

USING MOBILE-ASSISTED EXERCISES TO SUPPORT STUDENTS' VOCABULARY SKILL DEVELOPMENT

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ABSTRACT

The use of mobile phones for learning has become well-known and is widely adopted in many language classes. The use of SMS for transmitting short messages is a fast way of helping students to learn vocabulary. To address this issue, this study was conducted to examine the effects of mobile-assisted vocabulary exercises on vocabulary acquisition of first-year students. Eighty students from two sections enrolled in a fundamental English course participated in the study. Each section consisted of 40 students. One of the groups was chosen as the experimental group, and the other as the control group. All students received the same amount of new words and dictation in class. Then only the students in the experimental group did vocabulary exercises on mobile phones via SMS. Those in the control group received paper-based exercises to be done in class. The instruments were pre-and post-vocabulary tests and a questionnaire surveying the students' attitudes toward mobile-assisted exercises. The findings revealed that vocabulary knowledge of students in the experimental group outperformed the control group. They used and learned target vocabulary better than those in the control group. Mobile-assisted vocabulary exercises had a significant effect on vocabulary ability of the students. The results of the questionnaire also illustrated their positive attitudes toward doing mobile-assisted exercises as a whole. It can be concluded that using mobile phones as a learning tool contributes to the success of students meanwhile increases their learning motivation.

Keywords: vocabulary learning, teaching vocabulary, m-learning, mobile-assisted learning

INTRODUCTION

The advancements of mobile technologies have changed the way teaching and learning processes are being conducted inevitably (Cavus, 2011). Mobile technologies including mobile phones, pocket electronic dictionaries, personal digital assistants (PDAs), MP3 players, and tablet PCs are being used for educational purposes. The term 'mobile learning' or m-learning is, therefore, defined for learning through mobile technologies. It is as a new type of learning model which allows learners to receive learning materials anywhere and anytime through wireless telecommunication network and the Internet (Lan and Sie (2010). Likewise, Guy (2009) defines m-learning as electronic learning (e-learning) through mobile computational devices. M-learning combines strategies, practices, tools, applications, and resources with proven advances in technology to support anywhere, anytime learning (Brown, 2008). As Kee and Samsudin (2014) put up, the teenagers in this mobile-technology era can perform ubiquitous learning easily. They can simply gain access to the information and content from different resources in the web. So, they have more variety of choices to obtain knowledge and information.

Among various mobile technologies, mobile phones have a high potential of improving the teaching and learning processes. Teenagers in the 21 century are in the digital age; their lifestyle has been altered accordingly (Chanprasert & Han, 2013). Their daily lives depend on mobile phones which are mainly used for communication and entertainment. However, mobile phones are not only beneficial for personal use; they can make learning activities more motivational, interesting, and different from traditional ones (Cui & Bull, 2005). Mobile devices such as Wi-Fi, Bluetooth, Short Message Services (SMS) and camera can be applied for various educational practices (Kizito, 2012). Hoppe (2009) states that students can use browsers to read materials such as e-books, and watch lecture. According to Kafyulilo (2012), downloading feature on mobile phones can be used to get various kinds of materials and video. In addition, most of the mobile phones have features which can be used for recording and playing multimedia contents, so students can use a camera on mobile phone for documenting visual materials and collecting scientific data (Cui & Wang, 2008). With emails and even access to the Internet, mobile phones will be greatly useful for learning English. Learning through mobile phone can occur anywhere and anytime (Brown, 2008). In short, mobile phones can introduce a new learning environment due to the emergence of mobile and wireless technologies.

Although mobile phones are banned in many classrooms since faculty perceive them as intrusive stuffs which may distract the learners from learning, they can be turned to be a learning device if the faculty know how to use them to create learning tasks wisely. Many studies show that mobile phones can create pleasant learning environment and have a positive effect on learning (Cobcroft, Towers, Smith, & Bruns, 2006; Serrano-Santoyo & Organista-Sandoval, 2010). In addition, a positive view was demonstrated by learners in terms of mobile phone usage for learning (Cavus & Ibrahim, 2009; Lu, 2008; Stockwell, 2008; Stockwell, 2010). During the past ten years, mobile phones have been used to facilitate language learning in all skills. However, the skill which is much developed by this kind of technology is vocabulary. Adoption of mobile phones for vocabulary learning is, therefore, increasing (Stockwell, 2010; Zhang, Song, & Burston, 2011). The critical significance of vocabulary is placed on two issues: establishing knowledge structure and facilitating communication (Coady & Huckin, 1997). Vocabulary acquisition requires more efforts and time in second language (L2) than in first language (L1). Vocabulary is deemed important for student academic achievement, particularly for EFL learners with limited exposure to the target language. To form a meaningful and grammatically correct sentence, all the language components have to fall into place, the most prominent ones being grammar and vocabulary (Orawiwatnakul, 2013). L2 learners need at least 95 per cent coverage of the running words in the input in order to gain comprehension (Nation, 2001).

Learning Vocabulary via SMS and MMS

The lack of sufficient vocabulary can be solved by mobile-assisted language learning (MALL). Among many tools, mobile phones are increasingly used in academic activities because they are cheap when compared to other ICTs, and everyone can afford them. Nowadays, mobile phones are becoming more commonly used in learning vocabulary, and many studies show the increase of adoption of the cell phone in the classroom. Mobile phones have different features such as short message service that can be used for pedagogical purposes. Short message is one of the features of mobile phones that have the capacity to contribute to enhancing language learners' vocabulary knowledge (Lu, 2008). One of the possible learning tasks is the use of SMS for transmitting short messages of vocabulary lessons, exercises or assignments. An advantage of deploying mobile applications on SMS is that almost all mobile phones are SMS enabled.

Sending text messages by SMS has been carried out to motivate students to learn and develop their vocabulary knowledge as demonstrated in many studies. For instance, Jolliet (2007) designed a collaborative model for teaching beginner-level L2 via mobile phones based on an inventory of 50 basic vocabulary modules (20 words) and related short dialogues organized around daily-life themes (i.e., food, transportation, etc.). Learners used a phone link to practice and record pronunciation of the vocabulary and dialogues, which were distributed via email or a website, and role-play the scenarios with other learners via SMS or voice communication. Cavus and Ibrahim (2009) developed a system in a form of SMSs to send technical English words together with the meanings to students. The finding indicates that sending words is useful for learners' vocabulary improvement. Song & Fox (2005) reported on a pilot study that explored the use of mobile phone SMS to support the L2 English vocabulary learning of working adults. The system was trialed for four weeks by 10 volunteers as a complement to a web-based multimedia tutorial program. New words and expressions were delivered via SMS twice a day, four days a week. Test results demonstrated a marginal improvement in performance and a positive learner attitude towards the use of the combined technologies.

In some studies, the use of SMS was compared with the traditional approach to see what worked better for students. Lu (2008) investigated students' performance after they had learned two sets of English vocabulary through mobile phones and by a paper-based format. The finding revealed that students who learned via SMS knew more words than those learning with the paper-based tasks. Similarly, Tabatabaei and Goojani (2012) conducted a two-month mobile phone-based study to study the effectiveness of SMS for L2 English vocabulary acquisition. 30 high school students wrote sentences between five and six words, which were sent via SMS to the instructor and fellow students. A control group of 30 did similarly by exchanging written papers. The SMS group significantly outperformed the control group on a vocabulary post-test. Both students and their teachers had positive attitudes toward the application of SMS on vocabulary learning. In addition, a study conducted by Baçoğlu and Akdemir (2010) investigated the effectiveness of a mobile phone-based flashcard application for L2 English vocabulary acquisition used by students in an experimental group, compared to its printed counterpart used by a control group. The results from the posttest confirm that the flashcards on mobile phones is more efficient in enhancing students' vocabulary knowledge than the paper-based flashcards. Students found learning English vocabulary through mobile phones fun and really useful. Another study investigated the effectiveness of mobile phone SMS compared to printed paper for the rote learning of L2 English vocabulary. For 16 sessions, three times a week over a period of five weeks, 34 university students were sent a total of 50 words with definitions and example sentences. Half of the group received these via SMS, while the other half got a printed

hand-out. Based on the results of a post-test, participants in the SMS group showed significantly better vocabulary retention than those in the printed paper group (Motallebzadeh & Ganjali, 2011).

A few studies were conducted to compare the effectiveness of sending messages on mobile phones with the other two techniques. All of the cases were found to use three groups of students to compare the results. For instance, Hayati, Jalilifa, & Mashhadi (2013) did a study to compare among three modes of instruction of English idioms, comprising Short Message Service (SMS)-based learning, contextual learning and self-study learning. This study demonstrated SMS affordance to deliver bite-sized English idiom lessons on spaced intervals to the learners. More precisely, the application of SMS in teaching and learning English (idioms) revealed that students receiving short mini-lessons on their mobile phones via SMS were more enthusiastic and learned more than their counterparts on paper or contextual groups. A post-study survey to find out students' perceptions and attitudes toward mobile learning also revealed positive results. In another study, Choi and Jeong (2010) investigated the effects of using mobile Long Message Service (LMS) lessons on L2 English vocabulary learning. Three modes of instruction were employed: LMS lessons without student interaction; LMS lessons with teacher-student interactive messages; and a control group using paper materials. A total of 72 L2 English college students were assigned to one of three groups. The results showed that using LMS lessons was more effective than using paper materials for vocabulary learning, but there were no significant differences in performance between interactive versus non-interactive LMS. Similarly, Saran, Seferoglu, and Cagiltay (2012) studied the effectiveness of using mobile phone-based multimedia messages (MMS) in learning L2 English vocabulary compared to delivery through web pages and printed form. The MMS included the definitions of words, exemplary sentences, related visual representations, word formation information, and pronunciation. The four-week trial involved 103 English preparatory school students and tests indicated that students who were sent MMS learned more words than those who studied the web-and paper-based materials.

Recognizing the effectiveness of mobile phones on vocabulary development, we decided to implement them in a fundamental course to solve traditional learning problems and to make the learning process more efficient. Our main focus was put only on vocabulary skill. It is hoped that the first-year students taking this course would take part in a new learning environment that motivates them to learn without limit of time and place. After that, it is necessary to evaluate the success of using mobile phones for vocabulary learning. The findings of this study may potentially provide insights into unlocking how students learn a foreign language. That is, learning is taking place by blending or integrating a mobile technology into the learning process. The information derived from the study will be useful for the administrators in adjusting the teaching and learning process to attract students' attention. Also, the findings will be useful for any teachers interested in adopting the use of mobile phone in developing learners' language proficiency. The two research questions guiding this study included:

Research Question 1: Is there a significant difference in students' vocabulary ability after the intervention between those doing paper-based exercises and those doing exercises via SMS?

Research Question 2: How do the students respond to mobile-assisted vocabulary exercises?

RESEARCH METHODOLOGY

The present study was done based on the Theory of Behaviorist Learning which identified that learning has occurred when learners evidence the appropriate reinforcement of an association between a particular response and stimulus (Smith and Ragan, 2005). Learning is, therefore, focused on information or content delivery in mobile learning. In this study, SMS on mobile phones was used for vocabulary improvement of the learners.

Participants and the Setting

The participants of this research were students from two sections, each of which contained 40 students, got from cluster sampling since students were already assigned to their sections by the university. Forty of the participants were randomly assigned to the experimental group (paper-based exercises); the other forty formed the control group (SMS-based exercises). The research was conducted in the first semester of 2014 academic year. The students were enrolled in the Fundamental English I course; they met in class two times a week. Each time covered 140 minutes. The length of the semester was seven weeks. The two dependent variables were the students' vocabulary capabilities which were measured by the pre-test, the post-test and their attitudes towards mobile-assisted vocabulary exercises which were evaluated by the questionnaire. The independent variable was the methods of vocabulary learning comprising paper-based and SMS exercises.

Research Instruments

Two instruments were used in this study. These were 1) the pre-test and the post-test and 2) the questionnaire used for gathering information about the students' attitudes towards mobile-assisted vocabulary exercises.

1. Vocabulary Tests

To study the students' vocabulary ability, the same test was used as a parallel test for pre-and post-testing phases. However, the researchers shuffled the questions and multiple choices. The pre-test and post-test were composed of 50 multiple-choice questions designed to assess the students' vocabulary proficiency, covering the content in the textbook which was used for EN011 in the first semester of 2014 academic year.

Validity and Reliability of the English Vocabulary Tests

At first, the vocabulary test consisted of 60 questions. Each question had four possible answers. After the test was created, it was given to three experts at the Language Institute of Bangkok University to check and comment on the content. The experts were also asked to rate each item so as to see whether it was congruent with the objective. Then, the Item-Objective Congruence (IOC) Index was calculated by assigning scores to three kinds of answers: congruent = 1, questionable = 0, incongruent = -1. In this study, all items were rated higher than 0.5 of the IOC index, indicating that they were acceptably congruent with the objectives. Its content validity measured by the IOC Index was between 0.66-1.00. However, five items were removed due to difficulties and miscommunication. At this stage, there were 55 questions left.

After that the test with 55 questions was piloted with 40 students enrolled in EN011 who were not the target group. The vocabulary scores received from the pilot were used to find difficulty and discrimination values. According to the criteria, the test items of which difficulty indices range between 0.20 and 0.80, and the discrimination of indices which are equal to or higher than 0.20 were chosen for the main study. Only 50 items in the test met the criteria and could be kept for the experiment. The reliability coefficient of the overall test calculated by Kuder-Richardson-20 formula (KR-20) was 0.79, which can be interpreted that the test had high reliability. This was done to see if the test items obtained the same binary (right/wrong) results over a population of testing subjects.

2. Questionnaire

The last instrument was an attitudinal questionnaire relative to mobile-assisted vocabulary exercises, investigating how the students felt about it. It consisted of ten items. The Likert five-rating scale (1= strongly disagree, 2= disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree) was used for a post-study survey. The draft questionnaire items were checked for content validity by three experts in English teaching field. The items with IOC index higher than 0.6 are acceptable. In order to test the proper reliability, the questionnaire was piloted with 40 undergraduate students who were not the target group and calculated by using Cronbach's Alpha. According to Cronbach and Shevelson (2004), coefficient ranges in value from 0 to 1. The higher the score, the more reliable the generated scale is. They have also indicated 0.7 to be an acceptable reliability coefficient. The coefficient value of the overall questionnaire was 0.98. After that, the questionnaire was distributed to students in the experimental group at the end of period on week 7.

TEACHING AND LEARNING PROCEDURE

Based on the course syllabus, all students enrolled in EN011 had to join the dictation activity for vocabulary skill development. This activity helps students to acquire newly learned vocabulary in meaningful contexts. For each dictation, the teacher chose 10 words from the vocabulary list of the textbook and made up a sentence from each word. Students were required to take dictation in a form of sentence. The procedure to carry out this activity comprised three steps. First, students listened to the whole sentence without any pauses. Second, the teacher repeated and stopped after each meaningful chunk, and students wrote down what they heard. In the third stage they listened again to the whole sentence to check what they had written. After the dictation, the teacher showed the correct sentences followed by meanings in English and parts of speech. They would learn from the dictations they had written and the errors they had made. They checked their writing by themselves. Each dictation would take around 15 minutes. The dictation started from week 2- week 6. Since the class met twice a week, students were required to join 10 times of dictation. The total number of vocabulary was 100 words. By so doing, students would be more familiar with new words. As well, they could learn the instances in which each word was correctly used. After that, they were required to do two kinds of vocabulary exercises. The first one is giving students different sentences with missing words (week 2, 4, 6). They were required to fill in the blanks with correct words they learned on that week. The second one is using words to make a story (week 3, 5, 7). Students chose seven words they learned on that week to write a short story.

In the current study, mobile-assisted exercises were employed as a teaching technique for improving students' vocabulary ability. Although both groups had to do the same exercises on the same week, the ways they acquired knowledge were different. Paper-based exercises were provided for the control group while SMS-based exercises were given to the experimental group. Regarding the first exercise, students would increase their vocabulary knowledge from using the new words in the proper context. Students in the control group did a

paper-based exercise in class, while those in the experimental group got the message of exercise from the teacher after class. They were required to send the answers via SMS from their mobile phones to the teacher on that week. The exercise was done in a form of competition where the first three students whose answers were all correct would receive a reward of extra points. The teacher revealed correct answers along with useful explanation before the next exercise would be sent to them. For the second exercise, students in the control group wrote a story in class and submitted it to the teacher. They received feedback on their assignment when the paper was returned the following week. In contrast, students in the experimental group did the assignment after class and sent the teacher a text-message containing a paragraph they had composed by the end of that week. The teacher gave necessary feedback explicitly as soon as she received the story.

This empirical study was carried out in two classes where the researcher was their teacher. At the beginning of the semester the students in two groups were allotted 60 minutes to do the 50-question vocabulary pre-test. The vocabulary list was taken from the textbook used for EN011 course. Each student’s performance was recorded in terms of points. Then for the next six weeks they were required to join the activity provided. On week 7, both groups were given the post-test. After that, only the experimental group rated their opinions of mobile-assisted vocabulary exercises on a 10-item questionnaire.

DATA ANALYSIS

Two independent t-tests were run for the difference between the mean scores of the experimental group and the control group on the pre-test as well as the post-test. A paired t-test was run to find the difference between the means of the scores on the following tests: the pre- and post-tests for the control group as well as for the experimental group to see if there was any difference between the performance of the subjects on the pre- and post-tests. P values < 0.05 were considered statistically significant. Moreover, in an attempt to learn what the students in the experimental group thought about mobile-assisted vocabulary exercises, they were asked to do a questionnaire after the post-test. The scores were taken to analyze for means and standard deviations. Data obtained from the questionnaire were calculated by using mean and standard deviation and interpreted as levels to indicate how students perceived learning vocabulary via SMS. A mean score of 1-1.50 indicated having an attitude at a very negative level, 1.51-2.50 at a negative level, 2.51-3.50 at a moderate level, 3.51-4.50 at a positive level, and 4.51-5.00 at a very positive level.

RESULTS

The pre-test mean scores of control group (paper-based exercises) and experimental group (SMS based exercises) were compared to see if they were the same or different before the experiment started, using an independent samples t-test. The Levene’s Test for equality of variances shows $F=.233$ and $p=.631$, proving that the variance of the groups was equivalent. It was found that the pre-test mean score of students in the SMS group was a little bit lower than that of students in the paper-based group (22.57, 22.85). As evident in the table, the result showed $t = .205$, $df = 78$, and $p = .838$, indicating that there was no significant difference between the two groups before the experiment started and the two groups started with the same proficiency level. Therefore, it can be concluded that both groups were not initially different but homogeneous at the outset of the study.

Table 1: Comparison of Pre-test Scores between Paper-based Group and SMS Group

Group	Mean	SD	df	t	p
Paper-based exercises (n=40)	22.85	6.21	78	.205	.838
SMS-based exercises (n=40)	22.57	5.81			
Mean Difference	0.28				

Research Question 1: Is there a difference in students' ability after the intervention between those doing paper-based exercises and those doing exercises via SMS?

The result indicated that the post-test mean score of SMS-based group ($M = 33.25$, $SD = 5.67$) was higher than that of the paper-based group ($M = 29.70$, $SD = 5.57$). To find out whether there was a statistically significant difference between the two groups, the post-test mean scores were compared by using an independent samples t-test. The result revealed a statistically significant difference in the test scores at the level of .05 as shown in Table 2 ($p = .008$).

Table 2: Comparison of Post-test Mean Scores between Paper-based Group and SMS Group

Group	Mean	SD	df	t	p
Paper-based exercises (n=40)	29.70	5.57	78	-2.35	.008
SMS-based exercises (n=40)	33.25	5.67			
Mean difference	3.55				

In order to see how much improvement each group had from the pre-test to the post-test, paired samples *t*-tests were conducted. Table 3 shows descriptive statistics for the results of the pre- and post-tests for both groups. Before the intervention, the vocabulary mean scores of students in paper-based group and SMS group were 22.85 and 22.57 from 50 points, and those scores increased to 29.70 and 33.25 respectively after the intervention. It is noticed that standard deviation of the two groups also changed a little bit. From *t*-test analysis, the post-test mean scores were significantly higher than the pre-test mean scores in both groups ($p = .000$). This means that the students in paper-based and SMS-based groups improved their vocabulary knowledge. However, it is noted that students who did exercises via SMS improved more ability than those who did traditional paper-based exercises.

Table 3: Comparison of Pre-test and Post-test Mean Scores of Students in Both Groups

Groups		Pre-test (n=40)	Post-test (n=40)	t	p
Paper-based exercises	Mean	22.85	29.70	15.19	.000
	SD	6.21	5.57		
SMS-based exercises	Mean	22.57	33.25	19.39	.000
	SD	5.81	5.67		

Research Question 2: How do the students respond to mobile-assisted vocabulary exercises?

The students in the experimental group were asked to express their attitudes towards mobile-assisted vocabulary exercises. Table 4 showed the overall attitude at a positive level (Mean = 3.98). When considering each item, it was found that the highest mean score was on no. 1 (SMS exercises are useful, $M = 4.30$), followed by no. 2 (SMS exercises help me memorize new words, Mean = 4.15). There were two items for the third ranking. They were no. 3 (SMS exercises make learning vocabulary more interesting, Mean = 4.10) and no.9, SMS exercises provide freedom of learning, Mean = 4.10). The item that had the lowest mean score was no.10 (SMS exercises increase awareness of vocabulary usage, Mean = 3.67). However, the attitudes in all items were found to be positive.

Table 4: Mean, Standard Deviation, and Level of Attitudes of the Students

Statements	Mean	SD	Level
1. SMS exercises are useful.	4.30	.56	positive
2. SMS exercises help me memorize new words.	4.15	.58	positive
3. SMS exercises make learning vocabulary more interesting.	4.10	.54	positive
4. SMS exercises are convenient and easy to get access.	4.02	.80	positive
5. SMS exercises enable me to review the vocabulary.	3.80	.68	positive
6. SMS exercises increase my vocabulary knowledge.	4.00	.64	positive
7. SMS exercises make me want to learn new vocabulary.	3.82	.78	positive
8. SMS exercises help to solve the problem of being unable to complete the exercises in class.	3.90	.71	positive
9. SMS exercises provide freedom of learning.	4.10	.59	positive
10. SMS exercises increase awareness of vocabulary usage.	3.67	.57	positive
total	3.98	.29	positive

DISCUSSION

This study was carried out to determine whether the use of mobile learning approach was effective in enhancing students' vocabulary. The findings are discussed in relation to the research objectives as follows:

First, the increased writing score in both groups provides sufficient support that the use of exercises can help students improve their vocabulary knowledge. This might be because students had a chance to practice and work

on vocabulary they had learned. Exercises play an important role in vocabulary development, especially when new words were introduced. Furthermore, writing a short story gave them a chance to make use of new vocabulary. Although both groups were improved by exercises, the ways they learned were much different. It is interesting to see that students in SMS-based group gained higher scores when compared to those in paper-based group. Also, a statistically significant difference found between the two groups after the intervention can be used to support the findings of previous studies (Başoğlu & Akdemir, 2010; Lu, 2008; Tabatabaei & Goojani, 2012) in that students in the message sending group outperformed those in paper-based group. This is probably because mobile phones can build learning environment where students can study anywhere and any time. They had flexibility in how long they would devote to the given assignments and when they did them. Moreover, doing exercises on mobile phones seemed to be motivating when compared with a paper-based exercises. Since Thai students usually have mobile phones with them, mobile phones provide a ubiquitous learning that closely fits their habits. As such, it was more convenient for all students in the SMS-based group to do exercises whenever they want to, while students in paper-based group had to complete the tasks in class. The old way of teaching was probably the cause of boredom. They seemed to have less motivation in doing exercises and were controlled by time. Teaching vocabulary is not an easy task; students always feel discouraged because of the traditional learning process which does not support learning. This fact was consistent with Coady and Huckin (1997) who stated that the critical significance of vocabulary is placed on two issues: establishing knowledge structure and facilitating communication. Sending messages is a mean of communication. When vocabulary learning was transmitted through the technological device which can promote communication like SMS, students preferred to do the given tasks. As Jones, Edwards, and Reid (2009) stated, students check for text messages on their mobile phones frequently and always respond to them. Therefore, a significant feature of text messaging is the immediate capture of the recipient's attention. Such attention may lead to an increase in motivation (Martinez-Torres et al. 2007). If they had any urgent questions concerning the study, the communication channel used for asking questions was the same SMS. We cannot totally say that students in the SMS group put more effort into the exercises they did, but we can grasp their motivation to learn and enthusiasm from fast sending messages to the teacher. They know that once messages were sent, they would receive feedbacks.

The effectiveness of mobile-assisted learning is also supported by positive attitudes students demonstrated toward mobile-assisted vocabulary exercises ($M = 3.98$, $SD = .29$). Doing exercises on mobile phones was deemed satisfying. The results suggest the acceptance of using mobile phone as a learning tool. This might be because they realized the advantages of sending messages via mobile phones for language learning as the highest mean score was item no. 1 (SMS exercises are useful). Learning will no longer be limited only in class due to its potential for autonomous flexible learning. The finding can be supported by Ushioda (2013) who stated that autonomy, flexibility, freedom and choice are intrinsic features of mobile learning, and by exploiting these features may well be able to promote internalized motivation for independent learning. Moreover, students in the 21st century are accustomed to using technologies, and mobile phone is a part of their lives. They always have phones on them. It allows fast responses without having to be at computer. That is why adoption of mobile phone for vocabulary learning is increasing (Stockwell, 2010; Zhang, Song, & Burstson, 2011). The present findings were in accordance with those in previous studies which found that students demonstrated a positive view on mobile learning (Cavus & Ibrahim, 2009; Lu, 2008; Song & Fox, 2005; Stockwell, 2008; Stockwell, 2010). However, we should not overlook what students perceived regarding the awareness of vocabulary usage after learning via SMS exercises because it appeared to be the lowest mean score in the survey (Mean = 3.67, $SD = .57$). It reflects that most students still lack basic rules of language use. This is really true and can be seen from their writing tasks. Although students know more words, they cannot use them correctly. So, knowing the meanings of new words is not enough. With this in mind, teachers need to provide supplementary materials that explain about sentence structure and parts of speech to help them realize what is right or wrong when they are writing a story. Moreover, mistakes in their writing should be corrected and informed as soon as possible.

CONCLUSION

The present study shows how mobile phones can be implemented in a language course. The focus is on the use of SMS to create ubiquitous learning experiences of undergraduate students. The positive outcomes provide an opportunity to implement mobile phones for language development in future courses. One of the most noticeable advantages of mobile learning is the increase of learners' autonomy. Students have the freedom to access the learning tool and resources anytime and anywhere. Making use of the tool students are using in daily lives for academic purposes makes learning easier and convenient. Useful activities can be provided for improving not only vocabulary knowledge, but also other skills. However, in designing the course that uses mobile learning, an adjusted pedagogy is not the only issue to be considered, but other factors should be taken into account such as choosing activities that fits students' needs, the appropriateness of activities, the readiness of learners' learning tools etc. All these can affect the success of language learning development. For instance, although learning with mobile phones can occur all the time, the teachers should consider the amount of time students have to spend on

it. Joining too many activities or doing a lot of assignments may be a big burden for them and can build boring learning environment.

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