



UNIVERSITI PUTRA MALAYSIA

**AN INVESTIGATION OF THE RELATIONSHIP BETWEEN ENGLISH
LANGUAGE PROFICIENCY AND INFORMATION TECHNOLOGY
LITERACY**

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By

HAMIDAH BTE YAMAT @ AHMAD

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master of Arts

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January 2001

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Today's dependence on technology has changed how we view literacy. Literacy no longer means to have only the ability to read and write. Literate people now must be able to use the computer and other communication technologies in handling the vast information. In conjunction with this, there is a need to study what is meant by Information Technology (IT) literacy and what is required to be IT literate.



This study was based on the belief that proficiency in the language of technology, that is the English language, would enhance IT literacy. Hence, the relationship between two variables, English language proficiency and IT literacy, was studied. Proficiency was identified through students' scores in the SPM English examination while IT literacy was identified through the IT proficiency questionnaire. Other contributing factors to IT literacy were also discussed.

257 second year UPM students from five different faculties provided the qualitative and quantitative data for this study. They were given a set of questionnaire to respond to and were briefly interviewed for further insights. Data were then analysed. Both descriptive qualitative and quantitative analyses provided the answer to the five research questions that motivated the study.

Subject to the limitations of the study, the results showed a significant relationship between English language proficiency and IT literacy. In other words, proficiency in the English language tends to enhance IT literacy. This is because IT literacy requires the skill to use computers and other communication technologies. This skill can be acquired through hands-on experience and exploration which requires a profound proficiency level of the language of technology, that is the English language. Hence, one must be proficient in the English language to be IT literate.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan Ijazah Master Sastera

**SATU KAJIAN TENTANG HUBUNGAN ANTARA PENGUASAAN BAHASA
INGGERIS DAN LITERASI TEKNOLOGI MAKLUMAT**

Oleh

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Dewasa ini, pergantungan terhadap teknologi telah merubah pandangan kita terhadap literasi (celik huruf). Literasi bukan sekadar mempunyai kebolehan membaca dan menulis. Orang yang celik huruf kini memerlukan pengetahuan penggunaan komputer dan teknologi perhubungan yang lain dalam pengendalian maklumat. Sehubungan dengan itu, timbul satu keperluan untuk mengkaji apa itu sebenarnya literasi maklumat dan apa yang diperlukan untuk menjadi celik huruf dalam literasi maklumat.

Kajian ini berdasarkan pegangan bahawa penguasaan bahasa teknologi iaitu Bahasa Inggeris akan dapat meningkatkan tahap literasi maklumat. Justeru,



kajian ini mengkaji perhubungan di antara dua pembolehubah iaitu penguasaan Bahasa Inggeris dan tahap literasi maklumat. Tahap penguasaan Bahasa Inggeris diperolehi daripada keputusan peperiksaan Bahasa Inggeris SPM pelajar manakala tahap literasi maklumat diperolehi melalui soal selidik. Faktor-faktor lain yang mempengaruhi tahap literasi maklumat juga dibincangkan di dalam kajian ini.

Seramai 257 orang pelajar tahun dua daripada lima fakulti di UPM digunakan bagi memperolehi data kualitatif dan kuantitatif untuk kajian ini. Mereka telah diberikan soal selidik untuk dijawab dan ditemu bual bagi mendapatkan pandangan mereka tentang hubungan di antara penguasaan Bahasa Inggeris dan tahap literasi maklumat. Analisa berbentuk kualitatif dan kuantitatif telah disediakan bagi menjawab lima persoalan kajian yang telah diutarakan.

Tertakluk kepada batasan kajian, dapatan kajian menunjukkan hubungan yang signifikan di antara penguasaan Bahasa Inggeris dan tahap literasi maklumat. Dalam ertikata lain, penguasaan Bahasa Inggeris berkecenderungan untuk meningkatkan tahap literasi teknologi maklumat. Ini adalah kerana literasi maklumat memerlukan kemahiran menggunakan komputer dan teknologi perhubungan yang lain. Kemahiran ini memerlukan pengalaman menggunakan sendiri atau mencuba yang memerlukan penguasaan bahasa teknologi iaitu Bahasa Inggeris. Justeru itu, seseorang itu perlu mahir di dalam Bahasa Inggeris untuk menjadi celik maklumat.

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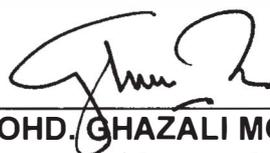
I certify that an Examination Committee met on 12th January 2001 to conduct the final examination of Hamidah Yamat @ Ahmad on her Master of Arts thesis entitled "An Investigation of the Relationship Between English Language Proficiency and Information Technology Literacy" in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulation 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

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DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.



HAMIDAHYAMAT @ AHMAD

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LIST OF ABBREVIATIONS

IT	Information Technology
SPM	Sijil Peperiksaan Malaysia
ES(A)P	English For Specific (Academic) Purposes
SPSS	Statistical Package for Social Science
AO	Accessibility Options
TOEFL	Test of English as a Foreign Language
MTELP	Michigan Test of English Language Proficiency



CHAPTER 1

INTRODUCTION

“Today...I would like to ask Malaysians, young and old, rural and urban, government and the opposition alike...to answer and support the nation’s initiative in harnessing IT ... we cannot afford to be mere spectators of the information revolution. We need to be part of it.”

Dr. Mahathir, New Sunday Times, Oct. 12, 1997

Indeed, we cannot afford to be mere spectators of the information revolution. Every aspect of human life is controlled by technology. The Prime Minister has called for all Malaysians to educate themselves to be Information Technology (IT) literate, regardless of age, ethnic group and social differences.

Malaysian society has changed from agricultural to industrial based and now to an information based society. This is due to the development of IT. For instance, the percentage of workforce involved in handling and disseminating information has increased from 17% in 1950’s to 60% in the 1990’s (Sulaiman, 1993).

The explosion of information too has led to the increase of knowledge. For instance, almost 7,000 scientific articles are written in a day (Wan Mohd.



Zahid, 1993). Not only new knowledge is created but also it keeps changing rapidly all the time. Due to this, the present generation has to know how to choose and handle knowledge. This is even more in this era where information can be gathered easily through the Internet.

During the agricultural and industrial era, the Malaysian education system was designed to produce knowledgeable and skilled individuals in agriculture and industry. Hence, the system had concentrated on the fields of sciences, engineering, medicine and business. However today, the teaching and learning processes have undergone a change; from traditional to technological based. Facilities in tertiary institutions have also increased to cater for the increasing number of students; from 60,000 in 1990 to 667,000 in 2020 (Malaysia, 1991). Apart from that, new programmes such as distance learning, offcampus, open universities and Twinning Programmes were introduced and offered to these students. These programmes require IT knowledge because the courses involve the use of teleconferencing, hypermedia, e-mails, internet, web sites and other networking systems. The IT era demands the skill to source information via computer and other telecommunication technologies. In fact, the whole education system has to be adapted and upgraded in conjunction with the increasing role of IT in education.

Realizing the impact and role of computers and IT, the government and private sectors have conducted awareness campaigns and projects to change Malaysians' attitudes towards technology, implant the love for IT and above all, educate Malaysians to be IT literate. The government has even adopted several policies with respect to the supply and demand of IT; namely IT infrastructure,

education and training, research and development, use of IT in the public sector, and financial incentives (Information Technology for Development Magazine, Dec. 1996. CD-Rom). All these are to ensure that Malaysians are not mere spectators of the IT Revolution. Every effort is being made to increase IT literacy.

Background of the Study

Despite all the efforts made, a study by the National Library of Malaysia (STAR, July 13, 1997) discovered that computer literacy rate in Malaysia is still low. The study covered 22,000 respondents from all ethnic groups and areas in the country. The result was as follows:

Table 1 : Computer Literacy Rate

Age Group	Percentage
10 – 14	10
15 – 24	20
25 – 34	16
35 – 44	10
45 – 55	6
above 55	1

Source : STAR, July 13, 1977

There was no indication of the reason for this low literacy rate. Most alarming however, is the 20% literacy rate among the 15 – 24 age group which includes both secondary and tertiary students. They are the workforce needed in

handling and disseminating information of the future. If this is the situation, then Malaysia's aim to be a paperless nation can be jeopardised.

This finding is used in the present study because there is no data available on the IT literacy rate among Malaysians. However, this finding is an indicator of IT literacy rate since computer skill is the basic skill for IT. Nevertheless, if Malaysia is to be the paperless nation, then more serious effort must be taken.

The main issue to be investigated now is the problem faced in the use of IT. In other words, what is the actual problem faced in the use of IT in the teaching and learning processes at secondary or tertiary levels?

Yaverbaum and Reisman (1995) identified three reasons why IT is not fully utilized. The reasons are firstly that of human factor; secondly, software and courseware; and thirdly, hardware. Meanwhile, Mohd. Naim and Mohd. Faizal (1994) discovered in their study that the use of IT in teaching and learning faces five problems; first, lecturers are not motivated because of heavy workload; second, students take a long time to comprehend course contents and problem solving; third, students who have problems in learning could not get help from others; fourth, students do not have time for revision; and fifth, students prefer individual learning style.

Despite these problems, today's knowledge acquisition in a technological informative society requires students to have the ability to source information via technological medium. Not only that, they must also be able to choose information that is relevant to them. They have to be selective and critical in their thinking. For instance, there is a variety of information students may get access

to on the Internet. However, students must select reliable information. Anyone may create a website or send information on the Net. It is the user who has to select proper and reliable information. Students must be ethical in their selection. In order to do so, they have to be able to read and write and understand the very large range of written forms, text types or genres which we all need for both reading and writing essential to participation in the society (Christie, 1990:3). Students must understand the genres found in the language of technology, that is, the English language. For instance, when users surf the Internet, they will see words and commands in the English language. This is so because most of the information available on the electronic network is in the English language. If users have a profound ability in the English language, they will be able to understand most types of information shown on the screen. They will also be able to retrieve information from a variety of sources and participate in today's technological-based communication. Hence, the use of IT is no longer frightening or foreign to them because they have the language competency.

Nevertheless, there are some arguments that other languages such as French, Arabic or even Bahasa Melayu can be used in using computers. These languages however are only available on different softwares or programmes designed to cater for particular users; those who are not proficient in the global language. Some also argue that to be able to use IT, one does not need to be proficient in English because IT is mastered through practice and exploration on one's own, such as through computer games. We should not assume that experience with computers through 'twich' action games is sufficient students to use computers to find and present information (Scarth, 1998). Finding and

presenting information require a higher language competency and computer and IT skills.

The language for computers and technology is based on the English language. It is the language used in today's globalized world. Everyone has to have a certain level of proficiency in the English language to be able to use the computer and other telecommunication technologies more effectively. It is the language ability required in order to be literate in technology.

Furthermore, there are features of the English language organization that need mastering before the information coded in English can be unlocked. These are the conceptual, rhetorical and grammatical competencies. For instance, the words open, file and menu are simple English words. However, they have different connotations when they are used in the context of computer application. They become conceptual. This creates difficulty in understanding, particularly among second language (L2) learners. Hence, before computers can be of any use to anyone, one has to be proficient in the language of medium used by the computers. Therefore, English language proficiency is necessary to be more efficient in the use of computers and IT.

In Malaysia's context, Malaysians need a very high level of competence in English and that the proficiency in the language is important to take advantage of new career opportunities as the country experiences rapid development (Wan, 1992). There is also a likelihood of reinstating English as the medium of instruction for technical subjects such as engineering, medicine and computer science in higher education institutions (Jones, 1994). This further

supports the need to have a profound level of proficiency in English in order to be IT literate.

Statement of the Problem

Today, one of the greatest tasks teachers and educators have to face at schools and higher institutions is teaching students the English language. At tertiary level, English proficiency courses have to be conducted to equip university students with the skill to at least help them through university education. Many university students end up not doing well in their studies at this level because of their inability to cope with the readings because many reference books are in English (Mohammed Amin, 1999). Although courses at this level are mostly conducted in *Bahasa Melayu*, students still need to do further readings. This is also based on the findings that failure to achieve academically is correlated to students' ability to understand the language of the classroom (Valverda, 1984 cited in Bermudez, 1994).

Today, students are required to use computers in their studies, either in doing their assignments or in looking for further information. Hence, they need the English language ability to be able to use the computer to retrieve most recent and current information. That is the role of IT in education – as a means of seeking knowledge.

Nevertheless, much time and effort is still spent on proficiency courses when this should have been completed at secondary education. Ironically, no matter how frequent these proficiency courses are conducted, university

students keep on facing difficulty in the language. All these imply that the existing language teaching and learning in Malaysia need to be improved.

The predominant emphasis on language teaching methodology has always been on the teaching of grammar (Abd. Rahman, 1999). However, recent movements towards communicative language teaching have included the ability to use language appropriately in different context. They also include the ability to organize one's thoughts through language. In other words, there is an attempt to develop learners' sociolinguistic and discourse competencies in addition to their grammatical competencies.

Teaching and learning concepts too have changed (Oblinger & Maruyama, 1996 cited in Abd. Rahman, 1999). Students in the past depended greatly on teachers or lecturers for knowledge. Today, students are required to seek knowledge on their own and teachers or lecturers only play the role of facilitators as shown in Figure 1. Students have to be independent in their learning. To do so, they need the basic skills which include the language competency needed for reading, writing, and communicating in today's world.

