Mobile Assisted Language Learning: Advantages and Use among Different Age Groups

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Abstract: Mobile assisted language learning (MALL) facilitates situated, authentic, context-aware, contingent and personalized learning. These and more advantages supported by teaching methodology theories are explained and related to suggestions for practical uses of MALL among different age groups (young learners, teenagers and students, and digital immigrants). Criteria for selection of appropriate mobile technologies are also suggested.

Keywords: MALL, education, technology, language, methodology

1. Introduction

As research shows, Information and Communications Technology or ICT (which includes mobile technology) has been implemented in all parts of our lives in the last decade. People use it in the banking sector, health sector, library, but also in education. As more and more people have access to mobile devices and to the internet, it can only be expected that the use of mobile devices for educational purposes will grow exponentially (Ally & Prieto-Blázquez 2014: 143-4). Mobile devices include devices which can be held with one hand, such as smartphones, cellphones, tablets, e-book readers and similar. They commodify our daily life, and also allow easy and fast communication.

There is an incredible amount of scientific literature on the thriving relationship of Information and Communications Technology and teaching (Dejica et al. 2016), so it is quite crucial for teachers to know how to select and apply the knowledge available. Papers on the use of mobile devices in the educational sector have been published for the last thirty years, always taking into consideration the cutting edge technology and how it could be used by language learners and students.

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Scientific literature, however, has mostly been focused on the use of mobile technology in higher education, while little literature is available on the topic of elderly people and how they could benefit from mobile technology in educational settings.

Learners should not be put in unnatural learning situations where technology and the internet are not available, as in life outside school, they are mostly available and they should be used to facilitate the learning process. Knowledge should not only be transferred and collected, memorized, but also connected and linked. For such connections to happen, motivation needs to exist. Moreover, "Thinking across associations, accessing, and integrating knowledge laterally are the very cognitive, socially situated repertoires we use to negotiate everyday life and are core requirements for hypertext navigation" (Luke 2006: 272). Furthermore, as Johnson-Eilola (1997) and Luke (2002) claim, "(…) the need for a critical ICT literacy is as important in the use and study of new media as it is of "old" (broadcast) media" (Luke 2006: 271). Thus, this paper aims to present advantages of mobile learning with accordance to recent literature as well as various ways and practical approaches to teaching different age groups using mobile technology.

2. Mobile Learning

In order to explain mobile learning, a number of approaches are presented in this paper. Information and Communications Technology (which includes computers as well as mobile devices) in teaching means "(...) the use of technology by teachers for instructional preparation, instructional delivery, and technology as a learning tool for students (Inan & Lowther 2010)" (Rahimi & Yadollahi 2011: 18). Mobile learning mostly focuses on instructional delivery and technology as a learning tool. As research has shown, "(...) technology has the capacity to afford opportunities for powerful teaching and learning environments (Hermans *et al.* 2008) and can impact students' learning (Cancannon *et al.* 2005), motivation (Mahdizadeh *et al.* 2008), critical thinking (Lim *et al.* 2003), and autonomy (Claudia *et al.* 2004)" (as cited in Rahimi & Yadollahi 2011: 17). Despite the magnitude of the positive relation between mobile technology and learning, it is crucial to mention that not every form of mobile technology can be used in every context, and careful planning is necessary.

Some of the criteria necessary to take into account while planning teaching activities which include mobile technology are learners' age, level, ICT literacy, motivation for learning, interests and, of course, the available class time. ICT is used by teachers teaching English as a foreign language for teaching all language skills (Rahimi & Yadollahi 2011: 18). Of course, the way ICT is used depends on the age, level and needs of the students. Further, "mobile learning is not about the technology, it is about the learner. The learner is mobile and is at the centre of the learning, and the technology allows the learner to learn in any context" (Ally & Prieto-Blázquez

2014: 145). This also allows for learning to be more individual, and also more appealing to the learner. Learners can access the content at any time they want and they can seek help any time they want (online, or through applications, for example).

The main purpose of using mobile technology is to provide useful learning content. Winters (2006: 6) states that mobile learning applications serve to mediate between the learner and the content that is learned. The purpose of learning is not to be proficient in using the tool (application) but to reach the learning objectives. Mobile assisted language learning can be combined with computer assisted language learning or traditional teaching, in which case it is called hybrid teaching. Also, in a hybrid classroom setting, mobile learning needs to be connected to various other resources already used in the classroom, or tools which are a part of contemporary internet and technological advances, for example, social networks or social media. It is clear, therefore, that mobile learning should not be used as the only source of learning but it should rather be combined with other resources and tools, in and outside the classroom.

iTutorGroup, a Taiwanese company, offers English courses which are hybrid in the way that learners attend English lessons taught by home based teachers in virtual classrooms with whiteboards. These courses can fully be accessed through smartphones and tablets as well as computers. After lessons, the students get individual feedback from the teacher as well as homework through the learning platform provided by the company. This way of learning is particularly appreciated by parents who do not need to take their children to the class and lose time in traffic, find a parking spot or pay for parking. It is cherished by people who live far from the city language schools. Working for this company has made me particularly aware of the advantages of mobile assisted language learning as I have had first-hand experience with learners of all ages and levels.

2.1 Advantages of Mobile Assisted Language Learning (MALL)

Mobile learning brings numerous advantages to learners of all ages and levels. It is hard to find a research paper which does not confirm this. The benefits are plentiful, and this paper only mentions and focuses on some of them, namely the benefits mentioned in papers by Quinn (2013) and Traxler (2010): mobile assisted language learning "benefits learners because they can use mobile devices to learn in their own learning community, where situated learning, authentic learning, context-aware learning, contingent learning, augmented reality mobile learning and personalized learning are encouraged" (as cited in Ally & Prieto-Blázquez 2014: 146). It is necessary to further explain these domains:

- Learning in their own learning community means that learners choose whether they want to learn with other learners at the same time or fully individually. This, of course, applies to adult or teenage learners rather than young learners.

- Situated learning means that learning is fundamentally a social process and not solely in the learner's head (abstract). Reder *et al.* (1996) claim that situated learning means that instruction must be done in complex, social environments and that training by abstraction is of little use. Mobile devices can enable learners to communicate with native speakers, for example, or access media in English. This allows situated learning to take place. Learners can, for example, learn certain content which includes grammar and vocabulary and then try using it with the use of mobile devices either offline or online.
- For authentic learning, also called learning by doing, Lombardi (2007) writes that the ICTs "make it possible to offer students authentic learning experiences ranging from experimentation to real-world problem solving". Application of mobile devices can cater for such experiences, be it with games, video or text chat, participation in the social media or simply texting. Learners can also take photographs, record themselves or others, play songs or video recordings.
- Context-aware learning or context-aware ubiquitous learning "employs mobile devices, wireless communications and sensor technologies in learning activities" (Hwang *et al.* 2008: 83). For example, a mobile device with information about the learner's location, date and time is able to provide learning content appropriate for such a situation; for instance, before New Year, an application with the purpose of context-aware learning would provide New Year related vocabulary.
- Contingent learning, or learning by chance may happen while using mobile devices due to the frequent exposure to the target language
- Augmented reality mobile learning is not available specifically for language learning, but for other types of mobile learning. However, the existing applications could be used for language learning.
- Personalized learning means that the content is adjusted according to the learner's personal and language characteristics

3. Teaching Young Learners with MALL

In the modern days, "young learners tend to be more confident and have greater familiarity with everyday (especially visual) literacy aspects and functions mediated by ICTs than older teachers and parents" (Hird 2000; Richards 2000 quoted in Richards 2005: 61). We can observe how skillful children are with technology at quite an early age – they use touchscreen devices and even explain to their parents or grandparents how to use them. The age difference does make a difference and is important for classroom management; but in cases of hybrid teaching, the difference could mean that the teacher is not as tech-savvy as their learners. This could be an issue as learners are used to being surrounded by technology. Therefore, it might

happen that a traditional classroom is not very appealing to them. However, finding a way of introducing mobile technology in the classroom does not have to be complicated and it does not need to have extensive objectives. It needs to be available, didactic, well-planned, and useful. Thus, to save time and find appropriate tools, before administering any ICT activities, it is necessary for the teacher to carefully consider "learning objectives, support materials, pupil's ICT skills – can they carry out the activity effectively; group size, and time available" (BECTA 2003).

There are numerous tools for learning languages with the help of mobile devices. One available tool is mobile games. Games are a very appealing and useful form of mobile learning. Godwin-Jones concluded that "there are some intriguing parallels between gaming and language learning in the use of roles, improvisation, codes, and negotiated meaning" (2005: 20). For good classroom management, gaming should be closely related to communication with peers, and traditional classroom activities.

British Council has developed mobile applications for teaching English to young learners (http://learnenglish.britishcouncil.org/en/apps). One interesting example is *Learning Time with Timmy - 1st words in English*. The narrator instructs the child to tap on the picture of the animal that they hear. The narrator pronounces full sentences, which is important so that the child can also acquire some grammar.

Cellphones with cameras, which are cheaper and perhaps more available to children can also be used, especially in settings without an internet connection. Wong & Looi in 2010 conducted an experiment on pupils and authentic content creation. The pupils were asked to take photos in such a way that they are understood as idioms or prepositions that were learned in the class. They exercise fostered peer learning and social meaning-making, as well as seamless language learning. This all provided authentic learning experience, contextual learning, and motivation increase. From this, we can learn that using mobile devices in a classroom does not have to be complicated or long, and it does not need to include any complex applications or expensive devices.

Young learners who are also beginners could learn the names of objects, animals, and colors with the use of the *Crayola ColorStudio HD* application where they can color the drawings with the instructions from teachers. This application minimizes the need for classroom stationary and is convenient, as the teacher does not need to warn students to bring their color pencils. Further, it allows for authentic and contingent learning to take place, as the children are likely to learn the names of the objects/animals/colors/numbers they see.

Teaching young learners with the help of mobile devices can propel their motivation and progress; it can change the atmosphere of the classroom and make it more dynamic and interesting. As young learners could get excited about using mobile devices in the language classroom, the teacher needs to pay special attention

to classroom discipline. It is important that teachers choose the tools carefully and make the use of mobile devices well-integrated into the curriculum.

4. Teaching Teenagers and Students with MALL

Teenagers and students today are digital natives used to learning about new ideas in a socially interactive way and to finding information in different sources, and once they enter traditional classrooms where they are often treated as empty boxes where knowledge should fit into, they do not feel connected to the situation they are in. *Digital natives*, according to Prensky (2001: 2) are young people who grew up surrounded with technology: CD and DVD players, computers and similar. Most of them have their own mobile devices, and sometimes even more of them. Moreover, the generational gap influences how they regard their teachers (Luke 2006: 271-2). The teachers might be *digital immigrants*, who, according to Prensky (2001: 3) are those people who have not grown up with digital technology, but started using it at one, later point of their life, and therefore, it is perhaps not so easy for them to accommodate to the daily use of technology. Today, those are people older than thirty. However, even some younger people could also be a kind of digital immigrants as they have not used technology every day or dislike using it, and thus, have difficulties using it. Teachers may be able to remove the generational or the digital gap by bringing the learning process closer to the student's daily activities. Also, as Luke claims, "(…) learning occurs in situated sociocultural contexts and that knowledge is apprehended and appropriated in social interaction, dialogue, negotiation, and contestation" (2006: 270), therefore teachers need to allow for such contexts to encourage learning.

Luke also underlines the importance of collaborative learning in that context. Also, she connects it to motivation, which is one of the crucial elements in learning a foreign language. "We know now that students prefer collaborating around the screen, problem solving, and information sharing as a group rather than working individually in isolation" (Bruce 2002; Holloway & Valentine 2000 as cited in Luke 2006: 273). From this, it may be concluded that providing a collaborative task for the students leads to better learning outcomes as well. Risking and playing with technologies is what the new generations grew up with, as Luke suggests (2006: 273). Luke describes collaboration as a way for students to check their own learning progress in relation to their peers' progress, where the teacher serves as a kind of a guide, or an instructor through the collaborative process (2006: 274). The teacher's roles serve to keep the collaborative process functioning. The teacher is there to make sure all learners are participating equally, to provide support for them, make sure everyone is on track, offer alternative ways of doing some tasks, provide appropriate materials, and manage the classroom discipline. The learners should not feel lost. A hybrid approach, where some learning takes place in the traditional classroom and some is virtual, is ideal for

the whole learning process to function properly (Luke 2006: 274). It could be virtual either because it is done physically and timewise outside the classroom, or during the class, using mobile devices.

To provide a collaborative task in line with the above described theory, teachers may use a game like *Johnny Grammar's Word Challenge* made by the British Council, where the students can be divided into groups and try to answer as many questions as possible in a limited time. As the learners get limited time, they are not able to look for answers in their books or online but have to collaborate and negotiate the correct answer quickly. Afterwards, the teacher could help the students with the tasks they were not able to solve and provide additional exercises. As teenagers and students are often extrinsically motivated to learn in order to get a good grade, some points could be awarded to teams with correct answers. Also, during such a game they can become aware of their actual and active vocabulary and compare to their peers.

Constructivism is discussed e.g. by Lin and Patel (2006), and is a learning theory which states that knowledge is built upon student's previous experience, in a subjective way. When it comes to the presentation of information, Mayo (2001) states that it is not good to present it in parts, and instead, it should be unified with a realistic setting, because such a setting allows for better application of knowledge (as cited in Lin & Patel 2006: 408). Technology enables teachers to direct their students to such realistic settings and to give tasks which are meaningful. In a hybrid setting, where, for example, some uses of language are taught in the classroom, learners can apply them online while engaging in target-language communities. Bearing in mind the postulations mentioned, learners should be able to learn English much better by using it for specific purposes in realistic settings.

Mobile devices can also be useful for acquiring a second language outside the classroom, especially for students at a higher level. For example, students could practice comprehension and enhance their listening skills through listening to podcasts of a lecture in English or even audio books on their mobile devices. Evans conducted a study named *The effectiveness of m-learning in the form of podcast revision lectures in higher education* in 2008, in which 200 students were given revision podcasts to study. The students enjoyed the flexibility and they claimed to be able to learn more in that way than in a traditional setting. It was probably an important factor that they could pause or repeat any part they wanted to. To relate this type of learning to the classroom, speaking or writing tasks could be given related to the podcast so that such activities can be rewarded with points or a grade as well. A motivating part of such a task is that students can choose a topic they are interested in with the teacher's help.

Using interests as a motivation tool could be useful for teenagers and students. Some teens, for example, like some American or English pop or film stars,

and they read about them in their native language. Offering them information portals which native speaker teens and students use could be motivational. There are a number of applications with customizable news feed, such as *Flipboard* or *Google News Stand* where learners could find articles related to their interests. This way, learners become more self-conscious and independent. They realize how much of the content they can understand and perhaps also notice their own weaknesses. Further, they could independently look for the meaning of unknown words using a mobile dictionary such as *WordWeb* which not only gives a definition and examples but also displays related words. Also, authentic activities (reading genuine articles, which are not abridged for a specific level) propel second language learning and are easily available through the use of mobile devices. Of course, careful planning is necessary on the teacher's part to assure that the learners are at a high enough level to deal with such texts without losing motivation when faced with unknown phrases or words.

In classes where most of the learners own a mobile device, teenagers and students could be encouraged to use dictionary applications to find out the meaning of unknown words they come across during the class. Developers have also gone as far as to create *Personalized mobile English vocabulary learning system*, as described in a study named *Personalized mobile English vocabulary learning system based on item response theory and learning memory cycle* by Chen and Chung (2008). Such a vocabulary system has a review strategy, which individualizes the review cycle for each learner. This means that it measures the learner's skills and acquired knowledge and proposes further action to be taken in the learning process.

For teenagers and students, it is definitely clear that "Because of the computing power and multimedia capabilities of mobile technologies, educational resources must be more game-like to motivate learners to learn." (Ally & Prieto-Blázquez 2014: 147). Teachers should not refrain from using playful activities, therefore, and let the students enjoy their English class while using mobile technology and learning seamlessly at the same time.

5. Teaching Digital Immigrants with MALL

As described before, digital immigrants are people who have not grown up with technology so they have difficulties learning how to use it and it may be difficult for them to adjust to new technology. They could also be people who grew up with technology but had no affinities to use it, such as young people who do not own smartphones or tablets because they do not want them. In comparison to digital natives, digital immigrants cannot use a large variety of devices and applications. Thus, teachers need to adjust the use of mobile devices when teaching them. It could be viable to use similar, if not the same applications and tools when teaching young learners and digital immigrants. This is because digital immigrants, just as young learners, need clear instructions and tools which are simple to use. Elderly people are

mostly digital immigrants; however, little literature is available on using mobile devices for teaching the elderly. This is contradictory to the facts that the world population is aging, and lifelong learning has gained popularity. Lam & Chung (2009: 36) in their valuable research dealing with the importance of mobile devices in the education of the elderly point out that adults lack self-discipline, which is necessary for mobile learning. Many of them give up, not because it is hard to learn but because of the lack of self-discipline. A hybrid teaching approach would be useful in this regard, as the official learning framework of a traditional classroom and a teacher provides certain authority that motivates adults to be disciplined and pursue their goal fully.

People above fifty years old usually use mobile devices to communicate with their family or friends, and not so much to learn a language. However, their peers who do are likely to influence them in this regard. "Effort expectancy and social influence are stronger predictors of IT usage intention for older people than for younger people" (Venkatesh *et al*. 2003, as cited in Wang *et al.* 2009: 112), so when presented with advantages of using mobile devices to learn English, they could be more inclined to do so. If a group of learners comprises only digital immigrants, collaborative learning should be encouraged, and the teacher should organize mobile learning in such a way that it does not present a burden for the learners. Also, this finding suggests that older learners could achieve better results when learning in groups than when they learn individually. Perhaps they could also teach each other how to use mobile devices in a better way than a young teacher.

For elderly people, as mentioned, it is important to prepare simple activities. A simple but quite useful way of learning English with mobile devices is watching videos. This could especially be useful for higher level learners who can follow a talk or a conversation in English. A *Youtube* channel under the name of *VOA Khmer Learning English* presents news and various reports read one third slower than normal. Khmer people live in Cambodia, and the videos often provide translation of advanced words for them. The motivation for watching such videos could be simply to find out the world news, which adults do on a daily basis anyway. There are a number of channels on *Youtube* that provide content for learning English. The teacher needs to select useful ones and also prepare activities related to the content in order to integrate the activity into the curriculum.

Jarvenpaa and Lang (2005: 14) found that elderly people do not want mobile devices that have too many options that they cannot use, they do not want devices that are too complicated and expensive as they would be afraid to lose them. Also, it is stressful for them to always carry a mobile device with them. For these reasons, it could be a better solution to use a classroom device rather than their own devices. The device should be simple and clear instructions on its use should be given beforehand.

This way the stress of taking care of the device is removed, and also the fear of not being able to use the device.

Lam & Chung (2009) point out that the biological capacity for learning of the elderly is declining and they need to repeat the new learning materials more times in order to acquire them. In this regard, mobile devices are helpful as the learners can use them any time they want outside the classroom as well. A simple tool as a mobile dictionary with audio recordings for pronunciation can help them learn and practice pronunciation of new words as many times as they want, for example. Also, application such as *Duolingo* is simple to use and the user can repeat an exercise or a lesson as many times as they want. Applications where repetition is easily accessible are more appropriate for this age group. Further, mobile devices are easier to use than computers so learning is facilitated.

Elderly learners might have visual issues, or issues with their hands and fingers, making it hard to use mobile devices or be precise when using a touchscreen. For this reason, applications and devices need to be carefully chosen. The devices need to have a larger screen, where a zoom-in option is available, or where the text is large enough for the elderly. The commands need to be simple and the touchscreen buttons large, to facilitate use. It is definitely the same case for very young learners; they could also lack precision when using the touchscreen and they appreciate a larger font.

As Lam & Chung (2009) point out in the results of their research, the interface of the mobile device and the applications or tools used is very important when we teach elderly people. The interface must be as simple as possible; there should be no multiple menus or overlaying windows. The learner should get visual, audio or tactile feedback about everything they do, so that they know that they are using the device properly. The requirements for the use of motor skills, such as double tap or drag and drop should be left out. Further, the interface should change minimally, or not change at all if possible, to reduce the chances of confusing the learner. All these requirements are not in line with what the producers of mobile technology aim to produce. This is because mobile technology is rather made for digital natives who can easily adapt to new user interfaces and interact with the device fairly easily and quickly. For these reasons, the teacher could take into consideration the use of *"lite"* devices, those that are purposefully made simple for use.

Lifelong learning has been particularly promoted in Europe with TEMPUS projects and the inclusion of the elderly is a popular topic. A large number of them are willing to use new technologies and this makes the role of the teacher easier. In case of low motivation for use of mobile devices, the teacher could explain that the device could also be useful for the communication with family and friends or even friends from other countries. The type of mobile devices as well as the type of

activities included in the hybrid classroom should also be well-prepared in accordance with above mentioned criteria.

6. Conclusion

In conclusion, the implementation of mobile technology in education is not a simple process and there are a number of variables to be taken into consideration even before the commencement of the organization procedure. Infrastructural, institutional, financial and other external factors together with internal factors should be considered. Much more important are internal factors, that is, the will and the motivation of both teachers and learners which decide about the organization and the progress of mobile device based activities. In an atmosphere where objectives are clear for all participants and all steps are carefully planned, mobile devices and ICTs in general should act as a means of obtaining a more practical, student-centered education.

Mobile assisted language learning can be used either in combination with traditional teaching, resulting in a hybrid classroom, or as the only source for learning. However, it has best results for all generations in the hybrid classroom. As we have found in literature and research that has been conducted in the last twenty years, the use of mobile devices in education differs according to the age of the learner. It is of utmost importance that the teacher takes into consideration the age structure of the group of learners they are teaching, as well as their language skills but also their ICT literacy.

Mobile devices need to be fully and appropriately implemented into the curriculum to be motivational and useful for the learners. For teachers who are starting to introduce mobile devices in their classroom, it is best to start with small, well-planned and short tasks. As mobile technology has been developing in the last thirty years, we only expect further development, and the English language classroom needs to cater for the changing social context.

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