

# CLASSROOM LEARNING ENVIRONMENTS WITH MOBILE ASSISTED LANGUAGE LEARNING

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**Accepted date:** 05-08-2018

**Published date:** 20-03-2019

**To cite this document:** Pool, J. P., & Yoshida, H. (2019). Classroom Learning Environments with Mobile Assisted Language Learning. *Journal of Information System and Technology Management*, 4(11), 107-113.

**Abstract:** *This presentation intends to show how common mobile assisted language learning (MALL) applications that focus on receptive skills can be complemented with a curriculum that emphasizes more productive skills. The research to be presented measured two groups of adult learners' language growth after they were subjected to a commonly used MALL application focusing on reading, listening, grammar, and vocabulary, and a 15-week classroom course involving instruction on communication, presentation skills, and training learners to mitigate their tendencies to fear and avoid errors. Learners were measured via standardized testing, instructor observation, and learner reflection. Both groups experienced a significant increase in their TOEIC scores; however, learners in the Group 2 failed to increase their TOEIC reading scores. Both the instructor and students reported an increase in communicative confidence and competence. Learners also improved their presentation skills. The difference between the two groups most likely lies in the fact that 14 out of 15 members of group one completed 100% of the online segment of the course, while only 10 out of 16 members of the second group completed even 50% of the online segment. The presentation will also highlight the value of using MALL applications focusing on receptive skills despite the fact that they may score lowly in evaluation models due to their lack of interactivity.*

**Keywords:** *Mobile Assisted Language Learning, EFL, Learner Confidence*

## Introduction

These days, the language classroom in many developed countries, whether it be university or adult education, includes smartphones as a tool available for exploitation by educators. Modern learners seem to be more comfortable than ever engaging in mobile learning (M-learning), defined by Vavoula (2005) as “any sort of learning that happens when the learner is not at a fixed predetermined location, or learning that happens when the learner takes advantage of the learning opportunity offered by mobile technologies” (p. 11). While learners from a decade

ago tended to prefer to use personal computers to mobile devices (Stockwell, 2008), Yoshida et al. concluded that adult learners now use smartphones to engage in mobile assisted language learning (MALL) applications at a greater rate than computers even when they have access to both (2018). Therefore, it is important to create classroom learning experiences that take into account the types of learning behaviors learners participate in outside the bounds of the classroom.

Stockwell & Hubbard (2013) assert that “one of the greatest challenges with mobile learning is to ensure that tasks are suited to the affordances of the devices used” (p. 3). While this is a worthy cause, there is also value in seeking out the types of mobile apps currently being used and examining how effectively they can be integrated into a curriculum. The purpose of this study is to ascertain the effect of using the types MALL applications that are commonly used, namely those that do not necessarily fulfill the affordances of modern technology (Kukulska-Hulme & Shield, 2008; Kim & Kwon, 2012; Burston, 2014a), but rather those intended to aid learners in both grammar and vocabulary acquisition, as well as listening, in conjunction with classroom sessions focusing on complementary skills. The research aimed to test the consistency of the results found in Pool & Yoshida (2018), which found a significant increase in learners’ reading and overall TOEIC test scores.

We also wish to challenge the concept that MALL applications must be evaluated in isolation. Burston (2013) offers an annotated bibliography of good research, much of which is on specific effects of isolating the MALL application or other form of M-learning as the variable. While much of the research showed that M-learning can enhance learning outcomes (including Alemi et al., 2012; Al-Jarf, R., 2012; Papadima-Sophocleous et al., 2012), it can be assumed that a learner’s language study rarely ever consists of solely a single application. Thus, it is important to think about how various MALL applications can fit into a broader language learning environment.

### **Literature Review**

M-learning provides learners with many affordances that they are not able to access otherwise. Rodriguez-Arancon et al. lists many of the advantages of MALL for both universities and students, including “ubiquity of access to information, resources, materials and educational content; flexibility which promotes independent and collaborative learning; interactivity, usability and efficiency which enhance the learning environment, develop professional skills and encourage learning” (2013, p. 1190). Arus Hita & Rodriguez-Arancon also note that time in the classroom is insufficient to becoming fluent in a language so m-learning can help learners receive easier access to the language outside of the classroom (2014).

Researchers often note the discrepancy between the ideal MALL applications based upon the potentialities of modern technology and those apps which are currently used most by language learners. A meta-analysis of MALL-based learning by Cho et al. showed that mobile devices have a moderate positive effect on language acquisition (2018). Our current mobile technology allows for the potential of construction of a rich learning environment (Stockwell, 2010); however, the realization of such learning environments is rarely found in the applications alone. Burston (2014a), for instance, said “ironically, it is precisely in the areas where they potentially have the most to offer – mobility, peer connectivity, oral interactions, and learner collaboration – that the advanced communication features of mobile phone technology have been, and continue to be, the least exploited in MALL” (p. 350). Similarly, Kim & Kwon (2012) point

out that “most language-learning mobile apps focus on cognitive processes such as recognition, recall and comprehension, as well as receptive learning skills, rather than socio-cognitive learning styles” (p. 41). The ubiquity of mobile technology means that learners are in charge of their own learning outside of the classroom (Kukulska-Hulme & Shield, 2008) and the focus on passive skills means that learners without a background in EFL pedagogy are likely to choose these forms of learning.

Numerous researchers have created evaluation models for MALL applications. One recent example is Martin-Monje et al., whose rubric involves five pedagogical criteria and five technical criteria (2014), along with a scoring rubric.

<b>Pedagogical Criteria</b>	<b>1. Cognitive value and pedagogic coherence.</b> <b>2. Content quality</b> <b>3. Capacity to generate learning</b> <b>4. Interactivity and adaptability</b> <b>5. Motivation</b>
<b>Technical Criteria</b>	6. Format and layout 7. Usability 8. Accessibility 9. Visibility 10. Compatibility

**Figure 1. Martin-Monje Et Al.’S (2014) Rubric for The Evaluation of Apps in Language Learning**

Chen (2016) similarly used a rubric to score his seven categories: content quality, pedagogical coherence, feedback and self-correction, motivation, usability, customization, and sharing. Rosell-Aguilar, on the other hand, does not use a scoring rubric, but rather asks yes/no questions regarding 33 criteria which are organized into the four categories of language learning, pedagogy, user experience, and technology (2017). Both Martin-Monje et al. and Chen refer to pedagogic coherence. Chen (2016) explains this category, asserting that “the skills provided in the app should be consistent with the targeted learning goal.” (2016, p. 42). Beyond pedagogic coherence, there is no category of curricular fit that asks that the application not only be in lines with the goals of the curriculum, but to also integrate with the rest of the curriculum to achieve those goals.

### **Design and Methodology**

As was previously mentioned, the common assertion is that the applications being used are imperfect. They do not adequately capitalize on the affordances of modern technology. Instead, they tend to promote more passive learning skills including rote memorization. There are two approaches to this problem that seem advantageous: 1) improve the applications or 2) compensate for their perceived shortcomings. This research promotes the attitudes that both attitudes are necessary. We must simultaneously strive for apps that make use of modern technology while also finding positive ways to use the apps our learners are engaging with today. This study focuses on the latter.

The research was performed on two groups comprising of 15 and 16 members respectively. The participants are employees of Takara Belmont, a Japanese company with international operations located in Osaka, Japan. The participants consisted of 30 men and one woman with

ages ranging between 25 and 44. The initial TOEIC scores of the students spanned from 195 (CEFR level A1: Basic User) to 715 (CEFR level B1: Independent User).

The members of the study received a two-pronged treatment including one hour of instruction per week focusing on speaking and listening, as well as presentation skills and mitigation of error-avoidance tendencies. Concurrently, they were asked to participate in ReallyEnglish, a MALL application that focuses mainly on applied grammar instruction, vocabulary acquisition, and listening.

### ***Classroom Treatment***

The learners had one hour of instruction per week for 15 weeks. The instruction focused on productive skills. The course aimed to teach meaningful communication, including both listening and speaking, presentation skills, cultural awareness, and also attempted to mitigate learners' inclination to avoid errors and focus on communication.

### ***MALL Application Treatment***

Participants were asked to successfully complete at least 50 units of the 100-unit program in the 15-week duration of the program. Learners initially take a diagnostic test which gauges their current level displays their strengths and weaknesses. Successful completion of a unit requires achieving 80% or greater on the unit quiz. The first five lessons are decided based on the results of the diagnostic test and the order of future lessons is dependent on the results of previously completed lessons.

## **Analysis and Findings**

Both Group 1 (see Figure 2) and Group 2 (see Figure 3) experienced increased TOEIC scores in all sections.

<b>TOEIC</b>	<b>Pre-Test</b>	<b>Post-Test</b>	<b>Change</b>
<b>Listening Section</b>	233.2	254.3	+21.1
<b>Reading Section</b>	207.1	239.3	+32.2
<b>Total</b>	440.4	493.6	+53.2

**Figure 2: Group 1 Average TOEIC Pre- and Post- Test Scores**

<b>TOEIC</b>	<b>Pre-Test</b>	<b>Post-Test</b>	<b>Change</b>
<b>Listening Section</b>	207.5	226.6	+19.1
<b>Reading Section</b>	171.6	175.9	+4.3
<b>Total</b>	379.1	402.5	+23.4

**Figure 3: Group 2 Average TOEIC Pre- and Post- Test Scores**

Pool & Yoshida (2018) showed using an independent-samples t-test that Group 1 experienced a significant increase in their TOEIC scores from the pre-test ( $M = 440.4$ ,  $SD = 113.25$ ) to the post-test ( $M = 493.5$ ,  $SD = 132.47$ );  $t(13) = 2.49$ ,  $p = 0.027$ . We have now additionally performed an independent-samples t-test showing that Group 2 has also experienced a significant increase in TOEIC scores from the pre-test ( $M = 379.1$ ,  $SD = 136.6$ ) to the post-test ( $M = 402.5$ ,  $SD = 132.9$ );  $t(15) = 2.78$ ,  $p = 0.014$ . Instructor observation of both groups also saw an increase in presentation skills and speaking confidence throughout the duration of the course, culminating in final presentations.

There are two main differences between Group 1 and Group 2: 1) Group 1 spent an average of 24 hours engaging in the MALL application, completing 60 units per person, compared to Group 2 only engaging in an average of 11 hours per person, completing an average of 37.5 units per person (see Figure 4), and 2) Group 1 experienced a significant increase in their reading scores on the TOEIC test, whereas Group 2 did not.

	<b>Group 1</b>	<b>Group 2</b>
<b>Hours using Really English</b>	24	11
<b>Units passed</b>	60	37.5

**Figure 4: MALL Application Time Studied and Productivity Per Person**

## **Discussion**

The consistency of results from Group 1 to Group 2 further confirms that a curriculum focusing on communication and presentation skills can successfully complement a MALL application that focuses on grammar and vocabulary acquisition. One may assume from the results that the two differences between the groups are related to each other. Reduced time studying an application that focuses on grammar and vocabulary led to lower reading gains on the TOEIC test. In fact, the first group significantly increased their reading score while the second group did not. This shows that learners must not merely be exposed to the technology but must adequately engage with it to reap the benefits. Furthermore, it clearly shows that time on task is a necessary factor in determining whether significant language development can be achieved.

The listening scores between the two groups were statistically similar. This makes sense if one assumes the course based on communication and presentation skills had the largest effect on learner improvement. Both groups experienced the same treatment in the classroom, so similar outcomes were to be expected.

MALL applications focusing on more passive skills have been criticized for lacking in characteristics such as peer-connectivity, speaking opportunities, or collaboration between students (Burston, 2014). There are also MALL evaluation frameworks (e.g., Rosell-Aguilar, 2017) that provide various questions to allow one to evaluate a MALL application in totality. However, the results of this research imply that such applications need not be evaluated in their ability to check every box of the language-learning experience. Rather, they should be viewed more situationally, dependent on how well they can fit into the full language-learning environment.

## **Conclusion**

This study confirms that selecting classroom teaching techniques and online learning programs that complement each other can lead to optimal learning outcomes. Furthermore, the difference the two groups spent engaging with the application shows the positive effect that such applications focusing on grammar, vocabulary, and listening have on developing a learner's reading skills. The similarity in listening scores may imply that such programs, while giving the learner some reading practice, do not have a significant impact on developing listening skills. However, the classroom instruction focusing on production skills seem to produce that effect.

MALL evaluation models should reflect the reality that online learning programs are often not used in isolation but are rather part of a larger language-learning eco-system that the learner is

a part of. By evaluating these applications as a part of a broader language learning experience, we can more accurately judge which ones are helpful in various situations.

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