

# 外国語語彙習得のための携帯電話ショートメッセージサービス (SMS) の使用

## The Use of the Mobile Phone Short Message Service (SMS) for Foreign Language Vocabulary Acquisition

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### ABSTRACT

様々な国で、携帯電話の使用は、外国語教育の分野で既に検討され、試行されている。Thornton & Houser (2005), Lu (2008), Kennedy & Levy (2008), Başoğlu & Akdemir (2010) らの研究では、外国語の語彙の習得と復習のために携帯電話を通じたショートメッセージサービス (SMS) の使用が有効であることが示された。これらの研究の結果と知見から、さらに携帯電話用の革新的な語彙習得教材を設計し、提供する方法とアイデアを見つけることができる。

The use of mobile phones has already been considered and tested in the area of foreign language education in many countries. Research carried by Thornton and Houser (2005), Lu (2008), Kennedy and Levy (2008), and Başoğlu and Akdemir (2010) have shown the effectiveness of the Short Message Service (SMS) via mobile phones for reviewing and acquiring new vocabulary in a foreign language. In these studies, suggestions and ideas can be found in order to look for further ways to deliver and design innovative vocabulary materials for mobile phones.

## Introduction

Mobile phone text messaging, well known as Short Message Service (SMS), has become a prevalent medium of communication among teenagers and young adults. Mcconatha, Praul and Lynch (2008) questioned whether SMS texting could be actually harmful to a student's grammatical development owing to the structure of the messages that tend to be compact and often contain acronyms as well as incorrect spelling, intentionally designed to maximize the speed of input. However, despite the critics, texting message via mobile phones has been considered an object of interest in education given its moveable characteristics. According to Mishra, (2009, p. 24), short message service has the widest application in teaching and learning support, as it is available in most basic mobile devices available in the market. The purpose of this study is to conduct a critical review of the narrow body of literature on the use of Mobile phones text messages (SMS) in foreign language vocabulary acquisition. The findings will highlights implications and provide recommendations for future research.

## Research in mobile phone as a tool for foreign language vocabulary acquisition

Naismith (2007) stated that previously suggested uses of text messaging in higher education included: providing support, motivation, and continuity; alerts and reminders (e.g. timetable changes, library loans); and delivering learning content as well as revision tips. One of the first projects that explored the use of mobile phones in foreign language learning was spearheaded by the Stanford Learning Lab in California, USA (Chinnery, 2006). Facilitated through mobile voice messaging and email (texting?) they delivered a Spanish language program, which included vocabulary practice, quizzes, word and phrase translations. Students also had access to live

tutors as needed. The experiment results indicated that mobile phones were effective for small chunk quiz delivery.

Another study, in Japan, by Thornton and Houser (2005) in which 333 female Japanese university students were surveyed regarding their use of mobile phones, found that the most utilized feature was e-mail. Moreover, they discovered that mobile phone e-mail was more frequently used than PC and mobile phone and voice calls. They carried out two experiments, which compared the effectiveness of English vocabulary lessons delivered in different technology mediums. In the first experiment, 13 students studied two sets of messages for a period of two weeks. Half of the group of students received their lessons via mobile phones and the other half studied materials posted on a website. Subsequently, the students switched their media medium and continued the lessons for another two weeks. The results showed that students' learning via mobile e-mail was significantly higher.

In the second experiment, two groups of students worked on similar materials over two weeks. One group received messages on their mobile phones and the other group studied similar messages in print materials. Once again, the results indicated that students who studied via mobiles phones learned significantly more. Their findings suggested that students who were sent messages via their mobiles phones were encouraged to study more often than students who were asked to use web-paged and paper based materials. These experiments demonstrated that mobile technology can be a useful tool to promote study.

In Taiwan, Lu (2008), in a study titled "Effectiveness of vocabulary learning via mobile phone", examines the effectiveness of SMS vocabulary lessons, given the limited amount of visible text that can be seen on the small screens of mobiles phones. Thirty vocational high school students from 10th grade joined the study. During the first week of the

experiment, 15 of the participants learned 14 target words in English via the mobile phone (M1), while the rest learned the vocabulary using print materials (P1). During the second week, the two groups switched roles (group M1 became P2 and P1 became M2) and were given another set of 14 words. A pre-treatment questionnaire and a test were conducted in the first week. After receiving the vocabulary lessons, students were given a post-test and a post-treatment questionnaire. In addition, interviews were conducted with the participants. The results showed that the mobile-participants gained a greater amount of vocabulary than their paper-group counterparts. Moreover, mobile-participants showed positive attitudes towards learning vocabulary using their mobile phones owing to its portability, immediacy and novelty. They felt that they could memorize vocabulary more easily through SMS lessons.

An Australian study, by Kennedy and Levy (2008) examined 91 students of the Italian language. The objective was to cultivate a habit of regular practice, enhance their level of motivation, and promote their development in language learning strategies. They use SMS to trigger students' out-of-class vocabulary learning, promote their enjoyment of language acquisition as well as their confidence in their ability to understand the new language. They used a variety of formats to present known words in a new context and new words in a familiar context to encourage the use of different learning strategies. They sent a total of 55 messages in seven weeks, at an average of 1.3 messages per day. Data was collected through pre-trial and post-trial questionnaires. The pre-trial results showed that one third of the students had used their mobile phones to exchange messages, with fellow students, related to assigned tasks and/or deadlines reminders. On the other hand, the post-trial survey revealed that the majority of students encountered a positive experience using their mobile phones. 84% of the participants enjoyed receiving the messages; 87.3% agreed that the messages

helped them consolidate their vocabulary; 82.5% responded that the messages helped them to extend their vocabulary; 80.7% said they had developed an interest in Italian vocabulary; and 78.6% mentioned that the SMS were helpful in strengthening their knowledge of grammar.

In Turkey, Başoğlu and Akdemir (2010) compared the learning of English vocabulary of undergraduate students using a program called ECTACO Flash Cards for mobile phones and paper based flashcards. Sixty students from the Compulsory Preparatory program of a public University in the Black Sea region formed part of the study. During a six-week period, students in the experimental group were asked to use the program ECTACO. They were expected to use this program during their extracurricular time. Students in the control group were given vocabulary cards that include words available in the mobile program and they were expected to use traditional vocabulary learning techniques. A pre and post 2-item multiple-choice test was administered along with eight random semi-structured interviews from the experimental group. The results showed that using vocabulary programs on mobile phones were more effective in improving students' acquisition of English than using flash cards on paper. Furthermore, students who used the vocabulary-learning program via their mobile phone reported a more positive attitude towards their learning experience.

## **Implications from Previous Studies**

This literature review offers insight and strategies for educators interested in using mobile phones SMS to teach foreign language vocabulary to young students. First and foremost, it is important to keep in mind that text messages are associated with personal contact and, as such, careful considerations needs to be given to the tone and the quality of the messages sent to students. Unnecessary messages

may produce a feeling of surveillance which can lead to 'spam-style deletion' (Naismith, 2007) of messages. On the other hand, messages that are fun and/or have a personal tone are considered to enhance or sustain student's motivation (Kennedy & Levy, 2008). Four important aspects that must be considered are: a) the length of the message; b) the number of messages sent per day; c) the time of day that messages are sent; d). the way in which feedback is provided.

Regarding a) the length of the messages, Thornton and Houser (2005) argue that the length of the message bears no significant difference in the students' learning. In their research, more importance was given to the effect of regular study that mobile e-mail encourages. Nevertheless, Miller (cited in Ally, 2005), contests messages should be chunked into appropriate pieces, given limited capacity of the human working memory. In addition, Ally (2004) suggests the division of information should be done in five and nine meaningful units to compensate for the limitations of the short-term memory as well as the restrictions of the display screen on mobile device.

As for b) the number of messages sent per day, Kennedy and Levy (2008) concluded that one message per day may be advisable for future studies. Similarly, in a post-survey, Thornton and Houser found that the majority of students read messages only once when they had time to concentrate. Moreover, Naismith (2007) considers a volume of 3-5 messages per week considerable acceptable.

Concerning c) the timing of messages sent, Thornton and Houser (2005) e-mailed short mini lesson between 9:00am and 5:00pm. Similarly, Lu (2008) sent SMS lessons from Monday to Friday from 7:00am to 5:00pm. However, in Kennedy and Levy's (2008) study, most students preferred to receive the messages during 8:00am and 5:00pm, from Monday to Friday. Even though it may be difficult to set a specific time schedule for sending

SMS, given that students might have differing cultural routines and personal habits, it can be implied that text messages sent in the late afternoon or at night may not be as well received.

Lastly, d) the way feedback is provided is another important aspect to be considered. An interaction where teachers offer feedback and that allows students to use the language are important conditions to maximize the advantages of learning vocabulary via mobile phones (Lu, 2008). Therefore, creating a website forum, where teachers can offer feedback and where students can post replies, observations and/or questions, is recommended (Kennedy & Levy, 2008). Using a common Social Networking Service (SNS) among students, such as Facebook, could be another avenue to provide constructive feedback.

## Conclusion

Even though the experiments presented in this paper proved that mobile phones could be an effective tool for teaching and learning vocabulary in a foreign language, many school teachers may not be willing to incorporate this technique into their teaching methodology. There are still negative feelings and resistance from teachers regarding the use of mobile phones in their classroom. Fortunately, new websites such as: [www.m-learning.org](http://www.m-learning.org) and [www.flexiblelearning.net.au](http://www.flexiblelearning.net.au), have started offering free software, journals, books and other sources of information on m-learning encouraging teachers to start using mobile phones and other mobile devices in their classes.

Other negative aspects and limitation must be considered. Students see mobile phones as an extension of their personal space. Therefore, using them by teachers for learning purposes can create a degree of resentment (Brett, 2011). Teachers must also somehow assure that, within the classroom context, students are using their mobile phones for

the learning task at hand rather than personal “off-topic” activities. Another consideration is the country and language configuration of the students’ mobile phone. Some characters in the foreign language alphabet are simply not available on some mobile phones (e.g., Japanese input language options are not available on Mexican mobile devices). The cost of text messaging service is another factor that may deter students from using their mobile phones other than for their own personal use. Adjustments of the mobile phone interface system must also be considered to prevent information overload and allow learners to move back and forth between displays. Furthermore, learners’ needs and learning styles must be considered (Lu, 2008) and thus learning materials should be designed in the form of learning objects to accommodate different learning characteristics (Ally, 2005). Teaching vocabulary using mobile phones, not only requires knowledge related to mobile technology, but techniques on how to teach vocabulary itself. Therefore, principles of vocabulary learning, such as making the form-meaning connection (Nations, 2001) and time-series distributed repetitions, should be considered to create optimal conditions for vocabulary retrieval (Baddeley, cited in Lu, 2008). Blending updated research in foreign language vocabulary acquisition and mobile device teaching techniques should be considered to design effective teaching curricula.

Future studies should compare and determine other potential uses of mobile phones for teaching and learning. Given the prevalence of mobile phones, teachers should explore innovative teaching strategies that can take advantage of the technology readily available in their students’ hands. As mobile phones continue to evolve and programmers create new types of applications (“apps”), the possibility for teaching and learning, through mobile devices, will unquestionably flourish.

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