within the administrative system of teacher posting. This is especially so when one observes that there are graduate music teachers who are posted to secondary schools and not assigned to teach music at all, which is irony to the situation of the primary schools where there are not enough music teachers around.

The second question is related to the effectiveness of music teacher training program provided under the management of Teacher Education Division (Bahagian Pendidikan Guru) by the Ministry of Education. The problems of recruiting candidates with little prior background in music into teachers' training program have been a known practice in the teachers' training colleges, as revealed in Mah's (2003) research where more than 50% of the teacher candidates recruited into Kursus Diploma Perguruan Malaysia were without prior music training or background. Although the teachers' training institutions are upgraded to offer Bachelor of Education degree at present, the problem of irrelevant candidates for music education must be studied and solved as this is the root cause for many other problems that follow concerning the applicability of the teachers' training program

and teachers' competency in teaching music, which cover their confidence in teaching both practical and theoretical components of music, the usage of music instrument, music equipments and other resources, as well as the confidence in classroom control during the music hour.

Administrative procedures was found to be stressful to music teachers irrespective of their gender, training background and teaching experience. Among items that have higher means are 'too much workload' and 'having to cope with non music duties' which are related to work assignment, whereas 'inadequate allocation to buy costume for music performance' and 'not enough time to practice for music performances' reflect the pressure faced by music teachers upon school's request to give performance.

Meanwhile, items with higher means in the sub-scales of social support gave clear reflections of certain problems pertaining to music teaching in Malaysia as compared to other countries. They are 'lack of recognition for music education', 'society's negative perception towards music education', 'fear of music for going against the Islamic values', as well as 'lack of recognition and support from parents'.

By referring to the Dorman's (2003) Model of Teacher Burnout, the main stressors experienced by music teachers in this study are 'teaching efficacy' (teacher's characteristics) and 'school environment' (administrative procedure). On the other hand, if Dorman's category of 'external locus of control' includes social perceptions as a kind of indirect control from outside parties in its definition, the stressors of 'social support' in this study may be grouped under it. Social support is revealed as a stressor to music teachers in Malaysia, and this stressor is also unique to the subject of music within the local social context. Social support was not included in other local studies of teacher stress as in Suseela's (1994) and Vickneasvari's research (1997). It is clear that the study of teacher stress, in certain subjects such as arts and music, requires an instrument of survey which reflects the requirements of the subject nature and its dynamic relationship with the society's culture at large. On the practical side, the social image of the music teachers, as

well as music professionals at large, needs to be improved through advocacy through means of public education and mass media in order to make music teachers feel that the value of their career is recognized in Malaysia.

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# **De-escalating Childhood Aggression in Hong Kong**

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## ABSTRACT

Numerous studies have linked aggression during childhood with long-term maladjustments and anti-social behaviour. Despite the alarming rise of aggression and violence in Hong Kong, few studies have been conducted on anger control intervention. It is well-known that aggression hinders development in children and creates numerous problems in the family, school, and community. The researcher reviewed the aetiology of childhood aggression from the ecosystemic perspective, and implemented an indigenous Anger Coping Training (ACT) programme for children aged 8-10, with physically aggressive behaviour and for their parents. Based on cognitive-behavioural therapy, the parent-child parallel group ACT program involved experimental and control groups with pre- and post-comparisons. Quantitative data collection consisted of the Child Behaviour Checklist (CBCL), Child Behaviour Checklist Teacher's Report Form (CBCL-TRF), and Peer Observation Checklist (POC). Meanwhile, two pilot studies were conducted prior to the main study. Eighteen out of 34 applicants were selected and divided into two experimental groups and one control group using the rule of randomization. There were no significant differences in the pre-treatment scores, and none of the demographic variables were statistically different among the three groups. The effectiveness of the ACT program was consistent. In post-intervention and follow-up studies, the treated children showed a consistent reduction in their physically aggressive behaviour. However, there was no obvious decline in their verbally aggressive behaviour. The research aims to contribute insights and practical help to parents, social workers, and teachers concerning childhood aggression in Hong Kong.

Keywords: Childhood aggression, de-escalating

#### INTRODUCTION

Despite the alarming rise of aggression and violence in Hong Kong, there has been no evidence-based outcome study conducted on anger control intervention. The researcher reviewed the aetiology of childhood aggression from the ecosystemic model, and implemented an indigenous Anger Coping Training (ACT) programme for children aged 8-10 years with physically aggressive behaviour and their parents.

#### DEFINITION

The researcher's definition of aggression in this study has a number of implications: (1) aggression is behaviour, it consists of overt action which can be observed by others; (2) aggression can be directed at either a person, an animal or an object; (3) aggression can be intended to do psychological as well as physical harm, and it may be manifested by verbal attack; and (4) aggression involves hostile intent, and is associated with cognitive processing. The above implications provide

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a foundation for understanding childhood aggression (Rutherford, Robert and Nelson, 1995; Cavell, 2000; Bassarath, 2003; Hotton, 2003; Camodeca and Goossens, 2005).

#### **SUB-CATEGORIES**

There are two major sub-categories of aggression: proactive and reactive (Kempes, Matthys, Vries, and Engeland, 2005; Vitaro, Gendreau, Tremblay, and Oligny, 1998). Proactive aggression is intentional injury to another with the purpose of gaining dominance, but reactive aggression is marked by anger arousal to hurt others. For proactive aggressors, appropriate punishments for aggressive behaviours and consistent rewards for pro-social behaviour are recommended. For reactive aggressors, cognitive restructuring through anger control training programme is recommended for reducing their hostile attributional biases (Kempes *et al.*, 2005; Vitaro *et al.*, 1998).

# THEORETICAL FRAMEWORK

The researcher reviewed and linked different theoretical paradigms into an ecological approach, in an attempt to provide an indepth understanding of the various aspects affecting a child's aggressiveness potential (Fung, 2004) (Fig. 1). There are a number of theoretical perspectives and approaches to view the development of childhood aggression, such as psychodynamics theory, biological theories, attachment theory, Maslow's theory, social labelling theory, interactionist situation approach, social learning theory, social information processing theory, and cognitive-behavioral approach. In addition, the researcher integrated the related theories into different systems, including an individual system, individual and family systems, school and social community systems, individual, family and community systems, as well as individual, family, school and community systems. The aetiology of childhood aggression from an ecological approach helps to enhance the understanding of the development of

childhood aggression from multiple perspectives and different points of view. In addition, it also provides groundwork for identifying the causes, processing and variables of childhood aggression, and a precise evaluation from multidimensional views (*Fig. 2*).

There are various determinants of childhood aggression, and these include physical attributes, psychological attributes, psychological disorders, and social influences. All contextual risk factors serve to cause, maintain, and escalate these problems; therefore, understanding the developmental risk factors and multisystemic points of view will ultimately inform intervention efforts. The ecological approach and multi-systemic model view the aggressive behaviors of children as a function of the interaction among the sub-systems of the larger system, and take into account how child and environmental factors influence each other in a transactional manner over time. This includes the reciprocal influences of child, family, peers, school, neighbourhood, and society. Interventions conducted within one sub-system will have direct and indirect influences on the other sub-systems (Bloomquist and Schnell, 2002). Thus, by intervening at the family level, the parents will promote changes in other areas (e.g. school) of influence on the child. Multisystemic interventions simultaneously address multiple sub-systems to affect change (Tremblay, 2000; Williams, Van Dorn, Hawkins, Abbott and Catalano, 2001).

In reviewing previous work conducted on treating childhood aggression, parent-child parallel group intervention with cognitivebehavioral therapy has been found to be the most effective way among other levels and approaches of intervention. Meanwhile, numerous studies have found a link between certain types of social cognitions and aggressive behaviour. Children who display social problemsolving deficits and distorted beliefs about the legitimacy of aggression are likely to behave aggressively (Casto, Veerman, Koops, Bosch and Monshouwer, 2002; Camodeca De-escalating Childhood Aggression in Hong Kong

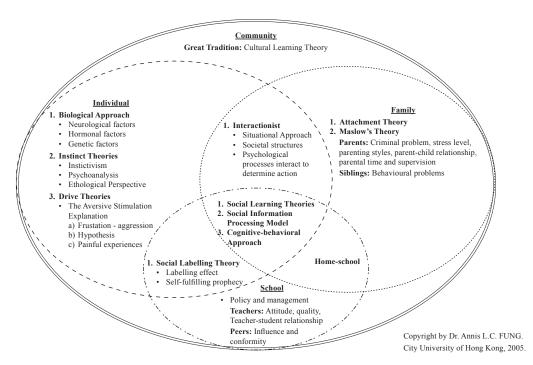


Fig. 1: A review of the aetiology of childhood aggression from an ecological approach

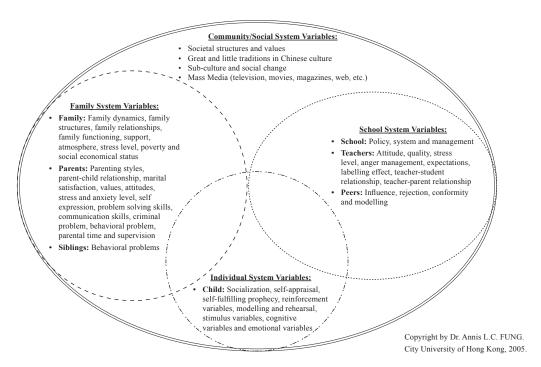


Fig. 2: Background variables in childhood aggression

and Goossens, 2005; Schwartz, Dodge, Coie, Hubbard, Cillessen, Lemerise and Bateman, 1998). Consistent with the findings, aggressive children tend to access social problem-solving responses which are more aggressive and less pro-social than responses of non-aggressive children (Quiggle, Garber, Panak and Dodge, 1992). Therefore, children's social cognition is an essential part of studying childhood aggression. Their habits of thought and beliefs which directly govern their aggressive responses have to be taken into account.

Based on the cognitive-behavioral therapy as the theoretical framework, the ACT programme focused on the social cognitive factors in childhood aggression. Cognitive treatment and skills training programs have been effective in preventing and reducing aggressive and anti-social behaviour (Howell, 1995; Kazdin, 1994; Phillips, Schwean and Saklofske, 1997). Moeller (2001) proposed that interventions targeting both a child's cognitive and behavioral processes are more likely to be successful than those which only aimed at reducing the child's problematic behaviours.

Parents play a critical and essential role in contributing to childhood aggression. Parent functioning, parent-child relationships, and family interactions are strongly related to the development of children with physically aggressive behaviour (Pakaslahti, Spoof, Asplund-Peltola and Keltikangas-Jaevinen, 1998). Children who experience unresponsive parenting, coercive parenting, or inconsistent and ineffective parent discipline are at heightened risk for the development of childhood aggression (Hart, Nelson, Robinson, Olsen and McNeilly-Choque, 1998). These parent-child relationships and family variables function as risk factors which have the potential to interfere with normative development in children and amplify the maladjusted childhood aggression developmental trajectory (Newson, Newson and Adams, 1993). The parent, parent-child, and family factors are addressed in this study (Kosterman, Graham, Hawkins, Catalano and Herrenkohl, 2001).

#### **PROGRAM CONTENT**

The construction of ten two-hour sessions in the parent-child parallel group of the ACT programme was done to promote resilient development in children with reactively aggressive behaviors (Fung, Wong and Wong, 2004). The ACT programme provides parenting skills training and forms of support for the parents, and teaches parents skills to enhance the parent-child relationships, as well as methods to provide family support.

The current ACT programme was tested through two pilot studies over a two-year's period. There are four phases of the ACT programme, which are: (1) relationship building; (2) cognitive preparation; (3) skill acquisition, and (4) application training.

The design of the first and second sessions in the relationship building phase was to emphasize the starting of a new parent-child relationship which focused on constructing a positive and supportive atmosphere in the group. Parents are assigned to pay attention to the child's pro-social behaviours and give compliments to them. The homework assignments are focused on positive self-talk, self-appreciation, and the parent-child activities are based on desirable experiences. Children can get positive and pleasant experiences from their parents' appreciation and positive reinforcement of their pro-social skills and strengths, instead of scolding and nagging about their misbehaviours. Being respected and enjoyed are the two basic foundations in the pyramid of building the parent-child relationship (Webster-Stratton and Hancock, 1999).

In the cognitive preparation phase, the third and fourth sessions are designed to strengthen aggressive children's ability to accurately detect others' intentions. A variety of instructional activities train the subjects to search for, interpret, and properly categorize verbal, physical, and behavioural cues exhibited by others in social situations. In ambiguous situations, highly aggressive children typically make their social decisions quickly, ignore available social cues, and endorse retaliatory aggression (Crick and Dodge, 1994; Dodge, Lansford, Burks, Bates, Pettit, Fontaine and Price, 2003). Aggressive children also tend to have inappropriate judgments about the intent of others (Hudley, Britsch, Wakefield, Smith, Demorat and Cho, 1998).

The skills acquisition phase emphasizes gaining skills in the interpretation of social cues. The fifth to seventh sessions were designed to increase the likelihood that aggressive children would attribute negative outcomes to accidental causes (Lochman and Larson, 2002). These sessions addressed the children's social-cognitive deficits by having them identify problems and social perspective taking with pictured and actual social problem situations, generate alternative solutions and consider the consequences of alternative solutions to social problems, view modelling videotapes of children becoming aware of physiological arousal to anger, use self-statements (Stop-Think-Do), and utilize the complete set of problem-solving skills with social problems. For the parents, workers revise the application of calming methods when facing angry circumstances. Parents' anger coping skills and stress coping techniques are also essential in managing their aggressive children (Cavell, 2000).

The eighth to tenth sessions in the application training phase emphasize on participants applying these newly acquired interpretive skills by making the connection between unbiased thinking and less verbally and physically aggressive behavioural responses. Children generate decision rules about when to enact particular responses. Such decision rules enhance maintenance and generalization of the newly acquired processing skills beyond the treatment setting. The final session stressed on strengthening the participants' problem-solving skills and relapse prevention. Parents are highlighted to play a training role for helping their children to internalize pro-social skills and anger coping strategies.

#### METHODOLOGY

In this study, a mixed method approach using an experimental and control group pre- and post-

comparison design was adopted (Appendix 1), because quantitative methods provide hard and reliable data while qualitative methods provide rich and deep data (Kazdin, 1998). It was hypothesized that the children's overall aggressive behaviour would decrease after completing the ACT programme. The quantitative data collection consisted of self-report questionnaires, whereas the Child behaviour Checklist (CBCL) reported by parents and the Child behaviour Checklist-Teacher Report Form (CBCL-TRF) rated by teachers generated two types of scores: a frequency of aggressive behaviour score and an intensity of aggression score. The CBCL scales had high internal consistency and test-retest reliability with reliability coefficients ranging from 0.7 to 0.9 (Achenbach, 1991) and high popularity use in Hong Kong with a coefficient alpha equalled to .88 in the first measurement and .90 in the second one, respectively. In addition, an individual structured interview for an in-depth assessment was offered for the children, their parents and teachers. The data from different sources could be triangulated so as to reduce the risks which could stem from reliance on a single source of data, as well as maximize the reliability of the test data and increase confidence in their validity. Two pilot studies contributed to field-test the screening and assessment process, the pre-test and post-test phase of the study, the effectiveness of the new curriculum of the ACT program, and the entire research design.

In line with the variables of childhood aggression and the theoretical framework of cognitive-behavioural therapy intervention in this research, the particulars of the ecological assessment were examined as follows: (1) data were collected for the multiple ecosystems, such as school and the home; (2) assessment came from four data sources which included the child with aggressive behaviors, his or her parents and teachers (counselling teacher, discipline teacher, class mistress, one of the teachers of a major subject); (3) data were collected about the child (physical, behavioral, and cognitive-affective domains) and situation (physical environment, behavioural-psychosocial environment, and historic normative environments); (4) data on

the child's aggressive behaviors were collected across different environments (the home and school), from different sources (the child, parents and teachers), and using different methods (structured diagnostic instruments included the CBCL and CBCL-TRF; and structured interviews); (5) data were integrated into a comprehensive perspective on each participant child's situation; (6) the assessment was linked to the cognitive-behavioural intervention approach which could change the child, significant others and the environment. In conclusion, this study used multiple methods, informants, settings, and domains with an ecological assessment. Data collected from all of these strategies are useful for the ACT programme planning. Due to limited sample size, non-parametric statistics, such as the Mann-Whitney U test, was applied to analyze the outcome of the programme.

#### RESULTS

Eighteen out of 34 applicants were selected and divided into two experimental groups and one control group in accordance with the rule of randomization. The two experimental groups were identical; both being involved in the ACT programme with the same facilitators. There were no significant differences in the pretreatment scores, and none of the demographic variables were statistically different among the three groups. Evidence indicated that the randomization in this study was effective.

Based on the CBCL, the mean rank of aggression rated by the parents in the control group was higher (Post-test: 14.25; Follow-up: 14.90) than the mean ranks of the two experimental groups (Post-test: 7.13; Follow-up: 6.54). However, there was a significant difference between the experimental and control groups, z = -2.67, p < .01 in the post-test, and z = -3.13, p < .01 in the results from the three-month follow-up.

Teachers' reports in the CBCL-TRF were consistent with the parents' ratings. The results from the three-month follow-up indicated that the mean rank of aggression, rated by the teachers at different positions in the control group, were higher (discipline teachers: 12.67; counselling teachers: 11.67; main subject teachers: 14.75) than the mean ranks of the two experimental groups (discipline teachers: 7.00; counselling teachers: 6.60; main subject teachers: 6.88). Meanwhile, the Mann-Whitney U analysis revealed significant differences between the two experimental and the control groups, z = -2.22, p <.05 in the discipline teachers' reports, z = -2.08, p <.05 in the counselling teachers' reports, and z = -2.97, p <.01 in the main subject teachers' reports. The mean rank of aggression rated by the class mistresses in the control group was higher (12.33) than the mean ranks of the two experimental groups (8.08). However, there was no significant difference between the two experimental and control groups, z = -1.60, ns.

Although children in the treatment and non-treatment groups were found to have no significant differences in terms of their aggressive behaviours in the classes, as rated by the class mistresses, the mean rank of both the experimental groups was lower than the control group. In conclusion, parents, discipline teachers, counselling teachers, main subject teachers, and class mistresses rated the intervention children as less aggressive than the control children at the end of the ACT intervention.

During the pre-, post-intervention and follow-up procedures, structured interviews were conducted for children, their parents and teachers. Children were asked about their interpersonal conflicts in their daily life. They were also assessed through the use of hypothetical ambiguous situations in the screening and assessment interviews. At the pre-intervention assessment, most of the children were overly sensitive to hostile cues, showed bias in attributing hostile intentions to others, and then relied on the physical aggression as a direct action solution:

"This was not an accident; he was deliberately blocking my way. I was so furious that I wanted to take the revenge of beating and killing him" (LAI). Treated children indicated that they felt less aggressive towards others, and the frequency and intensity of aggressive behaviour was decreased. Their hostile attributional bias became less influential to them. Moreover, an anger coping system of stop, think, do was also established in their cognitive structure, as explained in the following:

"Now, I will stop like a traffic light, think more about why people do this and fight less" (TONG).

They were also found to use pro-social problem solving methods to deal with interpersonal conflict at the post-intervention. Meanwhile, the parents' reports indicated the children exhibited a tendency to over-recall hostile cues and to include hostile commission errors or intrusions. They remembered some items in hostile terms rather than in their original positive or neutral form. Moreover, parents found they overacted in a hostile manner under neutral and non-provoking situations, as distorted cue interpretation was detected:

"He said that other people humiliate, insult and laugh, tease, and intentionally reject him, and do not let him play with them" (LING's father).

Based on the parents' reports during the post-intervention, children were found to exhibit less egocentric and distorted perceptions of social situations after completing the ACT programme. They also lessened over-attribution of hostile intent on the part of others and tended to take others' perspectives, and integrated selfand other-oriented concerns:

"His behaviour has changed, he talks more. He will assess his ability before taking action and question whether he should do such a thing. He asks more questions..." (TAM's mother). Children demonstrated more verbal assertion. Based on the teachers' observations, they found it difficult to manage an aggressive child in class. Such children overact angrily to accidents, always threaten and bully others, respond negatively to failure, and use physical force to dominate:

"In the classroom, he left the seat to disturb his fellow students. However, he said that this student triggered him first and laughed at him for being punished by the teacher" (AU's class mistress).

Four teachers in different positions at school found that after involvement in the 10-session ACT programme, the treated children became less cognitively impulsive, less inattentive, and generated more problem solutions. Ng's student guidance officer pointed out the children's improvement at school:

"He will now think before taking action, and cause less nuisance in school. His emotions in school are stabilized as well; complaints from school are drastically reduced. In these three months, there has been no complaint."

The qualitative results were consistent with the quantitative findings, offering additional support to verify the effectiveness of the ACT programme.

## DISCUSSION

This study demonstrates that the ACT programme developed through this research has the potential to be used for helping aggressive children and their families improve such children's management of aggression (Fung, 2004; Fung and Tsang, in press). There are several potential contributions of the study: (1) it is the first systematic research of childhood aggression in Hong Kong; (2) it strives to link up separate literatures and design an indigenous intervention program; (3) it offers a multi-method assessment

of a child's aggressive behaviours, which provide a platform for further study in adolescence aggression; (4) it provides a comprehensive review of the aetiology of childhood aggression from an ecological approach; (5) it helps to enhance the understanding of the development of childhood aggression from multi-perspectives and different points of view; (6) it combines the theoretical framework of the ecological approach and cognitive-behavioural therapy; (7) it focuses on the cognitive, affective and behavioural characteristics of the child; (8) it involves parents in a parent-child parallel-group model; and (9) it is the first study which specific targets are mainly focused on reactively aggressive children, which provides insight to teachers, professionals, and parents on assessing and dealing with this specific type of childhood aggression.

Furthermore, it is the hope of the researcher that the ACT Programme will be expanded: (1) to focus on different types of childhood aggression; (2) to focus on some specialized target groups such as new immigrants from the Mainland; (3) to address with tailor-made anger control treatment programmes the different characteristics of each particular school; (4) to provide intensive training for teachers to improve their positive attitudes towards students' aggression and enhance their skills in problem management; (5) to offer professional training for social workers and counsellors in order to strengthen their group facilitating skills; (6) to include aggressive youth and adolescents with peers recruited as counsellors and positive role models; and (7) to promote the significance of the parental role in childhood aggression, so as to be more conscious of their parenting style and help prevent childhood aggression.

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# **Open and Closed Mode of Online Discussion - Does It Matter?**

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## ABSTRACT

This paper addresses some issues concerning online task type. Using categories, namely, Scaffolding, Feedback on Performance, Cognitive Structuring, Modelling, Contingency Management, Instructing and Questioning to analyze message transactions, or means of assistance in CMC 'Discussion Board', this study involved a total of 48 participants consisting of 36 students and 12 tutors in a Masters programme. Here, the CMC was used as a communication tool, extending face-to-face (or classroom) discussion. CMC was used in an adjunct mode. It was found that open tasks are more likely to generate more open modes of discussion. When there is 'assistance seeking', 'assistance giving' should always follow. In addition, open mode discussions also seemed to offer the students more opportunities to raise their concerns about their learning compared to the closed mode. Using these findings, a simple approach to distinguish discussion modes is proposed.

# Keywords: Computer Mediated Communication (CMC), online discussion, task type, assisted performance

## **INTRODUCTION**

It is quite rare to find research which specifically explains the nature of online tasks, especially in studies of online discussion. Discussionoriented contexts are still the dominant form of communication with tutor-students and student-students interactions in online learning environments (Goodyear, 2001). Even though considerable research reports on the outcome or behaviour of a particular task, it is not clear if those findings are associated to the nature of the task itself. Through our experience, it is important in any research into online learning that the research question should indicate whether the nature of the task under study could possibly influence the research findings. It is also important to make the distinction whether the discussion is conducted for co-operative, collaborative or group work. As suggested by Goodyear, 'what is important, however, is to be clear about the nature of the tasks you set and about their implications for collaboration or co-operation' (2001, p. 79). This explanation is needed because such understanding regarding the nature of the task will inform the *situatedness* of the event or activities. In other words, it is a matter of context. As Goodyear states:

Part of the complexity of the problem may stem from assuming an identity between task and activity. Partly it may stem from having too global a view of an innovative educational intervention, failing to distinguish

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the contribution of its component parts or failing to use an appropriately wide range of outcome measures (Goodyear, 2001, p.49).

There are various terms used to refer to tasks in activities which use CMC in different areas of research, such as collaborative writing (Bonk and King, 1998), project-based learning, problem solving, assigned reading, class discussions, (Kirkley, Savery and Grabner-Hagen, 1998), computer conferencing (Henri, 1992), student role-play (Sugar and Bonk, 1998), and electronic collaboration (Kang, 1998). The orientations of these tasks are mainly discussion-based. The characteristics of the tasks which are used in different modes of online learning, especially collaboration through discussions, need to be differentiated, understood, enhanced, and integrated properly. Online learning promises non-hierarchal opportunities for participation. Students would have the same chances to start and conduct the discussion according to their desire of satisfying the task. However, how much do we know about the implications of different tasks' orientation (or mode) on the nature of tutor-student and student-student engagement, including giving assistance through discussions?

Part of this study works to understand the interaction in the online environment at the college or university level in different natures of task. It could be obtained by going back to the understanding of the interaction in the 'traditional' environment in the context of working co-operatively or collaboratively. Underwood and Underwood (1998) have distinguished types of tasks according to whether the students have to work co-operatively or collaboratively. Where the task is more problemsolving in nature, the students need to participate actively, as they will gain success through sharing their plans and ideas. Where the task is non-problem solving in nature, the students only need to agree on the task behaviour for task completion to take place, i.e. they need to cooperate, but not necessarily to collaborate (cited in Underwood and Underwood, 1998). The study was aimed at identifying the characteristics of co-operative and collaborative working in order to predict performance. The question they posed was: What kinds of discussion are associated with enhanced performance? The study was a controlled intervention in a school environment, and analysed the dialogue between children in order to establish the level of co-operation or collaboration between them when they were working with and around the computer.

Even though the study explored the students' group work tasks at the school level (i.e. when they were learning with or around the computer), it was clearly not in an online learning environment, but the information gained from the outcome of the study gives insight into the perspective of 'working together', which might be applicable to the college or university level. As argued by Pea (1993), some uses of technology 'enhance' education by making the achievement of 'traditional' objectives more efficient (as cited in Underwood and Underwood, 1998).

Another study has distinguished types of task according to learning objectives or goals. A study by Murthy and Kerr (2003) investigated the differences between communication process goals and communication modes by using teams (mix of teams using CMC and teams meeting face-to-face) with a shared history, performing two tasks: idea-generation and problem-solving. Idea-generation requires the conveyance of information while problem-solving requires convergence on the best solution. When the goal of the communication process was conveyance of information, CMC teams and face-to-face teams were found to perform equally well. However, when the communication process goal involved convergence, face-to-face communication resulted in a better performance compared to CMC (Murthy and Kerr, 2003). Results from this research revealed a significant connection between communication mode and communication process goals. In particular, tasks, which involved idea-generation, are suited to CMC as it allows conveyance of information through discussion. However, the question is: in what form of deliberations of tasks promote activities for idea-generation amongst students? And how can it be distinguished?

From the previous discussion, it can be generally concluded that the nature of has an impact on students' learning in online environments. One straightforward example is a study by Sorensen and Takle (2005), which explores knowledge building through students' self-reflection and suggests that the design element (task nature) is the key role of multiple opportunities for self-reflection by learners as 'it allows instructor and students to 'step outside themselves' and stand together to view the landscape of activities that has occurred' (Sorensen and Tackle, 2005, p.58). This finding shows that it is crucial to ensure the kind of task which will promote meaningful 'online dialogue'. Next, interactions between tutor-students and students-student have been also been focused on and studied. In particular, the method of analysis which explores the patterns of interactions in online discussions is put forward.

## HOW TASKS WERE OBSERVED

The main way of categorising the tasks during the early stages of this study was heavily influenced by the VLE studies literature of how the practitioners developed and practiced 'activities' in this environment. However, despite the use of such categorisation, some additional characteristics emerged during this study as: 'The development of the research strategy grows gradually with the process of learning about the research setting' (Holliday, 2002, p. 64). As the characteristics of 'open' and 'closed' emerged, this category was used to differentiate various types of task. However, the primacy of the first categorisation of the task type is questionable as each task is dynamic. There is always an overlap of definitions and practices. Therefore, another way of identifying or classifying the task type will benefit, sharpen, and hone our understanding. Although there is no literature on the concepts of 'openness' and 'closedness' in the field of VLEs they have been used in many language learning and science learning studies. For instance, these concepts are used to verify mode of questions in language learning assessments. The practitioners in language learning admitted that the consequences of the outcome of these variations (open and closed questions) impact the way the students construct their answers. In addition, 'openness' and 'closedness' were successfully used in research on schools' science work outside the classroom in the United Kingdom.

An 'open' task might refer to activities which were literally 'open-ended', in that there were a number of acceptable end-points (Jones *et al.*, 1992). Through the OPENS Project, Jones and his colleagues (1992) described what might be a helpful way of considering open work, i.e. to think of the activities (in their project, science activities) as having different degrees of openness. In the study, the openness and closedness of goals, processes, and outcomes of the activities were plotted in a framework with respect to degree. This is visualised in *Fig.1*.

Goal is where the participants are 'defining the problem' and the *processes* are where they are 'choosing a method', while the *outcomes* are where they are 'arriving at solutions'. However, as compared to the OPENS Project framework, *process* (choosing a method) and *outcome* (arriving at solutions) are not applicable for this study. In this study, a simple dualism of the terms *open* and *closed* are chosen as there is no way to distinguish the characters from one another and to plot the texts of my research along the spectrum. Our definitions of *open* and *closed* for this study are as follows:

Open task: Any activities in the learning which have no specific focus or specific instructions, where participants are free to contribute responses in any form, and afterwards having either an end product or none.

Examples:

- 1. A tutor invites students to post their ideas on any issue related to the subject content.
- A student posts his concern about his understanding of the subject content and invites any response from other participants. A friend may throw an idea and some others may post useful hyperlink sources.

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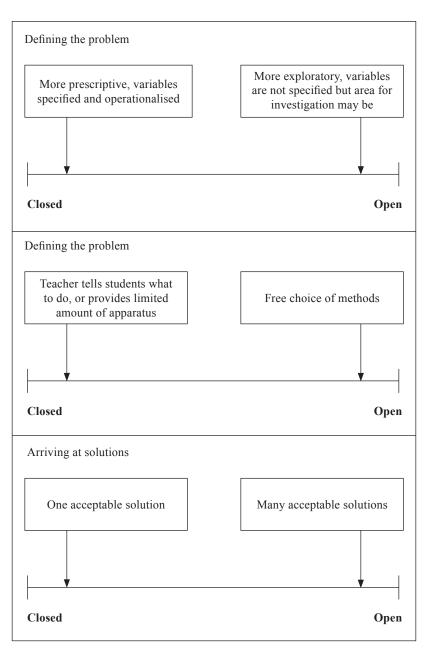


Fig. 1: Framework of open and closed work used in OPENS Project (1992) (adapted from Jones et al., 1992)

Closed task: Any activities in the learning which have specific focus (or scope) or specific instructions, which participants are expected to contribute responses in some form (individually or in group) and to some extent producing some kind of end product (individually or in group).

Examples:

- 1. A tutor posts a list of questions on a specific reading and asks his or her students to answer in a specific context.
- 2. A tutor invites students to post their concerns relating to specific theory or to their assignment in group of two.

# METHODOLOGY

The authors used the following categories to analyse the message transactions, or means

of assistance, in LMS 'Discussion Board' developed by Gallimore and Tharp (1990) and adapted in Kirkley *et al.* (1998). They are Scaffolding, Feedback on Performance, Cognitive Structuring, Modelling, Contingency Management, Instructing and Questioning. Details of the categories are as given in Table 1 below.

## Participants

This study involved a total of 48 participants consisting of 36 students and 12 tutors. The 36 students represented two groups of 19 and 23 students, respectively. Both groups comprised of tutors and students in a Masters programme. The programme ran on a one-year basis for the full-time students and up to five years for the part-time students. It consisted of eight taught units and a dissertation. Six of ten part-time

Scaffolding	Refers to the help, guidance, assistance, suggestions, recommendations, advice, opinions, and comments that the tutor or peer provides to help the learner master the materials and move to a higher level of understanding.
Feedback on performance	It is used when the tutor or students provide information (positive or negative) on specific acts, performance, or situations or acknowledge a contribution in reference to a given standard or set of criteria. Often it includes grades.
Cognitive structuring	It is a means of assistance whereby the tutor provides a structure for thinking and acting that helps the learner organize "raw" experience.
Modelling	This occurs when a tutor or more knowledgeable peer offers behaviour for imitation.
Contingency management	It is used by the tutor to reward desired behaviours through praises/ encouragements, or to control undesirable behaviours through punishment in the form of reprimand/censure.
Instructing	This occurs when the tutor gives explicit information on specific acts (e.g. assignments, task, group processes, etc.). It is usually embedded in other means of assistance but is often identified when the teacher reassumes responsibility for learning.
Questioning	It calls for an active linguistic and cognitive response and is used as a prompt to stimulate thinking and to provoke creations by the students. If the question is meant to provide assistance to the reader, then it is in this category.

 TABLE 1

 Means of assistance categories (adapted from Kirkley *et al.*, 1998)

students in the first group were also enrolled in the second group. Even though there were two series of year group used, the entire units were not included in the study. Seven out of eight units in the first year and six out of eight units in the second year were chosen for this study. Some units were not included in the study because they had used the CMC too little or not using it at all. In this study, the first group is labelled 'Year 1' and the second group is labelled 'Year 2'. Most of the findings are presented according to year groups (i.e. Year 1 and Year 2) to get an overview of the pattern of assistance. The focus is on the participants who used CMC in the Blackboard Online Learning System in the context of a Masters in Education programme at one of the universities in South West England. Here, the CMC was used as a communication tool, extending face-to-face (or classroom) discussion and CMC was used in an adjunct mode<sup>1</sup>.

## Procedures

It is important to note that assistance offering and giving, captured in the messages, are evidence of teaching in this context. Meanwhile, content analysis was one method used to investigate the circumstance of assistance through discussion. All the circumstances of assistance, such as the total number of assistance and the types of assistance by group (units), role, and different task types were counted and diagnosed. The content analysis was performed on all the messages in the 'Discussion Board' for all the courses selected. Quantitative analysis of the data, through regularities or frequencies, showed the nature of assistance in both the tutor-student/s and student-student interactions.

The content analysis was performed on all the 'Discussion Board' messages for all the courses selected. The quantitative analysis of the data, through regularities or frequencies, was performed to answer the following questions:

- Who gave more or less assistance (in open and closed mode)? In this context, 'who' refers to either tutor/students.
- What type of assistance more or less was given? And by whom? (Refer to the group in the previous question).

The data were divided into two groups. The first data group included the messages posted by all the participants in the first year and the second data group comprised the messages posted in the following year. Each group of data was collected at the end of the final term. Two interraters (working together) were used for the first year group while only one interrater was used for the second year group. The difference for the number of interrater(s) is due to their availability.

TABLE 2
Example of the comparison in coding between me and the interraters

Unit	Coder 1	Coder 2
Case 1	А	А
Case 2	С	D
Case 3		Е
Case 4	С	С
Case 5	С	С
Case	С	В

Coder 1 was me and Coder 2 was the interrater(s). A=Scaffolding, B=Feedback, C=Cognitive Structuring, D=Contingency management, E=Instructing and F=Questioning

<sup>&</sup>lt;sup>1</sup> An adjunct mode (as in this study), occurs when students in a course use CMC through an online delivery system as an optional rather than a compulsory learning activity (Harasim *et al.*, 1999)

Interrater agreements were achieved by employing Cohen's Kappa ( $\kappa$ ) in the SPSS programme. Approximately more than 20% of the data were used for this purpose as a huge number of messages from the collective data were already. If the value of  $\kappa$  is .7 or above, it is significant enough to proceed with the coding and analysis (Krippendorff, 2003).

These sequences were placed in the SPSS Data View to calculate Cohen's Kappa ( $\kappa$ ). 'Case x' is the instances of seven different types of assistance. 'Case' is used as it is possible to have more than one 'case' in one particular sentence in one particular posting. The table above is an example of the coding which takes place in the SPSS Data View. In Case 1, the interrater and the authors perceived that there was an instance of Scaffolding in the sentence. Meanwhile in Case 2, we perceived that there was a Cognitive Structuring in the sentence, but the interrater perceived it differently, i.e. as Contingency Management. In Case 3, the authors perceived that there was no assistance in the sentence; on the contrary, the interrater thought that the question in the sentence was somehow a way of assisting.

A Cohen's Kappa of 0.764 was established for the first year group and 0.706 for the second year group.

233

293

526

Open

Total

Closed

# **RESULTS AND DISCUSSION**

Table 3 shows the pattern of assistance provision by the participants according to the mode of the tasks initiated by the tutor (i.e. open and closed tasks). The first column in the table above indicates that more messages were posted in closed tasks. However, in terms of quality, more messages posted in the open tasks contained assistance as shown in the second column. The third column corroborates the assertion that the instances of assistance were more frequent in the open task discussions.

It can be concluded that, in Year 1, the open task discussions promote more instances of assistance compared to the closed task discussions even though the number of messages in the closed task discussions is higher than in the open task discussions.

Column one in Table 4 indicates that the total number of messages in Year 2 for the open task discussion is higher than the closed task mode. Meanwhile, the pattern is different compared to Year 1, where there is also a higher number of messages in the open discussion (210) compared to the closed discussion (96). (In Year 1, open discussions had a total of 233 messages while the closed discussions had 293). However, just as in the previous year group, the open task discussions contained more messages with assistance, than did the closed task discussions

313

219

532

Comparison of	the instances o	tasks in Year 1	ges posted in the ope	n and closed
Mode of task used to initiate discussion <sup>2</sup>	No. of messages	No. of messages with any assistance	No. of instances of assistance	Proportion of the whole (%)

119

93

212

TABLE 3

<sup>2</sup> The number of units in open task is the same as in the closed task. Therefore	hey are comparatively balance
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134.3

74.7

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TABLE 4 Comparison of the instances of assistance in the messages posted in open and closed task in Year 2

Mode of task used to initiate discussion	No. of messages	No. of messages with any assistance	No. of instances of assistance	Proportion of the whole (%)
Open	210	136	321	152.9
Closed	96	42	72	75
Total	306	178	393	

(as shown in column 2). Furthermore, as shown in the third column, there were more instances of assistance in the open task discussions as compared to the closed task discussions.

It is possible to argue, therefore, that the instances of assistance in both year groups show similar patterns, i.e. that open task discussions promote more instances of assistance.

This analysis attempted to identify the division of type of assistance in different modes of tasks in Year 1.

In Year 1, the number of messages sent in the closed discussions was 293, as indicated in Table 3, which is greater than in the open discussions (233). However, but the assistance offered is more frequently found in the open mode discussions (i.e. 314 out of 532 or 59.0%). Scaffolding is the most seen of all the types of assistance in the open and closed discussions. Scaffolding (126 or 64%) and Instructing (105 or 41.4%) are more often seen in open discussions, while Feedback (48 or 63.2%) is more often given in the closed discussions. Modelling and Contingency Management are rare overall. Cognitive Structuring is almost absent in both the open and closed discussions.

Next is the division of type of assistance in the different task modes in Year 2.

The number of messages posted in the open discussions is greater than in the closed discussions (see Table 4). Correspondingly, assistance is offered more frequently in the open mode (321) compared to the closed mode (72). In particular, scaffolding remains the type of assistance seen most often in both the open and closed discussions. Instructing and Questioning in the closed discussion in Year 2 showed a dramatically low rate of occurrence as opposed to Year 1. In the open discussion, however, the number of Instructing and Questioning instances is different between the groups. In Year 1, Instructing was found almost twice as much as Questioning, while in Year 2, it was the reverse. There was a slight increment in

TABLE 5
Number of instances of assistance for different type of assistance in open and closed
task in Year 1

Assistance	Open (%)	Closed (%)	Total	(%)
Scaffolding	125 (39.9)	72 (32.9)	197	37.0
Feedback	28 (8.9)	49 (22.4)	77	14.3
Cognitive Structuring	1 (0.3)	1 (0.5)	2	0.4
Modelling	4 (1.3)	6 (2.7)	10	1.9
Contingency management	5 (1.6)	4 (1.8)	9	1.7
Instructing	105 (33.5)	41 (18.7)	146	27.6
Questioning	45 (14.4)	46 (21.0)	91	17.1
Total	313	219	532	100.0

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#### Open and Closed Mode of Online Discussion - Does It Matter?

TABLE 6
Number of instances of assistance for different type of assistance in open and closed
task in Year 2

Assistance	Open	Closed	Total	(%)
Scaffolding	150 (46.7)	51 (70.8)	201	51.1
Feedback	39 (12.1)	10 (13.9)	49	12.5
Cognitive structuring	13 (4.0)	1 (1.4)	14	3.6
Modelling	9 (2.8)	0	9	2.3
Contingency management	7 (2.2)	1 (1.4)	8	2.0
Instructing	34 (10.6)	3 (4.2)	37	9.4
Questioning	69 (21.5)	6 (8.3)	75	19.1
Total	321	72	393	100.0

TABLE 7

Comparison of assistance provision by different role of participants in open and closed task (distribution is by unit) in Year 1

	Unit	Assistance from tutor	Assistance from student
	1-1	165	32
0	$2-1a^{3}$	2	28
Open	3-1	23	10
	4-1	27	26
	Total	217	96
	2-1b (small group)	1	23
	5-1	25	4
Closed	6-1	7	9
	7-1 (small group)	117	33
	Total	150	69

the number of less frequently used assistances from the previous year, i.e. Modelling and Contingency Management and especially Cognitive Structuring.

This analysis shows that there are differences in the patterns of assistance types from Year 1 to Year 2. This change is true for both the open and closed tasks.

As shown in the previous analyses, there is no overall specific pattern indicating that assistance, either from the tutors or from the students, is connected to the type of task. However, does tutor assistance affect students' assistance? If so, is this relationship stable in both the open and closed tasks? This analysis looks at the pattern of assistance by the students relative to the tutors' in different task types in Year 1.

As presented in the Table 7, the tutors in Unit 1-1 (in open mode) gave much more assistance than the tutors in other units. This was then followed by Unit 7-1 (in closed mode). However, the number of assistance instances from the students in both units is similar. If

<sup>&</sup>lt;sup>3</sup> Unit 2-1 is divided into two types according to discussion mode, where Unit 2-1a in general discussion to all participants (open mode) while Unit 2-1b is work group and in a closed mode of discussion

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	Unit	Assistance from tutor	Assistance from studen
	1-2	101	37
Open	2-2	15	37
-	4-2	56	75
Total	Total	172	149
	3-2	17	4
	5-2	10	9
Closed	8-2 (small group)	0	32
	Total	27	45

TABLE 8 Comparison of assistance by different roles of participants in open and closed tasks (distribution is by unit) in Year 2

we look at Unit 2-1a in the open task and Unit 2-1b in the closed task, the tutor gave the least amount of assistance, but the students' assistance was found to be varied. Therefore, it cannot be concluded that the students' assistance relied on the number of assistances given by the tutor in either open or closed tasks.

As for Year 2, the analysis is as shown in Table 8.

In the Table 8, in Unit 1-2, the tutor (the same tutor as in Unit 1-1) continued to give a large amount of assistance compared to the other tutors in other units. The tutor in Unit 2-2 (the same tutor in Unit 2-1a and 2-1b) gave an increasing number of assistances as compared to the first year group. However, the number of assistance by the students is not much different between the groups. Student assistance by the tutors in both the open and closed tasks.

Based on these results, it is clear that open tasks do evoke more assistance giving, even when fewer messages are posted. Whilst the number of assistance from the tutors and the students are different in both the year groups, whether for the open and closed tasks, the type of tasks does not affect the participants' role in providing assistance. In other words, either tutors or students are able to provide assistance in any mode of task – open or closed. Students' assistance is independent of tutor's assistance in both the open and closed tasks.

## CONCLUSIONS

In this study, different nature of tasks was found to lead to different patterns of responses and participation. The patterns, however, are not straightforward as they are also dependent on certain other factors or conditions. One way that we can distinguish between the different natures of task is through its degree of 'openness and closedness'. Such differences as defined here seem to lead to a different nature of responses and how the participants carried out the related discussion task. Therefore, the authors could not simply give instruction to carry out the task to the students without thinking about the implication of either the openness or closedness of the task to their behaviour.

Open tasks are more likely to generate more open modes of discussion. The students are free to start the forum and choose the direction of the conversation. This situation is an opportunity for the students to pin down their understanding and check whether their understanding is moving in the right or appropriate direction. When there is 'assistance seeking', 'assistance giving' should always follow. This situation might be one of the reasons why there were more evidences of assistance in the open tasks as compared to the closed tasks.

In addition, if the students are not working in groups, i.e. when they are all participating in course discussions, it is clear from the findings of this study that more assistance can be found in the open tasks compared to the closed tasks. This is similar to working in groups, where open mode discussions offer the students more opportunities to raise their concerns about their learning compared to the closed mode. In this composition of participants (i.e. whole class work not group work), the number of assistance from the students does not rely on the number of assistance provided by the tutors, either in the open or closed tasks. Consequently, whether the tutors were actively involved in providing assistance or not, any mode of discussion (open or closed), did not hinder the students' efforts in doing so. This study has thus proposed a simple approach to distinguish the discussion modes in an online environment.

Therefore, one should consider how students can work together when designing an adjunct course, particularly if they can work collaboratively or cooperatively. When a task in an online discussion is open in nature, the group shall benefits in terms of there shall be more room for them to post their concern as anyone is free to post his/her concerns. As the students' concern in a bigger group could be verity (scope) and the amount could be enormous, therefore, more peers' responses are needed in order to overcome the problem or assisted performance from the peer.

If the tutor plans to have smaller groups (two to three members), and the task is planned to be carried out in a closed mode - the task should have a specific goal, process and outcome. Students should have a clear idea of what to do, can arrange responsibility amongst group members and understand the expected product. As the task is more certain, concerns which may emerge from students are also more specific as compared to those of a larger group. Furthermore, the topics are more familiar among the group members and therefore assistances are easier to be given. Initiating small groups in closed tasks is good if the purpose is to obtain high student participation in the online discussion. As in a bigger group, there will be a possibility of students who just 'lay back', as compared to the smaller group where this passivity can be reduced. The course would be more manageable if it was to be conducted by more than one tutor where more assistance could be enhanced by both the tutor and the students.

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# Preschool Children with Attention Deficit Hyperactivity Disorder (ADHD) in Inclusive Settings: Challenging but Not Problematic

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## ABSTRACT

This paper describes mainstream preschool teachers' perceptions and attitudes towards students exhibiting Attention Deficit Hyperactivity Disorder ADHD characteristics. An ADHD checklist (ADHDC), specially developed for studying Malaysian preschool children with ADHD, was used in screening children with ADHD-like behaviours. Based on teachers' rating on the ADHDC, ten children from eight different preschool classrooms were chosen from eight different schools: four schools in the rural areas and four in the urban areas. All the eight teachers who were involved in the rating process became samples for exploring their perceptions and attitudes towards students with ADHD. Classroom observations and interviews were used as methods for gathering information. The results showed that all the ten selected children exhibited core features of ADHD symptoms, either inattentiveness or hyperactivity/impulsiveness or both, as rated by their teachers. In general, the teachers' perceptions and attitudes were positive towards these ADHD children's conditions.

Keywords: Attention Deficit Hyperactivity Disorder (ADHD), preschool children

## **INTRODUCTION**

"......preschool teachers should know the various ways in which they can assist those who are very active and to overcome their emotional outburst through activities which will benefit the child" (MOE, p. 7, Book 1)

Attention Deficit Hyperactivity Disorder (ADHD) is a disorder which is characterized by serious and persistent difficulties in specific areas, namely attention span, impulse control, and hyperactivity in some cases. ADHD is one of the new categories of children with special educational needs (SEN), which is grouped under Learning Disabilities (LD) in the Malaysian educational classification.

Children with ADHD respond best to motivation and positive reinforcement and perform relatively better on high-interest tasks (Carlson and Tamm, 2000). Therefore, teaching strategies will influence the children's ability in controlling ADHD-related behaviours in the classroom. Effective teachers know their students. Therefore, building a positive relationship with ADHD students will help teachers understand them better, and this will also show them that their teacher(s) really want them to succeed.

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# ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

ADHD is a developing subject. Its nature is complex and many aspects of this disorder are still under investigation. The research on ADHD is mostly from the USA as well as other developed countries. ADHD has its roots in the medical domain, which has subsequently been widened by researchers from other fields, especially psychology and education. However, its medical origins had influenced the conceptualization that led to the use of the ADHD terminology. Multiple changes have taken place in the diagnostic criteria for ADHD since the 1980s as researchers tried to develop a more appropriate explanation of ADHD. The development of ADHD definition and diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM) can be found with the American Psychiatric Association (APA: 1980: 1987: 1994: 2000).

## SUB-TYPES OF ADHD

The debate on the dimension of ADHD diagnosis is whether it is conceptually a uni- or a multi-dimensional disorder (Barkley, 1997a; Chhabildas, Pennington and Willcutt, 2001; Marks *et al.*, 1999). For example, the theory of poor executive function relates ADHD with poor self-control and self-regulation. However, the idea is more applicable to individuals with symptoms of hyperactivity/impulsivity, in addition to inattentiveness, but those with inattention problems alone are not catered by this particular theory.

# Children with ADHD Inattentive Type (ADHD/IA)

Children in this group exhibit multiple inattentive symptoms with a few, or without, hyperactive/ impulsive symptoms. They have great difficulties getting focused on task or activities although they may able to sit still. The common risk in this particular sub-type is the teacher may overlook these children's needs (Cooper and Ideus, 1996; Lovey, 1999). Lovey (1999) argued that the needs of children with ADHD without hyperactivity were easily overlooked by their teachers as they went through their school life without disrupting the class and remained undiagnosed (until later in their life). Lovey further stated that:

"Attention deficit without hyperactivity is as detrimental to a child's education and subsequent mental health as the type with hyperactivity but is less likely to be referred for diagnosis" (p. 180)

In terms of 'behavioural activity style,' they are likely to show 'underactivity' and are frequently described as lethargic, day-dreamy and sluggish. This sub-type is more frequently associated with girls (Taylor *et al.*, 1998).

# Children with ADHD Hyperactivity/ Impulsivity Type (ADHD/HI)

ADHD/HI is a category created in DSM-IV to identify children who are extremely active but they do not display gross inattention. Children from this sub-type display multiple hyperactive/ impulsive symptoms. They do not display significant attentional problems. They are able to pay attention to a task but lose focus because of hyperactivity or impulsiveness and frequently have trouble in controlling impulse and activity. This sub-type is more typical in boys (Taylor et al., 1998). Burns and Walsh (2002) studied the influence of hyperactivity and impulsivity symptoms in the development of other disorders in 752 children. From the longitudinal study, they found that the hyperactivity/impulsivity (HI) factor was able to predict a higher level of Oppositional Deviant Disorder (ODD) factors in subsequent years, whereas ODD factors did not predict HI factors across the 2-years interval. They concluded that hyperactivity and impulsivity aspects of ADHD might influence the development of ODD behaviours.

## ADHD Combined Type (ADHD/C)

Children from this cluster of sub-type have both conditions (a) and (b). According to Fowler (1999), this sub-type is the most common amongst the ADHD cases. A key characteristic is physical impulsivity. Children with this sub-type are likely to be at greater risk for other psychiatric disorders such as Oppositional Deviant Disorder (ODD) and Bipolar Disorder (BD). A child with hyperactivity is more likely to be rejected by peers owing to anti-social behaviours and be at a risk of suspension from school or referral to SEN provision (Barkley, 1997b).

# CHILDREN WITH ADHD IN SCHOOL

Children with ADHD have problems complying with both school and classroom demands. They are unique and no two of them present themselves in the same way; in other words, different children experience different complications and have different characteristics, reacting differently in different environments. As children's attention is a crucial factor in managing their behaviour and social skills, those with behavioural problems need to learn techniques to monitor and control their attention. Hence, ADHD classification involves educational issues as the disorder is associated with the types of learning difficulties or academic impairments (Marshall, Hynd, Handwerk and Hall, 1997).

# THE PREVALENCE OF ADHD IN PRESCHOOL AND YOUNG CHILDREN POPULATION

Psychiatric and paediatric disorders frequently emerge in preschool years (Wilens *et al.*, 2002). There are a number of studies focusing on the prevalence rates of ADHD among very young children. A checklist directly based on the DSM-IV was assumed by some researchers as dependable in determining the ADHD symptoms in children from this group (Pineda *et al.*, 1999). Buitelaar (2002) suggested that ADHD is relatively lower among preschool children compared to children at older age. Wilens *et al.* (2002) also investigated the clinical characteristics of children referred for clinical care from 1991 to 1999. In comparing ADHD with other disorders, they found that 80% of 200 youngsters aged equal or less than 6 years could be described as having ADHD.

ADHD is less diagnosed in certain countries. Achenbach, Dumenci and Rescorta (2003) pointed out the different rates of ADHD might be explained as the studies used different methods or case definitions. Hence, the figures are not directly comparable. The changes in the diagnostic criteria such as in DSM have also contributed to the diversity in the prevalence rates of ADHD, for instance, between the criteria in DSM-III-R and DSM-IV. Nevertheless, some consistent findings had been identified; ADHD symptoms were more frequently found in school-aged children, more in boys, and more cases appeared to occur in children from low SES families. From an educational perspective, prevalence rates are important for planning preventive interventions and treatment programmes.

# Preschool Children with ADHD in Malaysia

As mentioned earlier, ADHD is classified under the learning disabilities group in the Malaysian education system. The screening and diagnostic procedures used in identifying children with ADHD are based on the criteria used internationally, particularly the guidelines proposed by the APA in the DSM-IV, and the one proposed by WHO in ICD-10. Legally, the procedure is done by a medical professional or endorsed by medical practitioners. Only children with severe hyperactivity or behaviour problems were included in special education programmes, either studying in special schools or integrated special programmes in regular schools. However, undiagnosed children with behavioural problems remained in mainstream classrooms. Most of them perform poorly in classroom activities as well as in academic due to their conditions

# MAINSTREAM TEACHERS' PERCEPTION TOWARDS CHILDREN WITH ADHD

"Teachers' perceptions of children's problems are crucial, because teachers are the gatekeeper of psychological treatment in the schools" (Savener, 2005)

The detection of children's behaviour and learning problems is usually initiated by school teachers and in many cases, the problems are treated solely in an educational setting. According to Savener (2005), if teachers misperceive symptoms, the child is not likely to receive adequate treatment.

Every child has something that they find exciting or interesting. Nevertheless, children with ADHD usually do not complete assignments, walk around, and they become easily irritated and frustrated. As mentioned in the earlier section, some of them are passive, day dreamy and do not succeed socially as well as academically. Therefore, children's behavioural management is one of the teachers' important roles in an inclusive classroom. According to Haniz (1998), Malaysian primary teachers generally have negative attitudes towards the placement of children with special educational needs in mainstream classes and they are of the view that the structure of primary schooling will need to change in order to support the implementation of inclusive education.

## Research Design

Considering the appropriateness of a method of investigation for a particular research study and the theoretical and substantive problems involved (Burgess, 1985), and based on the definition and properties of a qualitative case study offered by various researchers, case study was thought to be the best general approach for answering the research questions of the present study.

#### Research Questions

- What are the teachers' understanding of SEN and ADHD and how do they use this understanding in working with children with ADHD characteristic behaviours in the classroom?
- What are the factors associated with teachers' approaches to teaching children with ADHD and planning of tasks or activities for children with ADHD?

## Research Methods

# **ADHD screening**

The ADHDC, a checklist specially developed for studying Malaysian preschool children with ADHD, was used to screen children with ADHD-like behaviours. The ADHDC forms were distributed to twenty selected teachers in the Federal Territory of Kuala Lumpur and the state of Kedah. The teachers were requested to rate each student in their preschool class using the form. The ADHD students were identified following the scrutiny of the data. The psychometric properties of the ADHDC were described in another paper.

# **Observations and interviews**

Classroom observations were carried out and interviews were also conducted with the teachers and the identified students, as a result of the rating forms analysis. The classroom observations allowed three types of data to be collected using two dimensions of task direction through normal teaching. The off-task behaviours related to inattentiveness, impulsivity and hyperactivity, as well as the negative social behaviours presented by the students with ADHD and the comparison peers were scored using an observation coding sheet during the structured observation (details of the study were described in another paper). Unstructured observations were carried out to disclose the other facts related to every teacher and student being studied.

Every teacher was interviewed and the duration of the discussion between 25 to 55

minutes. The teachers were requested to respond to the questions based on their observations and experiences in teaching the particular pupil/s as they have had comprehensive interactions with the students for at least eight months prior to the interview. The discussions were tape-recorded. The sessions followed the same pattern and the teachers were encouraged to talk about the particular students in their classes. Other than the pupil's background and behaviour, the questions led the teachers to talk about their perceptions on the strengths of the students as well as their expectations.

## The Participants

The participants involved in this study were the preschool teachers from the preschool programmes run by the MOE of Malaysia and their students. The reason for choosing these groups was because this study hoped to obtain insights on the needs as well as the constraints affecting educational provision for young Malaysian children with symptoms of ADHD.

#### **Students with ADHD**

In total, 533 pupils were rated by 28 preschool teachers. They were included in the quantitative

data analysis which was described in another paper. The highest scores on the ratings from each school were scrutinized for the case study inclusion. Finally, ten pupils, five from four schools in Kuala Lumpur and the other five from four schools in Kedah (rural areas) were selected based on the rating done by their teachers. Out of the ten students, nine were males and one was female. They were chosen in such a way that they represented all the sub-types of ADHD. Comparison peers from the same gender and age were chosen for every student scrutinized as with ADHD.

# Mainstream preschool teachers

There were eight qualified female preschool teachers involved as the key informants for this study. Their age ranged from 23 to 42 years old. In term of their teaching experiences, it was found to widely vary. The youngest teacher had only 10 months of experience, whereas the oldest had 20 years of experience. It is important to note that none of the teachers had formal training in dealing with children with special needs. The general description of the students and teachers who were directly focused on behaviour observations and interviews is given in Table 1.

 TABLE 1

 Preschool teachers and their students with ADHD (pseudonym is used)

Teacher's name and age (years)	Teaching experience	Student's name	Student's predicted ADHD type
Hana (23)	10 months	Rizam (boy)	inattentive
Irah (29)	8 years	Mahdi (boy)	combined
Mizan (29)	8 years	Justi (boy)	inattentive
Sally (30)	9 years	Abdul (boy) Hafzi (boy)	combined hyperactivity/impulsivity
Zuyah (32)	10 years	Malik (boy)	hyperactivity/impulsivity
Kasma (42)	20 years	Kefli (boy)	combined
Tasha (31)	8 years	Bidin (boy)	inattentive
Alin (35)	12 years	Narmi (boy) Rozi (girl)	combined hyperactivity/impulsivity

# DATA ANALYSIS

As the data collection followed the same format pattern of coding and jotting notes, the findings related to the teachers' views were discussed according to the cases. In order to present the findings comprehensively, the related findings with ADHD pupils were blended with the information from the observations and interviews with other pupils. Due to space limitations, however, the current paper only reported on five of the ten students included in the qualitative study. The sub-headings in the following sections carry the pseudonyms of the teachers and their respective pupils with ADHD; for instance Miss Hana in 5.2 was the first teacher being studied, whereas Rizam was her pupil with ADHD characteristics (refer to Table 1).

#### Ms. Hana – Rizam

# **Rizam from Ms. Hana's perceptions**

Rizam was behind in some aspects of learning owing to many reasons. One reason Miss Hana believed, was the approach to upbringing. She claimed that the boy was 'ruined' by the way his family 'spoiled him', stating that:

"Rizam is not totally problematic. Please do not misunderstand me, but I strongly believe that the way his mother pampers him has made him dependent on others, so much so, he lost confidence to be independent. His mother used to wait at the door (pointed to the classroom's door) and put his shoes on almost every day when she fetched him at 11.30 am" IH(M1:9)

Miss Hana used the term 'offhand' to describe Rizam's impulsivity behaviours and 'moody' to illustrate the boy's habits in choosing the class activities and selection of friends. A few incidents at the beginning of the school year where Rizam was really difficult to handle were revealed and she used to lock the classroom door so Rizam could not simply go out of the class and hang around the school compound at any time he wanted. Rizam used to be violent and destroyed teaching aids and teaching materials. As she was a fresh graduate teacher, and unable to manage his behaviours, she requested his parents' involvement and finally the parent (mostly the father) was to be with Rizam in the class until he settled with his new experience in school life. His difficult behaviour decreased after some time but some behaviour still occurred such as grabbing materials from others, using abusive words to peers, and bringing some irrelevant things to schools. 'Only five minutes at most he could stay on a task' was the phrase she used to explain Rizam's learning conditions for something new or he has interest in, or 'he would just enter his "day dream affinity" or just explore the outside or request another task.' Nevertheless, Miss Hana was confident that the condition would improve as Rizam became more mature in the future, based on the progress he had achieved in eight months.

## **Rizam from the unstructured observations**

In line with his teacher's comments, Rizam was picky as he could not get along with two of his peers in the class for any known reasons. There was a boy who seemed to captivate Rizam most, as he was tolerated by him more than others. On one occasion, he brought his father's car keys to school and just placed them on his desk. He left toys and books unkempt and when the teacher asked, he would blame others. He frequently forgot his belongings.

Despite being placed in front of the teacher's eyes in group activities or for individual work, he was not enthusiastic as he was keener with outdoor activities. He was in his seat for a very short time before he started moving around leading him off-task almost all the time. He would hang around the class, staying on one activity for a short while. He hardly put any effort in starting a task unless someone made a move to lead him through the task. Sometimes, he was very moody, and ignored his teacher's questions. In terms of communication, he was very selective and responded only to topics such as animals and foods. However, he frequently changed the topic whenever he thought of something else during the conversation. He also frequently shouted out answers and sometimes produced irritating sounds in between lessons. He liked calling others' names and rarely responded to questions that did not interest him, yet was never aggressive.

In general, Rizam was impulsive in answering questions, frequently commented on unrelated peripheral noises or objects, and he frequently asked when the task (game) would be over, or what would be the next. In line with Miss Hana's perceptions, Rizam sometimes did the work given for a short while or start the task only after being pushed by an adult, but never finished it.

## Ms. Irah – Mahdi

# Mahdi from Ms. Irah's perceptions

Mahdi was considered as the worst student in the class in term of academic achievement and social skills compared to the other students in the class who were also very slow in learning or having specific difficulties. Ms. Irah predicted that the nature of Mahdi's family and education background compared to his peers was a disadvantage for his learning process. She rationalised her argument as below:

I made the conclusion that Mahdi lacked the attention because there was a different effect when I gave him individual attention. I used to punish him when he did not do his work or he was slow in his reaction to my instruction, but I didn't see any improvements. I tried other strategies such as using a reward (for any good behaviour) and personal attention and gave him a small amount of task, and ... (tremendously) his behaviour improved and did much better in his work ... (although) slow, still slow. He started from zero...... His mother once thanked me for the change in Mahdi's behaviour (at home) as she thought the improvement was due to my teaching approach. II(M1:6)

On the other hand, Ms. Irah imagined that Mahdi's future in learning would be complicated since he was very slow in many things and the most difficult to manage was his lack of attention in doing or completing a task. Ms. Irah perceived Mahdi's behaviour in the class as 'playful' as he recurrently hugged his friend in front of him, played with things (objects) close to him or simply played with his clothes, while the term 'ligat' or very active was used in describing his condition during free play as he actively played; he was cheerful compared to his performance during the lessons. She rationalised her perception by considering him as not a problematic pupil, but rather having exceptional needs in teaching circumstances.

## Mahdi from the unstructured observations

Mahdi usually arrived to school on time, frequently yawning before settling down in the "morning talk" sessions. It was obvious from the observations that he forgot his homework or books almost everyday. Academically, Mahdi had not acquired reading or writing skills, but still managed to identify some alphabetical letters in his name. As for the written work, he often spent a long time waiting for someone to lend him a pencil or eraser (as he lost his most of the time). Otherwise, during individual attention, he copied the words from the blackboard and repeatedly erased it in order to improve his writing. As he repeatedly wrote and erased many times, the pages became shabby and messy, and on some occasions, the page was torn resulting in grimy workbooks.

However, Mahdi was eager to compete, and showed that he followed the teacher's instructions, especially when a reward was promised to those that behaved. For example, on two occasions, when he was working on his own, he focused on writing something in his book as his peers did. In fact, he was drawing or scathing something unrelated to the task, later explaining that he drew an aircraft that looked more like a patterned scribble.

Although he inexplicably lost his pencil and eraser almost everyday, he had no initiative to borrow it from others. He just stared at his friends' belongings, sometimes touched them while he was looking at his friend's face, then retreated when the owner said, "That's mine!!" Mahdi was frequently lost in class discussions as he daydreamed or looked away. Interestingly, despite his inattentiveness, he always volunteered to answer questions, although it was usually the wrong answer or something which was unrelated. Whenever the teacher asked for an opinion or idea, he was amongst the first to put up his hand. On a few occasions, the teacher gave him a chance, and then he stood up, smiled and looked at his friends' faces, answering with whatever words were uttered by his friends.

Throughout the observations, there were only a few times when Mahdi answered the questions correctly; when the teacher deliberately gave answerable questions, or after he was verbally punished for his behaviours. He was obviously cheered up by the teacher's good remarks.

In terms of interpersonal ability, Mahdi was vulnerable in interpreting verbal and non-verbal communication, as he did not respond accordingly to jokes or the teacher's punishments. He was easily distracted and lost his focus during lessons and it was typical of him to be engaged with something else, even playing with his own clothes or just simply fidgeting with his feet or hands.

Hamirul was the peer who always sat next to Mahdi on many occasions. The teacher separated them the moment she realised that they teased each other or played with something close to them, if not disturbing others. The teacher labelled Hamirul as in the same situation as Mahdi, i.e. "playful and forgetful".

The friends with whom he played and chatted most during the recess/meal times were those in his group, who were considered by the teacher as 'those having problems in learning.' However, in terms of devotion, he always complied with the teacher's instructions, though doing it wrongly and needed close guidance from an adult. Mahdi also used very little verbal communication as compared to others and was never aggressive.

In general, Mahdi was weak in communication and off task most of the time. He moved around the class aimlessly, frequently playing with unrelated items, and pretended to show interest in activities by senselessly following his peers' actions.

## Ms. Mizam – Justi

# Justi from Ms. Mizam's perceptions

Ms. Mizam described Justi's character as not interactive; he frequently pondered during class activities and the term 'melopong' or empty minded was used to express her observations on his typical behaviour during lessons. Ms. Mizam also stressed that the problem was more on his lack of interest in the class activities.

To further illustrate the situation, the teacher said:

...he never shows any interest in learning. While others were busy carrying out tasks or activities or answering my questions, he just stayed quietly empty minded, and without any inquisitiveness he stared (at the things outside the class) away. To make him engaged in any task, I had to sit next to him and guide him 'personally'; ...then, he just did it for a short time before he abandoned the work as he was pondering and looking around again and again ... until he got more personal attention. His work was messy and never completed. IM(M1: 1)

Justi's behaviours were presumed by the teacher as a consequence of parenting styles, because other pupils were staying in his neighbourhood notified her that Justi's father was 'ferocious'. To support her assumption, the teacher stated:

As I mentioned to you before, he is difficult to manage .... as to make him do any tasks, he needs personal attention. I don't know the real cause but I'm pretty sure he has no interest in learning... If I force him he would cry, sometimes up to 11.30 a.m. On one occasion, he screamed loudly until another teacher and pupils' next class surrounded the preschool class as they thought something serious has happened. On a different occasion, he wept in a high pitch until other preschool pupils got confused (pening), ... closed their ears ... and I'm sorry to say, nothing could stop him except his parents...I mean until his mother or his father came at 11.30 a.m. to fetch him and shouted at him (ordered him to stop crying). IM(M1: 12)

In terms of teaching strategies, Ms Mizam admitted that she has limited knowledge in teaching children with exceptional conditions. She confessed this by stating:

I observed that he was not active in learning...of course without any interest (he would not take part). Maybe his interest has not yet existed or...I myself am not good (not skilful) at boosting his interest to learn IM. (US: 2)

Ms. Mizam used the term 'unreceptive' in the later part of the interview to describe Justi's character. She labelled him as from a 'pelalak' family as both his elder sisters were behaving in the same manner during their preschool time, namely crying and wailing for long periods, and inconsolable, stopping only when the parent told them to stop crying. Ms. Mizam interpreted the situation as exploiting wailing strategies to avoid the task (his elder sisters were in the same school and also taught by Ms. Mizam previously). According to Ms. Mizam, other pupils in the class were not very keen to accept him in their group during the activities and some peers avoided him because they were worried that during the activities or during mealtimes, he might cry unreasonably.

#### Justi from the unstructured observations

There were some obvious patterns in Justi's behaviours during the unstructured observations. For example, during the sitting-on-the-floor setting, he changed the way he was seated (hugging his knees), the moment he lost his focus on the task. Typically, it was followed by a prolonged looking away, like daydreaming. Another pattern observed was withdrawal from the activity involving individual presentations but he complied when it came to group activities. Nonetheless, he was behind in most group activities. Additionally, it was noticed that he had the courage to voice his views or answer an adult's questions only in an indirect way. He never replied openly to questions asked but when the same questions were used to ask his peers he butted in.

In terms of academic achievement, Justi had not recognised letters, but managed to differentiate some numerical symbols. He focused on the task in the academic lessons for a very short time before looking away or day dreaming as most of the tasks were related to reading or writing, in particular to matching words or numbers in the work books.

Justi seemed lost and confused in the cognitively oriented tasks, while in the manipulation oriented task, he always seemed a step behind his peers. In pencil and paper (written task) activities such as colouring, Justi complied with the instructions though he hardly ever finished them. Sometimes, he would just pretend working on the task, but did something else irrelevant to the tasks, such as working on different pages of the workbook. Justi is not verbal in nature but occasionally says offensive words that upset others.

In general, Justi hardly replied verbally to an adult's questions and seldom talked to his peers, and he used more non-verbal indications in responding to others. He was not eager to explore new things or new experiences, and apprehensively withdrew when he saw unfamiliar adults in the class.

## Ms. Sali – Abdul

## Abdul from Ms. Sali's perceptions

Ms. Sali exclaimed her views of Abdul by describing his difficult behaviour at the beginning of the year. She revealed her strategy in coping with it, as well as her adverse experience when his mother misunderstood her approach. Ms. Sali used the term 'bully' to explain the initial aggressive situation and 'bullet' to describe his physical movement in the class. She depicted the early circumstances of Abdul's situation with her statement as below:

Abdul was enrolled in this programme two weeks later than others, ... I mean after he was rejected by a private preschool nearby. I knew the reason he was refused (by the private preschool) after two weeks (attending the class) because his ex-teacher is my friend but I accepted him as there was a vacancy in this class. The first day in this class, I partnered him with Adha because Adha is an outgoing boy and tolerable. Unfortunately, he bullied and used insulting words (four letters words as well) towards Adha. IS(M1: 5)

To illustrate the student's condition, she said:

He took control of many things in the class as he (extremely active) proceeded like a bullet .... I called his mother to discuss his condition (learnt that his behaviour at home was the same)....and she pleaded for (the teacher's) any workable way and she promised to fully cooperate. Difficult! Within two months, his behaviours were really interrupting others, as he was frequently aggressive. He grabbed others' things or toys and he conquered all the game devices for himself. Then I called him and told him nicely how to behave, so people would like to befriend him...I used simulation. The condition improved gradually except for his verbal violence and his attendance problem. IS(M1: 9)

Ms. Sali described the other conditions that were difficult for her to deal with:

He was frequently absent, sometimes only one (day) in a week (turned up) ... (and) for sure he was not in attendance at least once in a week. Otherwise, he would arrive late in the morning (up to 9.15 am) most of the time ... (despite the fact that he staved at the council flat which was only 50 metres away). He was absent for two weeks once, and came back to school with the old bad habits after that. I wrote a letter to inform the parents but (there was) no response, and (followed by) I rang his mother on his attendance issue and reminded her that if (Abdul) absent for more than two weeks without any reasons, the school would dismiss him from the enrolment. There was further improvement after the discussion, as he arrived in school just a bit late...8.00 a.m. (compared to previously). Even if more than two days (that he was absent), I would ring his mother and in addition I regularly chatted with him on/about the advantages to be in class on time everyday... I narrated (cerita) to him the consequences of being absent regularly... IS(M1: 13)

As many of the ways she had used to tackle his verbal misconduct were fruitless, Ms. Sali employed a radical approach to stop the habits. On one occasion, she threatened to rub a fresh chilli on his lips if he ever said such words again. She then immediately took out the chilli and showed him as he uttered the words. According to Ms. Sali, he was dreadfully attentive at the particular moment and finally promised her to avoid the words in the future. Unfortunately, his mother misconstrued the action and complained to Ms. Sali's friend (the other teacher in the school). Ms. Sali rang her and invited her to come to discuss the matter and clarify the issue. On top of these approaches, Ms. Sali realised that some topics or methods were more effective in motivating him such as the rewards she used to make him stop the bad habit. She said:

All the strategy I used was on a trial and error basis, but I never forgot to praise him for not uttering the bad words when he was dreadfully upset or angry (as habitually he did). I recognized that rewards and praises were effective for this particular child as his work improved a lot (using this approach) though not at par. ...another thing (I should mention) is about his interest, meaning that he just paid attention to the work within his interest. IS(M1: 12)

In terms of his overall progress, Ms. Sali claimed that Abdul was gradually picking up the skills, and he apparently improved his aggressive manner and social skills. She perceived the state as not problematic as most of his unpleasant habits had diminished. Meanwhile, she also believed that in order to deal with children's behaviours, the teacher should be aware of some typical behaviour for children who were brought up in rough surroundings like the city council flat settlement.

## Abdul from the unstructured observation

Abdul was frequently late and consequently always rushing to class. He often took a brief rest in his seat before joining the class in the 'morning talk activity'. Abdul was very anxious with his belongings, and kept his things in order before he left the class at 11.30 a.m. every day. There was also an obvious pattern in his favourite topic of warming-up discussion in the "morning talk" sessions. The teacher used the session to cheer up the pupils and give them a chance to briefly tell anything related to the chosen topic. Abdul gave more attention in discussions on fruits, foods, or vehicles.

The classroom activities were mainly carried out in two different settings: the pupils sat cross-legged on the floor and they also sat at their desks in a fixed group. During the sessions where the pupils sat on the floor, Abdul was frequently playfully hugging a friend next to him, or drawing something on the pupil's back who was sitting in front of him, and at other times, he just looked around. A few times he drifted away, engaged in daydreaming. On some occasions, the teacher made him sit in front so that she could monitor him closely, but the pupils behind him were not happy with the sitting arrangement because he blocked their view. He was apparently sensitive and annoved with the hassle and moved aside with a squirmy face. Abdul was among the last to finish a written task although he was given lesser amount of work.

In general, with significant encouragement from the teacher, Abdul completed his work most of the time and actively took part in class activities. He was behind his peers in terms of quality of his work as his attention was frequently disrupted. Nonetheless, he successfully managed his anger in uneasy situations as described by the teacher.

# Ms. Sali - Hafzi

## Hafzi from Ms. Sali's perceptions

Ms. Sali, in describing Hafzi's characteristics used the words, 'active thinker' instead of 'daydreamer'. She explained that Hafzi was forgetful and conducted himself differently from other pupils, and although daydreaming frequently in class, he did learn during the lessons. She gave some examples in different parts of the interview to support her strong opinions. She described Hafzi's thoughts that significantly fascinated her as follows:

In one lesson on the topic of transportation, the pupils named a few types of ways people travel in the world. One pupil mentioned helicopters, the

others looked cheerful about it, ... I prolonged the discussion and focused on travel by plane. Hafzi was looking at the blackboard with empty eyes (daydreamed) for about 3 minutes. I called him to join the discussion twice, but he just smiled and then went on daydreaming again. After the lesson, I asked him "Hafzi, you looked like thinking of something during the lesson, what was in your mind (actually)?" He told me the wonderful journey he was engaged in his imagination: ... he was on an aircraft, looking at a beautiful scene outside. Ironically, he did not know the destination. He revealed that he had never experienced travelling by plane. When I asked on the condition in the aircraft, he answered politely "I just imagined something like I saw in the movies. I wish one day I could go somewhere by plane. IS(M1: 4b)

The other aspect that surprised Ms. Sali was that Hafzi as a preschool aged boy could express his concerns about the effects of negative habits:

One morning, Hafzi was the first pupil to enter the class while I was organising the activities for the day. He approached me and said, "Teacher! My father is stubborn" and then he paused. I replied with "Ye ke?" (or "really?")... (and he continued) "He keeps on smoking after I have told him smoking is bad for his body. His lung could be burned by the smoke, isn't it?" (Then, I replied) "You are worried about your father's health, aren't you? "He then slowly said, "I want him to live longer. But, my mother is a nurse. She should tell him (to quit smoking)." The conversation stopped as the (school) bell rang (meaning that it was time for the school's weekly assembly). I wonder when a child (at his age) was concerned about his father's smoking *habit (normally the parent who worried about the kids). IS(M1: 6b)* 

On another occasion, Ms. Sali recalled how Hafzi's father came to her to clarify, after Hafzi had confronted him for not paying the monthly donation which was collected on a voluntary basis and the fund was used to buy extra pencils, colour pencils, erasers, etc. Hafzi told his father that he was not supposed to use class pencils or other things, as his father did not contribute, whereas other poorer people made contributions.

Ms. Sali gave her opinion of Hafzi as a special boy because of his ability to learn in a different way. She ended the interview by stating:

Even as he was engaged in daydreaming or looking somewhere else... he still gave the correct answer to the given questions and sometimes in return he asked me the question I had never expected. IS(M1: 9b)

## Hafzi from the unstructured observations

Hafzi fidgeted, as well as being out of his seat most of the time. Most of his moving around behaviour occurred either when he stood up while he was still working on a task or simply lying prone on the floor to finish his task. This behaviour occurred even during the time when he appeared to be interested in the task. He hardly hung around or bothered others though the teacher seemed lenient, allowing pupils to move around in carrying out tasks. The class was under control with pupils choosing to work in their own way.

Hafzi mostly looked around during activities which involved taking turns, and sometimes the behaviour was followed by daydreaming. He forgot his things almost every day and lost his pencil frequently. On day, he came to the teacher in the morning asking if she had seen his (school) bag. The teacher assured him that she saw him taking his bag when he stepped out of the class (yesterday) and she asked him to recall where he was before getting on the school bus home. Then he thought for a while before slowly and consciously saying, "I put it at the canteen.... then played around...the bus came (and) I forgot my bag." He never found the bag again. Yet, in line with his teacher's perceptions, he could remember the facts and subject contents he learnt which most of the other pupils could not. He was among the first to answer when the teacher asked something related to the previous lessons.

As for his written tasks, Hafzi finished his tasks on time, and most were with correct answers. However, the quality of his work was not at par and not as well organised as others, but with some encouragement, he could do slightly better. He seemed satisfied with his work and only tried to improve it upon the teacher's request. In terms of participation during class discussions, Hafzi used the appropriate terms and manner to convey his thoughts to relate the subject previously taught.

# PRESCHOOL TEACHERS' PERCEPTIONS AND UNDERSTANDING OF PUPILS WITH ADHD IN THEIR CLASSES

In expressing their understanding of ADHD, all the teachers interviewed claimed that they had never heard of the term ADHD and the first time they came across such a term was from the researcher's instrument, the ADHD checklist (ADHDC) distributed for this study. They expressed their ignorance of the term. Interestingly, two of them claimed that they at the moment were aware about other types of children's problems that might affect the learning process.

Based on the characteristics listed in the ADHDC, they perceived the meaning of the term ADHD. Most of them were very interested to explore the concept of ADHD by drawing assumptions related to their pupils' behaviours. Two teachers in return asked more information from the researcher in order to answer the questions on ADHD. One of them sincerely admitted that she was interested to know more about ADHD since it is related to behaviours.

She professed that most of the preschool children were having some of the problems listed and she assumed some might have ADHD. Another teacher presumed ADHD as commonly found in the mainstream classrooms as she related the behaviours listed in ADHDC to ordinary school children.

When comparing ADHD to behavioural problems in their classes, some teachers regarded it as severe behaviour problems while others considered it as the degree of behavioural problems which differentiate between the cases of ADHD from ordinary behavioural problems. However, as they also admitted that their ignorance of ADHD led them to perceive ADHD according to their limited knowledge and information. Five of the teachers assumed that the children were considered to have ADHD if they had all the 25 behaviours listed in the ADHDC list, while the other three used their common sense to draw the logic by assuming that ADHD occurred in a continuum ranging from mild to severe as other types of children's difficulties.

However, out of ten, only three pupils with ADHD chosen for case studies were considered as possibly having ADHD by their respective teachers. All of these pupils are from combined sub-type of ADHD (Mahdi, Abdul and Kefli). The pupils of inattentive or hyperactivity subtypes were considered by their teacher as not having ADHD for the reasons of not having enough ADHD-like behaviours.

In response to the probing questions related to their ratings on the ADHDC, the teachers confessed that they did the rating based on their daily experience with the pupils. Except for the three teachers who assumed that their particular pupils might have ADHD, other teachers were not aware of the exceptional needs of the pupils with ADHD chosen in their class in terms of specific teaching strategies, as they assumed they (the pupils) were immature or playful or otherwise spoilt by their upbringing. In addition, they were not really concerned as they assumed that these particular pupils would outgrow the problems as they grew older.

# DISCUSSION

Although pupils with ADHD are heterogeneous in character, there were patterns that emerged from the data analyses. The patterns were in line with the manifestations reported in the review of some previous researches; in general, most were affected by the requirements of the academic lesson as highlighted in the previous section. Thus, to investigate the entirety of ADHD symptomatic behaviours (in relation to the exceptional situation between ADHD and the classroom atmosphere), information was collected including the views from the pupils with ADHD and their peers, as well as adults in the class. This study adopted a psychological/ educational perspective that the behaviour could be learnt and unlearnt. The data from the unstructured observations and interviews revealed that the sample of pupils with ADHD tended to have characteristics which were in line with those described by many scholars (Cooper and Ideus, 1996; Hughes et al., 1998; Campbell, 1990), namely:

- Handing in incomplete or untidy work (9)
- Have very few friends and the friendship is not long lasting (9)
- Bored with routine tasks and/or refuse to do them (8)
- Use inappropriate verbal requests (5)
- Play with or befriend the same peer/peers during free time (7)
- Overly active (7)
- Forgetful (8)
- Dominant and focussed on themselves or a bossy manner (4)
- Moody (4)
- Overreact due to being emotionally sensitive (3)
- Blaming others for any negative outcome, particularly during group work for any mistakes made (5)
- Make negative statements about others (5)
- Have difficulties to adapt to new situations (5)
- Stay by themselves (4)

All the above characteristics are socially related and are in line with the findings of previous research (Cunningham and Boyle, 2002; Gentschel and McLaughlin, 2000; Brendgen et al., 2002). In addition to the observation procedure, a brief interview with the pupils on the means used to resolve conflicts revealed that teacher's feedback and encouragement were important. More personal attention was also expected to make them more likely to perform appropriately in their interactions, academic works, and/or to behave accordingly. The exploration of the nature of interaction displayed by particular pupils with ADHD revealed that social and global functions with regard to learning varied within and between the children. Nevertheless, they were more likely to be neglected or rejected during classroom activities or interactions.

Within the context of ADHD in the studied cases, pupils were traditionally expected to behave well and obey their teachers. However, when pupils deviated from the behaviour norm, they simply withdrew as they realised they were not expected to do such things (e.g. to question the teacher's instruction/request or behave out of norm), yet the awareness was unsustainable. Some clear examples of this situation were found in most cases of assertiveness in Kefli, Abdul, Rizam and Narmi, where they compromised easily when the teacher or assistant teacher intervened within any crisis situation, no matter what approach was used (autonomy or diplomatic). The possible explanation concerns with cultural values and moral compulsion. However, the degree of their negotiation varied. The opposite situation was found in a few cases where pupils just ignored the teachers' instructions that they disliked (e.g. Rozi and Justi: perseverant behaviour was not effectively controlled by an authoritarian approach). One possible explanation for the variation in the pupils' reactions is that it may be influenced by other problems (co morbidity), as argued by Conners (1997) and Kadesjo and Gillberg (2001). Kadesjo and Gilberg (2001) indicated that children with co-morbid problems, "by far outnumbered those with ADHD only" (p. 491). For example, Rozi apparently also had speech problems and mood instability. These problems were noticed during the observation period and were supported by the teacher's comments/perception, whereas in Justi's case, low self-esteem/confidence was noticed. The other explanation could be due to the process of upbringing. Many (6) teachers in this study perceived that pupils' behaviours were influenced by their background and stressed on the fact that parenting is an important contributing factor (Hectman, 1996).

# TEACHERS' PROFILES AND LEARNING ENVIRONMENTS OF PUPILS WITH ADHD

The findings on the profiles of teachers' knowledge regarding ADHD suggested that teachers were not aware of the gist of the term. However, they shared similar perceptions of the nature of ADHD: a condition indicated by behavioural symptoms as listed by the researcher on the ADHDC. Some of them used common sense to assume the variety of ADHD cases corresponding to the severity of the symptoms. Teachers' attitudes towards pupils with ADHD (interpreted by their responses in the interview, the observations and their approach in teaching ADHD) were positive. They positively accepted the pupils' conditions and were confident that the pupils would do well in the long term. This finding is not supportive of Haniz's (1998) findings on Malaysian mainstream teachers' attitudes towards the implementation of inclusive education (IE) for SEN children. In other words, this finding may indicate that pupils with ADHD are more acceptable by mainstream teachers compared to other SEN group. It is reasonable because teachers in the first place did not even know that the pupils had ADHD/SEN. Furthermore, pupils with ADHD are physically no different from typical children, whereas pupils with some other SEN are more apparently different in their basic needs.

Although teachers were positive about pupils with ADHD in their classes (judged in terms of their approach to teaching and planning tasks or activities), there were clear patterns of sporadic mismatch between the individual needs of pupils with ADHD and their learning conditions. The findings also show that instead of their exceptional needs, most pupils with ADHD have been treated as a typical child. This means that they were denied the opportunities to learn according to their needs, not to mention to develop their own interests. The dominance of 'chalk and talk' approach is not encouraged for preschool education (as construed in the MOE curriculum guidelines), yet this was found in most cases. Paper and pencil activities, drilling strategy, and memorization skills dominated the teaching and learning sessions in most of the classrooms. Pupils with ADHD have less chance to express and perform what they know and understand due to the mismatch. Interestingly, despite the common practice, most teachers were aware that pupils' interests and needs were not met and they argued that the mismatches were due to their lack of knowledge and training in SEN. Most teachers admitted that they had used commonsense trial and error approaches in their practices to overcome the deficiency (in dealing with exceptional pupils). Nevertheless, the emphasis on written literacy and numeracy dominated the teaching goals in most cases. Unpersuasive environments/ situations were found at times; for example, less positive reinforcement (more negative comment or reprimand), monotonous or less challenging activities (repetitive or insignificant to pupil's interest), unclear instructions (in some cases pupil's important requests/questions were not entertained by the teacher), and inconsistency in giving instructions, as well as more likely owing to limited training and expertise. These are also not beneficial to non-ADHD children.

The teachers' role in mediating pupils' behaviour is crucial, but this discussion is limited by the amount of data collected as it was only intended to relate to pupils' circumstances. Nevertheless, the MOE Malaysia stressed in one of the preschool guidebooks "the effectiveness of children's learning depends on the wisdom and efforts of the teachers" (p.4) (MOE: 1999 book 1). From the observations and interviews,

it was clear that the teachers' efforts varied in every individual case. The approach and strategies used in dealing with the cases by the first teacher were more towards the individual needs of the pupils with ADHD, whereas in SR4, a whole class approach was more dominantly applied and consequently the exceptional needs of pupils with ADHD were addressed by an assistant teacher (untrained personnel). Nevertheless, most teachers claimed they had put their best efforts in spite of their constraints. A majority of them tended to treat their pupils with ADHD equally as typical children (no specific approaches or strategies, as revealed by the teachers). These teachers, however, were fully aware that the pupils reacted differently to similar activities or rules.

The findings also revealed that most of the teachers were satisfied with the progress made by pupils with ADHD because their classroom behaviours were much improved within 8/9 months (compared to their behaviours at the beginning of the year) although their academic improvement was limited compared to their peers. This might be the reason for the teachers to perceive the 10 pupils with ADHD as not problematic even though they were not typical children at their age. Hence, despite the evidence from the ADHDC and observations, only a few teachers perceived the chosen pupils with ADHD in this study as 'having ADHD'. These findings have an important impact on the implementation of inclusive education for preschool children in Malaysia.

It is speculated that teachers' personal profiles are also related to the approach they adopt. All of them used common strategies in dealing with pupils' behaviours and on a trial and error basis, some teachers kept on with different ways until they were satisfied, while a few gave up and treated the pupil/pupils the same as others. Therefore, on the basis of these data, it could be said that the mismatch between individual needs and the learning conditions of the pupils with ADHD was due to the teaching skills and training issues rather than attitude/acceptance. Hence, a teacher's teaching profile does not make it possible for pupils with ADHD to achieve the optimal level in learning, as their welfare and rights are adversely affected. However, to further take this issue into consideration, more investigation is still needed. These findings have several implications as they indicated that the pupils with ADHD might be at risk of persistent learning and attention problems as argued by many researchers (Cooper, 1993; Gaultney *et al.*, 1999). Nevertheless, the emergent issue is 'in order to broadly implement the intended inclusive education in Malaysia, how does the MOE of Malaysia deal with the variance?'

The cases studied revealed that there was a lack of elements of outward affection in all the Malaysian preschool classes. Outward affection, which is commonly practised in the western society, is crucial in dealing with ADHD. The use of verbal encouragement (praise words such as 'good' 'brilliant' or 'clever'), motherly body stroke (touch) during the time children were upset or in a state of discomfort and affectionate terms (such as love, darling and dear) should be used not only for pupils with ADHD but the whole class. These elements can be nurtured as an expanding model for a 'caring society' by showing/modelling to young pupils to appreciate others. In addition, more emphasis should be given to show 'what is right' instead of focusing on 'what is wrong' so that pupils will have the choice to correct their actions (Malaysians tend to say "don't do that" but do not show how to do other than that).

# RECOMMENDATIONS

• The sample of ADHD in this study had not been properly diagnosed but was identified through the ADHDC which was used as a screening device. Diagnostic procedures for young children are not simple but are feasible. The multidisciplinary team in Malaysia should provide access to diagnosis for teachers and/or parents with possible ADHD cases. This service must come as a priority to the MOE and other related agencies not only for ADHD but other SEN categories. Pupils with co morbid Preschool Children with Attention Deficit Hyperactivity Disorder (ADHD) in Inclusive Settings

conditions should be diagnosed accurately so that all the difficulties can be addressed appropriately.

- This study revealed that mainstream teachers lack the necessary skills and knowledge to deal with ADHD children as they exhibited impairments in many aspects, and the need for concrete and consistent experiences and much adult supervision. Hence, to implement inclusive education for ADHD, teachers' competencies need to be improved. Pedagogical aspects for ADHD related requirements in daily classroom activities could be met by improving initial and in-service training.
- Moreover, action research should be prioritised as teachers may produce valuable materials based on their educational experience. This type of research is currently promoted by the MOE for primary and secondary school teachers (Mohamad Nor, 2002). Preschool and special needs children should be included in the agenda. By promoting action research in preschools, experienced teachers could also share their expertise and experience in effectively teaching exceptional pupils. The combination of many components for effective practice will enrich the research literature.

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# The Davis Model of Dyslexia Intervention: Lessons from One Child

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## ABSTRACT

Ronald Davis developed a theoretical base for the Davis model of understanding dyslexia. The model describes the cause of dyslexia and prescribes certain strategies for intervention. The strategies consist of three main components. The first is the Davis Orientation Counselling procedure, while the second is the Davis Symbol Mastery procedure and finally the Davis Reading Exercises. Annie is a 9-year-old child diagnosed with dyslexia with major problems in the area of visual perceptual skills, which manifest academically in the area of reading and writing. The Davis strategies were used to help correct her dyslexia symptoms. The results suggest that the Davis Orientation Counselling method has helped to correct her visual perceptual problems, which in turn improves her reading and writing skills. Furthermore, the Davis Symbol Mastery was able to help identify and correct her problems with reversals. Finally, the Davis Reading Exercises helped her in tracking and in word recognition. Therefore, it is suggested that the Davis method offers a plausible explanation for Annie's dyslexic symptoms.

# Keywords: Davis Model, dyslexia, intervention

# **INTRODUCTION**

Dyslexia is one of the most widely known learning disabilities (Sanders, 2001). Generally, the term dyslexia is often used to refer to a reading deficit that cannot be accounted for by low intelligence, sensory deficits, emotional problems, or the lack of educational opportunities (Vellutino, Fletcher, Snowling and Scanlon, 2004). Reading problems at word level emerge as a key factor in developmental dyslexia. The latest definition of dyslexia, adopted by the National Institute of Child Health and Human Development (NICHD) and The International Dyslexia Association (IDA), defines dyslexia as characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities (Lyons, Shaywitz and Shaywitz, 2003). In particular, Vellutino

(1979, cited in Pressley, 2002) made the first exceptionally strong case that dyslexia was a result of a language deficit rather than a visualperceptual deficit. Converging evidence from the past four decades of research evaluating the hypothesized causes of dyslexia suggests that the most common explanation for dyslexia stems from an underlying phonological deficit - a difficulty in processing the speech sounds of the native language (Vellutino, Fletcher, Snowling and Scanlon, 2004). Thus, the main focus on the remediation of dyslexia has been to address this particular weakness. Children are first taught individual letter-sound relations and then to blend these letters together to read words and sentences using a visual-auditorykinesthetic-tactile (VAKT) procedure referred to as multisensory. Most methods to teach

Received: 30 September 2009 Accepted: 20 January 2010 children with dyslexia are derived from the Orton-Gillingham approach (Stahl, 2002). The Orton-Gillingham method of instruction (Henry, 1998) uses multisensory, structured, and explicit instruction to teach phonological awareness, decoding, and spelling.

The possibility that dyslexia may be more than just a language disorder and that there may be a variety of perceptual deficits which can result has gained more respectability in the recent years (Martin, 1995, cited in Pressley, 2003). In this study, an alternative model of understanding dyslexia, the Davis model, is given attention.

## THE RESEARCH PROBLEM

The traditional model of dyslexia, i.e. the phonological processing representation, cannot adequately explain certain symptoms of dyslexia reported by children with dyslexia. Such symptoms include reversing of letters, problems differentiating alphabets, moving letters/words, as well as disappearing letters/words or jumbled and reassembled letters and words into different sequences. Lee Lay Wah (2004) reported on cases of children with dyslexia in Malaysia which showed such symptoms. These children have problems differentiating between letters such as 'b/d' and 'j/g' as well as problems reversing such letters. In one of the cases reported, the child with dyslexia complains of letters floating from the page. The child's response was to lower his head in order to press the letters down as he reads. This particular child also sees the letter 'N' floating and turning to become 'Z'. The traditional models of dyslexia do not adequately explain such symptoms and such symptoms are mostly ignored with emphasis given to sounds of language and the process of decoding for word recognition. However, these seemingly bizarre symptoms cannot be ignored as it obviously hinders the child's word recognition process in particular and affects the child's reading process in general. A new perspective on dyslexia put forward by Ronald Davis (1994) seems to offer a plausible explanation for the symptoms described.

#### FRAMEWORK OF THE STUDY

Ronald Davis offers a new perspective on what dyslexia is (Davis, 1994; Davis and Braun, 2003). About 15 years ago, Davis, an engineer and sculptor, discovered something about his own dyslexia that did not fit into the established label of dyslexia. Davis and his team of researchers found that for someone to be dyslexic, three things had to be present; these include a certain way of thinking (picture thinking), a natural ability to disorientate (a perceptual talent), and a specific way of reacting to the disorientation. According to Davis, these three ingredients are responsible for all the symptoms of dyslexia.

Dyslexics think primarily in pictures. They naturally think through mental or sensory imagery rather than through words or sentences. According to Davis, picture thinkers tend to use global logic and reasoning and are usually good at strategizing and creative endeavours. This could explain the unexpected perceived strength found in children with dyslexia which does not correspond to their reading problems. However, this ability among dyslexics can also be a foundation for a problem, which he called disorientation. The principle of disorientation has to do primarily with perception. Davis defines orientation as a state of existence where a person accurately perceives the environment. Disorientation is a state of existence where one does not accurately perceive the environment. According to Davis, disorientation is the key to the puzzle of dyslexia. As dyslexics are essentially picture thinkers, when a child comes across words whose meanings cannot be pictured, blank pictures are produced in the thinking process. The blank pictures contain a feeling of confusion. Davis calls the words which trigger blank pictures and lead to confusion as trigger words. As the blank pictures accumulate, the feeling of confusion intensifies to a point where the person cannot tolerate any more confusion. At this point, disorientation is stimulated and perception becomes distorted. This results in the appearance of symptoms found in dyslexia when a child reads such as reversals, substitutions, omissions, transposition, and words starting to move or disappear. In fact, according to Davis, the only factor limiting these symptoms is the imagination of the disoriented person. For that split second, the person experiences an alternate reality. Apart from visual distortions, audio distortions or distortion in the sense of balance, movement and time may also occur. These are the negative effects of disorientations. According to Davis, this perceptual ability to distort is also a perceptual talent which explains the gift of people with dyslexia such as is often reported in famous individuals like Albert Einstein.

Thus, it can be seen that if disorientation was the cause of the symptoms of dyslexia, logically, by removing disorientation the symptoms would be able to be removed. Davis and his team discovered that it was possible to teach dyslexics to turn off the disorientation which caused them to make mistakes. The process of correction involves helping the child to become aware of this natural perceptual talent and how this perceptual ability could cause disorientations and mistakes. The child is then taught how to control his orientation state. The procedure for this correction is called the Davis Orientation Counselling procedure. Davis Orientation Counselling teaches a dyslexic child a technique for terminating or turning off disorientations. Through Orientation Counselling, the child establishes an orientation 'point' which enables him to perceive the physical environment without perceptual distortions. If a dyslexic child can recognise disorientation and consciously produce a state of orientation at his will, his disorientation can then be turned off whenever it occurs, and thus the symptoms of dyslexia which are manifestations of disorientation will also be terminated.

Apart from Orientation Counselling, another main tool in the Davis model is the Davis Symbol Mastery procedure. According to Davis, the traditional teaching methods are not well suited to the thought processes of a dyslexic. The teaching method for dyslexics needs to take into account the dyslexics' need to form mental pictures which they can use to think with and associate these pictures with the visuals and sounds of the words. The other element required is the creativity process. Dyslexics need to be allowed to create a personal mental picture of the meaning of the trigger words. This principle is in accordance with the principles of constructivism. Therefore, for a child to be able to understand meaningfully what he or she is learning, the child needs to be able to develop his or her own interpretation of the concept. Through Davis Symbol Mastery, the child learns to master alphabets, punctuation marks, and basic sight words with clay modelling.

Another Davis procedure is the Davis Reading Exercises. There are three techniques involved in the Davis Reading Exercises, and these are known as Spell-Reading, Sweep-Sweep-Spell, and Picture-at-Punctuation. Dyslexic students are known to try to go too fast or concentrate too much on the reading material. These two procedures, Spell Reading and Sweep-Sweep-Spell, are aimed at helping the dyslexic child overcome this habit. Meanwhile, Picture-at-Punctuation is a strategy for text comprehension.

The model of dyslexia proposed by Davis and the resulting intervention procedures departs radically from the commonly accepted phonological processing deficit hypothesis model of dyslexia which focuses primarily on remediating the underlying foundational skills of language.

# **RESEARCH OBJECTIVES**

Firstly, the current study was carried out to explore whether the Orientation Counselling procedure, as prescribed by Davis, could be used to help a child showing disorientation symptoms. Secondly, the study set out to explore whether the Davis Symbol Mastery strategy could be used to help the child correct her problems with reversal in alphabets and numbers. Finally, the researcher aimed to explore whether the Davis Reading Exercises could assist the child in tracking while reading.

# METHODOLOGY

A single case study methodology was employed to explore a phenomenon which is still largely new, i.e. applying the Davis procedures to a child exhibiting obvious visual-perceptual symptoms of dyslexia. The child in this research is henceforth known as Annie (pseudonym). Data collection methods included direct observation during the implementation of the Davis procedures by the researcher and parent interviews on the longer term results of the Davis procedures.

## Annie

Annie was chosen for this study because she showed symptoms which fit the profile of dyslexia as described by the Davis model. At the time of the study, she was nine years old and had been diagnosed by the Dyslexia Association of KL as having mild dyslexia. She was studying in a vernacular primary school, which uses three mediums of instruction, the Malay Language, English Language, and Mandarin. She reported symptoms such as seeing letters move and turn on the blackboard and letters/words disappearing while reading. Her parents were concerned with her tendency to make mistakes when copying work from the blackboard and from books. When she copied, she had a tendency to leave out letters or words. When reading, she tended to skip words or lines. Annie also had a tendency to reverse the Chinese character strokes. She also exhibited problems with her motor coordination. Nevertheless, she is also a creative child who excels in art and craft work

## **RESULTS OF THE DAVIS PROCEDURES**

Annie was first assessed using the Davis Perceptual Ability Assessment (Davis, 2000). Annie's assessment indicated positive results. The assessment showed that she had the ability to experience self-created mental images as real and the ability to intentionally shift her perception to look from another perspective. In other words, she could intentionally access the brain's perceptual distortion function and consciously view mental images in three dimensions. According to the Davis model, having this ability to create and distort mental images were the cause of Annie's learning difficulties and also the reason for her creativity. The positive results also indicate that these abilities can be brought under conscious control using the Davis Counselling procedure and the disorientations intentionally turned off. As the symptoms of dyslexia are also the symptoms of disorientation, the process of correcting dyslexia begins with getting the perceptual distortions under control. Once the child gains the ability to turn off disorientations, the child will stop creating dyslexic symptoms.

In order for Annie to understand the Davis Counselling procedure, the concept of the mind's eye, or the location that one sees from, was explained to Annie. Annie was asked whether she could still 'see' what she had done the day before. She was asked to describe what she saw. The purpose was for her to create a mental picture of the scene the day before. She was asked who was doing the 'seeing' of yesterday's scene when her eyes were looking at the researcher. She said that it was her 'eyes in the mind' that were doing the seeing. This was indeed interesting as Davis himself called the location where one is seeing from as the 'mind's eyes'. It was of note that she was able to grasp the concept of the mind's eye as if it was second nature to her. The Orientation Counselling procedure was then used to help Annie control or turn off her disorientation in order to achieve accurate perceptions. It took about 45 minutes to put Annie through the initial Davis Orientation Counselling session in order for her to practise putting her mind's eye onto the orientation point. Confusion occurs when the mind's eye moves around. Annie was taught to deliberately bring the mind's eye back to the orientation point to turn it off. At the same time, the parents were also taught to help Annie practise using orientation at home.

The parents reported that giving Annie the tools to help her orientate reduced her mistakes. When Annie made mistakes following the treatment, she was asked to check her orientation point and her parents reported that she was able to catch her mistakes faster than before. Previously, when a mistake occurred and she was told to locate her mistake, she took a long time to do it or she could not locate the mistake at all. With this tool, she was able to spot her mistake quickly without any intervention from her parents.

The Davis Symbol Mastery procedure was then used to help Annie master her trigger letters. Annie was asked to create the alphabets using clay. According to Davis, dyslexics only learn things which are created by them. When the concept of the word is made in clay, and what the word looks like and sounds like are added, the word will be mastered. Annie started with the alphabet mastery procedure. The purpose was to find and eliminate any letters that might trigger disorientation. Three letters were identified as trigger letters for Annie. Her clay letters, 'j', 's', and 'c' were flipped vertically. To help correct her reversals, she was asked to slowly and deliberately touch and say the name of these letter and was then asked to compare them with the printed letters of the correct orientation. The purpose was for her to realise her mistakes. Once she realised this, it was reinforced by questions regarding the shape of the letters. She was allowed to correct her reversals. In order for her to achieve mastery of the letter, she was asked to put her mind's eye at the orientation point while experiencing the letter with her sense of touch. Once the researcher was sure that the letters would not cause further disorientation, she was allowed to stop. The same procedure was done to identify her problem with numbers. It was discovered that she reversed the number '3'. Next, she was taught to create a word using Symbol Mastery. Her mother was taught to help her create words which make her confused whenever she reads at home. It was explained to her mother that small words in the English language are usually words which trigger confusion because these are the words of which dyslexic children find trouble creating mental pictures. It was interesting to note that this made the mother aware that the mistakes Annie makes in Mandarin are also words which are difficult for her to develop mental pictures for, such as the word 'and'.

Finally, the Davis Reading Exercises were taught to Annie. The Reading Exercises trained her eyes to move sequentially from left to right and to recognise letter groups as words for word recognition. This helped her to eliminate her habit of skipping words and lines when she reads. The researcher watched out for any signs of confusion or disorientation during reading and helped the child to check for the orientation.

It would appear that Annie is a dyslexic child who fit the profile of the Davis model. The perceptual ability assessment indicated that Annie is a picture thinker with the perceptual talent of dyslexia. The Orientation Counselling procedure indicated that Annie could have control over a specific mind function for her own betterment. The Davis Symbol Mastery was particularly helpful in helping Annie identify and correct her reversal problems. Finally, the Davis Reading Exercises helped change her habit of skipping words when she reads.

## DISCUSSION

One of the major tensions in dyslexia research has been the range of potentially conflicting viewpoints. Dyslexia research has been described as an 'ecosystem' involving a pool of different perspectives with overlapping but often conflicting needs attempting to inhabit the same space (Fawcett, 2002). The Davis model of explaining dyslexia is another viewpoint that departs from the presently accepted model of dyslexia. However, it is interesting to note that the Davis model offers a plausible explanation for the visual-perceptual symptoms which are largely ignored in the academic research on dyslexia. The positive results obtained from this single case study imply that the Davis model should not be dismissed even though it radically departs from the present definition of dyslexia. The preliminary findings from this and other studies indicate – if nothing else – that the Davis model warrants further scientific research.

Another reason that the Davis model should not be dismissed is because the author postulates that even though both methods appear different, they are actually two sides of the same

dyslexia 'coin'. The Davis model focuses on the strengths which dyslexic individuals have - the ability to think holistically in pictures and to see things from a multiple visual perspective - and to use this strength as a method for language intervention. On the other hand, the phonological processing representation hypothesis focuses on the other side of the dyslexia 'coin', which is the deficit side of the dyslexic individual. Since a phonological processing deficit directly leads to problems in decoding, the focus of dyslexia intervention from this side of the dyslexia 'coin' is to remediate the underlying deficits until a stable foundation of reading skills is reached. A synthesis of previous researches on reading instruction for students with learning disabilities has indicated that students benefit from systematic, explicit instruction in foundational skills of phonemic awareness and phonics (Swanson, 2008). On the other hand, it would appear that the Davis model skips the entire alphabetic stage of reading where skills in decoding are based on the alphabetic principle and phonemic awareness are important for word recognition. In the Davis model, on the contrary, automaticity which is the final goal of word recognition (Sanders, 2001) is achieved through a holistic and thorough understanding of the concept of the word, the look of the word and the sound of the word as the child constructs his clay model and clay word based on a constructivist multisensory method of creation. However, it is of interest to note that even though both view dyslexia from diametrically opposite perspectives, both the traditional and the Davis method emphasize instruction that is multisensory. The author postulates that this is the point where the dyslexia 'coin' meets.

## CONCLUSIONS

In conclusion, there is a need for more independent and larger scale studies on the Davis model of looking at dyslexia. The postulation above warrants further investigation. Testimonials of the efficacy of the Davis model appear on the Davis website, however, there is little scientific evidence to support or disprove this model. The current case study is limited to only one child and thus no generalizable conclusions can be drawn from it except to say that it has helped this particular child. However, the positive results from this case study do indicate the possibility that for certain children with dyslexia, especially those showing obvious visual-perceptual deficits such as Annie, other methods of intervention than the traditional may be necessary. As the final goal of reading is comprehension, if either the traditional or the non-traditional path can lead to this final goal, the end will then justify the means.

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# Effectiveness of Assistive Computer Technology (ACT) for Enhancing Basic Language Skills among Students with Hearing Disabilities

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# ABSTRACT

It is well-documented that deaf children are often delayed in language development compared to their hearing peers. However, invention of assistive computer technology (ACT) gives deaf students the opportunity to enhance their language skills and immerse on new and more interactive virtual learning environment. The purpose of this paper is to review the potential and effectiveness of ACT for improving language skills and learning outcomes among deaf students. The review is organized into two major sections which reflect the theoretical framework to date, as well as dialogic reading interventions and technology interventions on the deaf's written language. Many researchers conclude that dialogic reading interventions have yielded significant improvement on deaf students' language development and ACT has demonstrated efficacy in enhancing language skills among students with hearing disabilities. Educational considerations in planning computerbased dialogic reading intervention for students with deafness in Malaysia are deliberately discussed for future practitioners and educators.

Keywords: Effectiveness, assistive computer technology, language skills, hearing difficulties

# INTRODUCTION

### Language and Students with Deafness

Normal children develop most of their early linguistic skills through spoken language and they use what they hear to construct their own understanding, which includes the decoding of the words, rules governing the sentences and combining words to make meaningful sentences (Ormrod, 2006; Beaty and Pratt, 2007). Construction of the understanding tremendously influences and helps children later in their development of written language, a secondary form of literacy that revolves around understanding of printed texts and capability to produce written texts (Kajder, 2007). However, deaf children are disadvantaged on both counts due to their inaccessibility to the spoken language and less exposure to sign languages (Goldin-Meadow and Mayberry, 2001; Belson, 2003). Therefore, it is not surprisingly that deaf children are often delayed in language development compared to their hearing peers (Wauters, 2006; Kyle and Harris, 2006; Daigle and Armand, 2007; Mayer, 2007).

Geers (1994) further added that the disparity between their incomplete spoken language system and demands of reading a speech-based system is the culprit that leads to the low-literacy levels among students with hearing disabilities.

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Language deficit in an early onset of linguistic acquisition can clearly be evidenced in middleschool aged where the written language is widely being used (Stoner et al., 2005). Advancing learning process demands highly rich literacy situation, in which reading and writing play bigger role in acquiring broader knowledge. Entering this phase, students should be able 'to read in order to learn'. In a congruent view, Piaget (1964, cited in Passig and Eden, 2000), suggested that lacking on linguistic progression hampered the cognitive development among deaf children, and thus affected the chances to be functional members in the society, i.e. the capability to enquire knowledge to be employed and to be able to communicate with the community (Ormrod, 2006; Bursuck and Damer, 2007; Gunning, 2003; Bond et al., 1994; Bowe, 2002).

Realizing the importance of written language as the precursor of literacy, many researchers have experimented with different types of interventions to improve basic language skills among students with hearing disabilities. Thanks to the invention of technology, special education is gaining the benefit from the application of ACT in its setting. The purpose of this paper is to review the potential and effectiveness of the ACT in improving language skills and learning outcomes among deaf students, and it specifically investigated how dialogic reading interventions could be successfully implemented through ACT. This paper is organized into two major sections which reflect the theoretical framework to date, as well as the dialogic reading interventions and technology interventions on the deaf's written language.

# Reading at a Glance

The first revelation sent down to Prophet Muhammad (pbuh) was;

Read! in the name of thy Sustainer, who has-(Quran 96:1)

The verse implies the importance of reading in human's life, with a view to understand the texts, extract the pivotal meaning and implement the knowledge gains in a beneficial ways. Reading has several definitions underpinning it. Goodman, Watson and Burke (1987, cited by Girgin, 2006) defined reading as the process of problem solving and meaning construction. Gibson and Levin (1979) defined "reading is extracting information from text." They proposed that reading involves several processes and to be able to read requires the acquisition of basic language skills. Massaro and Schmuller (in Massaro, 1975) suggest that reading process starts with the stimulation by a sequence of letters and spaces that conform to orthographic, syntactic, and semantic constraint defining the written language. Reading is a continuously developing activity as a reader grows and expands, as the child progresses through the age. Fresh experience, new vocabulary acquisition, and interaction with printed text help students enhance their language skills (Gunning, 2003; Ormrod, 2006).

### **DIALOGIC READING (DR)**

For normal children, development of vocabulary is highly related to their communicative input and environments (Carney and Moeller, 1998; Ormrod, 2006; Silverman, 2005; Schunk, 2004). Vocabulary knowledge provides foundation to decode and comprehend text and deficit in this area will clearly interrupt the process of becoming a mature reader (Beatty and Pratt, 2007, Bursuck and Damer, 2007; Nagy, Berninger and Abbott, 2006). Moeller, Osberger and Eccarius (1986) found that there was a lack of improvement in deaf students' language skills with age, i.e. with a delay in vocabulary development at 4-9 years compared to hearing children. Thus, limited or no access to oral language potentially hinders the process of vocabulary development in deaf student's linguistic milestone.

Many researchers have conducted various types of vocabulary intervention to help young children and children with language delays enhance their vocabulary acquiring process

(Silverman, 2005; Van Otterloo, Van der Leij and Veldkamp, 2006). One of the prominent vocabulary intervention is a dialogic reading, which is a research-based technique invented by Whitehurst and his colleagues during the 80's at the State University of New York at Stony Brook Reading and Language Project, with the ultimate goal to enrich vocabulary of the children (Arnold, 2005). It is an interactive shared picture book reading practice designed to enhance young children's language and literacy skills. Vygotsky's Zone of Proximal Development and scaffolding concept are applied in this intervention (Vygotsky, 1978), which was evidenced during the shared reading practice. The adult and the child switch roles so that the child will learn to become the storyteller with the assistance of the adult who functions as an active listener and questioner. Three simple steps are involved in the process: (a) asking 'wh' questions that have specific answer, (b) increasing open-ended questions, and (c) expanding appropriately on the children's attempt to answer those questions (Whitehurst et al., 1988; Zevenbergen and Whitehurst, 2003). For adult as a facilitator, DR prompts (i.e. CROWD, PEER) were prepared to help them memorize the DR strategies which should be used during the process of intervention (see Table 1).

# A REVIEW TO SUPPORT THE USE OF DR

Whitehurst et al. (1988: 1994a: 1994b), Wasik

and Bond (2001) and Zevenbergen *et al.* (2003) conducted several studies to investigate the usage of DR in different settings and subjects.

Whitehurst et al. (1988) included 29 children from 21 to 35 months of age with normal development and language level, and from sub-urban Long Island, New York in their study, to investigate the impact of home-based dialogic reading intervention in enhancing children's linguistic skills. The treatment groups received designated instruction which altered the frequency and various aspects of their child-directed verbalization during the reading procedure. Meanwhile, the controlled groups were directed to the accustomed reading procedure with no additional behaviour. Whitehurst and colleagues found that the children from experimental groups (M=29.4 months-old) scored significantly higher than the children in the controlled group (M=27.9 months-old) on the standardized post-test expressive language ability, possessed a higher mean length of utterance (MLU), higher usage of phrases and lower frequency of single words occurrence. The results were maintained at 9 months follow-up assessment.

Whitehurst *et al.* (1994a) selected different samples of 67 children (M=3.46 years-old) from low-income families in New York in five subsidized day-care centres. They were randomly assigned to three different conditions: (a) DR both at school and home, (b) DR in school, and (c) a control condition in which children engaged in play activities under the supervision of their teachers. The outcomes showed significant

Prompts	Description
Completion Recall	Child fills in blank at the end of a sentence Adult asks questions about a book the child has read
Open-ended	Adult encourages child to tell what is happening in a picture
Wh- Distancing	Adult asks "wh-" questions about the pictures in books Adult relates pictures and words in the book to children's own experiences
Distanting	outside of the book

TABLE 1DR prompts (WWC Intervention Report, 2006)

differences in expressive language produced by children from the condition involved the implementation of DR during the procedure.

In a related study by Whitehurst *et al.* (1994b), 167 four years old at-risk children were selected. Oral language, phonological processing, print knowledge, and early written language outcomes were studied. They found significant differences in four out of five domains tested; where phonological processing showed no statistically significant result. A follow-up study conducted by Zevenbergen *et al.* (2003) was replicating Whitehurst *et al.*, (1994b), with additional domains, and narration understanding. The findings showed that positive effects continued to demonstrate, including the outcomes from the additional features.

A hundred and twenty one children (M=4.3 years old) participated in a study by Wasik and Bond (2001). The study was aimed at examining the effects of DR plus extension activities to reinforce usage of target vocabulary in the book on children's activities. Two groups were assigned different reading tasks, namely DR with targeted vocabulary reinforcement and usual reading. The outcomes showed that significant differences in terms of expressive language produced by the children treated with DR strategies. The outcomes are parallel with those by Hargrave and Senechal (2000) and Mol et al. (2008). In Mol et al. (2008), the researchers further suggested that dialogic reading has potential to foster rich literacy experience for family with 2-3 years old children, but less likely for older children, families with at-risk children or children with language impairments.

DR has also been shown to be efficient in other languages (Jimenez *et al.*, 2006; Chow *et al*, 2008; Aram, 2006; Korat *et al.*, 2006).

Jimenez *et al.* (2006) repeated Whitehurst *et al.* (1988) with linguistic minority children selected as sample. 16 primarily Spanishspeaking Hispanic American caregivers and their 7- to 8-years-old children participated in a home-based reading intervention in the families' primary language. Results of their study showed that DR had boosted the verbal participation of the parents and children, parents' reading approaches and children's production of language.

In Aram (2006), children from lowsocioeconomic strata (SES) township in Jaffa, Israel were selected to take part in the research which was aimed to examine the different impacts of three intervention programmes, namely shared reading, alphabetical skills, and combination of shared reading and alphabetical skills conducted by teachers in preschools and investigate whether age reciprocally related to the outcomes of those proposed interventions. Therefore, in order to fulfil the objectives, 156 Hebrew speaking children were randomly assigned to one of the three interventions and comparison groups at the two age groups (3-4 years old and 4-5 years old), respectively. The effects of intervention programmes were separately analyzed and storybook reading was found to be productive in promoting name writing, letter knowledge, phonological awareness, and, marginally, receptive vocabulary, as compared to the comparison group. The unexpected finding found was that the storybook reading programme, which focused on language, did not enhance receptive vocabulary more than the other intervention programmes, and this is in line with the finding by Whitehurst et al. (1994a). In relation to age-related objective, very few differences emerged between the progress of the younger children and that of their older counterparts. Nevertheless, no differences were demonstrated between the progress of the younger and older children on the manipulated dependent variables in any of the programmes, except for receptive vocabulary which documented younger children outdid the older ones in all the programmes.

In a related study by Chow *et al.* (2008) 148 kindergartners (M=63.8) from Cantonesespeaking parents were used as sample to investigate the effects of parent-child shared book reading and metalinguistic training on their language and literacy skills. Children were randomly assigned to one of four conditions: the dialogic reading with morphology training (DRMT), dialogic reading (DR), typical reading, or controlled condition. The findings showed that DR yielded highly improved receptive vocabulary production in Chinese students, and DRMT tremendously enhanced character recognition and morphological awareness. Both interventions were proven to be capable of inducing the children's interest on reading.

Korat et al. (2006) investigated the role of maternal reading mediation and family home literacy environment (HLE) in children's emergent literacy (EL) level and the differences on these variables with regard to SES level. A total of 94 5-6 years old Hebrew-speaking children and their mothers took part in this study. They were evenly distributed into two different social status-stratified groups, namely low-SES (LSES) and high-SES (HSES). Mother-children interactions while reading an unfamiliar book were videotaped and their verbal interactions were also recorded. The findings showed that HSES children demonstrated higher EL levels and had a richer literacy environment. Turning to the maternal mediation level and SES, the researchers found that LSES mothers paraphrased texts more often, whereas HSES mothers discussed the written systems and made connection beyond text. It was concluded that maternal mediation level and HLE mutually existed in the HSES group, whereas no such relationship existed in the LSES group.

### DR IN SPECIAL EDUCATION SETTINGS

Low literacy level among special students attracted many researchers to propose strategies and literacy intervention to alleviate the deficiency in the department. Easterbrooks and Stephenson (2006), in their theoretical review on best practices to use in improving literacy among deaf students, listed DR as one of the 10 most used practices in the deaf education field. However, in relation to the status of deafness, as a low-incidence disability, only a handful research on DR usage among students with deafness was documented. Language enhancement and vocabulary enrichment were the testimonials of the effective DR intervention among students with hearing disabilities (Fung *et al.*, 2005; Gillespie and Twardorsz, 1997) and DR has also demonstrated its efficacy in augmenting language level among children with language impairments (Justice *et al.*, 2005; Crain-Thoreson and Dale, 1999).

Gillespie and Twardosz (1997) selected 18 deaf children aged between 4-11 years old in their study. Nine children were assigned to the experimental group which received story. The nine children in the experimental group cottages participated in the group storybook reading twice a week for the consecutive period of five months. Each storybook-reading consisted of three to six target children, a high school student as their reader, other non-target elementary school-aged deaf students and someone (often counsellor or a child) who were assisting by holding the book. The reader read the story/ book and involved the children in the discussion. On the contrary for the controlled group, the instructors only read the book for them. The outcome proved that the children in the DR group were highly engaged during the reading sessions. It was clearly evidenced when the readers used an interactive reading approach. Moreover, children in the treatment group also performed more independently on emergent reading task and their counsellors identified them to demonstrate enjoyment (positive) behaviour towards reading.

The findings from Gillespie and Twardosz (1997) were extended by the outcomes from Fung et al. (2005). Twenty-eight children from Cantonese-speaking families in Hong Kong, with moderate to severe hearing loss, were included in the study. These children's age ranged from 5 years 2 months and 9 years 1 month, and they were attending kindergarten, first, or second grade in local primary schools. All the participants were randomly assigned to one of the three conditions, namely dialogic reading group, typical reading group or control group. DR was adapted to accommodate the needs of the deaf children. Picture cards were given to the parents and used as materials to support prompt questions. For example, parents were asking the children the prompt questions based on the content of the storybook and the answers were given in the picture cards. The outcome proved that the dialogic reading group produced the largest improvements in receptive vocabulary learning among the three groups.

In a different study conducted in a language impairment field, Justice et al. (2005) evaluated the outcome of a parent-implemented phonological awareness (PA) intervention using DR for young children with specific language impairment. Twenty-two children (M=5 years 2 months) were assigned into two conditions, namely PA intervention and vocabulary production intervention. During the intervention, the treatment groups were exposed to the PA tasks, e.g. "Can you find me a word that rhymes with this (referring to the card with a picture of a corn)?" The outcomes showed the differences in rhymes produced in pre-test and post-test but not in alliteration. Justice *et al.* (2005) also evidenced the age-factor and level of impairments influenced the outcomes of PA intervention.

Thirty-three children (M=51.6 months) with language delays participated in the study by Crain-Thoreson and Dale (1999) and 22 were randomly assigned into one of the two conditions, namely teacher-conducted DR and parents-conducted DR. The findings favoured the intervention groups in expressive vocabulary, receptive vocabulary, and number of word utterances. It was concluded that DR interventions delivered positive results in terms of vocabulary enrichment among children with language delays.

# WHAT IS ASSISTIVE COMPUTER TECHNOLOGY (ACT)?

In this section, the author segments the review into two sub-components, as follows:

- A review to support the use of ACT to improve language learning in special education settings; and,
- Electronic books and their impact on the language development of children.

The integration of education and technology has sparked a new experience of learning and benefited most of the students and educators. In a closer context of teaching and learning process in special education settings, Assistive Technology (AT) which demonstrated benefit in enhancing life is defined as any technology that allows an increase, maintenance or improvement of the functional capabilities of an individual with a disability (Morrison, 2007). In a different definition of AT but serving the same objective, Lewis (1998, cited in Jeffs et al., 2006) described that "First, it can augment an individual strengths so that his or her abilities counterbalance the efforts of any disabilities. Second, technology can provide an alternate mode of performing a task so that disabilities are compensated for or bypass entirely." In a nutshell, AT provides someone with disabilities the opportunity to perform and complete task efficiently and independently.

On the other hand, Assistive Computer Technology (ACT) is functional in the same manner as an assistive device, but it requires access to electronic technology, specifically computer technology and is used to address students' learning problems. ACT, Computer-Based Learning (CBL) and Computer-Assisted Learning (CAL) are different lexicons sharing similarity in performing the function to facilitate learning through computer technology.

# A Review to Support the Use of ACT to Improve Language Learning in Special Education Settings

Many researchers concluded that technology invention has sparked benefit in enhancing language learning among students with disabilities (e.g. Gentry *et al.*, 2005; Barker, 2003; Massaro, 2006 in Miesenberger *et al.*, 2006; Noraini *et al.*, 2006; Mioduser *et al.*, 2001; Lee and Vail, 2005; Yang and Lay, 2005) across the modalities.

Noraini *et al.* (2006) conducted a survey to assess the impact of MyGfL on its users. MyGfL is a web-based learning portal owned by the Malaysian government through the Ministry of Education to cater for the learners' needs in Malaysia. A section for the non-hearing students was developed with additional sign-language captioning. The portal is also accessible for the public who wish to learn the sign language. The research on the feasibility of Malaysian Grid for Learning (MyGfL) in assisting hearing disability students in their learning yielded positive perceptions from both the students and teachers. Children with hearing needs and their teachers agreed that the contents in MyGfL have helped these children far better in learning.

Barker (2003) conducted a study to evaluate the effectiveness of a computer-based vocabulary tutor in an elementary auditory/oral programme. Nineteen children with hearing disability took part in the study. The vocabulary tutor displayed line drawings or photographs of the words to be learned while the computer generated avatar of a 'talking head' provided synthesized audiovisual speech from the text. In general, children memorized 70 new words from everyday objects and after four weeks, they were found to retain 39 words at the most. Through the process, children memorized 218 new words for everyday household items. After four weeks, the vocabulary production was tested and most of the participants retained half of the total number of the words. In a conclusive ending, Barker stated the effectiveness of the computer-based vocabulary tutor had been demonstrated.

The findings are consistent with the ones by Massaro (cited in Miesenberger et al., 2006). Massaro conducted a study to evaluate the efficacy of vocabulary instruction using an embodied conversational agent as the instructor name, Baldi<sup>®</sup>. It is a 3-D computer-animated talking head. Baldi provides a realistic visible speech that is almost as accurate as a natural speaker. Eight children with hearing loss participated in this study. The researcher developed a set of lessons with a collection of vocabulary items which was individually composed for each student. Each collection of items comprised of 24 items, and they were broken down into three categories of eight items each. Three lessons with eight items each were provided for each child. Images of the vocabulary items were presented on the screen next to Baldi as he spoke. Assessment was carried out on all of the items at the beginning of each lesson. This included identifying and producing the vocabulary items without feedback. The outcomes showed that identification accuracy was higher than production accuracy. In addition, a reassessment test was carried out about four weeks after the completion of the experiment revealed that the students retained the items that they had learned.

In Mioduser *et al.* (2001), 46 children aged 5-6 years old at high risk of learning disabilities (LD) participated in a study to examine the

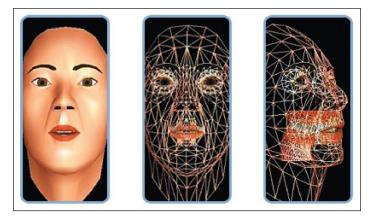


Fig. 1: Baldi ® (Massaro in Miesenberger et al., 2006)

effect of computer-based instruction compared to conventional modes of instructions in early reading skills acquisition. The children were randomly assigned to one of the three groups: Group 1 (n=16) received reading instruction which included both printed and computer-based materials, Group 2 (n=15) given printed materials reading instruction, and Group 3 (n=15) served as a controlled group which received regular special education instruction without specific reading instruction. The findings indicated that children who received the reading intervention in the forms of both printed and computerbased materials significantly improved their phonological awareness, word recognition and alphabetical knowledge relative to their peers who received the other two conditions.

In their study, Lee and Vail (2005) investigated the effect of computer-based word recognition intervention in four selected children with developmental disabilities. The intervention programme was developed through a formative evaluation process and embedded a constanttime-delay procedure which involved sounds, video, texts, and animations. The percentage of correct responses was measured. The programme consisted of among others, direction page, video segment with verbal description, and task directions. Findings indicated that all the participants acquired the targeted words. They gained incidental information presented through antecedent procedure and sight word recognition.

Yang and Lay (2005) developed a computeraided Mandarin phonemes training (CAMPT) system and evaluated its effectiveness in enhancing phonemes among deaf students in high schools. The system analyses the spoken Mandarin phonemes of a hearing-impaired person, compares it with the phonemes database, and shows the results on the computer monitor. The analysis showed that the system could help the students with hearing disabilities in learning Mandarin phonemes.

# DR via Electronic Books and Its Impact on Language Development of Children

In a previous review, using a printed materials, DR has been demonstrated to be effectiveness in augmenting language level of children including among children with disabilities (Whitehurst

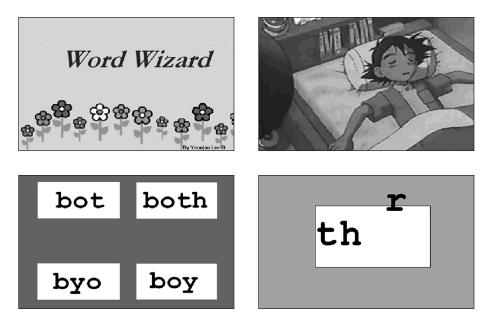


Fig. 2: Screenshot from the computer-based language programme in Lee and Vail (2005)

et al., 1988: 1994a: 1994b; Wasik and Bond, 2001; Zevenbergen et al., 2003; Walsh and Blewitt, 2006; Jimenez et al., 2006; Chow et al., 2008; Aram, 2006; Korat et al., 2006; Fung et al., 2005; Gillespie and Twardorsz, 1997; Justice et al., 2005; Crain-Thoreson and Dale, 1999). Advances in information and technology communication have brought new dimension of learning, which evidences the influx of technology-embedded learning. DR too, has gone through the evolution of technology when the conventional method of conducting the faceto-face session is substituted with the computerbased intervention programme. The new idea of computer-based DR procedure has attracted a few researchers to investigate the efficacy of e-DR in enhancing language skills of normal students (Korat and Shamir, 2007) and students with disabilities' (Kennedy, 2004; Gentry et al., 2005).

Korat and Shamir (2007) conducted a study to examine the effects of electronic storybooks on the emergent literacy relative to the conventional method, being read the same storybook in its printed version by adult. A sample of 128 children aged 5-6 years old was stratified according to their socio-economic status (SES), namely low (LSES), and middle (MSES). Then, the children in each group were randomly assigned to one of the three conditions. The two intervention groups included three book reading sessions each; children in one group individually read the electronic book; in the second group or served as a control, received the regular kindergarten programme. Vocabulary, word recognition and phonological awareness were also measured. The children's vocabulary scores in both intervention groups were found to improve and they also showed a similarly good level of story comprehension. In both the SES groups, the children's phonological awareness and word recognition did not improve following the two reading interventions compared to the control group.

Kennedy (2004) investigated acquisition of word recognition and word knowledge using Thinking Reader among students with hearing disabilities. It is a digital book with reading comprehension support embedded, facilitated word comprehension using multimedia which include videos in American Sign Language that correspond directly with the reading material. The study was implemented using deaf middle school, or grades 6, 7, 8, students whose average reading ability was at the first and second grade levels. The goal of the study was to observe the process and gain insight into the decisions and interactions students made to enhance their vocabulary with Thinking Reader, a computermediated environment. The findings of this study suggested that the students benefited from the multimedia features of Thinking Reader. The multimedia features support students' word recognition, word knowledge, and encourage independence. In addition, the use of technology to present text bilingually, in both American Sign Language and English, had an impact on the students' motivation. The students reported that the decoding view was the most successful in motivating them to recognize words.

In a study conducted by Gentry et al. (2005), technology has again done its magnificent job. The results suggested that presenting a story on CD ROM with multiple modes of reading cues, such as pictures, print and sign language could be an enjoyable and interesting supplement compared to the conventional reading practices. A sample of N=28 deaf students were chosen to participate in the study. Using the repeated measures design, they were given four different reading treatments in a CD ROM: (a) print only, (b) print and pictures, (c) print and digital videos of sign language, and (d) print, pictures and digital video of sign language. Surprisingly, the level of comprehension was shown to be the highest for stories presented with print and pictures. The least conducive treatment was presenting the story via print only. They further suggested that the use of multimedia application is significantly more effective in reading comprehension than using print-only material.

#### DISCUSSION

Students with hearing disabilities have different needs in education relative to their normal peers.

Planning an adapted DR into computer-based intervention, with regards to the deaf students as users, involves several factors that should be taken into consideration by the educators and practitioners. Understanding the factors which highly contribute to the success of the aforementioned programmes is therefore crucial.

# NEEDS OF THE DEAF CHILDREN

First, the Computer-Based Dialogic Reading (CBDR) should be able to address the physical needs of the deaf. For a deaf or hard of hearing person, computer software applications are generally accessible and usable in respect to the visually oriented and text based application. To be more precise, Belson (2003) elaborated the criteria for evaluating the software for the deaf and hard of hearing students by citing the guideline provided by Gallaudet University's Laurent Clerc National Deaf Education Centre. The guidelines are stated below:

If deaf or hard of hearing evaluators/ users cannot understand what the software is about (without the ability to hear the sound accompanying the programme, then the importance (of sound in its use) would be major. If some portions of the product can be understood despite the fact that audio information cannot be heard, then its importance is moderate. If the sound is not critical to using the product successfully, then it is minor. If you are a hearing reviewer, please be sure to evaluate the product with the speakers turned off (Gallaudet University's Laurent Clerc National Deaf Education Centre).

The author adapted De Jong and Bus (2003)'s specific guidelines to evaluate the appropriateness of the software for students with deafness (refer to Table 2).

### FAMILY MEDIATION

Second, several studies showed that family mediation is an influencing factor in determining the effectiveness of a reading intervention (Whitehurst *et al.*, 1994a; Mol *et al.*, 2008; Korat *et al.*, 2006). Thus, family should give support and participate in any intervention programme provided by the schools. Family mediation encourages more verbalization and interaction among children. In utilizing computer-assisted learning, family mediation is very helpful in helping students with disabilities to be in contact with the software. Parents can help in operating the software and discussing the learning.

# THE USE OF VISUAL CUES AND ANIMATIONS

Third, the use of visual cues has been proven to be beneficial for language learning among students with hearing disabilities (Gentry et al., 2005; Fung et al., 2005; Johnston et al., 2008). Pictorial books and pictorial reading materials tremendously assist the deaf children especially those with severe to profound hearing loss during the language acquisition period (Bond et al., 1994). Deficiency in auditory forces the deaf students to utilize visual cues bridge signs and printed text. However, several added considerations should be carefully used to guide the implementation of visual cues in computer-based intervention. Kim et al. (2007) found that for younger age deaf students, animation is deemed as the most enjoyable features which are relatively in contrast with students of older age who prefer self-paced navigation on the animation provided. Albeit one should be concerned of not overdoing it which may result in shifted learning objective. Too many animations will distract the students from extracting learning from the software (Kim et al., 2007; Kim and Gilman, 2008). In addition, the embedded multimedia components should be presented as a choice for deaf users. It is documented that simultaneously playing ASL video, printed text, and pictures produced lower comprehension and word recognition

#### Effectiveness of Assistive Computer Technology

The adaptation of De Jong and Bus (2003) coding system for the content analysis of e-books

Coding variable	Analysis criteria
Book processing	<ol> <li>Introduction screen: option are explained</li> <li>A forward and back button to load the next or previous screen</li> <li>Overview screen shows all screens in small format</li> </ol>
Multimedia in pictures	<ol> <li>Dynamic visuals to dramatize the story</li> <li>What is dramatized; details, fragments or complete story scenes?</li> <li>Availability of an oral/sign reading</li> </ol>
Multimedia connected to printed or gestural text	<ol> <li>Print that changes while it is being narrated by highlighting, colouring and the like</li> <li>Availability of games:         <ol> <li>as a separate page;</li> <li>integrated in the story</li> </ol> </li> <li>Hotspots:         <ol> <li>availability;</li> <li>integrated in the story</li> </ol> </li> </ol>
Interactivity of the story	<ul> <li>10. Interactivity of illustrations accompanying the story:</li> <li>(i) no interactivity;</li> <li>(ii) realized by the availability of games and hotspots;</li> <li>(iii) realized by the availability of games and;</li> <li>(iv) realized by the availability of hotspots</li> </ul>
Interactive legibility	<ol> <li>Option to start, restart and interrupt the sign reading</li> <li>Availability of print</li> <li>Hotspot in the text to activate pronunciation of phrases or separate words</li> <li>A dictionary to explain words in the story</li> </ol>

among deaf students. The causal might be traced to the overloaded cognition provided by simultaneously playing various multimedia components (Gentry *et al.*, 2005).

# **INTERACTIONS**

Meanwhile, in discussing about animations and interactions, Schery and O'Connor (1997) stated the appropriateness of stimuli and responds indicating that the programme features, including accessing the type of stimuli, the requirements for responding and the reinforcement provided, need to be carefully examined so as to determine if they will provide a positive learning experience for students. Interaction which consists of stimuli and responses are much akin to the prompt of Wh- in the face-to-face shared reading programme. Thus, stimuli presented must be provided in the much similar way as humans and the reinforcements should be administered to boost the motivation. The suitability of using animation and interaction in the software is therefore crucial in order to avoid bored experiences, frustration and de-motivation.

# SUITABILITY OF THE READING MATERIALS

The next factor that should be taken into consideration during the planning process is the suitability of the storybooks or reading materials chosen for the audience. Delays in languages could cause deaf students to be left years behind the chronology age. Thus, storybooks which suit normal children may not be appropriate for deaf children in a plateau age. Inappropriate reading materials, irrelative of the reading level, will result in an inefficacy of the intervention (Girgin, 2006). In addition, prior knowledge also plays a big role in determining the appropriateness of the storybooks to be included in the reading inventories. Prior knowledge gives students insight experiences to comprehend the stories and provides clues in word recognition (Girgin, 2006). Besides, children get attracted to the characters revolving around their family, animals, and fairy tales (Massaro, 1975).

# CONCLUSIONS

To sum up, computer-assisted learning in accelerating language learning among children with or without disabilities is promising. The adaptation of the traditional language learning method into the digital material with embedded interactivity could constitute a good source for young children's language development, particularly children with disability and at-risk. Entering a new world of technology-based learning, where the processes are equally emphasized as much as tools, incorporating the analysis of needs, theory of learning and linguistic theoretical frameworks is crucial in planning the instructional design of computerassisted language learning. The multimedia combination offers advantages and helps compensating the deficiency in the department of auditory among children with hearing disabilities. Enhancement of visual graphics and interactive media are promising attributes to motivate the joy of language learning among them. Since children with disabilities generally composed a rather low span of attention, technology can do wonder in retaining their focus. However, technology abandonment is on edge if the educational software is developed without concerning the needs of these children. By understanding several factors included in this study, the efficacy of the computer-assisted learning can therefore be enhanced.

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# PhD Students' Experiences of Thesis Supervision: 'Management' as Acceptance and Strategy for Action

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# ABSTRACT

Relationships with supervisors are regarded by graduate students the world over as the most important aspect affecting the quality of their overall university research experience. With the global increase in attrition rates of graduate students, much research is being conducted on understanding the nature of supervisory relationships in an attempt to develop ways of reducing attrition and improving PhD students' and supervisors' experiences of the PhD process. Despite this trend, from the perspective of graduate students, managing supervisory relationships is a topic that has received only scant coverage in the extensive literature on graduate supervision. In response to this gap, eighteen students from diverse backgrounds studying at one Malaysian university were interviewed using a combination of in-depth, one-on-one interviews, and focus group discussions. The results illuminated the central theme of 'management' of the supervisory relationship and included both management of self and supervisor. Managing the supervisory experience was further reduced to two streams: 1) *acceptance* of the situation, and 2) *responding proactively* to the situation so as to optimize the PhD research experience. The findings raise several issues related to the role of managing one's experience in the context of professional development at the PhD level.

Keywords: Experience, management, PhD students, thesis supervision

# **INTRODUCTION**

Completing a PhD is a process that, like many others, is dependent on a close, working relationship between the student and his or her supervisor. Unlike other professional or educational relationships, however, the PhD supervisory relationship can often make or break one's success. Many authors on this subject have indicated that the quality of the student/supervisor relationship is vital to the PhD process and often pointed to as the most important factor in whether or not students make it through the process (Zainal Abiddin, 2007). With the current negative trends in postgraduate attrition rates occurring globally, there has been a plethora of studies looking into the PhD supervisory relationship from a variety of angles (Burgess *et al.*, 1993; Moses, 1984; Rudd, 1985; Whittle, 1994).

From what students and other researchers claim, the heart of a successful supervision process is the quality of the relationship between student and supervisor (Eggleston and Delamont, 1983; Seagram, Gould and Pyke, 1998; Knowles, 1999; Grant and Graham, 1999; Dinham and Scott, 1999). Poor interpersonal relationships and lack of rapport between student and supervisor are the reasons most often given for problems

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encountered in the PhD supervisory process (Hill *et al.*, 1994; McAleese and Welsh, 1983). According to Armstrong (2004, p. 600),

Rarely is consideration given to preferences for the degree of structure in the process, for direction versus freedom in supervisory styles, or for other relationship variables that might be important for effective supervision. Yet relationships with supervisors are also known to be related to the satisfaction and productivity that students find in their supervision, are known to be critical for successful completion, and are regarded by most graduate students as the single most important aspect of the quality of their research experience.

Armstrong (2004) further cites Blumberg (1978), who suggested that trust, warmth, and honest collaboration are key elements in successful supervision. One study even indicated that satisfaction with supervision highly correlated with the students' perceptions of the supervisory relationships than with perceived expertise (Heppner and Handley, 1981).

# **PROBLEM STATEMENT**

The growing amount of evidence of the importance of the interpersonal aspects of PhD supervision is undeniable. Despite the number of studies that have been conducted and the consensus reached by researchers, important gaps still remain in relation to our understanding of the nature of these interpersonal relationships, particularly among postgraduate students from diverse, non-Western backgrounds. For one, there is still a lack of understanding as to how students in particular 'deal with' or strategize to optimize their supervisory relationships. To date, most studies have concentrated on identifying the elements of successful supervisory relationships (e.g. Moses, 1984), while some have even

developed theoretical models in relation to different aspects of the process (e.g. Gatfield, 2005; Styles and Radloff, 2001; Gurr, 2001). Despite this important work, understanding how supervisory relationships are accepted and acted upon by students is an area worthy of more serious research efforts, to extend our understanding of this unique professional development experience.

# **RESEARCH QUESTION**

Typically, the 'nature' of any process, including the supervisory process, refers to a descriptive, in-depth investigation to pull out, from the experiences of the actors themselves, what is happening within and among peoples' daily experiences. Such inquiry arguably requires a qualitative, descriptive approach which is capable of penetrating the hearts and minds of the target group.

The current study aimed to contribute to the ongoing investigation in this area by attempting to understand the nature of the PhD supervisory experience, from the words and stories of PhD students themselves, using a qualitative approach. Using the plethora of prior studies on PhD supervision to guide the process of conceptualizing and formulating the research questions, we attempted to shed light on this issue by focusing on an area related to interpersonal relations between supervisors and their PhD students to arrive at a deeper understanding of the nature of the PhD supervisory relationship from the perspective of graduate students.

The current paper reports on the results from one of the two main research questions posed at the outset of the current study, namely: What is the nature of PhD supervisory relationships at the University under study?

# **METHODS**

#### Situating Ourselves as Researchers

The findings reported in this paper are based on a small-scale study covering one major public university in Malaysia. As lecturers and PhD PhD Students' Experiences of Thesis Supervision: 'Management' as Acceptance and Strategy for Action

supervisors at this university, we were spurred on to conduct the study due to our direct experiences working with PhD students in the context of post-graduate courses and supervision. In our discussions with students in both formal and informal settings, we became increasingly intrigued by the variety of experiences students were reporting having with their supervisors in the context of their PhD study. From the very positive to the extremely negative, the students' range of experiences really struck us. In addition, our colleagues were also sharing a broad range of experiences as well as what could be called different philosophical and functional approaches to working with their students. As young academicians who ourselves are only a few years removed from PhD study, we thought that this issue needed to be examined more closely.

Although perhaps the study could have included 'both sides of the story' so to speak, we chose to begin with the stories of the students, and to attempt to understand their experiences in a more structured manner using a contextual, descriptive, qualitative methodology. Following an in-depth review of the literature, we found that although much research has been conducted on PhD supervision, certain gaps remain related to understanding the nature of these interpersonal relationships and supervisory styles (Armstrong, 2004), particularly in non-Western contexts. Thus, we chose to undertake a study which would shed light on the nature of the PhD supervisory relationship in an attempt to respond to this call.

# Participants

Participants included 18 PhD students from different backgrounds and faculties throughout the University. The majority of the participants were chosen because they were late in their PhD programme, i.e.  $5^{th}$  semester or more, as it was assumed that those who had more established relationships with their supervisors would be able to provide more in-depth data. However, a small number (n = 4) of the participants selected were only in their second or third semester, for

the sake of exploring if there were any major differences in their experiences with the others. One participant was a recent graduate (less than six months).

The students were purposefully selected using a snowballing approach. As a whole, the student participants involved in the study came from a variety of faculties including Engineering, Modern Language and Communications, Human Ecology, Medicine, Agriculture and Science. Half of the students involved in the study (n =9) were international students, while the other half comprised of local Malaysians. Of the international students, four were from Iran, followed by three from Sudan, one from Sri Lanka and another one from Yemen. Eight of the students were males and ten were females. The majority of the students were full-time students. The age range of the participants was between 32 and 48 years.

# Data Collection

Fifteen of the students participated in three focus groups (five in each group), while three semistructured, face-to-face, in-depth interviews were conducted to triangulate the focus group data. The researchers added in-depth interviews to the three focus groups to ensure that an adequate level of depth would be achieved from the respondents. As lecturers at the university where the study took place, trustworthiness was established through our relationships with several students. The majority of the participants were eager to participate in the study as it was rather rare that they were given the opportunity to express their feelings and experiences related to their PhD experience. Thus, when the students were approached to participate in the focus groups or in-depth interviews, they were comfortable and willing to provide information about their experiences.

An interview guide, consisting of a series of eight open-ended questions, was designed and used to help the students describe the nature of their relationships with their supervisors. Each interview lasted approximately 1 to 1.5 hours. The interview followed the flow dictated by the student(s), though the respondents eventually answered all of the questions on the protocol. In this way, the interviews were informant-directed in that they started at points which respondents wished to discuss.

Probes and prompts were used judiciously to provide a more open-ended interview feel. This was necessary, as the topic proved to be personal and even emotional at times, and we wanted to allow the students flexibility and freedom in how they responded. In addition, during the focus groups, the respondents found the issues highly engaging and it created a lively discussion that we felt the need to preserve and even encourage, as it resulted in richer data. It was often a fine line between allowing the respondents to openly discuss the questions posed and having to redirect them to keep them on topic. In order to ensure an accurate transcription of the data, interviews were tape-recorded and transcribed with the permission of each participant.

# Data Analysis

During the period of data collection, we read the transcripts carefully, trying to 'immerse' ourselves in the data (D'Cruz, 2002). Although observation was not a formal method used in the current study, we found that being in the research setting of the university every day helped to better understand the issues at play. In this manner, methodological rigor was achieved through what could be considered as prolonged engagement (Lincoln and Guba, 1985). Interacting with students on a regular basis both formally and informally, discussing the relevant issues with colleagues as well as supervising our own students allowed us to feel highly immersed in the research setting, making the research questions come alive. Such immersion helped us to identify themes, categories, and patterns emerging from the data (Marshall and Rossman, 1999).

In line with the grounded theory approach, the constant comparative method was employed to analyze the data (Glaser and Strauss, 1967; Strauss and Corbin, 1998). Research questions were used as the focus in forming the categories. The transcripts from the interviews were coded, and used to analyze and generate themes and conclusions. In this study, open coding followed by axial and selective coding was employed to arrive at our themes. NVIVO 8 was used to manage and analyze the interview data.

Data analysis of the current study was a highly evolving process that underwent several iterations. As with any qualitative study, the research as well as interview questions evolved during the process of data collection and analysis and the first two focus groups were re-analyzed following a reformulation of the research questions early on in the study resulting from the emerging findings. All the open codes were first examined to find whether individual codes could be combined into higher conceptual categories as a part of the axial coding process. Once these higher conceptual categories were developed, they were then examined for their properties and dimensions (Rausch and Hamilton, 2006). Through the process of selective coding, the axial categories were then analyzed to investigate their relationships to each other across the student interviews. All the three coding stages helped to arrive at a set of themes to describe the nature of the experience the students were having, focusing on the overall storyline.

### Reliability and Validity

In addition to triangulating our data collection methods using interviews and focus groups, prolonged engagement in the setting, member checking, and peer review were used to ensure credibility and trustworthiness of the data (Creswell, 2007). Peer review, in particular, was used at length due to three main reasons: 1) the study took place at the same university where we worked; 2) colleagues at our workplace were familiar with not only the students participating in the study but also the issues being explored; and 3) several colleagues in the same department were qualitative researchers. These factors combined helped us to use colleagues as a sounding board to get their continuous feedback and opinion on the methods used, preliminary findings, interview protocol, and the like.

### FINDINGS

Although the initial study questions attempted to address how students experienced their supervisory relationships, i.e. the nature of the experience, the findings pointed to more than just a description of their everyday experiences and the meaning behind them. Rather, the resulting themes illuminated the experience for the students as one of 'managing' one's PhD supervisory relationship experience, which includes managing themselves and their supervisors. Managing their supervisory experience could further be understood according to two general streams: 1) accepting the situation presented to them; and 2) responding to the situation in order to optimize the experience and complete the process.

The way that many of the PhD students described it, although it was recognized that the quality of the supervisory relationship is the most critical element in the process, both parties risk approaching the process seemingly by "talking past each other, i.e. talking without understanding the other's point of view, with some serious consequences" (Grant and Graham, 1999). Each one has his or her eyes fixed on the goal, which is completion of the process, but in so doing, they take for granted or do not fully invest in the most important aspect which is the process itself. As such, the process is left 'unnurtured' and it becomes highly mechanical and task-oriented rather than developmental. This is an important point for it is the process which is often highlighted as the key to successful completion of the PhD; yet in practice, the process becomes almost secondary, put on the back burner while the focus is placed on fulfilling the tasks required to reach the end goal.

### 'Management' as a Two-Part Process

The choice of the word 'management' to describe the nature of the relationship from the

eyes of the students implies a simultaneously occurring two-part process. Management, or managing, conveys action and is defined as an individual's attempt to handle, direct, make and keep compliant, treat with care, exercise direction, work upon or try to alter for a purpose, and succeed in accomplishing. All the terms used to define the word indicate some initiatives taken by the individual to affect his or her situation in some ways. Before any managerial action can be taken, however, there must be some resolutions or acknowledgements of the situation in which one has been put. In other words, there must be 'something' or 'someone' to manage. Management, therefore, includes two aspects - an acceptance that there is a situation to be managed, followed by actual strategies and efforts to handle, direct, exercise direction, and the like. Managing a supervisory relationship thus implies managing people - the student himself or herself and the supervisor – as well as any of the other controllable elements related to the supervisory experience.

In the context of the current study, the first part of the students' management process is that there is a certain level of acceptance of the situation, no matter how negative it might be perceived. Even among students having negative relations with their supervisors, we found that acceptance was an important theme throughout. For example, Allison, a foreign student who described her experience as, "It was not a good experience for me. In my whole life, I had many bad experiences, but I think it was the worst," changed her supervisor just before the interview for this study took place. Despite her negative experience, prior to 'giving up' on the relationship, she described her acceptance of it:

Our relationship, most of the time -- she was the boss, the leader of many big projects, so she should order everything -- yes, I accepted it, maybe this was the culture.... So I accepted it, that maybe she wanted to be like that... Another respondent, Harry, who described his PhD supervisory experience as very positive, on the other hand, and who had just completed his programme at the time of the interview commented:

... They (supervisory committee) commented but I accepted their comments. I got to accept because these are the people who are going to get me through. So whatever comments, it's only to help me survive my viva. It's as if they help me to survive ... so I accepted...

Another foreign student, Matthew, also spoke of the need for acceptance:

...Acceptance of the situation of my supervisor for me is the best way, because I have accepted that the behaviour of my supervisor is like this and I don't force myself to be angry or to be worried.

Jennifer, a local teacher and part-time PhD student spoke about not only accepting the fact that students cannot always have what they want in a supervisor, but must also be flexible and adjusted to their situation:

Because we want him to have the expert knowledge, we want to have this, we want to have that, but...you have to adjust. You have to play that kind of thing, you know...we don't have the choice many times... to suit my style...to get him to be my supervisor. But along the line, we have to adjust.

Management, as a two-part process, also includes being proactive and even strategic in order to cope with the situation. It reflects the students' efforts to maintain some level of control of their own situation and fate, despite the difficulties they face. This became evident when these students discussed ways of getting through the process in order to achieve their overall goal of completing the PhD. Coupled with acceptance, management in this context refers to the efforts the students make to not merely accept the situation but to also devise a variety of approaches and techniques for navigating their relationships with their supervisors. Francis, a community health student commented:

We can't close the gap...but what we can do as a supervisor and student sort of adaptation...we have to adapt to the supervisor's rules and regulations and the supervisor has to adapt to us on our weaknesses, our limitations and how we can maximize and enhance... to close the gap...how are we going to link that gap...

This quote by Francis is indicative of the two-part management mentality emphasized above. She mentions that, in her experience, there exists some sort of gap in the relationship which must be adapted to or accepted, followed by a simultaneous attempt to strategize ways of 'closing the gap' or what can the students do to change the situation for the better. Another student, Nancy, in facing the reality of having little time with her supervisor, responded with a strategy of her own:

But I'm doing, for example, actually with the three of them (i.e. committee members) I know the one supervisor is so busy I can only see him for ten or fifteen minutes, that's the most time I can meet him. But I try to be ready with everything. At least for 15 minutes I can have a good discussion. Or at least, maybe I email him before that's what I'm doing to get him to at least criticize my writing, but it's not easy.

As highlighted above, Nancy's approach to management of the relationship included the important element of managing herself as well as doing her best to manage her supervisor/ co-supervisors. By managing her own time and work so as to maximize her time with supervisors, she prepared herself by being 'ready with everything,' by being proactive in emailing ahead of time. These are some examples of how graduate students self-manage as a key element in the overall management process.

Allison spoke about working through the difficulties and trying her best to impress the supervisor through producing high-quality work, as another example of self-management:

I think I tried my best because during the last year, I didn't sleep well -maybe every night two to three hours. So I tried to work hard, may be harder than possible. So I pressed myself to do whatever she wanted....

And Katherine explicitly mentioned how her supervisor's advice helped her to realize the importance of managing:

Prof. Ramos tells me that, as a student you should know how to manage your supervisor. Don't bring keropok (Malaysian delicacy), don't bring fruits for me, don't bring gifts for me, but bring your thesis, bring your chapters... that one I need...

Jennifer added the importance of making a commitment to the relationship by being proactive in understanding the supervisor's background and schedule as an approach to being strategic in managing the relationship:

If you tell the person how you want the relationship to be with your supervisory, you have to make an effort. You have to see his time, you have to see his schedule, you have to understand a little bit of his background, you have to understand...

The students' responses to the situation and their efforts to make the relationship work took on many forms, but there was a common need to adapt to the situation through management strategies and self-management efforts which followed their personal level of acceptance of the nature of the relationship with the supervisor.

# DISCUSSION AND CONCLUSIONS

The research question evolved during the course of the study to the extent that by the end of the study, the original question focusing on understanding the nature of the relationship according to personality and work style, for example were not the focal issue for the students. This is in line with the qualitative research process which calls for the researcher to be open and flexible to the reality as experienced by the respondents (Strauss and Corbin, 1998). When queried specifically about concepts such as 'work style,' 'personality,' 'professionalism' and others during the interviews, the respondents found it difficult to locate the concepts within the context of their own experiences, and often resorted to describing those aspects of the relationship which were simply the most significant to them. This is one reason, perhaps, why the interview questions focusing on the nature of the relationship evolved or resulted in students' discussing their experiences from the perspective of management of the relationship.

Of the numerous studies investigating PhD supervision, only a few have addressed the issue of 'management' at length, and how students not only 'do it' but also how they experience it. Styles and Radloff (2001), in their study on selfregulated learning in PhD supervision, put forth a four-part model for supervision which includes 'Management Strategies,' as one of the major components of the process. The authors describe it as "organisation of self and task, and selection and use of strategies and relevant resources at optimal stages of the research" (p. 97). Apart from this, however, they do not elaborate on the finer aspects of what management means to students or supervisors. Grant and Graham (1999) describe the supervisory relationship as a 'pedagogical power relation' where both supervisor and student are both capable of acting to change the relationship dynamic. They assert that the supervisory relationship is one that allows for the empowerment of students.

They emphasize the fact that despite students' institutional disempowerment, students do indeed have the ability to manage themselves and their supervisors to facilitate the pedagogical process in spite of some supervisors' unwillingness to adapt to the needs of students. The findings of the current study therefore support the assertion that students can empower themselves to be better managers of the supervisory relationship. However, this may be less realistic in certain cases as not all relationships and certainly not all supervisors are indeed 'manageable' by students, such as in the example of Allison. This is supported by Grant and Graham's (1999) experiences in conducting university-based programmes on reconstructing supervision for both academic staff and students, where the authors cite supervisor resistance to attending the program as a barrier to changes in their supervision approach.

The current study did not target the PhD process as a whole, but rather focused on the qualities and strategies of the supervisory relationship in particular. Management, as a key theme, can be due to contextual factors. There are several possible explanations for this. For one, as half of the respondents were comprised of foreign students, it is possible that much of the management employed was in response to the fact that so much of the experience itself was new and in many ways - foreign. Beginning with the students' expectations themselves, of which many said they had no idea what to expect, the adjustment process to a new setting and new academic environment could greatly shape the overall experience for the students, including their supervisory relationships.

In reflecting on the findings as they relate to our own experiences as supervisors, we can identify much with Styles and Radloff (2001) when they write that in the context of post-graduate supervision, both supervisor and student are involved in self-regulatory processes. In the current study, although not one of the explicit objectives at the outset, the findings expound on Styles and Radloff's synergistic model of supervision by providing a greater level of understanding as to why management of the supervisory relationship is a major element within this unique professional relationship. Too often, perhaps due to cultural differences as elaborated on by McClure (2005), students enter into the PhD process assuming that management is entirely the responsibility of the supervisor. Perhaps only by necessity, many students over the course of their study realize that to be successful in forging a positive, working relationship and thus increasing their chances of not only finishing the process but making their time together tolerable and even enjoyable, they need to take on the responsibility of being proactive in managing their supervisory relationships to the extent allowed. This is a deeply reflective process for the students as they often find themselves spending as much time and mental energy on relationship management as on their research and coursework.

Like most qualitative research studies, this study has certain limitations particularly in regard to generalizability, as the sample was purposively selected and small. However, in complementing previous studies, particularly McClure's (2005) and others, the authors found certain thematic consistencies across different settings, despite the limitations. Although the study questions and samples differed in a number of ways, some similarities could be seen such as in the students' need to develop a high level of independence in order to solve their research problems; a good supervisor is one who provides a high level of guidance to 'keep students on track'; from the process, students develop a deepened level of selfawareness concerning their personal strengths and limitations; and tensions in experiences of the student/supervisory relationship may be understood in terms of unrealistic or unfulfilled expectations being brought to the new study context but grounded in the home culture (McClure, 2005). Though not directly dealt with in this paper nor the focus of the present study per se, the above themes are consistent with the findings of the present study.

PhD Students' Experiences of Thesis Supervision: 'Management' as Acceptance and Strategy for Action

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# The Correlation between Communication and Social Skills among Early Schoolers in Malaysia

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### ABSTRACT

Innumerable studies have shown that being able to express oneself clearly and understand with equal clarity what other people are saying to you are fundamental enabling skills of life. A proficiency at interpersonal communication is strongly linked to educational achievement and positive social behaviour. Socio-economic status (SES) has also been known for a long time to be a powerful predictor of children's development (e.g. Deutsch, 1973; Sameroff and Chandler, 1975; Scott-Jones, 1984). In this study, communication refers to oral language skills which include the development of narrative ability, as well as the use of talk and varied vocabulary usage (Dickinson and Tabors, 2001). Hence, the objective of this paper is to find out the communication and social skills of the pupils and to see whether there is a relationship between communication skills and social skills of early schoolers and their impact on school academic achievement. This study focused on Year 1 and Year 4 primary school children, and for this purpose, a descriptive correlational method was employed. It was carried out on 344 primary school pupils, of which 168 were from Year 1 and 176 were Year 4 pupils. The pupils in the sample were academically weak and they had undergone screening and diagnostic tests. The findings indicate that the social skills of Year 1 pupils were significantly and positively correlated with their communication skills (r=.31, p<.05) and language acquisition (r=.33, p<.05), whereas the social skills of Year 4 pupils were found to be significantly and positively correlated with their language acquisition (r=.59, p<.05), Mathematic acquisition (r=.41, p<.05), and their communication skills (r=.50, p<.05). There is also a positive and significant relationship between communication (r=.81, p<.05) and social skills (r=.85, p< .05) with family background. These findings show that social skills are very important as children enter primary school. The significant correlations between social skills and language acquisition, Mathematic acquisition and communication skills show that their performance can be negatively affected if they do not acquire the social skills.

Keywords: Communication skills, social skills, early schoolers

#### **INTRODUCTION**

Innumerable studies have shown that being able to express oneself clearly and understand with equal clarity what other people are saying to you are fundamental enabling skills of life. A proficiency at interpersonal communication is strongly linked to educational achievement and positive social behaviour which are goal directed and learned behaviours that allow the child to interact and function effectively in a variety of social contexts (Sheriden and Walker, 1999). A child has to selectively choose appropriate behaviours when interacting with others. On top of that, the child must be able to relate in a way that is acceptable to others in a range of social

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situations. In order to relate effectively, language plays a central part in most social interactions. Some children with language limitations (communication skills) will find that their ability to interact effectively is hindered. According to Social Adaptation Model (SAM), poor communication abilities may influence social competence. Furthermore, SAM also argues that children with limited communication skills have social problems as a result of adjustments made in social situations which are due to their limited language skills. These children realize they have language difficulties and thus avoid social interactions where language is used, thus appearing to be withdrawn (Gertner et al., 1994). Research has shown that children with poor communication skills have greater difficulty than typical developing peers in accessing an on-going interaction. Craig and Washington (1993) observed five 7-year old children with language limitations, four chronological agematched (CA) typical developing peers, and four language age-matched (LA) typical peers. Each child attempted to enter an on-going dyadic interaction between two age-matched peers. Craig and Washington reported that all the CA and LA peers entered an on-going interaction easily and rather quickly. Nevertheless, three of the five children with limited language did not enter the interactions during the 20-minute observation period.

The authors suggested that since these children with limited language had failed to interact in this simple context, they would likely also fail when accessing more difficult situations. The findings by Craig and Washington (1993) are similar with those of other studies compared to typical age-matched peers, and children with poor communication have greater difficulty entering an ongoing activity (Brinton, Fujiki, Spencer and Robinson, 1997; Craig and Washington, 1993), negotiating solutions to a problem (Brinton, Fujiki and McKee, 1998), participating and interacting in groups (Brinton, Fujiki and Higbee, 1998; Brinton, Fujiki, Montague and Hanton, 2000), and sustaining interactions with peers (Redmond and Rice, 1998). Gertner, Rice and Hadley (1994) stated that peer rejection for children with communication problems may begin as early as preschool, whereas Rubin, Bukowski and Parker (1998) suggested that these problems are often associated with, among others, academic achievement.

Besides, socio-economic status (SES) has also been known for a long time to be a powerful predictor of children's development (Deutsch, 1973; Sameroff and Chandler, 1975; Scott-Jones, 1984). They examined and concluded that SES are predictive of children's early cognitive and language functioning, academic achievement, and social competence. Studies of the child's home learning environment have also repeatedly shown that the language environment in the home and the quality of linguistic interaction and learning experiences with the parent have direct and significant associations with children's cognitive and language development (Dickinson and Tabors, 2001). Due to economic reasons, many parents from the low SES group may not have the time to be with their children, and coupled with financial constraints, they may not be able to provide books and other print materials in the home, and engage with them in appropriate language development.

A stimulating and linguistically enriched home environment, which supports children's language and communication skills, is also likely to have implications for children's social and behavioural functioning. Language competence in young children is associated with better social skills. Children, who are able to communicate their feelings and use language to direct their own and others' behaviours, are better able to negotiate social situations and regulate their own emotions (Brinton and Fujiki, 1993; Gallagher, 1993; Howes and Olenick, 1986). Hence, based on the above literature, the objective of this paper is to find out whether there is a relationship between communication skills and social skills of early schoolers and whether it has any impact on school performance.

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# METHODOLOGY

### Sample

This study utilized the descriptive correlational method. It was carried out on 344 primary school pupils of which 168 were from Year 1 and 176 were from Year 4. The pupils in the sample were from 6 different schools (3 urban and 3 rural schools, respectively) which were randomly selected. In Malaysia, the number of classes for each year of study is between 5 to 6. The pupils in the samples taken from the six schools, who were academically weak, had to undergo screening and diagnostic tests. For Year 1 students, the weak ones were identified by the teachers based on their observations and their daily performances. As for Year 4 students, the last two classes were selected based on the school streaming practices, whereby the last two classes comprised of academically weak students.

#### Instrumentation

For the communication skills, the children were tested based on the reading text and performing actions based on oral directives. For example, they were asked to read on various topics, tell jokes and give information (speaking for various purposes). In addition, they were also encouraged to ask questions in complete sentences and express anything that was in their minds (speaking clearly and giving information effectively). Moreover, they were observed on whether they got themselves involved in speaking and discussing with their peers, whether they made use of new words and vocabulary and used standard spoken language. These categories in communication skills were adapted from the Maryland Model for School Readiness. For the social skills, the children were given sociometric test with questions enquiring whether they have friends, how many, do they play with their friends and whether they share things with their friends.

#### Findings

Table 1 shows the pupils' levels of communication skills based on a 3-point scale according to the communication skill categories. Most of the pupils were found to be weak in all the categories (between 50% - 75% for Year 1 pupils and between 45% - 67% for Year 4 pupils). However, there is a slight improvement in the communication skills for Year 4 pupils. The weakest categories for the two groups involved using of new words and vocabulary and communicating using standard language.

In terms of their social skills, the data presented in Table 2 show that these pupils were poor although the Year 4 pupils seemed to be better. Majority of the pupils stated that they had friends but mostly around 1-2 only, and this explained the higher percentage in sharing and playing with friends. Only a very small percentage (15% -17%) had 5 or more friends.

Therefore, in terms of correlations, the data given in Table 3 show that the social skills of Year 1 pupils were significantly and positively correlated with communication skills (r=.31, p<.05), and for Year 4, the correlation between their social and communication skills was found to be r=.50, p<.05. In summary, it could be said that if the pupils had good communication skills, they would also have good social skills. In this study, the pupils had weak communication skills, hence poor social skills as well.

Both social and communication skills have also been reported to be linked to academic achievement. In this study, two subjects were looked into; namely mathematics and language achievement. The results showed (Table 3) that for Year 1 pupils, there are positive correlations between social skills and achievement in Mathematics (r=.22, p<.05) as well as social skills and language achievement (r=.33, p<.05). For Year 4 pupils, the correlation between their social skills and Mathematics achievement is r=.41, p<.05, and for language achievement the correlation is r=.59, p<.05. Similarly, there are positive correlations (although weak) between communication skills with good achievement

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Communication categories	Levels	Year 1	Year 4
Speaking for various purposes	Weak	51.4%	45.7%
	Average	45.8%	51.4%
	Good	2.8%	2.9%
Speaking clearly and giving information effectively	Weak	65.4%	59.4%
	Average	31.8%	37.1%
	Good	2.8%	3.4%
Got involved in speaking and discussing with their peers	Weak	66.9%	58.3%
	Average	29.8%	38.3%
	Good	3.4%	3.4%
Making use of new words and vocabulary	Weak	67.6%	61.1%
e s	Average	30.2%	37.7%
	Good	2.2%	1.1%
Using standard speaking language	Weak	74.2%	67.2%
	Average	24.2%	27.6%
	Good	1.7%	5.2%

# TABLE 1 Levels of communication skills

TABLE 2			
Social skills based on sociometric test			

Sosiometric questions	Response	Year 1	Year 4
Do you have friends?	Yes	64%	74.4%
-	No	36%	25.6%
How many friends do you have?	0-1	63.3%	60%
	2-5	19%	25%
	5 or more	17.7%	15%
Do you play with your friends?	Yes	83%	85%
	No	17%	15%
Do you share things with your friends?	Yes	79%	89%
	No	21%	11%

in Mathematics (r=0.20, p< .05) and language achievement (r =0.22, p< .05) for Year 1 pupils. For Year 4 pupils, the positive correlations (although weak) between communication skills and achievement in Mathematics is r = 0.21, p< .05 and r=0.33, p< .05 for their language achievement.

These findings indicate that both communication and social skills are very important as children enter primary school. The positive correlations between communication and social skills with achievements in language and Mathematics among the Years 1 and 4 pupils showed that their performance could be negatively affected if they did not acquire these important skills. The findings also revealed that there are positive correlations (although weak) between social skills (r= .21, p<.05.) and communication skills (r=.44, p<.05) with the parental occupation for Year 1 pupils. As The Correlation between Communication and Social Skills among Early Schoolers in Malaysia

TABLE 3

Relationship between social skills	s and communication ski	lls with achievements in		
language and Mathematics				
Casial shills	Veer 1	Vera 4		

Social skills	Year 1	Year 4
Communication skills Mathematics achievement Language achievement Parental occupation	$\begin{array}{l} r=0.31,p<.05\\ r=0.22,p<.05\\ r=0.33,p<.05\\ r=21,p<.05 \end{array}$	$\begin{array}{l} r=0.50,p<.05\\ r=0.31,p<.05\\ r=0.59,p<.05\\ r=34,p<.05 \end{array}$
Communication skills	Year 1	Year 4
Social skills Mathematics achievement Language achievement Parental occupation	$\begin{array}{l} r=0.31,p<.05\\ r=0.20,p<.05\\ r=0.22,p<.05\\ r=44,p<.05 \end{array}$	$\begin{array}{l} r=0.50,p<.05\\ r=0.21,p<.05\\ r=0.33,p<.05\\ r=56,p<.05 \end{array}$

for Year 4 pupils, the correlations were also positive between their social (r=.34, p, .05) and communications (r=.56, p< .05) skills and parental occupation.

Based on the findings of this study, most Year 1 pupils' mothers were housewives (66.3%), while fathers were mostly self-employed (47.6%) where income was inconsistent. About 42.2% of Year 1 students came from families with around 5 -7 children. For Year 4 pupils, their fathers were mostly self-employed (37.9%) with inconsistent income or working in the private sectors (42.4%). They have considered to be in the lower income bracket. Most (75.4%) of their mothers were also housewives. Sixty nine percent (69%) of these students came from families with around 4-7 children. Therefore, it can be stated that there is a link between these children's communication and social skills with parental occupation and the size of their families. Families with lower income seemed to have larger family size.

# DISCUSSION AND IMPLICATIONS

The results gathered in this study showed that there were positive correlations between communication skills and social skills among early schoolers suggesting that if the communication skill is good, the social skill will also be good. In this study, the pupils who were generally weak in terms of their academic performances were also found to be weak in their communication skills. They could not speak clearly or deliver information effectively. Hence, they could not involve themselves in group discussions with their peers. In Malaysia, children come from various cultural and racial background. It is unique in the sense that they have their own vernacular languages and dialects. Therefore, in order to be able to communicate effectively and participate in group activities, they have to be proficient in the usage of their standard language, be it English language or the national language - Bahasa Melayu. In this study, the pupils were found to be weak in the standard language. This particular problem further impacts and limits their social skills. Most of them were found to have very few friends. These conditions supported the findings of other researchers which stated that children with communication difficulties demonstrated particular problems in their social interactions, including accessing and participating in a group, initiating and maintaining conversation, verbal negotiations, and other social situations (Rubin et al., 1998). In another study, Fujiki, Brinton, Isaacson et al. (2001) observed the behaviours of eight children with language difficulty and found that these children participated less in peer interactions. These findings also support the Social Adaptation Model (SAM) where poor communication abilities are suggested to influence social competence.

Therefore, in order to improve the social skills, the children's communication skills should be emphasized and this has to start from home. Parents could give their children the basic knowledge and good language skills by having good communication, starting from the moment the child is born. In addition, it is also very important for parents to be able to communicate openly and effectively with their children because good communication skills will benefit the children in their entire lives. Generally, traditional research has revealed that mothers who are highly educated have greater success in providing their children with the cognitive, language and communication skills that contribute to early success in school (Sticht and McDonald, 1990). It is also widely believed that the everyday experiences in relationships with their parents are fundamental to children's developing social skills (Cohn, Patterson and Christopoulous, 1991; Parke and Ladd, 1992). In particular, parental responsiveness and nurturance are considered to be the key factors in the development of children's social competence (Maccoby and Martin, 1983). The findings of this study, on the other hand, revealed that most of these children were from low SES homes with large families. Furthermore, the parents were more occupied with their work and had limited time with their children. Their educational levels were also low. Fielding, Kerr and Rosier (1998) found that adults who could not read well and became parents would not spare time or assist their children with significant reading problems. Parental involvement is crucial in enhancing children's social and communication skills. In his work, Auerbach (1989) also pointed out that among some of the indirect influencing factors are emotional climate of the homes, amount of time interacting with adults, level of financial stress and parental involvement on many aspects of reading and communicating. No matter how busy parents are, they must and have to spare time communicating with their children. The authorities, particularly in the education field, should plan appropriate programmes to help create awareness among these parents about the importance of good communication skills as the skill is important for the continuation of social play. As for schools, it is important that teachers recognize the role of peer group in maintaining a child's level of social acceptance. Teachers should encourage social acceptance among peers by planning special activities and grouping children who lack social skills with those who are socially competent so that the latter will provide examples for learning effective skills.

The findings of this study also showed that pupils who were weak in their communication skills would consequently have poor social skills and they did not do well academic ally including language proficiency and Mathematics. As mentioned by Knapczyk and Rodes (2001), poor social skills not only make for unhappy and often lonely pupils, they have a measurable impact on their academic achievement. On the other hand, achievement will improve when social skills are improved. They are more likely to learn important cognitive skills when they are confident and engaging interactively with other children.

## CONCLUSIONS

Apparently, communication skills are important in enhancing social skills. These basic skills have considerable impacts on academic performance. Hence, a strong foundation in language and a great exposure to activities are the keys to ensuring success in the social skills, as well as academic and personal success thereafter. Parents are responsible for their children's education, basic needs and school needs and they should have good communication with the teachers. Parents should also get to know their children's capacity and motivate them based on their interests, and let their children play games and participate in social activities. Similarly, teachers should know their students, use a variety of instructional strategies, be aware of individual differences, motivate students, and have good communication skills.

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# The Social Context of Educating Pre-service Teachers for Success with At-risk Children

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# ABSTRACT

A research study was conducted to find reliable indicators of teacher dispositions that would provide at-risk children with effective educational outcomes. The research indicates that socio-cultural factors provide the best reference points for developing a true picture of teachers of at-risk children. In the U.S., there is a disconnect between the mainly white, middle class teachers, and the increasingly culturally-different students that they serve. The study provides students with an exchange of European and American students to explore socio-cultural factors in classrooms and the inherent dispositions needed by teachers to be effective with at-risk students.

# Keywords: At-risk children, pre-service teachers, social context

# INTRODUCTION

In the United States, the conditions of at-risk children vary from state to state since education and social service agencies are considered state functions and are therefore decentralized under the auspices of each state government. One federal law, the Individuals with Disabilities in Education Act (IDEA), has provided some measure of standardization and regulation in the support of at-risk children, since each state and local education authority (LEA), as a condition of receiving IDEA funding, must provide free and appropriate public education for eligible children and comply with federal regulations and reporting on the use of IDEA funds for atrisk children. In 2004, the federal government funding for the Grants-to-States Program was just over ten billion dollars, an amount that has quadrupled since 1996. Yet, this funding represents only 18.6% of the estimated excess cost of serving children who are at-risk, and approaches only one-half the amount necessary to fully fund these programmes (Apling, 2004).

Financial support for the education of at-risk children, therefore, is a major social context issue. Poverty is a critical piece in preventing effective education, especially for at-risk students. For schools in high poverty areas, there is now the added pressure of the No Child Left Behind Act (NCLB) which mandates that adequate yearly progress (AYP) in test scores must be made, or school districts could face restructuring or closure. In this decade, LEAs face increased accountability, yet lack the funding to make substantive improvements in the education of at-risk children.

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# AT-RISK FACTORS IN THE UNITED STATES

# Socio-Cultural Factors

The socio-cultural factors that are most often identified with school failure are: poverty, absent or single-parent families, parents who did not graduate from high school or who are lacking full-time employment, welfare dependent or low income working families, households without a telephone or transportation, children having difficulty speaking English, teens who are high school dropouts or not attending school, and children living in high-risk families (Census Brief, 1997; Kids Count, 2000).

Poverty is the most widely used indicator of at-risk, since it is linked closely to outcomes in health, education, resilience, and delinquency. In the United States, the eight pockets of poverty include impoverished African Americans, Native Americans, Hispanics, and Whites. Children are at-risk across all ethnic and racial groups (Shaw, 1996; O-Hare, 1996).

Children living in single-parent families pose another at-risk factor. In the U.S. in 2000, thirty percent of the children lived in singleparent families, up 25% in the last decade, and since 1960, a 200% increase. Since most single-parent families are headed by women, children in these households are less likely to have the economic and human resources that their counterparts who live in two-parent families would have (Kids Count, 2000). In addition, population surveys have found that 4 million children, about 5 percent of all children were living in the home of a grandparent. Only 14 percent of the children who lived in a grandparent's home had both a mother and a father living with them (U.S. Census, 2000).

Full-time employment by parents is another critical area for at-risk children. In 2000, nineteen million children (28%) in the U.S. (Kids Count, 2000) did not have a parent in the households who worked full-time, year-round. It has been found that when parents are fully employed that their children's psychological well-being and family functioning are enhanced and stress is reduced (Federal Interagency Forum on the Child and Family Statistics, 2001).

Parents of at-risk children who have dropped out of high school create another at-risk factor. Parents without a high school diploma are less likely to provide their children with an environment that is educationally stimulating (Kids Count, 2000).

Changes to laws for child-care subsidies have also created more of a crisis for low-income families. Since 2001 in the U.S., changes to laws have decreased access to child-care subsidies. These include changed income eligibility thresholds and factors to narrow coverage, restricted access by starting waiting lists and/ or stopping enrolment of new families, and increased co-payments, which all impact both transitioning families and other low-income working families. These changes in laws can be seen by the increase in the number of lowincome working families, now at 22%, which is up 16% from the last decade (Kids Count, 2000).

Access to basic services, such as telephones and transportation, creates yet another issue for low-income families. It has been found that without any phone access, and the accompanying Internet connections so readily utilized in learning today, that children living in these households would have a more difficult time accessing assistance of any kind (Kids Count, 2000). Equally important is transportation. While the number of households without transportation, either a vehicle or mass transit access, has fallen 22% in the last decade in the U.S., there are still 7% of the households without readily available transportation. This figure has also been exacerbated by welfare reform measures, where families attempting to go from "welfare to work" are thwarted by lack of reliable, cheap transportation. These two areas also tend to increase isolation, especially in rural areas, where families are disconnected from economic opportunity and access to health care and other social support systems. Children from welfare dependent and low-income working families are at risk since families in

these economic circumstances are often unable to provide effective health and child-care as well as other critical services (Kids Count, 2000).

# STRUCTURAL FACTORS IN SCHOOLS

There are several important structural factors which conspire to increase academic failure by children at-risk. Tracking, which is used to place students of matched ability in groups, has been found to be based mostly on social indices (Rist, 1970) and decisions made as early as kindergarten by teachers have resulted in students remaining in the same track for the duration of their academic life. By being placed in a lower track, students have been found to develop problems of self-esteem and have higher drop out rates. Meanwhile, over-reliance on standardized tests to make instructional and curricular decisions results in more labelling of at-risk children increased sorting and segregating of children, especially those who are English language learners (ELL). With the increase of English language learners in the U.S., schools that are not equipped to handle these students often place them in special education classes for lack of any other services. This also means inappropriate, limited, and rigid instructional strategies by teachers who are not trained to handle English language learners, and inappropriate texts and other materials used to instruct these children. Testing, and subsequent placement in special classes can also have the effect of narrowing the curriculum, so that there is a priority focus on basic skills and teaching to the test. Schools that use isolated pull-out programmes to service these at-risk children find that there is inflexible scheduling and lost instruction in the regular classroom (Hixson and Tinzmann, 1990).

The curriculum can also have a negative effect on at-risk children, if it does not address the context and content of their lives and realities, and too often, the curriculum serves as a source of social control (Bernstein, 1971). In the U.S., pedagogy and classroom control emanate mainly from a white, middle class praxis. When teachers and administrators do not have direct knowledge of their at-risk children's socio-cultural context, their beliefs and attitudes toward these children are shallow and inaccurate. Effective parenting differs by culture, and what may be considered effective parenting in one culture is ineffective in the other (Benton, 2005). It has been found that in mainstream culture, authoritative parenting is most effective, but not so in Black, Hispanic, and Asian cultures. Therefore, when mostly middle class white teachers use their parenting styles to teach and control children, they lack effectiveness with many at-risk children who do not fit into the mainstream culture. When at-risk children are taught by teachers who lack sufficient understanding of their family and community contexts, the children and their parents also lack empowerment. When teachers and administrators make all curricular, pedagogical, and disciplinary choices and enforce them according to mainstream culture, the role of at-risk children and parents in the educational process is even more constricted.

# SCHOOL-IDENTIFICATION FACTORS

Even if educators wait until children are in school to identify them as at-risk, they still make assessments based on their own cultural backgrounds. When they collect information, whether it is from tests, observations, interviews, or play-contexts, they are deriving conclusions based on their own notions of success and failure. Without full knowledge of the social context, it matters little where and what type of programme the child is placed into, e.g., mainstreamed into a regular classroom with support services, placed in a pull-out program or special class, or provided homebound or residential treatment. Successful interventions are less likely, as expectations of both teacher and students are that poor performance will continue. The entire foundational assumptions of special education instruction are based on mainstream beliefs and values. Until educators accurately represent non-mainstream children in the educational process, or mainstream teachers

are provided opportunities to be among the children in their communities, there is not much hope for improvement in the education of at-risk children.

### **NEED-BASED FACTORS**

The focus of this approach is to view all students as at-risk or in need of special education, and assume that all students will have access to special services. Raising the bar even higher is the No Child Left Behind Act (NCLB, 2001) which pushes for increased accountability of student performance and increased parent empowerment. Parents are now demanding that more funding be available for programmes that deliver results and more local control and flexibility at the state level to allow them more options for their children's education. Driving the process to identify at-risk children in school is the NCLB, which mandates annual testing of all public school students in reading and math, grades 3-8 and high school. Middle- and upperclass parents are also demanding privatization of education so that they do not have to pay both private tuition fees and school taxes for public schools, which has created an erosion of support for public education. As mainstream parents continue to dominate the discussions about accountability, at-risk children and their parents are left to fend for themselves. Voucher programmes, while enticing to low-income parents, do not provide sufficient funds to offer real school choice. Every day, loopholes in the NCLB are created. In 2005, more than half of the states received approval from the federal government to change the way they determine whether school districts are failing. In perhaps the biggest change, districts in the state of Georgia no longer must have all students in various sub-groups, including blacks, Hispanics, special education and limited English proficiency categories, to meet state testing goals. These rule changes help out wealthy districts with fewer minority students, but leave high minority enrolment schools stranded and accountable to making adequate yearly progress on their test scores. This change violates the core

philosophy of this education law, which is, as the legislation's name suggests, that no children should be left behind.

# NATIONAL AT-RISK STANDARDS

The No Child Left Behind Act of 2001, originally intended to give all children a chance to succeed academically, is quickly being eroded by exceptions that are now being granted to the states by the Department of Education. Inadequate funding to carry out the law's provisions is also shifting resources to fewer school districts and once again providing wealthy suburban districts the opportunity to opt out of providing effective programmes for at-risk students.

While politics have played centre stage in the provisions for at-risk children, the National At-risk Education Network (NAREN) has begun offering school districts the opportunity to conduct self-studies of their own districts' at-risk programs as an elective process that would strengthen school districts' abilities to meet NCLB accountability standards. NAREN provides guidance and leadership in establishing effective design and implementation of quality interventions for at-risk children, which is beginning to be recognized as a valuable tool for improving programs.

Included in the proposed NAREN certification standards are key factors to enhance the success of at-risk children and a focus on protective factors for development, such as child/mentor relationships, personal school environments, and opportunities for children to learn about their own talents. Schools that use the NAREN standards can more easily become agencies of inclusion for all children, and advance an ethos of complex equality for all students.

The NAREN standards, as developed by Dallman-Jones (2002), emphasize a comprehensive view of working with atrisk children in four contexts. *Curricular Contexts* that are emphasized are: (1) accelerated academic curriculum, (2) a strong literacy component, and (3) personalized curriculum. *Structural Contexts* include (4) a deliberate self-management program and (5) small schools and class sizes. *Community Contexts* focus on (6) project-experiential-work orientation and (7) a collaborative community model. *School Contexts* involve (8) a solid planning and administrative support system, and (9) a comprehensive staff development model.

An accelerated academic curriculum means that teachers should maintain high expectations through use of appropriate pedagogy. "Acceleration is accomplished by setting high and clear goals, with meaningful material, matched to learning style, signifying that each student has his/her learning individually prescribed (Dallman-Jones, 2002)." A crucial aspect of this curriculum is a strong literacy component, which includes effective procedures and strategies for assessing, prescribing, monitoring, and adjusting appropriate literacy activities. Another component lies in the personalization of the curriculum, which must shape itself to the student and which takes into account all of the aforementioned factors (socioeconomic, structural, school identification, and needs-based).

Smaller schools and class sizes have been shown to improve student performance on grades and test scores, lower drop-out rates, and reduce violence and drug abuse (Noguera, 2002; Lee and Burkam, 2003; Deutsch, 2003). Small classes also have been found to "stimulate student engagement, allow more innovative instructional strategies, increase teacher-student interactions, reduce the amount of time teachers devote to discipline, improve teacher morale, and minimize feelings of isolation and alienation in adolescence that can come from anonymity (Tajalli and Opheim, 2004)." Resilience, which is a combination of having a strong relationship with competent, caring pro-social adults, an average or better IQ, good attention skills and knowledge of the streets, can be fostered in this type of environment to build students' selfesteem to persist in the educational process.

Building and exploiting the social capital that already exists in communities can be accomplished through four principles: interaction, responsibility, shared vision, and collaboration/ inclusion, and developed at four levels, namely the immediate and extended family level; the neighbourhood, communities of faith, school, and work level; the institutional and market level; and the societal culture level (Benton, 2005). Schools, teachers, and administrators who find ways to participate substantively in collaborative community activities will affect school outcomes for at-risk children. When combined with another NAREN standard, the project-experiential-work orientation, business, and community leaders can demonstrate the importance of a solid work ethic, which involves important life skills of decision-making, prioritizing, problem-solving, persistence, resilience, and accountability (Dallman-Jones, 2002; Matson, 1997).

School leadership on education for atrisk children is imperative. A collaborative, communicative, and supportive administration is necessary for teachers to be effective in their efforts. Comprehensive staff development programs are the "front lines" for effective at-risk interventions. When the majority of teachers do not come from at-risk home environments themselves, the possibility of disconnects between them and the development of appropriate curriculum is a likely possibility. Therefore, staff development programmes must work from many perspectives in order to provide teachers with effective pedagogy. In addition, these programmes must be deliberate and pertinent. They must be delivered in a variety of settings which involve a variety of activities including distance learning, in-house interactive involvement with experts, video-conferencing, attendance at conferences and trainings, and professional association membership (Dallman-Jones, 2002).

# THE STUDY

# Purpose of the Study

All these contexts (curriculum, structure, community, and school) require concerted effort by all stakeholders. As teacher educators, we have selected to focus our research on teacher's pedagogical development in the belief that this is the central axis of at-risk children issues. With the advent of inclusion, all teachers must become proficient in working with at-risk children. Major issues in educating pre-service teachers for success with at-risk children are the disconnects between the social context of the pupils and that of the teachers. While the majority of teachers in the U.S. are female (75%) and White (84%), the pupils are progressively more racially, ethnically, and linguistically different. Current school enrolments indicate that over 35% of school-age pupils are culturally different, while only 15% of teachers are. A disproportionate representation of pupils in special education who are racially and ethnically different, poor, immigrant, non-English speaking and male also widens the gap. A variety of culturally-different parenting styles adds to the magnitude of the issues.

Therefore, when predominantly white, middle class teachers who have grown up with mostly trouble-free childhoods and intact families begin to work with at-risk children, they become overwhelmed by the degree and magnitude of the problems with which at-risk children come to school. Since these teachers have very few life skills to draw upon for work with at-risk children, their cognitive dissonance often creates feelings of guilt, shame, or anger with the mainstream culture that sustains this cultural underclass. Efforts by these white middle class teachers to reach out to these at-risk children are often met by withdrawal, hostility, and resentment by these pupils, who interpret the help as pity or condescension. The teachers, in turn, misinterpret the lack of responses to their gestures by redirecting their anger at the at-risk children, who are now blamed for their own academic failures.

While the theory behind best practices for work with at-risk children can be learned from textbooks, there is no substitute for direct practice. Our research focuses on developing effective ways to bridge the gap between the cultures of the at-risk and non-mainstream children and the teacher's cultures to foster positive dispositions and attitudes for work with at-risk pupils through informed experiences that develop *ethical caring* (Noddings, 1992), the engagement of the problem, followed by action with and on behalf of the recipient.

During our 20 years of research on student teachers who had completed at least eight weeks of teaching in another culture, we found that these teachers displayed increased awareness of the world around them, were better able to cope in new situations, and were much more comfortable reaching out to people who were culturally and ethnically different from themselves. Yet, not all of these student teachers came back "changed." It was this vexing problem that we wanted to explore in our research. Our research questions focused on the following: What are the key dispositions that teachers need to work effectively with atrisk children? Are the dispositions of ethical caring key to teachers' success in their work with children? Does teachers' articulation of atrisk student problems change as a result of their participation in the program?

After going through the research literature on student teaching abroad, we found several variables that we believed would make a difference in the growth of teachers' positive dispositions toward "different children," i.e., children at-risk. The variables identified were the length of stay abroad, the intensity with which the student interacted with the culture, their involvement in the community, the school's connection to the community, the use of language other than one's own native tongue, the type of school placement, whether or not the student was in a setting with at-risk children, the types and kinds of school support the student teachers received, the modelling they observed, students' pre-departure preparation for teaching abroad, and students' pre-dispositions for wanting to teach abroad (Bryan and Sprague, 1997; Clayton, 1995; Clement and Outlaw, 2002; Jokikokko, 2005; Mahan and Cushner, 2002; Quezada, 2004; Quinn et al., 1995; Stachowski and Chleb, 1998).

# Participants

Through an international grant, six universities in Europe and the United States were able to form

a consortium to work together on this common issue as identified above. In the second year of the grant, the partners arranged to exchange 8-9 students each from their universities, with 26 American students going to the three European partner campuses and the 27 European students coming to the three American campuses, so that two-three students from each university were at each partner institution campus. Of the 53 students who were selected to participate in the program, the majority were second and third year students, with a few seeking second degrees in education. For the most part, the students had had only introductory teaching experiences in their own countries. Participants ranged in age from 19-35 years, with most being 21. Students were selected through an application and interview process, which screened out students with low GPAs and questionable academic records. There was also some measure of student self-selection, since the program was advertised as challenging and only students with the skills to tackle this program were advised to apply. Students were compensated with a travel stipend to participate in the program.

# Research Design

For the student mobility semester, there were a number of common elements that were agreed upon by the consortium: pre-departure culture and language seminars, college classes, school placements, internet seminar, reflective journaling, general cultural visits, and a thirdyear evaluation conference. Pre-departure Culture and Language Seminars were held once a week during the preceding semester and covered the "nuts and bolts of travel," broad aspects of culture as well as a specific focus on target culture, introduction to comparative educational practice and curriculum structures, and inter-cultural events and meals with students from the target cultures. Language classes were on-going for those students headed to Spain, and for those going to the Netherlands, language classes were begun a full year before departure. College Classes took place two days per week. The content of the courses focused on "at-risk" concepts, as well as comparative aspects of education in another country, i.e., structure of the educational system, curriculum, philosophical, and theoretical underpinnings, pedagogy, etc.

Four types of School Experiences took place two to three days per week. The first experience was the main placement of two-three days per week in a school with a substantial at-risk pupil population with whom students worked for the semester. The second type of school experience was visits to schools with "successful" profiles for comparison among the students' main placements and their home country schools. The third experience was visits to examples of existing programs that successfully addressed atrisk education, e.g. Reading Recovery, Parents as Teachers, and Early Years Enriched Curriculum. The fourth experience was to schools, which demonstrated cultural difference, e.g. Irishmedium schools, travelling schools for the Roma, English as a Second Language programs, and schools with strong parent-community programs. The main placement expectations of students were that they would engage in general class teaching, prepare lessons, identify a small group of "at risk" students for whom they would design a special curriculum, and act as an assistant teacher by proactively helping the teacher as needed to do classroom teaching, but not act as a teacher's aide.

The Internet Seminar took place throughout the semester every week. All participants engaged in an online forum where they shared and compared their placements, ideas, issues, materials, and teaching strategies. Students kept Weekly Reflective Journals, which became part of the documentation of their experiences in working with at-risk children. Students took part in General Cultural Visits in order to get a broader sense of the culture in which they were working and living. Finally, students participated in an Evaluation Conference the following year to assist the consortium in developing effective strategies and programs for pre-service teachers to work with at-risk children.

# METHODOLOGY

Data were collected before, during, and after the mobility period. In the semester preceding the outward mobility, all students were administered the Global Awareness Profile to ascertain their baseline understandings of global awareness and issues. This profile was put on-line on the project web site, to which all students and faculty had access. It was administered again at the end of the mobility period. Before students left, the project directors at each site collected all work completed during the pre-departure seminars.

Once the students were in-country, the project directors began collecting the following types of data from the students throughout the mobility period: (1) reflective journals, (2) coursework papers, (3) lesson plans, (4) teacher work samples, and (5) on-line seminars. During the evaluation conference the following year, project directors collected (6) questionnaires, and (7) transcripts of conference outcomes.

# DATA ANALYSIS PROCEDURES

Since the study is mixed-method, quantitative and qualitative data analysis procedures are being employed. The only quantitative data analysis procedure is being conducted on the Global Awareness Profile. The universities use software that enables the researchers to view profile results in a number of ways, including a general description of the test profile and its properties, a pie chart to show distribution of scores for the profile, overall statistics for the test profile, individual student results on each question, summative results for each question, and a list of all the summative scores for each student. Each participant is to be assigned a gain score, equals to the difference between pre-test and post-test scores on the Global Awareness Profile. Gain scores will be expressed in positive and negative numbers. A sum of squares error test will be calculated to ascertain the standard error for the group. Analysis of Variance (ANOVA) will be conducted to compare the gain scores among the U.S. and European participants. All quantitative analysis will be conducted using SPSS.

Qualitative procedures are being conducted through the use of Atlas.ti software. This tool facilitates the selecting, indexing, coding, and annotating of the qualitative data sources listed above that the project directors collected during and after the mobility period. The data sources have been indexed and are being coded to identify dispositions that would indicate students' attitudes, beliefs, and thinking about other cultures and their work with at-risk children. The software will assist in developing relationships among the data categories, which will be cross-checked by the researchers to provide for reliability and validity measures through triangulation of data. Before results of the study are fully made public, a random selection of student participants will read and respond to the text prepared by the researchers through written feedback of the data analysis. Written feedback will be included as a secondtext, or inter-text, providing readers with an additional layer of analysis.

# INSTRUMENTATION

Pre-departure instruments include the Global Awareness Profile (Corbitt, 1998), is a 120item knowledge test related to global awareness across all geographic regions. Instrumentation used during the mobility period included the reflective journal prompts, which included the following questions: What surprises have you encountered while interning in this country? Describe a significant event that has happened to you and what you thought. What insights are you gaining about this society, its schools, and this university from this experience? What have you learned about your own society and its schools from this experience? What have you learned about yourself from this experience? Coursework papers, lesson plans, teacher work samples, and the on-line seminar are also mobility-period instruments. Post-mobility instruments include notes collated from group sessions at the Evaluation Conference, and a questionnaire with the following prompts: What new awareness and understanding do you have of your host culture's values and way of life?

Identify core issues about children at risk in your host country. Based on situations identified in earlier sessions, what approaches and strategies would you use with children at risk?

# FINDINGS

At this stage of the research, some basic themes are emerging. Briefly put, we are finding that students are telling us that they are much more aware of the world outside their own and much more interested in learning about the world outside. These themes are to be expected, since research literature has reported this before. What is new, though, is that students are reporting their initial responses to the culture is one of feeling like an outsider, like the immigrants and at-risk children that they were teaching, principally because they did not have proficient command of the host language, nor really understand the covert and overt nuances of their host culture. Dispositions reported by students ranged from wanting to withdraw from the culture, not wanting to adapt to the culture by sticking to those from their own culture, and allowing themselves to be cut off from the culture as well as actively cutting themselves off from the culture. Other students reported the feeling of being at-risk. These dispositions were manifested by trying to guess what people were saying in a language that they did not fully understand, feeling guilty for "tuning out" in the classroom when they experienced language and cultural overloads and wondering why they did not care. Students also reported trying to act as though they knew what was going on and how they could hide their struggle to understand. Also reported were dispositions of annoyance, which really masked insecurity in the culture, and pushing away those that tried to help. These actions tended to further isolate and build resentment toward the people with whom they were interacting. While these responses, too, have been reported in the literature on culture shock, the difference in this case is the connections that students had with the programmatic focus of at-risk children. Feelings of guilt overwhelmed some students since they realized that they were the ones who were in the schools to help the at-risk children, not become the at-risk themselves!

After this initial stage of about two months, the research data indicates that the students began to shift dispositions, some totally reversing their previous roles as the "oppressed," to become the "oppressors," and forgetting all the lessons they learned upon their initial entry into the culture. In their reflections, they reveal their struggles to keep these initial lessons in their minds so that they could monitor their efforts through the children's responses and performance. Sociocultural issues such as the role of families and the community, as well as the structural issues of tracking, disciplinary measures, retention, and curriculum surfaced as natural points of reflection and discussion without students reacting to specific prompts on these themes.

As the period of teaching abroad came to a close, students began to reflect on how these experiences of feeling like an outsider helped them to identify more strongly with their teaching, how to adjust instruction, how to notice when children were struggling, how to assist these children, and how to put preventative measures in place so that these children do not have to go through what other at-risk children before them had to experience.

# IMPLICATIONS FOR ACTION AND PRACTICE

Based on these initial glimpses of the data, some implications for action and practice are surfacing. The data indicate that there is no substitute for being "on the ground" in the target culture, where each student can be put in the role of an at-risk child, especially in the structural sense. Since not every pre-service teacher would have the resources to teach abroad, other possibilities that could reasonably substitute for this experience in the teacher's home country would be residential student teaching placements in a high poverty area outside the students' regional culture, arranged through cooperative arrangements with universities in those regions. By targeting at-risk children in the communities of the eight regions of severe poverty, our mostly

middle class, White students would be forced out of their comfort zones and into a "foreign cultural system." In most cases, they would also have to have knowledge of the languages used by the people who live in these eight regions, namely, a number of Native American languages, Black English, Spanish, and other languages that may be represented in the northern cities, such as African, Middle Eastern, and southern European languages. These placements would then simulate the conditions that students experienced in the research grant, which would give students direct experience with all the presage factors discussed earlier. They would also be able to view the experience through the NAREN standards framework, which would provide additional opportunities to learn how to develop effective programs for at-risk children.

Acceptance and comfort in the culture are necessary before effective teaching can take place. When emotional responses by the students to their environments upon entry were replaced with cognitive responses through the shifting of the source of the identification as outsider to that of teacher, students began to develop the disposition of focusing on individual needs and characteristics and away from group needs and characteristics. This indicates the possibility that ethical caring can be fostered during these types of experiences.

While it is still too early in the data analysis stage to have definitive answers to our research questions, we believe that the study is helping to point us in the right direction of finding reliable indicators of teacher dispositions that would provide at-risk children with effective educational outcomes and that socio-cultural factors provide the best reference points for developing a true picture of successful teachers of at-risk children.

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# Pre-service Teachers' Voices While Learning to Teach: What Can be Learned from England?

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# ABSTRACT

An attempt to facilitate pre-service teachers learning, which is attuned with their learning needs, raises questions regarding how these pre-service teachers learn to teach. Learning to teach is developmental and it is a lifelong process; therefore, it puts heavy demands of cognitive, affective, and performance nature upon pre-service teachers (PSTs). In fact, it is a complex process as information which is useful to experienced teachers may not have the same value to beginners (Arends, 2004). An understanding of the process of learning to teach may help to clarify the role of teacher education programmemes especially at the pre-service level (Feiman-Nemser and Remillard, 1996). For instance, what do PSTs come to know about teaching and learning? How in the process of becoming teachers do PSTs replace notions about teaching and learning with practical knowledge of subject matter, pedagogy, learners, contexts, and learning that can inform their teaching judgments and actions? This paper discusses the findings from a study conducted at the Department of Educational Studies of a university in England. The study focused on how pre-service teachers develop their knowledge of teaching throughout their teaching practice period. An in-depth semi-structured interview was carried out with the preservice teachers who were in their final semester of a one year postgraduate programme and at the time of the study, were in school experience (practicum) placements. Results were summarised into four main categories, namely pre-service teachers' preparations of the lesson, expectations of the learning outcomes, reflections of their teaching and rooms for improvements. Understanding how pre-service teachers learn to teach would be a great help in designing teacher education programme effectively. The knowledge needed by the PSTs should be the guidelines in developing the curriculum of a teacher education programme.

Keywords: Learning to teach, pre-service teachers, voices

# **INTRODUCTION**

One important aspect of research with regards to teacher's knowledge is explaining how preservice teachers (PSTs) develop their knowledge of teaching throughout their learning to teach phase, i.e. teacher education programme. Conceptions about knowledge of teaching would be the basis for the process of learning to teach of the PSTs. Understanding PSTs' learning to teach phase is a challenge itself as it involves many aspects since PSTs who enter the teaching field come from a wide variation of knowledge, beliefs and past experiences as students which may have influenced their performances in the teacher education programme (Crespo and Speer, 2006; Abd Rahman and Scaife, 2006; Abd Rahman, 2002a,b). The prior experiences, acquired during their school years, may have

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great influence on how PSTs interpret what they are learning and how they end up teaching (Putnam and Borko, 1996; Lortie, 1975).

Ensuring that beginning teachers received proper training and education before entering the teaching field are crucially important. This is supported by the fact that teachers who learn to teach without guidance often learn merely to cope rather than promote learning for all their students and they can acquire bad habits that are hard to unlearn (Darling-Hammond and Baratz-Snowden, 2005). Therefore, it is important to know how the existing knowledge, skills, and experiences of the PSTs shape their knowledge of teaching to ensure quality teachings in the classroom and help in designing effective teacher education programmes. This study explores how PSTs develop their teaching knowledge based on the prior knowledge and practices in the teacher education programme. It offers opportunities for the PSTs to reflect and learn from their teaching and experiences in the classroom.

# STATEMENT OF PROBLEM

Teaching has been considered the act of transferring information from the teacher to the learner who is seen as an empty vessel to be filled with knowledge. This view of learning is due to the popularity of behaviourist learning theories which focus on how the presentation of information affects learning outcomes (Weinstein and Mayer, 1986). Teachers should continue to improve on their own knowledge and skills in order to improve their students' performance (Hill *et al.*, 2005).

As newcomers, it is common that PSTs would refer to their experiences as students to come up with images of how teaching would be. Research findings suggest that many teacher education programmes have minimal impact on PSTs' views about teaching and learning, resulting in most classroom teachers teaching the way they were taught (Anderson and Bird, 1994; Borko *et al.*, 1992; Zeichner and Tabachnick, 1981). Research has also shown that PSTs tend to focus on their own actions within the classroom rather than on what the children are

learning (Darling-Hammond and Hammerness, 2005, p.400).

Therefore, it is important to understand how PSTs' learn to teach to enable them facilitate the learning of the students effectively. However, little is known about the pre-service teachers' learning to teach and how they develop their knowledge in teaching in order to fulfil their aspirations to become quality teachers. Thus, the purpose of this study was to understand how PSTs developed their knowledge of learning to teach. The research question that guided this study is 'How do pre-service teachers develop their knowledge in the process of learning to teach during teacher education programme?'

# UNDERSTANDING LEARNING TO TEACH

An understanding of the various issues implied by the phrase learning to teach (LTT) may help to clarify the role of teacher education especially at the pre-service education level. Although it often has formal beginning and ending in a university-based programme, the informal beginning and ending are virtually impossible to define. Images of teaching go back to the first day at school, or even earlier, and in many aspects, the experience of learning to teach is never complete (Featherstone *et al.*, 1997).

Knowledge concerning LTT can be used to provide guidelines in designing the curriculum for teacher education programmes (Feiman-Nemser and Remillard, 1996). Furthermore, understanding of the development stages in LTT could provide an insight into educating and evaluating PSTs (Stroot et al., 1998). In other words, a better understanding of LTT could serve as a crucial point in examining how PSTs construct their knowledge of teaching (Howey, 1996). Apparently, studies of how beginning teachers learn to teach have attracted increasing attention from researchers in the recent years. Particular points of interest include examination of PSTs' learning regarding what they know, what they believe, how they act, and how they think of themselves as teachers from a variety of perspectives (Putnam and Borko, 1996).

However, it was found that many aspects of those researches were ambiguous and needed further clarification and discussion (Oosterheert *et al.*, 2002; Reynolds, 1995; Carter, 1990; Kagan, 1990), particularly the process and the development stages of learning to teach.

LTT generally refers to the whole activity of teacher education or sometimes acts as a substitute for a concept such as 'teacher learning', or 'teacher development'. Oosterheert *et al.* (2002) claimed that LTT involves a development and change of existing knowledge relating to learning and teaching. Feiman-Nemser and Remillard (1996) claimed that LTT is developing different knowledge and skills at different times and at different places.

Borko (1989), in reviewing studies that explored the thinking and action of PSTs in the process of LTT, claimed that the subject matter has an impact on teaching, i.e. PSTs without knowledge of the subject matter are likely to lack confidence in their ability to teach well. This situation also creates difficulty in learning the skills of teaching, i.e. making the transition from a personal understanding of the subject matter to thinking about the subject matter from students' perspectives. Carter (1990) emphasized that LTT is comprised of, firstly, the outcomes - what the teacher should be learning; secondly, the treatment, or setting - what effect can be attributed to programmes, programme components, or experience in various fields; and thirdly, learning - how change occurs in teaching. Furthermore, LTT is seen as a process whereby the PSTs are provided with knowledge of teaching. I dispute this, as it seems an overly traditional view of the learning process.

In this study, the process of LTT among PSTs involves their understanding of what they believe they can do, as well as their understanding of what they actually do and the awareness of what sources allow them to complete LTT tasks efficiently. This view is based on the constructivist perspective that teaching and learning are activities in which understanding is constructed (Reynolds, 1995). The teacher educator should provide opportunities for PSTs to deepen their understanding by building on their prior knowledge of and beliefs in LTT. Simultaneously, through reflection on dynamic learning, they should build a new understanding of their practice and thereby learn how to improve it (Reynolds, 1995).

# THE STAGES IN LEARNING TO TEACH

LTT is a complex process that progresses in stages (Stroot *et al.*, 1998). The purpose of this section is to discuss professional developmental stages of teachers in order to understand knowledge development of PSTs in the LTT process, and this will also be a useful guide for PSTs to become effective teachers. Knowledge of the stages of development can also help to determine the type of interaction that is most beneficial to the teacher educator to improve PSTs' communication in the classroom (Stroot *et al.*, 1998).

In general, the development of performance usually consists of three levels or stages (Shuell, 1990), as follows:

- A novice stage where errors are frequent;
- An intermediate stage where some consolidations of learning take place and knowledge is developed; and
- An advanced stage for some who work hard at constructing their competency, proficiency will occur.

Fullers and Bown (1975, as cited in Halim, 1997), proposed a four-stage development model which describes the stages of concern that teachers go through as they learn to teach. These are:

- Pre teaching concerns: Fresh from the pupil's role, education students who have never taught are concerned about pupils, that is, about themselves. They are often unsympathetic towards the classroom teacher whom they are observing.
- Early concerns about survival: At the first contact with actual teaching, their concerns about pupils are replaced by their concern about their own survival as teachers. PSTs are primarily concerned

with classroom control, their mastery of the content being taught and the evaluations by their supervisor.

- Teaching situation concerns: Education students who are teaching become competent at classroom management. These teachers are now shifting their concerns to their teaching performances. They start to deal with limitations in the classroom such as inappropriate instructional materials. They also start to realize their own lack of repertoire of teaching strategies.
- Concerns about students: After coping with the survival and teaching situation, concerns then turn to students, in terms of social and emotional needs, as well as the effects of their teaching strategies on their students.

One of the implications of Fullers and Bown (1975)'s model for learning to teach is that it seems to focus on providing general pedagogical knowledge and results in teacher educators maintaining an emphasis on teaching skills in teacher education programmes (Halim, 1997). In my opinion, this view is incompatible with CLT; teacher education programmes should focus equally on knowledge of context, and knowledge of learners and the like, rather than only on teaching skills.

The developmental model discussed above helps to clarify the PSTs' stages of performance in the classroom. They also describe PSTs use of reflection upon what has occurred within the lessons. Overall, it can be said that the stages occur in a hierarchical pattern, and it is logical that teachers in the earlier stages of development will have basic survival needs (Stroot *et al.*, 1998). Thus, it is important for teacher educators to identify a PST's stage of development to provide suitable assistance for the specific needs of the PST.

# ASSESSING PRE-SERVICE TEACHERS' LEARNING TO TEACH

According to Carter and Doyle (1996), LTT is fundamentally a negotiated process. This means

that PSTs' knowledge is not simply formed by their experiences prior to, during, or after their initial teacher preparation. Rather, they are highly active participants in interpreting their experiences, searching for and constructing images that capture the essential features of the tasks they encounter in teaching, struggling with the dilemmas and challenges of classroom life, seeking out experiences and exploring opportunities that may enhance their knowledge of teaching, or otherwise navigating the difficult circumstances of their tasks.

Moreover, according to Carter and Doyle (1996), it is important to emphasize that the description of active construction of meaning is not intended only for those who are exceptionally successful as teachers as the same negotiation of self in situation is found among all PSTs, even those who fail to achieve certain standards (Cole and Knowles, 1993). In my view, considering both successful and unsuccessful examples may provide a rich picture of the phenomenon in practice.

Moreover, studies on LTT suggest that considerable emotion, as well as intellect, is associated with PSTs' efforts to understand the particularities of their practice in the classroom (Carter and Doyle, 1996).

This means that examining the process of LTT among PSTs would appear illogical if the issues at hand are not those that they are currently working on. In other words, any judgement about PST's learning cannot assume that the outsider's perspective is necessarily the most important (Gitlin, 1990). Teacher education programmes should therefore use the prior beliefs or pre-conceptions prospective teachers have about teaching and schooling as a direction to facilitate PSTs.

However, there are still some questions about how exactly is PSTs' process of learning to teach and how they learn through a developmental process of the study, preparation, expectation, application, and reflection. Hence, we reasoned that this study was aimed to explore how the PSTs developed their knowledge of teaching, especially throughout their teacher education and internship programmes in the school.

# METHOD AND METHODOLOGY

Interviewing is an essential tool in educational enquiry because the respondents' preconceptions, perceptions, and beliefs are an inescapably important part of the backdrop of social interaction (Scott and Usher, 1996). According to Johnson and Johnson (2002, p. 192), an interview is a personal interaction between the interviewer and one or more interviewees, to whom verbal questions are asked and from whom verbal or linguistic responses are given. Kvale (1996, p. 14) notes that an interview, as an 'interchange of views between two or more people on a topic of mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situated of research data.'

There are various types of interview, and they differ in term of their openness of purpose and degree of structure (Cohen et al., 2000, p.270). For example, there are structured, semistructured, unstructured, standardized openended interview, close quantitative interview, and many more. Kvale (1996) and Smith (1995) mentioned that the semi-structured interviews attracted interest and are widely used with the expectation that the interviewed subjects' view-points are more likely to be expressed in a relatively open situation than in a standardised interview or questionnaire. The interview questions were developed from other scholars' sample of interview questions (on the knowledge of teaching) such as Grossman (1990), Shulman (1986a: 1987) and Stones (1990).

The participants in this study were PSTs in one of the School of Education at a university in the United Kingdom. They were in their last semester of a one-year post-graduate programme and at the time of the study, were in the school experience (practicum) placements. Based on the analysis of completed questionnaires, the student teachers were observed and interviewed. One of the PSTs is from Science Education programme, while the other two are from English Language Education. The School of Education (SOE), where this study was conducted, has a wide range of teaching and research programmes including Postgraduate Certificate in Education (PGCE) course. PGCE at SOE is a one-year course designed to prepare PSTs to teach students aged 11-18 in the school. A major aim of the tutors and teachers in the partnership schools who contribute to the course is to help PSTs acquire understanding and competence in the strategies of teaching, learning, assessment, and classroom management.

In this session, the PSTs were invited to reflect on their teaching, both in the observed lessons and more generally. The interviews were recorded and the gathered data were then transcribed. As there were many irrelevant issues in the actual interview, the data had to be reworded so as to address significant issues (the above-mentioned aspects). In order to illustrate the above-mentioned aspects, excerpts from the reworded data interviews, from the responses of participants named Cannie, Garrie and Rossie, would be given. The checklist *matrix* (Miles and Huberman, 1994) was used to help with the coding and themes in the rewording process. The analyses were then related to the components of PCK that PSTs emphasised during their reflections on their teaching. The PSTs were asked about their teaching activities, what they learned, how they performed, and about any difficulties they were still encountering in teaching.

With regard to the interview plan and administration, Kvale's (1996, p. 88) stages of interview were adapted and used as a guideline in this semi-structured interview:

- Planning and designing the study, by taking into consideration all the stages suggested, including conducting a pilot study to test the interview process and amend the interview questions as appropriately possible.
- Conducting the interview and taking the ethical aspects of investigation into consideration.
- Preparing the interview material for analysis, including a transcription from oral speech to written text.
- Deciding, based on the purpose and topic of investigation, and on the nature of the interview material, the most appropriate

methods of analysis to be used for the interviews.

- Assessing the credibility of the findings from the interviews.
- Communicating the findings of the study, and presenting the result as a readable product.

The above guidelines of interview were implemented in this study. In this research, the type of interview used is a semi-structured interview. It is semi-structured because there were several general questions which were outlined to be asked to the interviewees. The interviewees were relatively 'unguided' because the researcher remained as open and adaptable as possible to the interviewees' responses. The interviews were done face-to-face with each of the participants, one at a time. The interview session was held two times during the period of the teaching practices. Most of these interviews were held right after the classroom observations at the school. In some cases, the interviews were carried out after the school session because the PSTs were having another lesson right after the observation.

# FINDINGS AND DISCUSSION

Understanding pre-service teachers' learning to teach phase is important to improve the teaching and learning processes in the classroom and provide quality lessons to the students. This research focused on how the PSTs developed their knowledge of teaching throughout their learning to teach phase. Hence, during the interview, the three participants were asked about how they had gained the knowledge and learned to teach throughout their teacher education programme and internship at school. The findings can be summarized into four (4) main categories, namely the PSTs' preparations of the lesson, expectations of the learning outcomes, reflections of their teaching, and rooms for improvements. Coupled by the supporting data from the intervies, each of these is presented in the subsequent section.

# Pre-service Teachers' Preparation of Lessons

In each of the interviews, the participants initially talked about their preparations before the lesson, which included preparing scheme of works, lesson plans, understanding the topic that they were going to teach, and planning the methods and activities to be included in the lesson. One participant explained that, "I would prepare a series of lessons, a scheme of work ... " (Rosie, P.1, L.8). She also added that she would plan by, "...thinking about what I wanted them to have done by the end of the lesson... jotting down the ways in which we were going to get there, the methods that I was going to use, the activities they were going to be involved... looking at lots of fairy stories and talking about the general features of fairy stories and we'd move on to discuss how fairy stories could be changed for a particular purpose and then by the end I wanted the pupils to have written their own fairy stories with changes" (Rossie, P.1, L.15).

Meanwhile, the other participant said, "I do a medium term plan, scheme of work first, where I want the entire scheme of work to go and then plan the individual lessons around that" (Garrie, P.1, L.10). He also added that he would plan some active activities in his lesson. He said, "I wanted them to do something more active, which is why we did the acting ...set the learning objectives on the board...made sure that the texts...folders and mark book... flip chart were ready" (Garrie, P.1, L.13).

The third participant mentioned that she would break down the topic that she was going to teach into lessons and focused on the key points in the topic. She also would refer to more experienced teachers so that she could learn something from them.

The first thing I do is largely what the topic that we're doing is ... break it down into lessons ... base my lessons around the key points... look at the resource pack...ask other teachers that had done it because obviously they know better than I do... adapt them to what I think the class is going to work best at. (Cannie, P.1, L.11) Each classroom has students with different learning abilities and attitudes. One participant mentioned that he thought about students' diversity in his preparation. He said,

... if we're doing writing or a reading activity, I tend to select appropriate resources for different groups. I'll have a planning sheet for writing on, maybe two or three different worksheets that you can give to different pupils... I prefer to take maybe one or two pupils, either pupils that are particularly gifted in that area or pupils who particularly struggle and work more closely with them. (Garrie, P.1, L.46)

The other participant also explained that she took her students' diversity into consideration whenever she was planning her lessons. She tried to plan a lesson which would be the most appropriate covering the differences in terms of social, ethnic, and religious backgrounds among the students. She said,

I try to get a mix of ideas, so if I know there will be children in the class who come from different ethnic backgrounds that they're the ones that I will ask when we're doing questions and that kind of thing, so they can share their ideas, it's not something that should be ignored, it should be embraced and shared around with the rest of the class. (Cannie, P.5, L.201)

These kinds of teaching plans and approaches are a good strategy to be used to attract students' attention in the classroom. They also help to enhance the pre-service teachers' thinking and creativity when planning their lessons.

# *Pre-Service Teachers' Expectation of Learning Outcome*

Expectation of the learning outcomes is very useful to teachers as it helps them to identify the contents, skills, and key concepts on each topic, according to the grade level. It also assists teachers to assess whether or not the students will succeed in achieving the expected skills and knowledge during the lesson.

A participant mentioned that, "understanding what a particular thing means and it's slightly more a case of understanding an idea or having thought about something...the outcome is often written in some form or another so today it was writing...and I was looking at how they put their ideas together." He further stated that, "in a couple of lessons, when they've written their story, I'll be looking at the outcome in terms of the whole story and how they've put that together, how they use their knowledge of sentences and paragraphs and how they've done that" (Rossie, P.1, L.25 - 31).

Another participant talked about his expectations of the students' achievement in the classroom, stating that

"as many pupils as possible get something out of the lesson...some pupils really enjoyed reading that play, so they have an increased awareness of literature...others may develop their confidence reading aloud...understand more about the social context, different pupils achieve different things" (Garrie, P.2, L.64; 69 - 72)

# Meanwhile, the other participant said that,

"...all of the kids understand it to some extent, but how well they understand it obviously depends on how bright they are, how well they do the work in the lesson, and how well they grasp the concept of the extent you work with them in the lesson..." (Cannie, P.2, L.70). She insisted that students need to understand the lesson to some extent, know what they were doing and the reason of doing it. "...my plan is that they all understand it to some extent and they all know why they're doing, what they're doing" (Cannie, P.2, L.74) Then, she also mentioned about how she assessed the students' understanding of the lesson. She said,

"...by observing what they 're doing, by reading their work, by talking to them, by listening to what they say" (Rosie, P.1, L.36)

Through the assessment, she was able to determine whether or not the students achieved the learning outcomes of the lesson.

# *Pre-Service Teachers' Reflection and Satisfaction in Teaching*

Reflection on one's teaching experience is one of the most important processes in developing teacher's knowledge and teaching skills. It also enhances teachers' personal and professional development. It is an opportunity for teachers to reflect on their strengths and weaknesses as a teacher and improve their abilities to deal with various situations in school.

There were evidences that the pre-service teachers learned from his reflection of his own experience handling the students who had learning difficulties or problems during the class. During the interview session, a participant explained about one of the situations he had encountered with his students. He said,

... if somebody came up to you and said, 'Sir, I'm really struggling with this', you'd like to be able to say 'right, half an hour of my time, there you go, I'll sit with you and we'll work together on it until we're happy with it'. And you do try and do that, but obviously you've got the demands of 26 other pupils saying 'Sir, I need you to do this, I need you to do that'. So again it's a case of balancing, trying to give you time to improve, to work on the difficulties, but also ensure that you're not neglecting anybody else. ... I've said 'right, the rest of you get on with your task, you know what you're doing and I'm going

to work with these four pupils and for this lesson I'm just working with these four pupils'. And then next lesson I go and work with a different four and you can do that, but that depends on the sort of class you've got, because it does rely on everybody else getting on. So you've got to know your class and be able to trust them to get on with the other stuff. (Garrie, P.4, L.177 - 189)

It showed that the participant learned from his experiences when dealing with the students who were having problems in the class and from that, he could come out with a better way of handling such situations in his next lessons.

During the interview, the participants were also asked to talk about their satisfaction of their teaching. Mostly, satisfaction came from their strengths in teaching and good relationship with the students. From their previous lessons, the teachers were able to identify their strengths and other things which motivated them to do better in the next lessons. For example, one participant said,

I'm really interested in the individual pupils that I'm working with... I think that I can communicate with the pupils quite effectively... both in a whole class setting and also one to one and in groups, that I can encourage them and motivate them. (Rosie, P.2, L.58)

Her confidence while dealing with the students could be an advantage to her when conducting the lesson. Students will feel more comfortable and motivated while learning and this can lead to a better learning environment in the classroom.

Another participant also mentioned that he had a good relationship with his students. He said, "I generally get on well with most pupils, which is a good thing. So I'd say that's my strength, relating to the kids, relating to the pupils...I seem to be able to have a good relationship with most of the students." (Garrie, P.4, L.155). Meanwhile, the third participant said that she got the satisfaction in teaching from her clear explanation and good planning in teaching. She mentioned, "I think a clear explanation and good planning are strengths because I've taken the time to review the syllabus" (Cannie, P.3, L.115).

# Room for Improvement

During the interview sessions, they also identified their weaknesses that could help them to improve themselves throughout the teaching period. A participant mentioned that one of the weaknesses in her teaching was in the transition time in the lesson, from ending one activity and starting another. She explained that,

...even though my plan is quite good, I've got a time line, for instance. Sometimes, even though I plan to keep to it sometimes I find that I don't and that's not always my fault but sometimes when I set an activity to last five minutes then I need to make sure it lasts five minutes and not any longer and then we can talk about it and go onto something else so I think that's an area that I really ought to look at. (Cannie, P.3, L.132)

She managed to identify her weakness on the timing in her teaching and since then, she has always tried to improve herself in each of her coming lessons. Meanwhile, the other participant mentioned that he learns all the time in every lesson, and he learned something. Nevertheless, he also said that he needed to specifically improve on his knowledge, saying "I need to develop my knowledge of the specific requirements for exams and coursework" (Garrie, P.3, L.100). However, the third participant mentioned that she had noticed that she needed to improve on her questioning skills. Based on her experience, she said, "I think I need to often be clearer about what exactly I'm asking, how long I'm giving them to do it in, exactly what outcome I expect" (Rossie, P.3, L.102).

Therefore, from the reflections and weaknesses that they had identified throughout their teaching period, the teacher basically managed to find rooms for them to improve themselves, especially on their knowledge of teaching, skills and classroom management. From the findings, we can see the overview of PSTs' process of learning to teach during their teaching period.

In terms of what involved in learning to teach of the PSTs, we found evidences in the data that they developed the knowledge of teaching from the four main categories, namely the PSTs' preparations for the lesson, expectation of the learning outcomes, the reflection of their teaching and rooms for improvement of the PST throughout the teaching education programme.

All the participants agreed that having a proper preparation before entering the classroom is important to ensure the smooth progress in the teaching and learning processes in the classroom. All of them stated to have done the lesson plans, mastered the topic that was going to be taught and also carefully planned the methods and activities which were to be carried out beforehand. It made them prepared both mentally and physically before starting the lessons.

Other finding gathered in the present study is that PSTs were found to have also learned from their expectations of the learning outcomes of the lessons. When they were preparing the lesson plans for their classes, they also stated the learning outcomes which were expected to be achieved by the students by the end of each lesson. Having early expectations for the students' achievement gave them a clear vision of what they needed to do and achieve in the lessons.

The results also indicated that the PSTs had learned a lot from their experiences in their teaching and in dealing with their students. By reflecting on their own teaching, they could see their strengths and weaknesses when conducting the lessons. Some of them realized their strengths in teaching, while others felt the advantages when dealing with the students. The made the teachers feel more motivated and more positive in doing their work. At the same time, they also noticed their own weaknesses throughout the teaching period as they encountered various kind of situations involving students' learning, attitudes, classroom management, and many more.

Since it was the first time they entered the real-life situation of teaching in school, they often lacked the skills in handling some difficult situations; however, after some times, they managed to learn something from their experiences and would come out with better solutions the next time. They had improved their skills and abilities in dealing with the students.

Furthermore, from the reflection of their teaching, they managed to figure out many aspects of the teaching which could be improved such as time and classroom management as well as handling students with learning difficulties. They started to develop their own strategies to overcome such situations. It shows that they were not only relying on their 'book' knowledge or their past experiences as a student anymore, but they also learned from their own experiences throughout the teaching period.

# CONCLUSIONS

The results of this study provide some insights into the development of PSTs' knowledge in learning to teach, and these have been found to vary based on their preparations, expectations of the learning outcomes, reflections of teaching and the experiences they gain throughout the teaching education programme. These outcomes have expanded our knowledge of the PSTs' learning to teach phase. Moreover, the reflection from this study helps to clarify the role of teacher education, especially at the preservice education level and also provide useful information in designing teacher education programmes effectively:

The road to knowledge of learning to teach is always under construction... Gray (1997)

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# Journal of Social Sciences and Humanities

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