

## Abstract

Learning another language presents several challenges around learning grammar and new vocabulary items. Studies by prominent language researchers suggest vocabulary learning as the most difficult criterion, yet also the most important. Another problem learners encounter is the lack of exposure to the new language, as their interaction with the language is often limited to the classroom or other learning environment. Mobile devices are considered as an appropriate solution to these obstacles in second language learning due to their portability, constant user interactions, availability, and ease of use.

A relatively new research area has developed to investigate these issues: Mobile Assisted Language Learning (MALL). MALL is defined as language learning which is assisted or enhanced through the use of a handheld mobile device.

The purpose of this project was to evaluate efficacy and usability of mobile devices for learning new vocabulary items. This was evaluated through the implementation of a successful vocabulary learning method called the Keyword Method. With the Keyword Method, any two pieces of information can be linked together in memory with the help of a keyword. In this method, the meaning of the target vocabulary item, along with a keyword, is associated with an image, (or its concept), to accommodate learning. The image should be bizarre or funny while relating both the meaning of the target word and the keyword, with the emphasis on the meaning. Although numerous investigations have taken place on different methods and strategies to help learners in learning new vocabulary items, little research has been conducted on learning vocabulary items using this method on a mobile device.

For this purpose, mnemonic learning methodology was implemented within the mobile device application. The designed application had three sections; vocabulary teaching, vocabulary testing, and the System Usability Scale (SUS) questionnaire. SUS is an industry standard pen and paper based tool designed to evaluate the usability of software systems. Several customised algorithms were considered to facilitate appropriate mapping from the pen and paper traditional method to a mobile device version.

For the experiment, while the primary device type used was a tablet, this pen and paper method was included as a means of comparison. The participants were asked to use the Keyword Method on both mobile application as the experimental group, and subsequently on pen and paper as the control group. The information provided by participants helped to establish whether mobile devices offer a usable and effective means of learning vocabulary items, and are beneficial to learners. This information was also useful to determine whether there is any advantage to utilising mobile devices for learning vocabulary items.

The results obtained from the experiments suggested that mobile device usage for vocabulary learning via keyword method improves vocabulary learning.