

Behavioral aspects of Thai students toward cell phone adoption in the classroom

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ABSTRACT

The preponderance of cell phones owned by students has prompted this study on how students would like to use their cell phones in the classroom. The purpose of this study was to determine student behaviors with cell phone use regarding EFL classroom activities. A questionnaire survey was given to two hundred Bangkok University EFL students in order to learn how the students were currently using their cell phones and how they would like to use them in the future. Both a quantitative and qualitative approach was taken and the two types of feedback were analyzed for a closer examination of the students' behaviors. The overall results have suggested their preference for using cell phones for various activities. The benefits of this study could be utilized for designing future learning activities as well as cell phone usage in the EFL classroom.

Keywords

EFL, Cell phone in Classroom, Cell phone Behavior

1) INTRODUCTION

It's safe to say that nearly all students in developed countries own a cell phone and the majority, if not all, bring their cell phones into the classroom or carry them on their person. The cell phone has become an indispensable device, so much so, that students have developed dependent behaviors with using their cell phones because they provide instant communication with not only their friends

but also with other cell phone functions such as games, social networks and the internet. In a sense the cell phone is information currency and is valued in the same manner as monetary currency. You can't leave home without it.

The attention of the students within a classroom setting is now divided between listening to the teacher and monitoring their cell phones. Barring eliminating cell phones from the classroom this study was devised to learn the feasibility of adopting the cell phone as a language learning aid. A questionnaire was designed which surveyed what students do with their cell phones both in and out of the classroom as well as their attitudes and opinions in using the cell phone in the classroom. Many surveys have been conducted on student attitudes and behaviors using cell phones but one survey which is exhaustive in its execution was designed by Cristina H. Oelofse in the Department of Curriculum Studies at the University of Pretoria (Oelofse, 2008). Oelofse's rationale is that if the cell phone does prove to be a viable educational tool then the learning process could be greatly enhanced.

Therefore, the objectives in designing this questionnaire were to elicit answers from EFL students at Bangkok University which could be studied and later used to determine the efficacy of learning English if the cell phone became integrated into classroom exercises.

2) LITERARY REVIEW

Over the past two years the amount of papers devoted to Mobile Assisted

Language Learning (MALL) has escalated to the point that conducting a study of all of them would be impractical. (Kukulka-Hulme, 2009) of the Institute of Educational Technology in the UK states, "The use of mobile phones and other portable devices is beginning to have an impact on how learning takes place in many disciplines and contexts, including language learning. In a collaborative research effort conducted by John Pettit and Kukulka-Hulme (Pettit, 2007) this impact on learning with cell phones was expanded by Pettit who showed how there is also a trend leading to personal learning environments which students are creating on their own thus side stepping a dependence on learning only from in the classroom. This same concern of learning in and out of the classroom recently made headlines in the New York Times (Richtel, 2010) where students were developing personal projects using their digital devices outside the classroom. It was the effort of David Reilly, principle of Woodside High School, in Silicon Valley who says, "I am trying to get back their attention from their Blackberry's". Reilly is creating other ways for the students to connect back to the school with their mobile devices so a continuous exchange of learning will take place and students do not just leave school work for personal work. Pettit likewise points to these personal learning environments in the UK and suggests ways of taking advantage of these personal environments, as has David Reilly at Woodside High School in California, to integrate them back into a meaningful learning experience within the school. These new interactions with mobile technologies are creating ever-changing learning environments. The weavings between spatial and temporal domains with mobile technologies, specifically the cell phone, will require an adjusted pedagogical framework to accommodate the students' new learning tools.

Looking farther afield to Hyejeon College in Korea, (Meurant, 2007) has developed a second language pedagogy for using cell phones. Meurant's research showed how cell phones were relevant to task based learning and are suitable for classroom interactivity. According to Meurant the rapid pace of technological learning is impacting second language acquisition which is radically redefining the traditional concept of the classroom. As a result, Meurant's literature review, with implications for second language pedagogy, found that cell phones can be useful as learning tools (Meurant, 2006). Meurant reviewed Keirnan and Aizawa's work (Keirnan, 2004) with cell phones in task based learning with students in Japan and showed how the authors demonstrated that cell phones could be potentially useful as language tools. All the researchers reviewed by Meurant contributed activities to augment second language learning such as distributed SMS messages, both during and after class, paired and group tasks using cell phones to communicate with one another as well as feedback on lessons sent by students using email or SMS text messaging.

The many research papers which exist in the literature show a marked increase in finding new ways to adopt the cell phone in the classroom. The European Network of Excellence in Technology Enhanced Learning most recently brought together forty researchers in mobile learning in a conference titled "Kaleidoscope" to discuss the implications of adopting cell phones as a learning tool (Sharples, 2006a). Important implications were discussed involving the ubiquitous nature of the cell phone in all sectors of society prompting the recognition of a society that is changing into a mobile society where learning is taking place at various locations and times to suit the interest and curiosity of the student. Sharples, who is the director of the Learning Sciences Research Institute at the University of

Nottingham, UK, discussed the conflicts between personal and informal learning with traditional classroom instruction at a Kaleidoscope workshop. Sharples discovered that this conflict has been found to be the biggest issue when educators are confronted with how to integrate mobile technology in the classroom. Another presenter at the workshop, (Winters, 2009) offered several factors to be considered when designing a mobile learning activity: The learner and their personal relationships (peer groups, teacher, etc.), What is the learner learning (topic, relationship to prior experience, etc.)?, and Where and when are learners learning? The implications to answering these questions led to more understanding on how to design lessons in a distributed learning network which spans time and space. Other arguments in favor and against using cell phones in the classroom were also addressed. The results of this workshop were that these mobile technologies would eventually be absorbed into schools and universities, but their integration would take on a variety of forms and the issue of integrating online knowledge and classroom knowledge would create a tension between users and educators as well as how parents wanted their children exposed to knowledge outside the classroom (Sharples, 2006). Obviously, it behooves us to examine our own students to learn how they are adapting to mobile learning environments.

So, what we are witnessing is a rapid pace of technological innovation which in turn is drastically changing the concept of the traditional classroom. When the cell phone and other mobile technologies are introduced into the classroom the motivation to adapt to tasks generated by these devices is usually met with a high degree of interest. The caution which needs to be addressed, however, is that this motivation is channeled into doing exercises which complement course work

rather than personal learning environments which Pettit, in the UK, has pointed out.

Mark Prensky, an internationally acclaimed game designer is also finding that students are inventing their own ways to use their cell phones to learn what it is they want to know (Prensky, 2005). Prensky defines young people as “Digital Natives” who have learned how to adopt these mini computers, as he calls cell phones, and use them as the primary means of communication. Prensky sees these “Digital Natives” adapting to the multiple uses of cell phone applications well beyond anything originally thought possible. Prensky asks the question as to whether these devices can provide the knowledge necessary to help students in their lives. Considering the integration of graphics, data bases, instant communication and shared information networks such as Facebook, these questions are likely to be less important than how we integrate the capacities of these mini computers (as the cell phone is called) into a learning environment.

Continuing, (Kukulska-Hulme, 2009) asks the question if mobile learning changes language learning. The key answer that came out of this question is the fact that mobility and the change in location-based learning needs to be considered when developing lessons for language learning. What this means is extending the types of learning available to students inside as well as outside the classroom. The question as to whether mobile assisted language learning will change language learning is an ongoing concern of Kukulska- Hulme. What has been found, is that the design of the learning activity is predicated on close interaction, conversation, and decision-making between members of a group, which includes physical movement both inside and outside the classroom.

One such researcher who draws on survey data, interviews, and focus groups to explore how personal mobile technology is changing the educational experience in educational systems is James E. Katz of Rutgers University (Katz, 2003). Katz's shows that there has been a significant alteration in the routines students perform in the classroom. His research is based on the results of a cell phone study by (Fortunati, 2001).

The development of mobile phone games for language learning has been conducted by Richard Watson Todd at King Mongkut University of Technology in Bangkok. Todd developed a "Mobile Maze" software program which he says is a "communicative paradigm" because it gives students an action reading maze for use with mobile phones rather than a passive behavioral approach of just answering questions. These Mobile Mazes were adapted to "Mobile Phone Assisted Language Learning" (MPALL), as Todd refers to cell phone learning, by using words and pictures so students could travel through the story (Mobile Maze) making their decisions as they proceeded through the story. Todd was able to bring many language skills into play which created a motivating experience for reading and grammar comprehension skills (Todd, 2008).

A team of researchers from several universities teamed up with Sharp Laboratories of Europe to study vocabulary learning using the English Language Mobile (ELMO) system which was conducted on Sharp Smartphones. The ELMO system has developed interactivity including highlighting words to adapt to the readers level, and access to an Oxford dictionary. Test results indicated that pre-post mean scores had increased resulting in the conclusion that adaptive software linked to e-books running on mobile devices offered a means for students to improve their

knowledge of a foreign language (Fisher, 2009). However, the study did point out that more effort was needed in developing interactive design solutions with L2 vocabulary acquisition software that would include better problem solving solutions when incorporated into cell phones to understand new vocabulary if significant learning gains by the students were to occur.

Supporting this view of better interactive design is Todd Toler, Director of User Experience at John Wiley & Sons in New York, who also thinks that the more learning theories are incorporated into interactive designs using cell phones for classroom assignments, the more readily these mobile devices will become permanent adjuncts to a students learning environment. The need to develop personal information spaces by students can then be integrated with classroom assignments thus bridging the divide between student and teacher. (Toler, 2010)

These are only just a few task based activities and research efforts using cell phone technology and many more are being explored and implemented every day. From learning the many concerns of educators around the world with mobile assisted language learning, it, therefore, seemed appropriate to analyze Thai students. As a result, the 200 students surveyed at Bangkok University showed that practically all the students carry their cell phones to class, which in itself may not be unexpected, but further examination reveals behavior patterns and perceptions suggesting that the Thai students surveyed are ready to adopt the cell phone for class work similar to their European, Asian and American counterparts. When taking into account these few mentions of cell phone use from the literature, coupled with on-going research, it is encouraging to learn how second language acquisition can be improved using mobile devices. Whether Thai students at Bangkok University prefer to use their cell phones to learn English was one of the objectives of this current research.

3) LEARNING THEORIES INTEGRATED WITH CELL PHONES IN THE ESL CLASSROOM

The focus for the cell phone survey at Bangkok University was geared to EFL students. As more and more students are in need of communicating in a globalized world, learning a second language has become a priority. There are many learning theories which can be adopted for learning a second language. Using mobile technologies to analyze the effectiveness of learning a second language has been developed at Boise State University in the USA. BSU is exploring how the constructivist theory of learning can be integrated with mobile learning (Craig, 2009). Since the constructivist approach is one in which people build on their own experiences, and with more students developing their own personal world of information sharing, it is the view of the researchers at Boise State University that there is a need to demonstrate that mobile technology integration, along with the constructivist approach to learning, is a perfect match. Likewise, Sharples at the Learning Sciences Research Institute in the UK, along with a team of researchers, is also developing a framework for theorizing about mobile learning. Sharples' team also found a match with cell phone learning and a social constructivist approach (Sharples, 2010). This team realizes that any theory of mobile learning must take account of the ubiquitous use of personal and shared technology. A convergence of personal mobile devices and learning languages is taking place with new applications being developed worldwide, and again (Kukulska-Hulme and Bull, 2009) are developing theory-based support for mobile language learning.

The motivational factors encouraging students to learn a second language have been indicated by (Todd, 2006) implying that mobile phones are intrinsically

motivating which ought to encourage English language teachers to look for applications within the classroom. The issue is how to impart the necessary lessons for students who are interested in second language acquisition. The implications for using mobile phones for language learning have prompted Todd to develop several activities in and out of the classroom. One such activity is one which Todd created that involved negotiated meaning between two people who used their cell phones to describe any object and then tried to draw the described object based on how it was explained over the cell phone. Self assessment of recorded activities was another activity Todd initiated which could be critiqued by detailed feedback on the student's performance from the teacher by listening to the recording and commenting using the cell phone.

Consequently, as a result of seeing the majority of students at Bangkok University using cell phones, the decision was made to obtain a self perception profile from the EFL students using a survey questionnaire. The questionnaire was designed in order to learn how Thai students related to their cell phones and what they would like to use them for in an educational setting. The questionnaire was offered in both Thai and English to minimize any misunderstanding of the questions.

The key aspect in conducting this self perception study with Thai students was to see how it would compare with the ongoing developments and results obtained by researchers and teachers in other universities around the world with their EFL students. Therefore, the intention in designing this survey was to get a broad look at how Thai students at Bangkok University perceived the use of their cell phone as well as their attitude for using it as a learning tool.

4) RESEARCH OBJECTIVES

The goal of this investigation on student behaviors with their cell phones was to:

1. *To examine how the students perceive their use of the cell phone.*
2. *To identify what the students do with their cell phones the most.*
3. *To investigate whether the students would like to use their cell phones to learn English.*
4. To study the students attitudes in using the cell phone in the classroom.

5) RESEARCH QUESTIONS

The research questions were designed to survey students' behavior related to cell phone use to learn English. A series of questions in the form of statements as well as asking which functions were used the most were developed to address the questions. Accordingly, this researcher has addressed four main questions:

1. *What are the students' perceptions of cell phone use?*
2. *What do the students do with their cell phones the most?*
3. *Do the students prefer to use their cell phones for learning English?*
4. *How would the students like to use their cell phone in the classroom?*

6) METHODOLOGY

6.1) Subjects

The subjects in this study were 1st year students in their 2nd semester, however, it was also open to other year students. Of the 200 students surveyed 46.3 percent were male and 53.5 percent were female. The ages ranged from 18 to 24 years of age. 52 percent had a C+ to B grade rating, and 38 percent were majoring in business English or business management with 10.5 percent in hotel and tourism

The questionnaire was designed using both the Thai language and the English language to remove any doubt as to the meaning of the questions. The questions were reviewed prior to being administered by native speakers of Thai who hold doctorates in the field to determine any inconsistencies after translation into Thai.

6.2) Instrument construction:

The questionnaire was used as an instrument to survey the students' perceptions and preferences with using a cell phone consisting of three parts:

Part I. Demographic data.

Part IIa: Students' self perception of cell phone use.

Part IIb: Cell phone functions preferred by students.

Part III. Students' journal on using cell phones.

7) RESULTS AND DISCUSSION

Data analysis: The data analysis in this research used both the quantitative and qualitative method. Descriptive statistics was used to find means and standard deviation (SD) of students self perception for parts IIa and IIb. The Students' journal, Part III, was analyzed based on student discourse reviewed by the researcher. Patterns in the students' answers were clustered in order to make overall comments on the students' remarks.

The questionnaires were constructed and reviewed by three teachers in the Language Institute at Bangkok University. To ascertain the reliability of the questionnaire, the alpha reliability coefficient was calculated for the items, using the Likert scale. The alpha reliability score was .85.

7.1) Part IIa: Students' self perception of cell phone use.

Statement	Levels of agreement		
	Mean	S.D.	Meaning
I could not go anywhere without my cell phone.	4.62	.621	High
I think using my cell phone to call friends to help me with my lessons is important.	4.02	1.06	High
I think sending homework to my teacher over the cell phone (SMS, email, internet) is a good idea.	3.99	1.05	High
The cell phone is very useful when I have to do my homework alone.	3.71	1.05	High
I think the cell phone can be used in class to help me understand what the teacher is saying.	3.58	1.07	High
The cell phone is very helpful for searching information for my assignments.	3.54	1.02	High
My English classroom would be more interesting if I could use my cell phone for learning.	3.52	1.07	High
I think I can use my cell phone to help me learn English better.	3.35	.996	Medium

I would like it if the teacher asked me to use my cell phone to learn English in class.	3.25	1.11	Medium
Cell phones are useful in preparing for tests.	2.10	1.20	Low

Figure 1.

Scale: 1.0 – 2.49 = Low, 2.5 – 3.49 = Medium, 3.5 – 5.00 = High

The results show that almost all the students carry a cell phone to class. What is very interesting is that besides the students wanting to talk to their friends they rate equally as high a want to send their assignments to the teacher. The students also admit the cell phone is useful when they are alone at home for doing their homework. When you compare these two results of wanting to communicate with the teacher and using the cell phone for homework the link between these two are currently non-existent with classroom lessons. Therefore, it is highly probable that the students would like to have some interaction with the teacher using the cell phone for their homework.

Comments: *I like sending my homework by email because it's easier and faster for students and the teacher. / I think I can use my cell phone to help me learn English better because my cell phone can assist me in many ways. / It's quick and easy. / My cell phone can save me time to work on anything. / It's good to send files on the internet because it's faster than going to my friend's house.*

It's readily apparent that the students have already developed routines to use their cell phones for home work and indicate they would like to communicate with the teacher

Another interesting observation is that the students are using the cell phone to try and understand what the teacher is saying in the classroom. If the student had some interaction with their lessons the answer as to whether the cell phone would better help them learn English may improve.

Comments: *The cell phone can search anything on the internet in class to help me learn. / My cell phone helps me take dictation. / I don't understand what the teacher is saying every time. / I use my cell phone in class because it has a dictionary. / I can search for information that's easy and correct.*

These few comments are representative of all the comments from the students who responded positively with being able to use their cell phones to help them understand the information they were receiving from the teacher. This is positive feedback and one that should not be ignored.

How do the students perceive using their cell phone to learn English better?

Comments: *I can get various types of information like vocabulary and sentences. / If you set the menu to English it helps a little bit. / I can find more examples on my cell phone. / It makes me learn and understand better. / If your intention is to learn English it's helpful. / Yes I think it works in class. / I think so, because I set all my phones functions in English.*

These kinds of comments are very typical. What it is showing is the cell phone is a very quick resource to help with understanding English. Whether it's vocabulary, sentences, or clarifying what the teacher is saying, the majority of students depend on their cell phone for language assistance. So even though there may be residual feelings of loss of control in teaching, the reverse seems to be taking place. Students are using the cell phone to keep up with the teacher so if the teacher

maintains ownership of the lesson and guidance with the instruction there is a very good chance that the students will access information on the cell phone related to the content in the lesson plan.

7.2) Part IIb: Cell phone functions preferred by students.

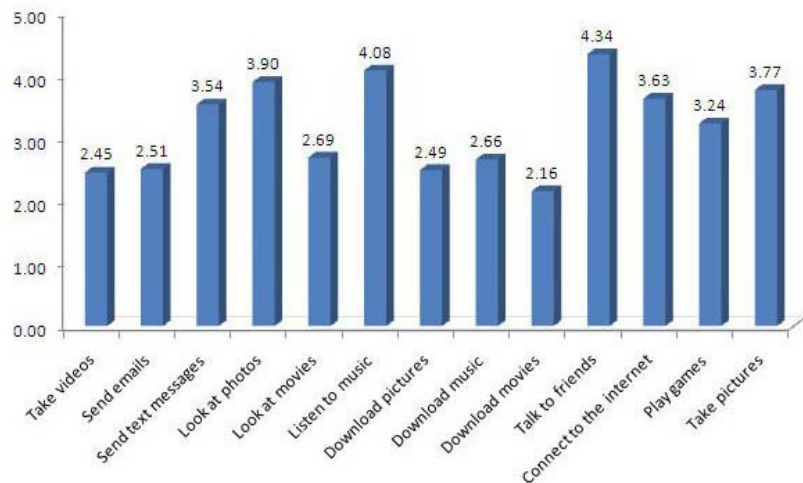


Figure 2.

Scale: 1.0 – 2.49 = Low, 2.5 – 3.49 = Medium, 3.5 – 5.00 = High

When analyzing what the students do with their cell phones it can be seen that the top two activities are listening and speaking. The next two are looking or taking pictures and the next two are connecting to the internet and text messaging.

It is these activities that need to be looked at more closely when considering any lesson plan that would be given to the students requiring the use of a cell phone.

Connecting to the internet and text messaging is very insightful. If a student is asked to locate something on the internet there is a chance they may enjoy text messaging to someone about the information they found. If a student enjoys looking at pictures it may be useful for the student to describe the picture using a list

of adjectives or identify the picture using a noun..

When you compare the results of students saying the cell phone is very useful in helping them with their assignments, and also see that they like to connect to the internet, it is only logical to assume that if they had an assignment that related to both these interests a positive result in learning might come about.

What we find as a result of this survey is a positive orientation to the cell phone on many levels, yet on a classroom level the students are not being asked to do any academic work with them. Therefore, it would prove very beneficial to develop classroom exercises with one group of students using the cell phone and another group of students using the traditional reading materials and compare the results.

7.3) Part III: Students' journal on using cell phones.

Question 1.

- a. Would you like to use your cell phone to learn English? Yes or no.

The number of students who answered yes was 137 with 52 students answering no and 11 not answering. Following are the students' answers from clustering the comments around four of the highest frequencies of the positive responses on how cell phones could be beneficial in learning English. The reasons given show that cell phones can help in learning English and center around four major patterns:

- a. Enhance their learning abilities using dictionaries and the internet.
- b. Enhance their language knowledge with text messaging, emails, and voice.
- c. Communicate with the teacher with emails or video.

- d. Motivation to participate in activities either in or out of the classroom.

Comments such as: *I like to search for information when I don't understand something. / I feel comfortable with my cell phone, and if I don't have it I don't understand as well.*

These comments are indications that the students have already developed a dependence with their cell phones.

Following are the students' answers from clustering the comments around four of the highest frequencies of the negative responses on how cell phones could be beneficial in learning English. The reasons given show that cell phones detract the students from learning English and center around four major patterns:

- a. Interferes with an ability to concentrate.
- b. Prefer to use a talking dictionary or book.
- c. Can learn English better from a teacher.
- d. Lacks the capability to improve language skills.

Comments such as: *The cell phone interferes with my studying and I can't concentrate. / I use my computer and talking dictionary more than my cell phone. / It bores me when I use my cell phone in class.*

These comments indicate that there is very little dependence on the cell phone for learning. Many of these students also felt the cell phones were too expensive and that they could learn more from a book.

Question 2.

How would you like to use your cell phone in the future?

Again, following the students' answers the comments were clustered around four of the highest frequencies of a particular response.

- a. The desire to communicate with the teacher with assignments, video conferencing, email, voice clips, or direct video calls.
- b. Software programs that would make learning English easier.
- c. Learn from home by downloading e-Learning lessons or interacting with the internet.
- d. Ability to search knowledge better, access to more applications to learn English, use it like a computer with Wi-Fi.

The comments expressed with this question seem to indicate the students are ready for more engagement with software to help them learn English better.

Comments: I would like to listen to music or play games that would improve my language skills. / I want to find new search techniques to develop my learning skills. / I want to open the internet anywhere, anytime with Hi-speed access to search for data quickly.

These answers indicate a level of student awareness on the capabilities of the technology and want to do more and do it more quickly.

8) CONCLUSION

The most prominent result from this survey is students at Bangkok University would like to use their cell phone to learn English. Not only would they like to be taught how to learn new techniques to learn English with these new digital tools, but also use them to interact with the teacher or with each other in meaningful task based activities involving the use of cell phones.

The researchers cited in the literature review, as well as in the learning theories applied to cell phones for second language acquisition, show a high degree of promise for adapting some aspects of mobile assisted language learning in the classroom. The motivation to use the cell phone to learn English definitely seems to be an interest of the students. It will take further research to determine which language skills can be benefited the most by their use in and out of the classroom. It is the goal of this researcher to explore those possibilities.

This is just a preliminary survey to get a sense of what the Thai students are doing with their cell phones. When you compare these results with those of other researchers as well as taking into consideration the issues surrounding cell phone use in the classroom it is evident that these Thai students would not be adverse to using them to learn English. Mobile assisted language learning is an every growing discipline in tandem with technological innovation, which is constantly providing ways in which information can be accessed, managed as well as displayed to assist the student to become more engaged in the learning process. And most importantly the teacher will also have to adapt to these new digital learning aids and pedagogies to match the student's willingness to use these devices in any way which benefits their curiosity. According to (Mounier, 2010) a real step towards the improvement of the quality of the teaching-learning process is to understand the science concerning the relationship between knowledge, the teacher and the student.

9) ACKNOWLEDGMENTS

I am grateful to Bangkok University for its excellent resources. I also thank Asst. Prof. Dr. Chutima Thamraksa, Director of the Language Institute, for creating a supportive and informative environment

for academic research work. I also want to thank Assistant Professors Dr. Preawpan Pringprom and Dr. Sutilak Meeampol for their guidance and constructive advice in preparing this research and a special thanks to Freek de Groot, M.Ed TESOL Program Leader, Graduate School of Education, Faculty of Liberal arts, Asian University, Banglamung, Chonburi for technical editing. Thanks also to all the students for participating in this research, and every researcher and author whose article was used in this paper.

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