

## **The Impact of Mobile-Assisted Language Learning (MALL) in Developing the Listening Skill: A Case of Students at Dubai Men's College, the United Arab Emirates**

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### **Abstract**

Mobile technologies are one of the fastest-growing technologies in education. They offer an appealing opportunity to access multiple sources of information anytime and anywhere. Students who join Dubai Men's College in the Foundations program suffer from accumulative weakness in the language skills in general and in the listening skill in particular. The study aimed to confirm the positive impact of Mobile-Assisted Language Learning (MALL) on English Listening Skills. It attempted to examine the effect of MALL on students' acquisition of English language Listening Skill at Dubai Men's College (DBM), the United Arab Emirates. The study also investigated teachers' perspectives on the effect of MALL on the students' listening skill. The research question was: To what extent students' listening skills have in the experimental group developed through the use of MALL compared to the students in the control group? A mixed-method approach composed of qualitative and quantitative data collection and analysis was used to answer this question. 66 students participated in a quasi-experiment of an experimental group, and a control group and 20 teachers participated. The findings indicated that there were statistically significant differences between both groups in favour of the experimental group. The research stressed the benefits of using MALL to improve the students' listening skills, especially those who seem to be demotivated. Finally, some teachers showed a lot of support for the use of MALL. Additional empirical research should be conducted to increase the generalizability of the findings.

*Keywords:* language acquisition, listening skill, MALL, teachers' perspectives, Dubai Men's College

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## Introduction

Recently, there has been considerable interest in mobile technology in education, although the technology is still developing. Pegrum (2014) defines MALL as the exploitation of ubiquitous handheld technologies, together with wireless and mobile phone networks, to facilitate, support, enhance, and extend the reach of teaching and learning. Mobile devices are one of the fastest-growing technologies in education. For learners, they offer an appealing opportunity to access multiple sources of information anytime and anywhere.

Young Emirati high school-leavers, who do not meet the minimum English language entry requirements (IELTS minimum 5.0) for studying in their career program of choice or bachelor programs, enter their first year in a Foundation Program at the Higher Colleges of Technology (HCT). These students suffer from accumulative weakness in the language skills in general and listening skill in particular, and they seem to lack motivation towards learning. A retention problem is also reported (Hatherley-Greene, 2014). In April 2012, the decision-makers in the United Arab Emirates (The UAE) decided to use MALL as a significant model of instructions in the Foundations Programs of the three federal institutions, i.e. Higher Colleges of Technology (HCT), Zayed University (ZU) and the UAE University (UAEU) for the academic year starting in September 2012.

The initiative's core objectives were to advance active learning methods that would provide the students with the skills and experiences needed in a flexible work environment to achieve individualized and collaborative student learning in the post PC era and introduce the challenge and task-based learning. Moreover, the initiative was designed to enhance cross-institutional collaboration between faculty members, increase faculty collaboration through cross-institutional repositories of learning objects and facilitate the migration to e-books (Hargis, Cavanaugh, Kamali, & Soto, 2014).

This study attempted to answer the following questions: (1) To what extent have students' listening skills in the experimental group developed through the use of MALL compared to the students in the control group? (2) What are teachers' perspectives on the effect of the use of MALL on English Listening skills? There are still many questions raised about the effectiveness of MALL and how far it helps develop students' language skills. This study's need stems from the demand to examine the effect of MALL on the acquisition of the English Listening skill. It could be one of the rare attempts to explore this effect empirically. It is believed that using MALL could positively affect students' language skills and subskills. It would also add to the students' autonomy, research skills, and motivation (Alzieni, 2021). Through MALL implementation, students could spend less time receiving knowledge and spending more time applying, analyzing, and evaluating this knowledge. Therefore, MALL Paradigm could leverage students' thinking skills. MALL could also enhance some of the students learning and thinking skills. There will be more time spent on application and analysis compared with time spent on memorization and understanding. My research aimed to shed line on the positive effect of MALL on the acquisition of English Language Listening skill.

The impetus of this research arose from the fact that it is an empirical study, which gave some insight and answers to questions about the effectiveness of the using MALL in tertiary

education. Nevertheless, there is a need to scrutinize the results and design guidelines for educational institutions in general and DMC in particular to sustain the MALL practices or effective practices that will be explored. This current study could help decision-makers at HCT decide the continuation of MALL program. It also gave insight into the significant benefits and the barriers that could stand against its effective implementation.

### Review of the Literature

Quinn (2012) defined mobile learning as the intersection of mobile computing and eLearning: accessible resources wherever you are, robust search capabilities, rich interaction, powerful support for effective learning, and performance-based assessment. By reviewing literature and related studies for the theoretical educational background that MALL stands on, we can find that this technology's supporters have seen many relations between MALL and some of these schools. For example, Behaviourism is one of the oldest approaches in education that claims that learning is a habit formation. Beatty (2003) showed that one of the practical applications of the behaviourist approach is programmed instruction or programmed learning with information in small steps. Many features of programmed instruction are found in MALL. Many mobile applications are designed to move forward, systematically to develop habits and improve learning.

According to constructivism, learners interpret the information and the world according to their reality; they learn by observation, processing and interpretation, and then personalize the information into personal knowledge (Cooper, 1993). Learners learn best when they can contextualize what they learn, both for immediate application and to acquire personal meaning. Mobile learning facilitates personalized learning because learning and collaboration from any place and at any time, allows the learning to be contextualized. MALL is a direct implementation of the constructivism theory, as students need to explore, synthesize, and construct ideas. Wagman (2005) indicated that "Constructivism stresses the holistic nature of learning and espouses the learner's central role in accommodating new information and experiences by synthesizing and constructing understanding from prior experience" (p. 38).

Closely associated with constructivism is the Social Development Theory of Vygotsky. He stressed the importance of social interaction, such as peer collaboration in developing recognition. The main feature of MALL is to provide an excellent opportunity for communication and collaboration among learners as they need to work in teams, and each has his/her role. Beatty (2003) claimed that collaboration is among the most useful ways in which learners acquire language. He adds that this collaboration can add to the learners' adaptability, coordination, decision-making, and interpersonal communication skills. The most significant single benefit of collaborative learning is how it serves to reveal information and ideas, not just to the learner's collaborative partners, but also to the learners themselves.

Much of recent research on the use of MALL has looked at the effect of MALL on the development of English language skills, and most of them has indicated the positive impact of it. Most studies have reported that students like the flexibility of using technology (Ally, 2013). Only very few studies have looked at whether MALL "improves performance and results in the transfer of what was learned in new situations" (Ally, 2013, p. 3). However, the experimental studies on

MALL are still rare. Besides, educators need to develop mobile learning materials that cope with learning theories—most studies on MALL feature positive impact.

In a meta-analysis study, Wu (2015) reviewed 164 studies published on MALL applications in educational contexts from 2003 to 2010. He asserted, "Research outcomes in mobile learning studies are significantly positive" (p. 826). Ally (2013) in his study on his students in Athabasca University, Toronto examines the effects of using mobile technology on learner's achievements, and he points out that the use of mobile devices for learning has implications as to how learning materials are designed using learning theories and instructional design principles. He asserted that the more effective MALL materials are, the more students' achievement is. Dzekoe (2021) confirmed the importance of integrating language literacy and digital literacy. He confirmed that the use of MALL would help "the students be in the real world" (p. 222), and it is a means of learning and at the same time communicating with local and global audience.

In the Arab world, there are some studies about the effectiveness of MALL on EFL. Most of these studies indicated that MALL could be one of the promising pedagogical technologies employed in the higher educational environments within the Arab countries (Al-Emran, Elsherif, & Shaalan, 2016). Al-Jarf (2012) conducted an experiment on mobile technology and student autonomy in oral and aural skills acquisition at a Saudi University. Two groups of EFL first-year university students at a translation department participated in this study. Pretests and post-tests were administered to measure the significant difference between the two groups. The experimental group practised 90 lessons and 900 short audio files of English. These files were in mp3 lessons, and students can read, listen to, and mimic as many as they needed. The results show that the listening and speaking post-tests mean scores for the experimental group are higher than those of the pretests mean scores. Responses to the post-treatment questionnaire showed "positive attitude towards the mp3 self-study listening and speaking lessons [and students] were encouraged to take responsibility for their practice and their own learning" (p. 126). As a result, this technique helped students be independent in their language learning.

In another English Language Acquisition setting, Palfreyman (2012) conducted a study at Zayed University in the UAE on how available mobile technology (students' own camera phones) can be used to enhance learners' input into the curriculum, to promote intercultural learning among teachers and students, and to improve students' productive skills; speaking and writing. Students also used their phone camera to give insight from their culture. They made videos using mobile apps such as iMovie. They also used some other apps to reflect on these photos and videos. These pictures and movies encouraged dialogues among students and their teachers. The results of this study showed that MALL creates a relaxing atmosphere of intercultural learning and promotes discussion. Palfreyman (2012) asserted that the use of MALL provides a simple, sustainable way for students to generate content which is meaningful and which contributes to the learning goals. He also confirmed that the results show some improvement in students' productive skills.

Furthermore, Djoub (2016) conducted an empirical study to examine the effect of MALL on students' achievements in language learning and to find out the difficulties learners encounter within this process at the University of Mostaganem, Algeria. She ensured that "Mobile Assisted Language Learning (MALL) provides learners with the chance to experience new learning modes

that go beyond the classroom context, offering them more flexibility, learning choices in terms of context, ways of its delivery, learning space, and time, thereby enhancing their learning autonomy" (p. 294).

In conclusion, most of the research that studied the effect of MALL on English language skills in general and on listening skill, in particular, showed a positive impact as these devices open the doors to the learner for more practice and more exposure to the language.

### Methodology

To achieve the purpose of this study, both quantitative and qualitative data were collected. In order to triangulate data collection, they were collected from multiple sources, including quasi-experimental and descriptive research methods. IELTS (International English Language Testing System) listening tests were used as pretests and post-tests for the experimental and control groups. Multiple resources prove the validity of both listening and speaking sections of the IELTS in literature. IELTS seems to be a reliable measure of language proficiency. IELTS has high construct, criterion, and content validity. The researcher had permission to access some IELTS resources and exams, which were used at DMC.

Two level three classes at DMC were used as the experimental group (33 students). The researcher was actually assigned to teach them. Another two level three classes were used as the control group, and another teacher was assigned to teach them. The researcher made sure that the two groups were as similar as possible in their major characteristics. Table (2) shows the baseline characteristics between the experimental group and the control group.

Table 1: *Baseline Characteristics of the Experimental Group and the Control Group*

Area	Experimental Group	Control Group
Age Factor	17-21	17-20
Sex	Males	Males & Females
Language Level	L3 Foundations Program	L3 Foundations program
CEPA Score	(164-170)	(164-170)
CEFR Level (Common European Framework of Reference)	B1	B1
IELTS Score	3.5-4.0	3.5-4.0
Curriculum Used	IELTS Skills Preparation_B1 (CEFR)	IELTS Skills Preparation_B1(CEFR)
Nationalities	UAE	UAE + Arabs
Number of students	33 (3 excluded as did not sit for the post-test)	33

To achieve greater test reliability for the two groups, the researcher had some meetings with the teacher teaching the control group and discussed how to administer the tests. The test included IELTS listening. The researcher ensured that everything, including time, printed papers, and all other issues were clear to them. It was agreed to do the pretests on the first week of the study and

do the post-test in the last week of the study for both the control and experimental groups. The pretests' objectives were to prove that both the experimental and control groups had no significant difference in these tests' results.

Besides, five teachers, two males and three females were interviewed. This sample was a purposive one. The researcher used his knowledge and experience to select a sample representing the target population, and simultaneously shows interest in the study topic. The goal of purposeful sampling is to select information-rich participants. These teachers in the present study have experience in teaching using MALL for more than three years. Conducting interviews provided the researcher with informative data about the topic of the study. The teachers answered questions regarding the effect of MALL on the acquisition of listening skills. These are the major interview questions:

- Do you think that MALL has developed students' language skills? How?
- Do you believe that MALL has developed students' listening skills? How?
- What is essential for implementing a successful MALL in an institution? i.e. IT Support, .....
- What are the issues that work as barriers in implementing a successful MALL in an institution?
- What are the problems that have arisen from implementing MALL?
- Please Feel Free to Add Any Additional Comments

## Findings

The study's findings answered the main two research questions; (1) To what extent have students' listening skills in the experimental group developed through the use of MALL compared to the students in the control group? (2) What are teachers' perspectives on the effect of the use of MALL on English Listening skills?

The results of the listening pretest showed that there was no significant difference in the Listening scores between the Experimental Group (M=36.79, SD=10.3) and the Control Group (M=40.82, SD=12.02) conditions;  $t(64) = -1.462$ ,  $p = 0.075$ . Therefore, the two groups are so similar in their language levels. Tables one and two represent the Listening Scores of the pretest. Table 2. *The pretest listening scores/group statistics*

	Group Name	N	Mean	Std. Deviation	Std. Error Mean
Listening	Experimental Group	33	36.7879	10.31006	1.79475
	Control Group	33	40.8182	12.02200	2.09276

*The listening scores/independent samples test*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Listening	Equal variances assumed	.041	.840	1.462	64	.149	-4.03030	2.75695	-9.53795	1.47734
	Equal variances not assumed			1.462	62.547	.149	-4.03030	2.75695	-9.54041	1.47981

While the listening post-test results showed that, there was a highly significant difference in mean scores of the Listening scores for Experimental Group. [Experimental Group (M=67.83, SD=16.7) and Control Group (M=40.15, SD=15.64), conditions;  $t(61) = 6.795$ ,  $p = 0.000$  which is  $\leq 0.05$ .]

Therefore, it can be seen that the listening skill has improved significantly for the experimental group students (M=67.8) compared with the control group ones (M=40.1). This significant improvement could be attributed to the impact of MALL on instruction and learning for these students. Obviously, MALL strategy has achieved its goal in developing the experimental group students' listening skills because it enables easy access to an unlimited number of listening resources. In contrast, the traditional teaching method supported students in the control group slightly because the listening practice needs tools such as portable computers that were not provided to the control group students. Consequently, the second hypothesis of the study is accepted. Table three shows the statistical results of the listening post-test.

Table 3. *The post-test listening scores/independent samples test/group Statistics*

	Group Name	N	Mean	Std. Deviation	Std. Error Mean
Listening	Experimental Group	30	67.8333	16.69624	3.04830
	Control Group	33	40.1515	15.63674	2.72201

*The listening scores/independent samples test*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper

									Lower	Upper
	Equal variances assumed	.236	.629	6.79561	.000	27.68182	4.07381	19.53572	35.82791	
Listening	Equal variances not assumed			6.77459	438.000	27.68182	4.08674	19.50553	35.85811	

Qualitative analysis of interviews revealed several in-depth thoughts regarding the topic of my study. In their response to the effect of the use of MALL on the acquisition of English language listening skills, the majority of teachers are for using MALL and concluded its positive impact. Others are for, but under some conditions, while very few teachers do not like the MALL strategy.

One of MALL proponents in the interview made sure that students today are obsessed with doing everything quickly. The features offered in mobile devices, if used by students, can increase their language skills. For example, students can study anytime, anywhere, and at their own convenience through their mobile devices. Another supporting teacher in an interview said, *"YES, MALL has developed students' language skills. Actually, it has a positive impact on all language skills. There are plenty of apps that can help students improve their skills and are designed to deal with certain types of skills."* A teacher also assured that students' social media use through mobile apps has improved their language skills. She confirmed that, *"Students are more likely to join social media sites (often in English) and watch English movies-with or without subtitles, which has had a positive impact on students' language skills"*.

A teacher in an interview gave detailed interpretation for the use and the positive effect of MALL. She said that MALL helped in developing students' grammar, pronunciation and vocabulary. The learners may download dictionaries with sound functions to learn the correct pronunciation of unfamiliar or new words to fulfil their learning needs. Grammatical points can be learnt through a specifically designed program installed on mobile devices, in which grammatical rules are taught, followed by multiple-choice activities where learners select the correct answer from the given alternatives.

Finally, a teacher in an interview gave detailed interpretation for the use and the positive effect of MALL. She said, *"Yes, MALL helps in developing students' listening, pronunciation and vocabulary. The learners may download dictionaries with sound functions so that they can learn the correct pronunciation of unfamiliar or new words to be able to fulfil their learning needs."*

To summarize, the findings from the interview indicate that through the self-directed study of MALL using the handheld devices and occasional face-to-face interaction with teachers, learners improve their language skills, their level of autonomy, and motivation. The atmosphere, which MALL creates, has facilitated the learning process and makes it interesting. In this study, teachers become a community of learners that support each other in planning for their lessons and generally

change their teaching approaches from being the sole providers of knowledge to be more facilitators of learning. Most teachers at DMC support MALL use with some consideration to mainly professional development programs for teachers and IT support.

### Discussion

The main result showed a statistically significant difference in mean scores of the Listening post-test between the control group and the experimental group in favour of the Experimental Group. This could be attributed to the use of MALL. The results indicated that the listening skill has a larger positive effect because of the use of MALL. The amount of exposure to many listening resources made this difference. The game-related atmosphere, which MALL creates, supports the informal learning and makes learning more motivating and engaging. The control group has achieved some improvement in language skills. However, the development of the experimental group was significant.

Results largely correspond with what is available in the literature regarding the positive effect of MALL on English listening skills. The Quantitative data from the study indicated a significant difference in listening mean scores in favour of the experimental group. This result agrees with Al-Jarf (2012) and Palfreyman (2012) 's related studies, who concluded that MALL improved students' overall performance in reading, writing, speaking, and listening. Besides, the results of Itayem's study (2014) showed that MALL improved students' language skills and helped them manage the materials and homework assignments of their language courses without effort. The results also go side by side with Djoub (2015) study who assured the positive impact of MALL on English language skills in general, speaking, and listening skills in particular.

In addition, the results of the study experiment correspond with the results of the research of Nah, White, and Sussex (2008), and Itayem (2014). Their studies showed that mobile-based systems were successfully used to teach listening. Similarly, the results agree with Lys's (2013), who examined the effects of MALL on tertiary education learners' oral and aural proficiency. The results showed that MALL enhanced oral and aural proficiency and increased linguistic complexity of the learners. Lys (2013) reported that MALL devices are highly suitable to practice listening and speaking skills. Additionally, in an experiment to study the pronunciation and definitions of English idioms by Yang and Xie (2013), the results showed that the students who used MALL retained more idioms than students who did not use mobile devices.

MALL's positive impact on language acquisition and learner autonomy could be attributed to the interest and appeal that using the devices could bring to the learning context. Ally (2013) indicated that MALL might motivate learners and transform the learning process as it helps learners raise their self-esteem, self-confidence and autonomy. MALL devices have merits over all other technologies because its flexible devices enable learners to be exposed to a considerable amount of authentic material. Itayem (2014) maintained that MALL provides learners with constant access to authentic educational materials.

One significant point to be considered in this context is that most qualitative studies on MALL point to students' willingness to adopt MALL into their learning process (Itayem, 2014). Most students showed a favourable attitude towards using MALL in their courses. The study of

Itayem (2014) showed that most students' perceptions of the iPads usefulness and ease as a MALL tool had a direct positive effect on their attitudes towards learning. The reported benefits are the students' interaction, collaboration, engagement, enhanced English language skills, and increased retention (Yang & Xie, 2013). For example, using broadcast apps like Spark Video, iMovie, and Periscope motivate learners to know more about the world and improve their language skills.

Additionally, Wu (2015) specified that MALL use helps reduce memorization burden and makes learning fun. More importantly, MALL provides a source of multi-sensory input of language that is required for learning to occur. It actually affects most learners' senses. In such a context, the learner is exposed to a sensory input combination, including the speech sounds, the learners' hearings, and the lights reflected from the object to be acquired. Hence, MALL influences the students' ability to learn to their full potential (Itayem, 2014), which agrees with Paivio's theory of Dual coding (1986).

In summary, MALL has many salient features such as convenience, portability, productivity, connectivity, affordability, interaction, and accessibility to up-to-date materials and media options. All these features helped to enhance the students' listening skills.

### Conclusion

In conclusion, this significant improvement in the students' listening skill is attributed to MALL use. The impact of these ubiquitous devices is noticeable. These devices are easily portable, facilitates social collaboration, and enhances authenticity and connectivity. Stimulating learning in a real-world context motivates students to learn and practice the skills they need once they enter the job market. However, the traditional method is not a complete failure as the post-test results also show some improvement in the students' language listening skill. Still, it could not be compared with MALL's impact on this skill, which was significant.

Finally, this study's results provided insight into the reasons behind the positive impact of MALL on the acquisition of listening skill, which was examined. At a practical level, this study's outcomes can be a step forward addressing MALL's contribution to the language learners' learning experience. MALL gives the learner the opportunity to reduce the memorization time and provides more time for higher thinking skills. The use of mobile apps, with their features, affect all senses of the students and make it easy for them to develop their listening skills.

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## References

- Ally, M. (2013). Mobile learning: from research to practice to Impact Education. *Learning and Teaching in Higher Education: Gulf Perspectives*, 10(2), 10-22. Available at <http://lthe.zu.ac.ae/index.php/lthehome/article/viewFile/140/62>.
- Alzieni, H. (2021). The Effect of Mobile Learning on Learner Autonomy in the United Arab Emirates. In P. Vinogradova & J. K. Shin (Eds.). *Contemporary foundations for teaching English as an additional language: Pedagogical approaches and classroom applications* (pp. 240-245). New York: Routledge.
- Al-Emran, M., Elsherif, M., & Shaalan, K. (2016). Investigating attitudes towards the use of mobile learning in higher education. *Computers in Human Behavior*, 56(1), 93-102. <https://doi.org/10.1016/j.chb.2015.11.033>
- Al-Jarf, R. (2012). Mobile Technology and Student Autonomy in Oral Skill Acquisition. In J. E. Diaz-Vera, (Ed.). *Left to my Own Devices: Learner Autonomy and Mobile-Assisted Language Learning* (pp. 105-130). Bingley: Emerald Group Publishing Limited.
- Beatty, K. (2003). *Teaching and Researching Computer-Assisted Language Learning*. London: Pearson Education Limited.
- Cooper, P. (1993). Paradigm Shifts in Designed Instruction. Retrieved from *Behaviorism to Cognitivism: Educational technology*, 33(5), 12-19.
- Djoub, Z. (2016). Mobile technology and learner autonomy in language learning. In S. S. Hines (Ed.), *Human-computer interaction: Concepts, methodologies, tools, and applications* (pp. 291-309). Pennsylvania: IGI Global.
- Dzekoe, R. (2021). English Language Education and digital literacy in the 21<sup>st</sup> Century. In P. Vinogradova & J. K. Shin (Eds.). *Contemporary foundations for teaching English as an additional language: Pedagogical approaches and classroom applications* (pp. 217-226). New York: Routledge.
- Hargis, J., Cavanaugh, C., Kamali, T., & Soto, M. (2014). A Federal Higher Education iPad Mobile Learning. *Innovative High Education*, 39(1), 45-57.
- Hatherley-Greene, P. J. (2014). The Cultural Border-Crossing Index: Implications for Higher Education Teachers in the UAE. *Learning and Teaching in Higher Education: Gulf Perspectives*, 11(2), 1-21.
- Henderson, S., & Yeow, J. (2012). iPad in education: A case study of iPad adoption and use in a primary school. *Computer Society Press 1*, 78-87.
- Hoven, D., & Palalas, A., (2011). Reconceptualizing design approaches for mobile language learning. *CALICO Journal*, 28(3), 699-720.
- Itayem, G. (2014). *Using the iPad in Language Learning: Perceptions of College Students*, (Unpublished Master's Dissertation). University of Toledo, Ohio. Retrieved from [https://etd.ohiolink.edu/apexprod/rws\\_olink/r/1501/10?clear=10&p10\\_accession\\_num=toledo1396575108](https://etd.ohiolink.edu/apexprod/rws_olink/r/1501/10?clear=10&p10_accession_num=toledo1396575108)
- Lys, F. (2013). The development of advanced learner oral proficiency using iPads. *Language learning & technology*, 17(3), 94-116.
- Nah, K. C., White, P., & Sussex, R. (2008). The potential of using a mobile phone to access the internet for learning EFL listening skills within a Korean context. *ReCALL: The Journal of EUROCALL*, 20(3), 331-347. <https://doi.org/10.1017/S0958344008000633>

- Palfreyman, D. M. (2012). Bringing the World into the Institution: Mobile Intercultural Learning for Staff and Students. In J.E. Diaz-Vera, (Ed.). *Left to my Own Devices: Learner Autonomy and Mobile-Assisted Language Learning* (pp. 163-181). Bingley: Emerald Group Publishing Limited.
- Pegrum, M. (2014). *Mobile Learning: Languages, Literacies, and Cultures*. Hampshire: Palgrave Macmillan.
- Quinn, C. N. (2012). *The Mobile Academy: MLearning for Higher Education*. San Francisco: John Wiley & sons, Inc.
- Richey, R. C., & Klein, J. D (2007). *Design and Development Research*. Mahwah, NJ: Lawrence Erlbaum Associates. Inc. Publishers.
- Wagman, J. C. (2005). *The effects of an inquiry-internet research project on motivation, self-efficacy, and academic autonomy in heterogeneously grouped high school Latin students*, Online Submission. Retrieved from the ERIC database.
- Wu, Q. (2015). Pulling mobile assisted language learning (MALL) into the mainstream: MALL in broad practice. *PLoS One*, 10(5). <https://doi.org/10.1371/journal.pone.0128762>
- Yang, C., & Xie, Y. (2013). Learning Chinese idioms through iPads. *Language Learning & Technology*, 17(2), 12–22.