

Internet and Independent E-Learning of School Age Children in Thailand (One Study)*

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Schools generally have been unable to keep up with the rapid technical changes in modern society. As a result, primary school age children worldwide are becoming self-taught independent e-learners and the gap between what they know and are able to do exceeds the learning outcomes for their schools' ICT (information communication technology) curriculum. The culture of text messaging is based upon a new form of language that does not develop or reinforce the language curriculum taught in schools. An issue of increasing concern for parents and teachers is that the Internet provides a level of freedom to young learners that have the potential to put them at risk. Today's independent e-learners of the Internet world are potentially vulnerable, because parents and teachers are unable to guide and supervise the contents that students are exploring. The digital world for all its benefits limits opportunities for young people to develop the social interaction skills that are critical to their overall emotional and social development.

Keywords: Internet, independent e-learning, role of schools and parents

Introduction

The availability of inexpensive high quality MCE (mobile communication electronic) tools, such as note books, smart mobile phones, digital cameras, MP3/MP4 players, play stations, iPods and iPads, have opened amazing doors through which students can communicate, share information and learn. After school, on their own time, students are acquiring new skills and achieving results that exceed the learning expectations of the curriculum at school. Thai students are becoming independent e-learners, because digital technology and the English language are connecting them to international trends in fashion, music, sports, entertainment as well as their friends. The application of the Internet has made learning for young people incidental, relevant, interesting and rewarding because it is based upon experiential learning that provides an immediate payoff.

For educators, the ICT (information communication technology) revolution that has occurred in the last few decades needs to be both understood and taken seriously. The potential for e-learning to engage Thai learners and raise the levels for student performance standards that clearly necessitate changes to the curriculum, the resources that teachers use, and more importantly, what teachers understand to be their role in an increasingly wireless world. Similarly, the impact that ICT has upon the daily lives of students is a source of

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concern for both parents and teachers alike. At home, the point can be argued that the Internet has reduced the quality of family life and eliminated important life skill opportunities for young people to acquire and confidently apply social skills based upon face-to-face social interactions. The new language associated with texting is based upon symbols and acronyms that isolate the generations, and more importantly, texting has reduced communication to its lowest common denominator. Expressive language development and social conversation skills within the culture of young texters have been minimized.

This paper is based upon a research study that was conducted in three private schools in Thailand. The study's findings will be discussed within the context of research conducted in Japan and the United States as a strategy to illustrate the impact that technology has on the behaviors of young learners during their after-school hours and underline the extent to which technological advances in society are forcing a rethinking of program delivery and the role of teachers in today's schools.

Literature Review

Studies conducted by the International Telecommunications Union in Geneva (CBC News, 2010) found that 60% of people around the world have registered for mobile phone subscriptions and developing countries currently make up about two thirds of mobile phone users. Studies have revealed that between the years 2000 to 2002, Internet use had more than doubled globally and projections estimated that almost one quarter of the people on the planet were Internet users at that time. About 10 million people, world-wide regularly use the Internet to access at least one virtual world, and 34% of teens living in the United States who are Internet users are increasingly being drawn into the virtual world (Hendrick, 2009).

In 2009, Asian countries represented approximately 56.0% of the world's population with an Internet penetration of 21.5%, which accounted for 42.4% of the world's Internet users (Miniwatts Marketing Group, 2009). By 2011, Japan had a 96.0% penetration of mobile phone use and a study in 2008 revealed that 31.3% of elementary school students and 57.6% of middle school students owned a mobile phone that had Internet access capability. Applications of mobile phones have become so pervasive in Japanese society that their usage has evolved into a unique dimension of modern Japanese phone culture or "keitai culture" (Wikipedia, 2011).

One of the considerable numbers of grass roots development projects in the field of e-learning is being initiated and managed by future lab in the United Kingdom (Sutch, 2006). This trend reflects the belief that the needs of tomorrow's citizens should be shaped in schools, communicated to parents and translated into a common set of ethical behaviors of citizens of the digital world.

The iCurriculum initiative (Sutch, 2006) was designed to conduct and explore a broad based analysis of curriculum contents across several European countries. Teachers in the project's partner nations of Germany, Greece, Romania, Spain and the United Kingdom have developed their research studies in response to three focus questions. What are the critical skills that apply to digital literacy? How can people function in our information rich world? In what ways can technology be used to transform thinking? The study is relevant and important, because it attempts to identify the Meta skills that are necessary to live and work in a digital age.

The study looked beyond how technology was being applied within the curriculum and focused upon a more human element. Issues related to the literature concerning cognitive and social development were explored through studies that examine the impact of the digital age upon learners at various stages of cognitive development. The thrust for this work was to encourage innovation in teaching under future lab's philosophy of professional sharing. An important focus for the study was to investigate the impact of the learning and

unlearning processes which have become critical in the digital age.

Findings from the study will be used to develop guidelines for the producers of curriculum-based digital resources and communicated to the general public related to the application of lifelong learning.

The iCurriculum research represents a shift away from traditional ways of looking at what students learn in school. The new emphasis for learning in the modern world is no longer focused on content or what to learn but on the process of how to learn. Digital learning skills are based upon sharing and exchanging information, collaborative communication, research information skills, modeling of learning paths and the practice of ethical work. The curricula of the future will need to be transformational, because what is known today can and will be changed in the future.

Youth and Their Digital World

Studies which focused upon young people in the United States and the popularity of online gaming, virtual world games, social networks for teens, cell phones and texting, investigated behaviors of young people and revealed the growing importance of technology as a focus for entertainment, communication and independent e-learning. In the United States, the amount of time children and teens spend on the computer has tripled in the last ten years. An article sponsored by the San Francisco Chronicle and posted on the San Francisco Gate on Twitter reported that for American children who were aged between six and 11, 71.1% had accessed the Internet in the last 30 days (Tucker, 2009). Findings, based upon the American Kids Study 2008/MRI (mediamark research and intelligence), revealed the extent to which American youth are using the Internet as a source of entertainment and communication. The study found that children spent 83.4% of their time surfing the net in their homes, while 29.6% surfed the net at school and 6.8% used public places, such as bookstores, Internet cafés or public libraries. The study summarized the Internet's tremendous draw on young people and concluded that 81.2% of the participants in the study had successfully navigated to inappropriate sites, because adults in their world either were unaware of the necessity to supervise their child's access to Internet sites or had not set boundaries, such as installing applications which block their child's access to inappropriate sites.

A Study in Thailand

A recent study in Thailand examined that Internet usage of children in Grades four, five and six was based upon a sampling of 1,418 students. The data were collected at three private schools as a part of a research project to introduce e-learning as an English learning strategy for primary school age children and was based upon the readiness levels of primary students and their teachers.

Administrators at the research sites reported that the students in their schools were from upper income families and estimated that between 80% and 90% of the students had access to a computer and the Internet at home. The majorities of parents were reported to be educated professionals and represented a wide range of proficiency with the English language. For this reason, one component of the study examined the opinions of parents as indicated by guidelines that are placed upon their child's access to the computer and the Internet. Primary school students between eight and 12 years old were surveyed to examine their experiences using computers and the Internet both at school and at home.

The Ministry of Education for Thailand has mandated English language instruction and information technology into the curriculum, beginning at Grade one (Ministry of Education Thailand, 2001). Findings from the study revealed that age, gender and grade levels did not play significant roles in influencing student

responses to the research instrument items. Of the 1,418 Grades four, five and six students who participated in the pre-study questionnaire, "Me and Computers", a very large degree of consistency was evident among the students' responses. Students were surveyed to determine both their opinions about their preferences and the importance of learning English and computers. Students indicated an overall preference for learning to use computers (80.7%) when compared to ratings for preferences for learning English (51.5%). Students rated the importance of learning English as high and this was consistent with the importance given to learning to use a computer (94.2%).

Students were surveyed to identify patterns in their preferred language when they are using the Internet. Students at the Grade four level preferred to access Internet sites where the contents were presented in Thai (33.2%). However, by the end of Grade six, almost half of the students indicated both languages, English and Thai as being the preferred (48.3%) languages. Thai students have access to quality Internet sites in their first language and this is complemented by access to English based information sites.

Thai students indicated that they access English language resources that are not available to them in Thai. Examples include Google Earth, National Geographic produced sites, English language skill development and practice activities, entertainment in the form of English movies, games and social communication and information sites, such as YouTube. Findings from the study indicated that the objective for young students was to find Internet sources which were satisfying to their interests and needs, and over time, this practice in accessing information in both Thai and English has resulted in a degree of flexibility to use languages that is both encouraging and commendable. Results of the study validated that Thai students as young as 12 view language as a learning tool.

As many as 70% of the students responded that they are using a computer, between three to five hours (40.4%), or for more than six hours (29.5%) on average per week. One interesting finding from this study revealed students' perceptions about where they were when they accessed a computer.

The majority of students indicated that they were at home when they used a computer (88.7%). These data confirm that a large majority of students enrolled in the research schools have access to a computer and the Internet at home (over 70%). A startling finding from the study was that less than 20% of students indicated that they were at school when they used a computer (19.5%). However, all students in the study use computers at school. In the sample schools for the study, the subject of computers is taught as an isolated subject and based upon knowing about computers, such as the parts and their functions, and instruction was observed to take the form of teacher demonstrated ICT applications and student practice. Internet based activities are not integrated with contents from other subject areas and the emphasis at the primary grades is not based upon learning to use a computer as a learning tool. A possible explanation is that in Thailand, much of the curriculum is content-based and student academic assessment is determined by recall and performances based upon rote memory.

One might speculate that the responses to the survey items implied that at school, students learn about the computer while at home, students use the computer as a learning, entertainment or communication tool and illustrate the extent to which the Internet has expanded options and accelerated students' independent learning rates.

It is a common perception among adults that for children the Internet is primarily used for game playing and as a source of entertainment. Findings from the study indicated that for young children, this perception is not completely accurate. Table 1 offers a broader perspective based upon what students actually reported to be

their preferred Internet-based activities.

Table 1

Student Preferred Internet Activities

Activity (<i>n</i> = 1,418 students)	Yes (%)	No (%)
Learn new skills	30.3	69.7
Play games	66.2	33.8
Look up things	32.5	67.5
Use email	24.0	76.0

Note. Dichotomous questions required respondents to make a single response.

As predicted, the data indicated that the most popular student activity was to play games (66.2%). However, upon a closer examination of the data, an interesting new perspective was revealed. Responses from the items “learn new skills” (30.3%) and “look up things” (32.5%), which when added together indicated that students were using the Internet as a learning tool (62.8%) to an almost equal extent, as they are accessing the Internet to play games (66.2%). The data strongly point to the degree to which a teacher’s role has changed as a result of the impact of the Internet in the daily lives of young learners and the motivation with which young people not only have the resources to learn on their own, but also have independently and successfully responded.

Responses to the questionnaire item which examined student use of email provided an unexpected and interesting additional perspective. Almost 80% (76.0%) of the students indicated that they do not use email, however, 24.0% indicated affirmative to this question item. A surprising finding was the students’ reactions to the use of email question which suggested that some students found this item confusing. Many of the respondents who indicated that they do use email had scratched out the word email and substituted other forms of social networking, such as Facebook, Twitter, Myspace and Skype. About one quarter of students responded “Yes” to the concept, because they know what email is but indicated the necessity to clarify in more specific detail for the researcher. This is an excellent example of test item bias because for eight to 12 year olds email is perhaps old fashioned and has been replaced by more interactive and effective social communication and networking systems. An outcome, however, is that students who are less than 12 years old have successfully managed to register as users of social network systems that their producers have deemed to be inappropriate for minors.

An element of the study was the examination of the favorite free time activities for eight to 12 year olds. Students’ responses identified that using a computer was the most popular pastime activity (44.7%) when compared to other childhood preferences, such as play with friends (26.7%), watch TV (20.3%) and other (8.3%). These findings confirmed the extent to which the Internet has been integrated into the lives of young children.

An examination of the independent Internet skills of students in the primary grades has significant implications for teachers. All of the students in the study responded affirmatively to the question which examined if they knew what the Internet was (100%) and an almost equal number of students (98.8%) indicated that they were able to access the Internet on their own. Table 2 illustrates students’ levels of attainment in terms of basic Internet related skills that they are able to perform independently.

Table 2

Sample Independent Internet Skills for Thai Students Ages 8 to 12

Questions (<i>n</i> = 1,418 students)	Yes (%)	No (%)
Can you open the Internet on your own?	98.8	1.2
Can you use a Website address on your own?	97.0	3.0
Can you find an Internet game on your own?	99.1	0.9
Can you use an Internet program to do creative work?	90.9	9.1
Can you find your school's Website on the Internet?	92.3	7.7

Table 2 represents an interesting finding for the study, because Thai students in Grades four, five and six are not provided with formal in-class instruction based upon the Internet. Applications of the Internet are deemed to be more appropriate to students in the secondary grades. It can be inferred from the overall findings for the study that young students are learning to access and navigate the Internet during their after-school hours. The implication for curriculum developers and educators is that students as young as eight are already independent e-learners.

Table 3 identifies a profile of changes that have occurred in family life related to computers and the Internet. A significant percentage of parents of students in the study were reported to be involved in and are directing their child's ICT learning (74.2%). This suggests a trend at home to reference the Internet to support school work. The Internet has become a source of enjoyment for shared family time. Discrepancy between the data concerning rules to access the computer and the Internet suggest that parents place more controls on accessing the computer (63.0%) when in fact real risks for young children are Internet based (54.3%). One quarter of students surveyed indicated that Internet sites are not blocked by their parents. Perhaps, parents are unaware of applications to block access to Internet sites or do not realize the importance of doing so (25.5%).

Table 3

Post-study: Parent Guidelines for at Home Access to Computers and the Internet

Questions (<i>n</i> = 326 students)	Yes (%)	No (%)
Do you need to ask your parents for permission to use a computer?	63.0	37.0
Do your parents have rules about using the computer?	84.8	15.2
Do your parents have rules about using the Internet?	54.3	45.7
Do your parents teach you new things about using a computer?	74.2	25.8
When you use the Internet are there sites that will not let you open them?	74.5	25.5

The data concerning how much time students spend using computers on average per week prompt an investigation about their purposes. The data indicated a trend towards students becoming independent e-learners who are competent to apply their knowledge of languages and ICT skills to learn at their own rate and manage how they explore and develop their own interests. It appears pertinent in light of the findings for the study to further explore the nature of student activities when using the Internet and the extent to which the Web-sites and subsequent activities students are accessing are legal and appropriate. What is the nature and purpose of games and materials that students are being exposed to via the Internet? Who is responsible to teach students how to be safe when they are using social network systems and chat-room services? The responsibilities for teaching students ethical applications of the Internet merits serious consideration by schools and parents are alike. A young student's learning curve related to his/her adoption rates for technical knowledge and skills are remarkable. Young people do not fear computers; for them, the problem-solving,

search and discovery methods that they employ to access the Internet have a direct payoff that provides immediate results and heightened learning satisfaction. As responses to both the pre- and post- student questionnaires, students admitted openly to illegally downloading music and movies from the Internet. Adults must intervene, because young learners are not aware of the consequences of their naivety. Guidelines that govern legal access to social communication networks, such as Facebook, for example, are easily compromised and manipulated by even the youngest Internet savvy user, particularly when they are unsupervised and uninformed about the very real dangers that are inherent to all Internet users.

Conclusions

The implications of the study's findings and others like it are important and far reaching for schools. On a world scale educators are conducting research to support the benefits of the integration of the Internet as a cross disciplinary learning tool. The reality of digital learning within a quickly advancing technological society has become a human issue with significant implications concerning the social, emotional and moral needs of modern learners. The prevalence of e-learning has established a need to examine the generic issues that pertain to all nations because the Internet is serving as a pathway for connecting learners to information on a global scale.

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