CHAPTER FIVE

Discussion, Implications, Limitations and Future Research

5.0 Introduction

The aim of this study is to determine the level of Internet skills among secondary school teachers and their perception towards the Internet as the new environment for teaching and learning.

Data for the survey was collected by administering a 5 Likert scale survey questionnaire consisting of 45 items to 40 teachers. There were only 27 teachers who responded to the survey.

The aim of this survey is to answer the following questions:

(a) What are some Internet skills teachers have acquired?

(b) What is the perception of teachers towards the Internet as a new environment for teaching and learning?

(c) What is the perception of teachers towards Internet's negative effects in teaching and learning?

5.1 Internet Skills among Teachers

Most of the teachers had indicated that they have most of the basic Internet skills. All of them can send and receive electronic mail, 89 % can use the web to get news and information and 88 % can create homepages. This survey shows that the teachers in this

group have the basic Internet skills to harness the Internet for teaching and learning in the classrooms. Kubala (1998) mentioned that novices can, in fact become proficient in the design of course materials on the Web in a very short time.

Only 41 % of the teachers had participated in newsgroup. This is probably because teachers surveyed go online for only a short duration (less than 5 hours per week). They were more interested in looking for news and information. They probably chose not to stay online for a long duration because it will increase their expenditure.

Most teachers do not have the ability to operate a web phone (89 %), chat on a whiteboard (64 %) or commence teleconferencing (93 %). These higher level Internet skills may require formal training and constant practice in their office or homes. They will easily forget these skills if they do not use it. Another contributing factor could be the cost in acquiring high-speed modems and the Internet video kit. Recently, the cost has become affordable. An easy to use video Internet kit now costs about RM 528 (Chong, 1999).

5.2 Perception of Teachers towards the Internet

(a) Internet's Information for Teaching and Learning

The survey has shown that about 97 % of the teachers agree that the students can get a lot of information on the Internet that is related to their learning; 74 % agree that the information can be obtained quickly and 85 % agree that looking for specific information develops reading skills. Generally the teachers were positive towards the

amount and speed at which information can be obtained from the Internet and students will develop reading skills as they need to read to evaluate materials found on the Web.

The above facts seem to indicate that teachers favour the use of Internet for searching information and developing study skills. This implies that teachers, if given the opportunity will favourably use these facilities in the classroom. Thus, an initial step in getting teachers to adopt such initiatives will be to provide the environment. Teachers who are not exposed to the Internet but intend to deploy the Internet should be trained and given hands on chance to apply their learning experiences. Despite the fact that there is a lot of interaction and information that can be accessed immediately, we should heed Deal's (1998), warning of being "caught in the Web" of information.

Thus teachers need to be trained on how to specifically look for information and use it in problem solving activities. This hands on experience can then be passed on to their students.

(b) Internet's Capability for Teaching and Learning

The survey shows that 93 % of teachers agree that Internet will stimulate creativity in students; 74 % agree that using electronic mail to send messages can help students to improve their writing skills and 97 % feels that electronic mail will definitely create more class interaction. A total of 85 % teachers agree that students collaboration will be enhanced through learning on the Web; 89 % thinks Internet can help students

learn at their own pace and 78 % feels that the Internet can promote higher thinking skills.

The above findings seem to indicate that teachers are quite impressed with the capability of Internet for teaching and learning. Email is an easy skill to learn. Thus teachers can use this tool confidently in the classroom as a tool for teaching language. There is a purpose for students to write and an authentic audience. Communication between students will generate interaction and student collaboration. This is in accordance with Quinn's (1998) observations on 1200 students who have unlimited email and Internet access who noted that emailing was very popular among the students. Although the contents did not pertain to their school work or academic pursuits, it generated a lot of excitement. The students were interacting and there was an air of cooperation among students in the computer labs when they were given assignments.

The implementation of the smart school by MMOE is a right step to provide the vehicle for this Internet experience. The students in smart schools will be able to practise discovery learning and use self-paced learning programmes through the Internet.

(c) Revision and Practice Using the Internet

Two thirds of the teachers agree that students will have more opportunity to ask questions online. A total of 85 % of the teachers agree that the students can access lessons on the web for revision anytime,78 % thinks that students can get immediate feedback for their practice and exercises and 85 % agree that electronic mail is an

excellent way to disseminate class information and assignments. Overall, the teachers were very positive of the Internet for revision and practice.

Students in our traditional classroom do not usually ask questions. Kubala (1998), discovered that students were more willing to ask questions and participate in class discussions compared to the traditional mode of learning. The measure of anonymity serves as a motivator for students to get involved. Hence teachers must access their mailbox frequently and response to the students need. The questions will also be a good feedback to teachers the kind of learning taking place among his or her students. Teachers should be given free Internet access to motivate them to check their email regularly.

The study seems to indicate that teachers are in favour of students using the Internet for revision, getting class information, assignments and exercises. The education ministry can help students get revision and exercises by setting up a website. Modules of each subject and suitable exercises can be placed online. This will lessen the burden of teachers having to make their own materials. Teachers who are able to produce teaching materials can send them to the education ministry. The administrator of the website can check the quality of the material and add to the collection. Students will access the website for revision, exercises and information with great assurance that they are getting quality materials.

(d) Motivation through the Internet

All teachers surveyed are in total agreement that communication with other students over the Internet will make learning more meaningful and looking for information on the web is fun and interesting. The students will try to find the most current and updated information.

Most teachers agreed that the colourful graphics and audio features of the web environment will motivate students to learn and the Internet is challenging and stimulating. Students are often attracted to programmes that are highly interactive, colourful and equipped with audio features.

This implies that teachers will integrate Internet into their lessons if they are provided with the facilities. The Internet can help to gain the student's attention. Student's attention must however be matched by the quality of the lessons planned. The combination of attractive features of the Internet and quality materials will ensure that the Internet can be a powerful medium of instruction.

The survey among elementary school teachers in California shows that 92 % of teachers believe computers are powerful motivators to improve learning (Tenth Planet, 1995). The present survey indicates the same response from the teachers. Thus, the education ministry can rest assure that their investment in the smart school is a step in the right direction.

(e) Assessment with the Internet

A total of 74 % of the teachers agree that presently Internet is the best medium for online assessment and about 34 % agree that Internet can immediately identify the good and slow learners. A total of 63 % teachers agree that Internet allows parents to keep tract of their child's progress and 74 % believe questions for online testing can be changed quickly and easily. The survey showed that the teachers were only slightly positive towards using the Internet as a medium for assessment.

Thus, if teachers are to use Internet for online assessment for their students, teachers must be assure that the assessment is fair, non-discriminating and secure. Teachers must be provided with training on how to conduct assessment through the Internet. Time must be given to teachers to familiarise with the procedures of the assessment. This will allow teachers to gauge the effectiveness of the Internet assessment to aggregate results, modify items and procedures immediately and inexpensively. According to Bicanich, Slivinski, Hardwicke and Kapes (1997), the state Departments of Education must take advantage of this technology and consider Internet as the end-of-course testing for education. The Internet offers a viable and cost-effective alternative to paper-and-pencil testing.

(f) Internet's Negative Effects on Teaching and Learning

There was general concern over the negative effects of the Internet on teaching and learning as 56 % agree that the Internet will reduce the personal treatment of the

students and 44 % believe that students who work long hours on the Internet may be socially isolated.

Thus teachers who are going to use the Internet must optimise the time spend on the Internet. Lessons must be well planned so that students remain focus and able to accomplish their tasks in time. Parents must also make sure their children do not spend too much time on the Internet. They can control access with password or keylock. Kraut and Lundmark (1998) in their studies on effects of the Internet on community and social relationships observed that greater use of the Internet was associated with the decline in communication with family members and decreased in size of social circles. Hence prolong use of the Internet may affect adverse social effects on students.

The government must ensure that there is equal access for students in rural and urban schools. Kubala (1998) said that the bottom line with Web-based graduate courses is access. The same can be said of any other courses offered over the Internet. The construction of this network may be costly but it is a sound investment for the future, as our country embark on the electronic journey.

Most teachers agree that students can get wrong information from the Internet and will be tempted to visit unhealthy websites. Their concern is understandable because the Internet is not censored.

5.3 Implications of the Survey

The survey among secondary school teachers has shown that they have the basic Internet skills needed to use the Internet environment for teaching and learning. They also exhibit a very positive perception towards the Internet as a new environment for teaching and learning with respect to the information that can be obtained from the Internet, the level of productivity that Internet can bring, using the Internet for practice and revision, motivation and to a certain level, assessment with the Internet.

However, they were of the opinion that Internet can have negative effects towards teaching and learning because Internet can reduce the teacher personal treatment of students, reduce their circle of social life, access to wrong information and unhealthy influences such as pornography and cults. They felt that the Internet might not be accessible to all students, resulting in inequality of opportunity for quality education. Presently this seems to be the case because rural areas do not have telephone lines. If this problem is resolved in the near future, accessibility will mean rural students will get the quality education via Internet which was deprived to their earlier generation.

The year 1999 sees the implementation of the Malaysian Smart School programme. The ninety selected schools will be supplied with modern computers, wired classrooms and interactive educational software written from the teacher's perspective. Eventually, the programme will be extended to all schools in the country. The survey has shown that the teachers are very positive that the Internet can be a new teaching and

learning environment in the classroom. The education ministry can therefore expect a good response from teachers with regard to the use of Internet in the classrooms.

However, the ministry must allay the fear of teachers and convince them that negative influence of the Internet can be controlled and minimised. Pornographic sites have to be blocked and school computer units must be armed with software like Cyberpatrol to discourage teens from accessing prohibited sites. Parents must supervise their children when they surf on the Internet. Special keywords can be used to prevent unauthorised access to computers.

5.4 Limitations of the Survey

This survey is limited to those teachers who have Internet experience. The result of this survey is therefore valid for teachers who had used Internet. Further surveys have to be conducted to determine the basic Internet skills among other school teachers and their perception towards the Internet.

5.5 Future Research

The result of this survey has shown that teachers who have Internet experience have basic Internet skills and generally a positive perception towards the Internet environment for teaching and learning.

The writer is of the opinion that the following research can be done in the near future:

- is there any difference between the performance and perception of students towards the Internet tests compared to paper-and-pencil tests? The education ministry may use the Internet as a medium for assessment. Students may have different perception towards assessment with the Internet. Their perception will affect their performance. Hence it is vital to know how students perceive Internet tests as compared with paper-and-pencil tests.
- does teaching and learning on the Internet present any disadvantages to any subgroups? The content of the Internet is basically in English. Students in rural setting are generally poor in the command of the English language. Hence they may be at a disadvantage in comparison with students who have better command of the English language in urban areas. Secondly, those who can afford Internet access at home will be more at ease with the Internet environment.
- does prolonged use of the Internet reduce student's family and social interaction in our social context? There are very few studies concerning the effect of Internet on social and family life. Hence it is vital to know how this technology can influence family and social interaction in the social context.
- can learning through the Internet improve students' performance?
- can Internet cater to the different learning styles of the students? Traditional classroom teaching may cater to only certain kind of students. If the Internet can cater for a variety of learning styles, it can be a new environment for teaching and learning.

In conclusion, I am of the opinion that the Internet can be a new environment for teaching and learning. Lately, there has been a lot of attention given to the Internet through our local print media. The public is therefore given exposure to the Internet environment although most of the attention seems to give the Internet a bad image. The Internet, like other media can be misused. Therefore, it is unlikely the public will develop a negative perception towards the Internet.

The education in the next millennium will be centred on electronic learning. Our nation is moving towards the age of digital and information technology. The MultiMedia Super Corridor is conceived to propel the nation to a new era of electronic government, marketing, communication and telemedicine. The Internet, which is a part of this setup will definitely be widely utilised for teaching and learning.