



The Effects of Using MALL Applications to Teach Vocabulary to EFL Learners in UTAS, Oman

Hisham Bakhit Al Shahri 

English Language Department, University of Technology and Applied Sciences, Oman

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ABSTRACT

This study aims to evaluate the effectiveness of incorporating different types of smartphone applications i.e., game-based, flashcards and self-paced applications in vocabulary teaching and learning at a public university in Oman. Past research indicated that Mobile Assisted Language Learning (MALL) applications facilitated second language learning (Stockwell, 2010). As a result, many teachers have opted to use smartphone-based applications such as *Kahoot*, *Quizlet*, and *Memrise* to engage their learners in the classroom and motivate them to learn lexical items. This paper investigates how deep is the influence and effectiveness of teachers' use of mobile applications on the students' learning of Academic vocabulary and how these applications should be utilized to be as effective as possible. The study uses semi-structured interviews with 8 interviewees who are lecturers at UTAS, Oman. The interviews focused on frequency of usage, efficiency, personal experiences and ideas for effective implementation of such applications in the future. Results indicate that smartphone applications used for vocabulary learning have a positive impact on vocabulary teaching and learning, enhancement of academic learning skills and advancement of academic vocabulary retention levels. The study also provides recommendations for effective use of mobile applications in vocabulary learning and teaching.

Keywords: *MALL, Vocabulary Retention, Teaching and Learning Vocabulary*

Introduction

Smartphone usage in classroom settings has become, in recent years, ever more ubiquitous in all aspects of daily life. English as a Foreign Language (EFL) teachers and instructors have increasingly utilized mobile-assisted teaching and learning strategies to facilitate the learning of foreign or second languages (Nguyen, 2022). The rationale behind its utilization is due to these

strategies and applications ability to make learning more engaging and effective when incorporated in the right way (Xodabande & Atai, 2022). As Behforouz and Al Ghaithi (2022) Commented, utilizing mobile-assisted tools in teaching and learning is convenient in the tertiary level because the learners can bring their smartphones with them. Using Mobile-assisted Language Learning Applications (MALL) to learn a second or foreign language can enhance the students learning and may have a positive impact on the overall experience of the student in the context of individual learning i.e., self-paced learning or institutionalized learning i.e., teacher-paced context (Mortazavi et al., 2021).

There are specific reasons for choosing to focus on smartphone applications in this study. First of all, smartphones are the most widespread technological device in the market. Secondly, smartphones are more practical and affordable for students when compared to other devices such as tablets, computers, or laptops. The third reason is due to the variety of language learning applications available in smartphones (Hou & Aryadoust, 2021; Mortazavi et al., 2021; Poláková & Klímová, 2020).

The meaning of learning a second or foreign language does not mean learning one or two separate skills, but it indicates the total learning of all skills like listening, speaking, reading and writing. Also, linguistic components such as grammar and vocabulary are included and fostered when using MALL applications. This study focuses on vocabulary as the author believes that effective vocabulary teaching is the most essential step to enhance the students' overall L2 learning because it creates the foundation upon which all other learning is based. An example of important vocabulary items that the learners need to advance in their studies is the Academic Word List (AWL) compiled by Coxhead (2000).

Some examples of the MALL applications that are used by EFL teachers in the context of the study include *Kahoot*, *MyELT* and *Quizlet*. The chosen apps were selected because they are prevalent to both teachers and learners because they can help in teaching and practicing AWL, expressions, and idioms.

Literature review

Vocabulary as a term is the group of words used in a particular language which convey a specific meaning or different meanings. Vocabulary words can be used in the form of single items, phrases, or in sentences. The importance of vocabulary in any language can be highlighted by Wilkins's (1972) famous claim that "without grammar, very little can be conveyed, Without Vocabulary nothing can be conveyed".

Academic word lists

The academic word lists compile vocabulary items that are used in both written and spoken academic register. The lists are categorized into two main categories: a) general academic word lists which contain academic words that occur across all academic disciplines; b) subject-specific word lists which contain academic vocabulary used in a specific academic discipline.

One of the early known general academic lists of this kind was the University Word List (UWL) created by Xue and Nation (1984) and contained the most frequently used academic expressions in writing within multiple disciplines. The UWL was later replaced by the Academic Word List (AWL) compiled by Coxhead (2000) who updated the list and made major changes to it. The AWL which is the focus of the study at hand was developed by Coxhead in 2000 based on a corpus of over 3.5 million words published in academic texts in New Zealand from 1960 to the late 1990s. The AWL is the list focused on by most curriculum designers when selecting what vocabulary items to include in a syllabus or activity (Khani & Tazik, 2013).

Other popularly used general academic vocabulary lists include the Academic Keyword List (AKL) created by Paquot (2010) and the New Academic Vocabulary List (AVL) created by Gardner and Davies (2014). The most recent general academic list is the Oxford Phrasal Academic Lexicon (OPAL) created by McCarthy (2019). The usefulness of general academic lists is that they are useful to students who are perusing multiple disciplines, those who still haven't identified what discipline to pursue, and also for teachers teaching in multidisciplinary classrooms (McCarthy, 2019).

There are multiple discipline-specific lists that were created to provide insight into the size and nature of subject-specific lexical items and identify them as well as compile vocabulary related to the subject to prepare learners to study and later use them to test their vocabulary knowledge. An example of such subject-specific lists is the Chemistry Academic Word List (CAWL) created by Valipouri and Nassaji (2013) which was developed for EFL Chemistry students.

MALL in vocabulary teaching

Investigating the effects of using MALL applications to teach vocabulary items is not a new topic among scholars (Yusoff et al., 2022). Early research on the use of mobile devices highlighted that MALL application integration in language learning has the ability to accommodate social interaction and collaborative learning. In early research on the uses of MALL in teaching and learning, researchers focused on certain date-appropriate equipment such as cell phones, Personal Digital Assistants (PDAs) and iPods in their studies which goes to show how the topic has been given attention even at that time.

Liu and Navarrete (2016) shed some light on students' positive attitudes toward autonomous learning using smart devices. In their study, the instruction for the experiential group was done with the help of iPods as learning tools. The researchers concluded that students in the experimental group achieved better results than their control group counterparts. The improvement in achievement was due to the fact that the group that learned using the iPods were able to have access to the material taught at any time as well as have open access to the tasks both inside and outside the classroom whereas, the control group learners only had access to the material inside the classroom.

Nowadays, it is estimated that over 2000 language learning applications are available for download. Moreover, positive vocabulary acquisition through the use of smartphone applications was recorded in a study by Jack Burstson (2015) who claimed learners showed more aptitude

toward achieving learning outcomes using mobile applications as a learning medium in both classroom-based and self-based learning contexts. The learners can set their own goals based on the needs set by the teacher or assessment results as well as have the leisure to self-study at their own pace which was shown to have effective results.

Bartholomew (2019) comments that the integration of mobile applications in teaching and learning vocabulary may boost the learners' self-learning abilities. Not only do online applications give the students the chance to enjoy their lessons and classroom-based teaching, but they also may motivate the learners to become independent learners who study at home and at any time or place they deem fit which increases the likelihood of remembering and practicing new vocabulary.

Research conducted by Al-Malki (2020) in Oman concluded that the students taught using MALL applications showed better comprehension and memorization of new words about the prescribed curriculum which gave rise to better vocabulary retention levels. Similarly, it has been proven that language accuracy also improved with the advancement of lexis, which was learned via *Quizlet* as a learning application. Moreover, Aminatun and Oktaviani (2019) indicated positive results of using *Memrise*, a smartphone application, on vocabulary learning. A critique of this study is that it only focused on one application which further strengthen the need for a broader spectrum that includes at least three applications to make the findings and conclusions more reliable.

On the other hand, some researchers like Hariadi and Simanjuntak (2020) stated that vocabulary teaching using mobile applications in the modern era still seems to be taught in isolation rather than in the learning context. The lack of explanatory corrective feedback and detachment from the needs of the individual learners is due to the inability to control the learners learning outside the classroom. It is suggested that smartphone applications usage for vocabulary teaching must be designed and developed to serve the communicative purposes of the learners and strengthen students' acquisition of both language and culture. Furthermore, a study conducted by Angela Chambers (2016) investigated learning new vocabulary items through the use of social media and mobile applications. The applications in the study were effective for language acquisition; however, the study did not take the class size and different language abilities into consideration.

This study will investigate how effective MALL applications can be in helping teachers teach Academic Word List (AWL) items in the General English Foundation Program (FP) in the context of the University of Technology and Applied Sciences, Oman.

Research questions

The study is designed to answer the following questions:

- 1- To what extent are Mobile Assisted Language Learning (MALL) applications as a vocabulary learning tool incorporated at the University of Technology and Applied Sciences (UTAS)?
- 2- What are the effects of incorporating MALL application as a teaching tool of Academic Word List (AWL) in the General Foundation Program (GFP) from the teachers' perspective?

Methods

Setting and participants

The participants for the study were 8 individual Lecturers/Assistant Professors currently teaching in the GFP at the University of Technology and Applied Sciences in Oman. The chosen teachers have years of experience in teaching English using both traditional methods and MALL applications as most of them have claimed that they are used to using technology in the classroom. The participants were selected for accessibility reasons as the researcher is also a lecturer at the university. Four out of the eight interviews were conducted face-to-face while the rest were done online because the interviewees were teaching in different cities from the researcher. All the interviews were recorded and transcribed.

Instrument

The instrument used in the study is semi-structured interviews. The reason for using semi-structured because it gives the author the balance to collect focused responses from the participants whilst still providing the participants with room to express their thoughts and personal experiences of using mobile applications (Mohajan, 2018). The interview included 7 main questions. There were 6 open-ended questions and one closed-ended question. There were some follow-up questions that varied in accordance with the participants' responses. Below are the 7 main interview questions:

- 1- Do you use Mobile-assisted Language Learning applications to teach vocabulary?
- 2- How often do you use Mobile-assisted Language Learning applications in teaching AWL vocabulary items?
- 3- What Mobile-assisted Language Learning applications do you use to teach vocabulary?
- 4- What effects did you notice the apps had on your teaching?
- 5- What aspects did you like and dislike about using the applications?
- 6- Has the application been useful to improve the students' learning of AWL vocabulary items?
- 7- Do you prefer using traditional methods or MALL applications in teaching AWL vocabulary items?

The selection of the interviewees was random, and they were interviewed face-to-face. The interviews were transcribed and analyzed narratively.

Findings

According to participants' responses to questions 1-3 7 out of the 8 teachers confirmed that they have used mobile language learning applications to teach target vocabulary items in the classroom. 3 out of the 7 stated that they use the applications in a frequent way (at least once in each two classes) while the others stated that they use the applications to a lesser degree.

In their responses, they showed willingness and interest in using the applications more regularly and wanted to know how they could use them in a more effective way:

I use at least one mobile-assisted activity program in every class I have. I usually use it as a summative assessment tool (Teacher 2)

I often use the applications because I like how it makes my students more engaged. (Teacher 4)

I mainly used the applications during the Covid-19 pandemic, but I haven't used them since because they take a lot of time and preparation. (Teacher 8)

The most frequently used applications that the interviewees used to teach vocabulary items were *Kahoot* and *Quizlet*. Though other applications were mentioned, *Kahoot* was mentioned by most teachers as being user-friendly and engaging to the students. *Quizlet* was also mentioned by some teachers who viewed it as a helping tool to revise and assess learners' understanding of vocabulary in an organized way. Other applications were mentioned by teachers such as *Memrise* which was mentioned by one of the teachers to have amazing usefulness in the classroom. Other applications for vocabulary learning mentioned were *PowerVocab* and *Anki*.

I always use *Kahoot* with my students when I teach vocabulary because I think it's the most fun way to teach the difficult items. (Teacher 1)

The app that I often use is *Quizlet* (Teacher 2)

I don't normally use smartphone applications to teach vocabulary, but when I do I use Quizzes (Teacher 5)

I sometimes use the applications. The applications I use most often are *Kahoot* and *Quizlet* (Teacher 4)

Although not all participants stated that they use MALL applications, all of them gave generally positive thoughts regarding incorporating and integrating the applications in their teaching and emphasized that using them for vocabulary teaching would make their classrooms more interactive and that the applications would help in creating a more motivated learning environment. Based on their previous experiences with using the applications in vocabulary teaching, they claimed that the applications made the students more invested and engaged in what was being introduced. Moreover, the applications used were helpful in motivating the learners to show more initiative toward learning new vocabulary on their own thus becoming more autonomous learners.

In my opinion, the applications' effectiveness in enhancing vocabulary learning is very good [.....] I mainly use them because they make my students think on their own and study at their leisure (Teacher 3)

I really like how *Memrise* gives my students the chance to revise what we study at home [.....] I noticed some of them are more motivated to come and ask about the new vocabulary they've encountered while using the applications (Teacher 5)

Some features that the applications have are that they are user-friendly and as a result, the students seemed motivated toward the idea of using the applications instead of looking at the dictionary or asking their teacher. Moreover, some applications can track progress which is convenient for both the teachers and learners and is helpful when they are doing pair or group work as it gives them an indication of what has been achieved.

What I usually do is ask them to download the app *Kahoot* and give them a link to enroll in a course I've created and with the progress report I can know what to do next (Teacher 4)

Question number 5 showed that the participants' experiences were mostly positive about using the applications. The biggest positive about using the applications was that they were functional and served multiple purposes. They are used as a teaching activity in the classroom, a tool to check homework and progress, and also as a tool for all types of vocabulary e.g., in-class quizzes, Comprehension check, summative assessment... etc. The different types of questions that can be created are also a big advantage because the teacher can use any question type needed such as True or False and Multiple-Choice questions to name a few.

It is extremely user-friendly to teach foundation program students and gives me the room to choose what type of questions to use. I like how it can be used in a fun way like *Kahoot* or as an online course like Quizzes (Teacher 5)

Designing questions using the applications doesn't limit my options. For example, I can choose if I want question A to be a True or False question or if I want it to be a short answer question. (Teacher 3)

The second main reason behind incorporating the applications in vocabulary learning is due to them giving the teacher more room to relax which was not expected because previous research claimed that some teachers thought that the applications were a nice addition to teaching, but some other teachers thought that using the applications meant they had to spend more time in preparing and mentoring progress.

In this study, the majority of the teachers thought the applications made teaching easier and did not require any noticeable effort or time because they opted to use readily available resources and activities online or redesign them based on their needs and the fact they are available to the students and can be used at any time and place meant that they are saving time and effort.

Moreover, some other teachers thought the applications opened the room for a more collaborative environment amongst the teachers as they shared the vocabulary activities and materials available or created some new ones together.

Using the application does not mean that I have to do everything, there is a plethora of very fun and appropriate exercises available online designed by other teachers. If those exercises are not achieving the target, you tweak them to better serve the intended purpose (Teacher 2)

Kahoot and *Quizlet* are fun because they make the students excited about the class and they always ask for more competitions (Teacher 4)

Though the teachers thought very positively about the applications, they expressed that the financial burden is a major limitation that limits their usage of the applications.

I want to use the apps to the maximum effect, but if they're expecting me to pay a hefty amount of money every month for full features, then I refuse. (Teacher 8)

I want to use the application, but I am not willing to pay money to do what I can do in a paper-based activity (Teacher 5)

Two teachers noted that using the applications can be difficult because it might cause distraction and the teacher might lose order of the class if the exercises are not done in the right way and the students lose interest.

Some of the students think that when I use the application in group or individual competitions, they have to shout and argue angrily with their peers [.....] I remember teaching and the teacher teaching in the next class came asking me if something happened because she heard shouting (Teacher 6)

I really liked it in the beginning. All the students are engaged and having fun, but while moving around to check progress, I always find some students who are checking their social media or texting (Teacher 7)

The interviews also yielded some perceptions on whether the students' vocabulary retention levels have significantly changed or not due to using the applications. 6 teachers responded that the applications have been effective in enhancing the learners' AWL vocabulary knowledge. Moreover, some teachers stated that they used similar tests at the end of the semester and compared them to their results at the beginning of the semester and found big improvements. The improvements focused on their improvement in using new vocabulary accurately and describing the words' meaning when asked to.

The students not only became more engaged and interested, but they were also noticeably better at using new words and understanding their meaning (Teacher 6)

I remember one of my students scored 7 out of 20 in an activity at the beginning of the semester and the same student scored something around 16 or 17 near the end of the semester (teacher 2)

The last interview question aimed at getting an insight into the teacher's views and preferences of what method of teaching to use in vocabulary teaching in the classroom. The question compared between the traditional vocabulary teaching method and using Mobile Assisted Language Learning applications for vocabulary teaching. 5 out of the 8 teachers argued that each method required something from the other meaning that they should be integrated and used simultaneously for effective teaching. Their argument mainly revolved around them believing that a teacher should not depend on traditional methods because the students will be bored, the class will be teacher-led, and learners will feel passive. On the other hand, using only applications is not practical because you are catering to different personalities and capabilities and thus teacher input and traditional activities are required. They suggested that using the two methods together will garner better results and help make the teaching more effective.

The two methods cannot exist effectively in separation but would thrive in coexistence (Teacher 6)

The final interview question also revealed an interesting argument because although the teachers showed overwhelming positive attitudes and perceptions on the use of mobile applications, three teachers stated that they thought the applications are not integral; and that they still prefer to use traditional teacher-led teaching approach because it's the way they have been

trained and they believe that it's more task-oriented to have a normal class session without leaving it to students to do it themselves.

I still prefer doing my classes the same way I've been doing them all these years [...] I think the applications are good, but I still like having control over what is being done in the classroom (Teacher 3)

To be honest we still don't have students who can be left on their own because they will copy from each other and submit the work if I'm not hovering over their shoulders (Teacher 8)

Discussion

The importance of mobile-Assisted Language Learning (MALL) applications usage in the classroom is not a new field of study, much research has been conducted on its usefulness and practicality for language development of all skills. Most research available to the researcher on the use of the applications in the English as a Foreign Language (EFL) context has yielded positive findings about its use in the classroom.

However, most of the research conducted has focused largely on how the applications can improve the learners' language level and make the learners acquire and develop the language aspects and non-linguistic factors such as personal experiences and ideals have been largely overlooked.

According to a Bibliometric analysis done by Karakaya and Bozkurt (2022) which examined MALL research between 2008 and 2020, they found that the majority of research has focused on linguistic factors and factors relating to interaction and personal experiences have been overlooked. On a similar note, Chwo et al. (2018) examined 213 papers on MALL to identify recurring themes and found that there is a gap between what teachers think MALL devices will be used and how they are actually used.

Though there is substantial research, there are still some aspects of Mobile-assisted Language Learning applications usage and effectiveness that have not been given enough attention and teacher's personal experiences and ideas for effective implementation are one of them. That is of great importance due to the fact that although the students are the center of any teaching, the teachers are the ones who do most of the work and their insight and suggestions are needed for effective teaching and learning to occur.

This research findings goes in alignment that MALL usage in the classroom is effective for vocabulary teaching and learning. Most of the teachers interviewed agreed that they thought the applications are useful and can be used to teach academic vocabulary items in all parts of teaching any lesson thus they concur that they are practical and useful. Furthermore, most teachers believe that the use of the applications is not demanding and that they are user-friendly and practical for students and teachers alike. Most of the teachers interviewed also claimed that the applications are useful because they give the teacher the ability to adapt, adopt, or design different types of activities and assessment tasks which can be used at any time whether inside or outside the classroom.

With regard to academic vocabulary, the teachers claimed that the applications provided them with room to monitor the students' progress and task achievement using the applications' features. Moreover, the fact that some applications even offer immediate feedback to the students was an added advantage.

As for using the applications outside the classroom, the results were not very positive because most of the teachers thought that the learners need to be very motivated to take charge of their learning outside the classroom and that when given extra vocabulary-centered activities for self-learning, the students showed less interest compared to in-class activities.

On the other hand, not all yielded results on the use of the application were positive. Some financial and behavioral difficulties in using the applications were mentioned by teachers. An emphasis was put on the fact that the applications required subscription fees which limited their access to the features available. Some limitations of the free versions included being limited to a small number of student enrolment which required doing multiple courses for each class, a limited number of free available material and not accessing the full features of what the applications can offer. Though they thought the applications were extremely useful, most of the teachers showed no indication of being willing to pay for the full features. The financial burden is crucial because it limits how the teachers use the applications. Another obstacle highlighted in the research is that the applications need careful implementation when selecting what material to use and how to use the applications inside the classroom. The results of the study showed both the positive effects of using the applications and the obstacles faced by teachers.

The results of the study are similar to a study carried out by Nguyen (2022) which looked at the teachers' opinions on online applications in vocabulary teaching and concluded that using online applications can help get the learners more involved and invested in the lesson. Moreover, the study is also in alignment with Klimova's (2021) study which urged the integral role of the teachers and the importance of equipping the teachers technically to be able to use the available resources to do their job in the most effective way.

The main advantage provided by the use of technology is that it is a useful tool to facilitate the students' interaction as well as the actual feedback. The use of technology can and may yield improvements to the learning and teaching environments; its integration into the learning and teaching process needs hard work and continuous professional development regarding the use of relevant resources inside and outside the classroom. The integration and introduction of technology into any context of education could be demanding due to the fact that staff members not only need to be able to develop their relevant technical skills, but they also need to develop their theoretical knowledge and comprehension of the validity and role of the technological resources being utilized. They also need to be well informed of the rationale behind their integration into the educational context.

Conclusion

The main aim of the current research was to explore the underlying beliefs and perceptions of the teachers teaching English as a foreign language about the use of technology in teaching

vocabulary. Some major findings found were that the teachers believed that their students showed interest in MALL applications' usage in the classroom in general and in language vocabulary learning in specific. The teachers also implied an increase in vocabulary retention and comprehension as well as an increase in the students' ability to express themselves. The findings of his study corresponded with the findings of that MALL application usage in teaching vocabulary has a stimulating effect on students' participation and active learning. Though the researcher yielded an overall positive view on MALL application in Academic vocabulary teaching and learning, some pedagogical implications need to be mentioned.

The main obstacles drawn from the interviews revolved around three main themes: financial aspects, unwanted behaviors by the learners, and the nature of some of the content provided by the applications.

First, the fact that most applications available for use are free doesn't mean that all features are available without payment. Some concern regarding the restrictions in the free account hindering the use has been raised as one of the main reasons some teachers have decided to quit using them in teaching. Though some teachers acknowledged that the financial burden is an issue but have subscribed because they believe that the benefits are worth it, most of the teachers showed no interest in paying. One way to overcome this obstacle is by showing the teachers the optimal way to use the free packages and the different alternative applications available which don't require any payment. Another solution would be that the teachers would share an account amongst themselves to save money.

Secondly, some students have shown unwanted behavior while the applications are being used whether it is by disturbing the class by shouting answers or using the activities to play with their phones. The teachers in these cases must set boundaries to which the students must adhere before the beginning of each course, so the learners know what is expected from them. Another way to overcome any unwanted behavior is via the applications themselves because many MALL applications provide the teachers with the opportunity to track their students' progress to see if they are doing what they are supposed to.

The third obstacle encountered by the interviewed teachers was the applications' free-sharing nature means that some of the activities and material there are not accurate or at certain times culturally insensitive. In the case of the students, this might become an issue because the learners don't have the knowledge to differentiate between helpful and unhelpful content. The teachers in these cases should advise the learners on what to choose and how to look for useful content in the platform they are using. As for the use of the content in the classroom, this is the job of the teacher to either adapt or adapt the material to suit his/her learners' needs and context.

Some limitations of the study should be mentioned. The number of teachers interviewed was not large enough to guarantee a comprehensive result on the topic. Also, the teachers interviewed taught different courses at the time of the interview which may have an impact on the experiences. Moreover, further research is suggested to focus on the use of the application in other skills (listening, speaking, reading, and writing); and on the integration of the applications in English for Specific Purpose (ESP) courses.

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Conflict of Interests

I have no known conflict of interest to disclose.

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