Title	Children's home computer use: A study in a neighborhood school
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CHILDREN'S HOME COMPUTER USE:
A STUDY IN A NEIGHBORHOOD SCHOOL

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Abstract: The computer is a useful tool for many students. All the schools in Singapore have computers. Students use computers in schools and many of them use computers at home too. The rate of using computers at home has been growing rapidly in recent years. This is a survey study of the use of home computers by students attending a neighborhood school. The target group is the Primary 5 students. In this study, we will find out the percentage of the students who have home computer, how they use computers at home, and how they use the Internet at home. The findings will provide a better picture of home computer use for parents and teachers.

Introduction

The Computer is a useful tool for many students. Since all the schools in Singapore have computers, students have been using them in schools. However, we also believe many students have computers at home. This may be because many parents are worried about their children's education (The Strait Times, 19 July 1999, p.1; The Sunday Times, July 25, 1999, p.32) and believe having computers at home will provide a better learning environment for their children. Some parents and teachers even believe that "early computer experience is a key to winning the race of financial success" (Healy, 1998, p.90). However, some educators pointed out that merely having home computers does not mean children use them for educational purposes. (Sefton-Green and Buckingham, 1996).

Context and Rationale of the Study

According to the "Masterplan for IT in Education", students will have or are having up to 30% of the curriculum time as hands-on use of computers. In 2002, student-computer ratio will be 2:1. There is no doubt that computer facilitates in schools are or will be adequate for students. However, can we make the assumption that students have computers at home? How do students use their home computers?

We believe school administrators and teachers should have a good idea about the home computer situation of their students. This is because schools should allow students who do not have computers at home to use computers at school when they have to do assignments in using computers. On the other hand, parents should have a better idea how their children use computers at home.

In this study, we investigated the home computer situation of the Primary 5 students in a neighborhood school. The study will give us an overview of the availability of home computers, the use of home computers, and Internet access issues.

Methodology & Research Questions

This is a study of the use of home computer by students attending a neighborhood school. The target group is the Primary 5 students. One hundred and fifty-six students were involved in the study. Sixty of the students were girls; ninety-six of the students were boys. This study includes four major research questions.

1. How many percentage of the P5 students have home computer?
2. What did P5 students use home computer for?
3. What did P5 students Internet for?
4. Did their parents sit with them when they were using Internet?

Findings & Discussion

How many percentage of the P5 students have home computer?

One hundred and thirty-seven P5 students had home computers (i.e. 88% of the sample). This indicates that the majority of the P5 students had home computers and only a small percentage of the students did not have home computers. This means we should not make the assumption that all the students have home computers. Schools should provide computer facilitates for those students who do not have home computers if they are given homework assignments which require them to use computer facilitates. Teachers also need to give consideration to some students who do not hand in their assignments in a word-processed format.

What did P5 students use home computer for?

Table 1 provides a summary about how the home computers were used. The tabulation includes only those students who had home computers. The table indicates that many students use their computer to access Internet, play games, run CD-ROM software packages, and type homework.

Parents should know the pros and cons of allowing their children to play computer games. Playing video games "may develop certain forms of visual-spatial reasoning" (Healy, 1998, p.157). On the other hand, poorly chosen games may teach children antisocial values, such as "one must kill first to survive" (Healy, 1998, p.158). There are good instructional games that children do enjoy while they can learn skills, knowledge, and pro-social values. However, we believe parents need to take an active role in making "good choices" of computer games and CD-ROM software packages for the children.

There are 77% of the students who are using CD-ROM software packages. We believe there are some "good" software packages in the market that parents can choose for their children. Parents may consider adopting certain guidelines in selecting CD-ROM books such as the guideline suggested by Matthew (1996). According to Adam and Wild (1995), multimedia CD-ROM storybooks may help reluctant primary school readers to develop positive attitudes towards reading. Their findings did not indicate any negative effect on willing readers' attitudes towards reading CD-ROM storybooks. As a result, parents may consider choosing multimedia CD-ROM storybooks for their children.

According to Parson and Johnson (1996), Kid Pix2 is an appropriate for use with primary school students. They believe that "Enhancing children's literature experience through writing for Kid Pix2 is limited on by teacher's creativity" (Parson and Johnson, 1996, p.125). Parents may encourage their children to write stories and book report by using Kid Pix2. "The final product is a slide show complete with motion, sound effects, narration, and eye-catching screen transitions that captivate the audience. Print copies of the slideshow allow children to share their published work with their parents and classmates." (Parson and Johnson 1996, p.124). In this case, using open-ended software may stimulate children more fun and creativity in their learning.

For those P5 students who had home computers, 78% of them can access Internet at home (i.e. about 68% of the total sample). Since there is a high percentage of them had Internet access at home, we should find out more details about Internet use. This is leading to our third research question: "What did P5 students use Internet for?"

Table 1
The Use of Home Computers

The Use of home computers	P5 students' response
Play computer games	89%
Internet access	78%
CD-ROM software	77%
Type their homework	64%
Others	44%

What did P5 students use Internet for?
For those students who have home computers, 78% of them have Internet access. Table 2 provides a summary of how the P5 students use Internet at home. According to our finding, the majority of the students use Internet to send emails. There should be a follow up study on how they make use of the Email services.

50% of the students, who have Internet access at home, used home computers to do their homework. We wonder if the students were required to use Internet to do their homework or if they used Internet to enhance their quality of their homework assignments. If they were required to use the Internet to do their homework, then those students who did not have Internet access at home might not be able to compete with those who had Internet access at home on the same ground. However, the school might provide Internet access to students who did not have Internet access at home.

Table 2
The Use of Internet at Home

The Use of Internet at home	P5 students' response
Send Emails	75%
Play games	51%
Do homework	50%
Others	43%

Did one of the parents sit with them when they were using Internet?
Only 27% of the P5 students said a parent sat with them when they accessed the Internet. One may argue that when parents set the rules on Internet use for their children, parents do not have to sit with them. However, setting the rules for their children does not mean they will follow them. This view is supported by a recent study (The Straits Times, May 12, 2000).

If the parents are not sitting with the children when they use Internet, it is possible that children come across of some pornographic sites and/or other inappropriate sites for them. Some parents may believe censorship is the solution to the problem. However, Mrs. Carmee Lim, Chairman of parents Advisory Group for the Internet, pointed out that "Censorship is not a perfect solution because you can never censor everything on the Net" (Computer Times, March 8, 2000, p.8). Perhaps parents should surf the web with their children to know what are web sites their children have been accessing.

When parents do not have time to spend with their children, they may set the rules on Internet use or consider the following strategies to monitor their children's activities on the web (Computer Times, March 8, 2000, p.8):

- track the web sites their kids visit,
- be aware of their online activities,
- talk to their kids about what's right and wrong on the web.

Conclusion
We believe that merely having home computers for children does not necessarily help them to learn better. Parents should take an active role in guiding their children in their learning at home with or without home computers. Healy (1998, p.141) suggested that "we must make sure that computer use includes the important step of requiring children to 'elaborate' their knowledge – thinking aloud, questioning, communicating ideas, or creating some kind of original representation about what they are learning". Parents may consider Healy's suggestions in developing their guidelines for their children in using computers at home. In addition, parents also have to realize the potential dangers in using computers such as visual, postural, skeletal, and radiation problems (Healy, 1998). They need to help their children to avoid these problems. Parents should use common sense to guide and to monitor their children in using computers at home.

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