

## Chapter 3

# Supporting Mobile Learners: An Action Research Project

**Krassie Petrova**

*Auckland University of Technology, New Zealand*

**Chun Li**

*Auckland University of Technology, New Zealand*

### ABSTRACT

*Mobile learning (mLearning) is a form of technology supported learning that may meet the needs of learners who frequently change their physical location ('mobile learners'). Ubiquitous mobile data technologies like SMS (Short Text messaging Service) allow designing learning and communications services that support student-centered teaching and learning. This paper presents the results of an action research (AR) project in which an SMS based mLearning service was integrated with classroom teaching in the context of international students studying English before enrolling in regular academic courses with English as the language of instruction. The findings of the two AR cycles suggest that the mLearning approach has added flexibility to the course design and has motivated students to improve academically. The concept and the methodology can be extended to other contexts.*

### INTRODUCTION

Mobile phone ownership worldwide has increased significantly in the last years, with developed countries reaching near saturation with 116 subscriptions per 100 inhabitants on the average, and developing countries following the trend with 68% penetration rate at the end of 2010 (ITU, 2010). The global spread and acceptance of mobile technologies have motivated the development of a

new form of electronic learning known as mobile learning. Mobile learning (mLearning) allows learners and instructors to participate in learning activities anywhere, anytime due to the ubiquitous nature of the supporting technology (Petrova, 2007). SMS (Short text Messaging Service) is one of the mobile technologies that can be used for innovative learning in a relatively simple and straightforward way. For example, SMS has been already applied successfully in language learning (Kukulska-Hulme & Shield, 2008).

DOI: 10.4018/978-1-4666-2023-0.ch003

Supporting English language learners is of high interest as it has acquired a special position as the world's 'global means of communication' (Kwon & Lee, 2010, p. 1884). Many universities offer programmes with English as the language of instruction, even in countries where English can be a second language (L2) for the local student body. However students with English as a second language (ESL) normally need to meet stringent academic criteria for English language proficiency before starting discipline study; to such students universities may offer enrolment in an 'up skill-ing' academic English course. Often completing successfully such a course may become quite challenging - mostly due to the time constraints (for non-beginners, this is normally a one semester programme).

Vocabulary acquisition is an important part of language study. Prior work suggests that 'picking up' the L2 words and phrases in a natural and informal way helps learners to develop language fluency more efficiently (Krashen, 1982, pp. 81-82). Therefore a learning service that provides a structure for fast language acquisition using a simple, familiar and relatively cheap technology (such as SMS) may be effective in supporting students to reach their academic goals within the time frame of the course.

The study presented here aims to evaluate the adoption potential of a vocabulary supporting SMS based service that complements the rest of the learning and teaching strategies used in a face-to-face ESL class by enhancing learning experiences and academic performance. A service providing value ('experience and performance enhancement') is a useful service and therefore may be adoptable, as confirmed by prior work (Turner, Kitchenham, Brereton, Charters, & Budgen, 2010). Therefore the research questions guiding this study investigate 'how much' value the service provides and what contributes to (or detracts from) the value creation process.

- R1: To what extent does the mLearning service enhance learning activities and improve student learning?, and
- R2: What are the success factors (or obstacles) to integrating the mLearning service into learning activities?

The service was developed incrementally as part of an action research (AR) project. The research outcomes demonstrate that the approach was successful in assisting efficient and effective vocabulary learning and contributes to the body of knowledge by developing a theory of integrating SMS technology into English academic vocabulary study for ESL students. From a practical perspective, the service prototype can be adapted to other mLearning settings and adopted in different contexts.

The rest of the paper is organized as follows: The section following provides the research background by reviewing relevant prior research. The section after that describes the research methodology. The findings of the study are presented and analyzed in the next sections. The concluding remarks discuss the study outcomes and its implications, outline the limitations and suggest guidelines for further research.

## **LITERATURE REVIEW**

This section provides a brief overview of previous research related to the context of the study. The choice of SMS as economically feasible mobile technology that has been successfully used for L2 study and the choice of AR research as the research method are justified.

### **SMS Based Learning**

As an mLearning technology SMS has the advantages of being cheap and easy to use. Its potential disadvantages include the limited number of characters in a single message, and the exclusive use

19 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/supporting-mobile-learners/68636](http://www.igi-global.com/chapter/supporting-mobile-learners/68636)

## Related Content

---

### Identifying Users Stereotypes for Dynamic Web Pages Customization

Sandro José Rigo, José M. Palazzo de Oliveira and Leandro Krug Wives (2010). *Web Technologies: Concepts, Methodologies, Tools, and Applications* (pp. 1388-1410).

[www.irma-international.org/chapter/identifying-users-stereotypes-dynamic-web/37695](http://www.irma-international.org/chapter/identifying-users-stereotypes-dynamic-web/37695)

### The Evolution of the (Hidden) Web and Its Hidden Data

Manuel Álvarez Díaz, Víctor Manuel Prieto Álvarez and Fidel Cacheda Seijo (2018). *The Dark Web: Breakthroughs in Research and Practice* (pp. 84-113).

[www.irma-international.org/chapter/the-evolution-of-the-hidden-web-and-its-hidden-data/185870](http://www.irma-international.org/chapter/the-evolution-of-the-hidden-web-and-its-hidden-data/185870)

### Evaluating the User Interface and Usability Approaches for E-Learning Systems

Jehad Saad Alqurni (2023). *International Journal of Information Technology and Web Engineering* (pp. 1-25).

[www.irma-international.org/article/evaluating-the-user-interface-and-usability-approaches-for-e-learning-systems/333638](http://www.irma-international.org/article/evaluating-the-user-interface-and-usability-approaches-for-e-learning-systems/333638)

### Thinking on Construction of Intelligent Auxiliary Physical Exercise Mode Under National Fitness Plan

Cheng Xu (2023). *International Journal of Information Technology and Web Engineering* (pp. 1-17).

[www.irma-international.org/article/thinking-on-construction-of-intelligent-auxiliary-physical-exercise-mode-under-national-fitness-plan/331080](http://www.irma-international.org/article/thinking-on-construction-of-intelligent-auxiliary-physical-exercise-mode-under-national-fitness-plan/331080)

### Web Search Engine Architectures and their Performance Analysis

Xiannong Meng (2008). *Handbook of Research on Web Information Systems Quality* (pp. 491-509).

[www.irma-international.org/chapter/web-search-engine-architectures-their/21990](http://www.irma-international.org/chapter/web-search-engine-architectures-their/21990)