

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The present study set out to determine whether there is a need for ICT literacy for lower secondary students. In order to understand this issue, two objectives were established. These are:

- 1) Whether there is any significant difference between the need for a structured ICT syllabus and that of informal learning of ICT through friends, reading materials, parents, CD-ROM, and the students' interest.
- 2) To gauge the interest shown towards ICT related activities after undergoing structured ICT syllabus.

A questionnaire was used as a major source of data gathering in this study, while the interview acted as a supporting tool to randomly justify whether the responses given earlier in the questionnaire were genuine. A total of 300 students participated in this study. These students were from Form One, Two,

and Three of Sekolah Menengah Bandar Sunway and Sekolah Menengah Seafield.

To answer the objective of the study, the questionnaire utilized two factors. These are information on ICT knowledge and information on ICT awareness among lower secondary students. The data gained from this study was analyzed, described, and summarized using basic descriptive statistics. The summary of the major findings is based on 100 percent returns of the questionnaire and responses given in the interview.

5.2 Major Findings

- i) The study revealed that a majority of students from urban school (S.M. Seafield) have used computers compared to semi-urban school (S.M. Bandar Sunway) and that most of them admitted using computers only to surf the Internet and play video games.
- ii) The attendance of computer classes at schools and at computer centres were relatively lower in both the urban school and the semi-urban school. However, the urban school respondents are more exposed to computer, and the percentage of students who have experienced surfing the Internet is comparatively larger than the semi-urban school.

- iii) Students who have experienced using computers also noted that they were interested to pursue IT related courses in future and believed that IT knowledge would help them get better jobs. Interestingly, a small number of respondents who earlier indicated that they do not know how to use a computer have also expressed a similar interest.

- iv) A significantly higher percentage of students admitted using E-mail and locating information in relevant websites via the Internet. When the participants were asked to explain the steps on how to compose a new message during the interview, many gave satisfactory answers. This in turn, suggests the reliability of the use of questionnaire and interview method.

- v) A majority of respondents mentioned that their understanding or learning of ICT was largely gained from friends. A reasonable number of them also noted parents and relatives, reading material, and electronic media as contributing factors.

- vi) Respondents from both schools generally agreed that ICT is indeed important for a country's development.

- vii) Many respondents also believed that basic ICT skills in Form One, Two, and Three would be helpful in choosing ICT subjects in Form Four.
- viii) Friends, parents and relatives were seen as the important individuals who have discussed about ICT with respondents compared to teachers and school principals.
- ix) A large number of participants also viewed that ICT is important for the country's development. Economic success, better government administration, and an IT literate society are regarded some the benefits of ICT for the country.
- x) An overwhelming number of respondents mentioned that if ICT is used in school, it can produce more IT literate and knowledgeable students. They also felt that ICT can help the school students get better understanding of the lessons taught and this in turn could produce good academic results in the school. A reasonable number of them also noted ICT could improve the school's overall administration.
- xi) Similarly, many respondents agreed that ICT skills and knowledge would help them in their studies, make them more knowledgeable, and get better jobs in future.

5.3 Conclusions

The following conclusions are based on the information gained from the study. It also attempts to answer the two objectives stated earlier.

The need for a structured ICT syllabus or curriculum is reflected by the respondents' attendance of computer classes at school computer clubs or computer centres outside. Students who did not follow such classes have exemplified their experiences and knowledge by indicating the skills they have acquired in the questionnaire. Even though school computer clubs and computer centres have structured ICT syllabus in place, it is discovered that students can acquire reasonable ICT skills and understanding through informal learning.

Students who have gone through a structured ICT syllabus at computer clubs in schools or computer centres and almost all students who did not attend such classes have expressed their interest in taking up ICT related courses later. Another point of interest is that these students have also indicated their interest in pursuing IT related careers in future. The summaries on the benefits of ICT for the country, school, and for the respondents respectively reflect that ICT knowledge has also created awareness among students.

Implications

ICT awareness among the lower secondary students is evidently shown in the findings of this study. As such, the Ministry of Education, the school administration, teachers and parents should provide the necessary means to enable students to acquire ICT knowledge and skills. Teachers especially, should encourage students to prepare class work using ICT tools while parents at home should involve ICT tools in the teaching and learning of academic subjects.

Even though there are computer classes at schools, the student enrollment in computer classes is not encouraging. Hence, the school administration, teachers and parents should play a pivotal role to encourage students to participate in computer classes. Schools should be equipped with more computer peripherals, qualified instructors and purpose-built computer labs. Most importantly, the teaching and learning of ICT subjects should be able to attract all students to enroll in computer classes. A set module encompassing various levels of work should be assigned to students who are advanced in ICT. It should be suitable for all the students irrespective of the level of ICT knowledge.

Parents, teachers and the school administration should also inculcate the importance of ICT among students to acquire ICT knowledge and skills. Students should be encouraged to the fact that early ICT knowledge and skills attainment would have a

positive impact on them when they progress to higher Forms and higher institution of learning. Apart from the computer classes, ICT based activities should also be encouraged in schools to allow more students to participate. It is hoped that with these activities, the level of ICT awareness among students can be enhanced.

Students should also be taught the benefits and the negative aspects of ICT. They must be educated on self-censorship, responsible use of ICT technologies, and plagiarism. This is necessary in order to prevent them from being influenced by the negative elements found especially in the Internet.

The Ministry of Education and the private sector should help in the realization of an IT literate society in the country, although rural computer centres have been set up by the relevant authorities. This can be achieved if more ICT facilities are provided to poor students through sponsorship, subsidy and special funds. In this way, there would be a balance in the attainment of ICT literacy between student who has access to the computer and those who do not.

5.5 Recommendations

The following recommendations are made with reference to the present study.

- i) Since this study is limited to only two schools (one urban and the other semi-urban), it is recommended that a similar study be conducted in rural

schools. This is to gauge the interest in ICT and to identify whether there is a need for a structured ICT syllabus and that of informal learning of ICT in rural areas.

- ii) It is also recommended that a study be conducted to understand whether ICT knowledge and skills have any significance on student's academic achievements.
- iii) A study should be conducted to identify whether students who have actually undergone a structured ICT syllabus have in reality taken up ICT related courses or IT related careers later in their lives. This study can be done in colleges (where the students are doing IT related courses) or staff who are involved in IT related careers.
- iv) A similar study should be conducted to determine whether the introduction of ICT at lower secondary level has any significance in ICT learning in Form Four.
- v) The Ministry of Education should expand its effort to provide and facilitate all activities pertaining to ICT literacy in all schools throughout the country.
- vi) The Ministry of Education is also encouraged to formulate a suitable ICT syllabus for lower secondary students in the country.