

MALL FOR ESP. ENHANCING MOTIVATION AND PROMOTING LANGUAGE LEARNING BEYOND THE CLASSROOM

Olivia CHIROBOCEA
“Ovidius” University of Constanța

Abstract. *In a competitive world where technology evolves practically on a daily basis, we, as language teachers and especially as ESP practitioners, must stay up to date and involve this technological progress into the teaching process. MALL (Mobile-Assisted Language Learning) and ESP (English for Specific Purposes) are compatible in more than one regard as they both address the conditions of our society and are rooted in present needs. While MALL is usually seen as an alternative to the classroom-type learning process, mobile devices can be turned by the teacher in the traditional setting, from a nuisance and attention disrupters to valuable tools that bring the students closer to the learning process. Using the smartphone, an object the students are very attached to, and getting them involved in activities closer to their everyday interests should have a significant effect on their motivation level. Also, involving this object into the language learning process will develop skills and tap into resources for further learning, beyond the classroom. This article will discuss some of the main points made by the extensive research done over the past ten years in regards to the uses of MALL for language learning in general, and ESP in particular, addressing the important topic of learner motivation and some of the advantages this method has at tertiary level.*

Keywords: MALL, m-learning, motivation, ESP, smartphone

Introduction

Most of us think the students' phones are a nuisance. How many of us have not been interrupted by a beeping or a ringing right in the middle of an explanation or an activity? How many times have we not seen students checking their messages or notifications during an explanation or an activity? It is annoying but also discouraging. It must mean that our class is not engaging enough or interesting enough to make them forget about their phones. But we do the same, we check our phones even in the most engaging of contexts because they have become so intertwined with our lives it is very difficult to be separated from them. Unfortunately, these negative feelings and the prejudice against these devices make many teachers ignore their educational potential. Discussions on whether to ban phones in schools always spark controversies. But technology has been a part of the education system for decades and mobile devices are but an example of technology in its current state. They can be used to learn anything and to learn about everything. Their permanent proximity to their owner, the user-friendly operating systems, constant connection to the internet and the existence of innumerable features and applications that can be downloaded and used at any given moment make them a much better tool for education than the classic PC or desktop computer, or in fact, any other standard media device, since any traditional format, whether audio or video, can be transferred digitally and played on a computer. Also, most studies agree on the characteristics of mobile devices that make them useful in education: affordability, portability, and connectivity among others (Klopfer, Squire 2002, Hashemi et al. 2011, Miangah, Nezarat 2012, Darmi, Albion 2014, Godwin-Jones 2017), which in turn

stimulate spontaneity, interactivity, creativity, curiosity, courage and other similar attitudes conducive to learning.

What is MALL

MALL (Mobile-Assisted Language Learning), part of *m-learning* is a relatively young term, derived from CALL (Computer-Assisted Language Learning), both referring in fact to language learning assisted by technology, namely by a type of computer, whether it is a desktop computer or a mobile device. Given the topic of this paper, I will refer only to mobile or handheld devices and first discuss the broader term *m-learning*. A little look back at history will give us a few important reference dates. In a vast and comprehensive article, Encyclopaedia Britannica goes through the history of the computer, linking the evolution of the ever smaller types of devices to the extraordinary popularity of the computer as a concept. Since these devices “allowed people to use computers not only in the office or at home but also while traveling—on airplanes, in waiting rooms, or even at the beach” (Hemmendinger et al.), the massive computers of the 1960s and 1970s gradually became portable computers (the ancestors of laptops and notebooks), then handheld computers like the PDAs (personal digital assistants) in the late 1980s and early 1990s or the Palm pilot in the mid-1990s (Hemmendinger et al.). Things evolved exponentially at the end of the decade and beginning of the new millennium with the integration of the PDA into the wireless telephone, a device that could connect to a personal computer as well as the internet, the Blackberry launched in 2002 becoming a major turning point.

The next technological step was what most of us use every day and what has become an integral part of our lives, namely the smartphone. Although designed in 1993 by IBM, the smartphone and its “advanced services became ubiquitous with the introduction of the so-called third-generation (3G) mobile phone networks in 2001” (Hosch). However, the use of smartphones basically exploded in the second half of the 2000s when user-friendly computer operating systems were transferred to the phones and when the iPhone, with its Mac OS X, and the T-Mobile G1, with its Android system, were launched in 2007 and 2008, respectively. The tablet computer, omnipresent in most science-fiction movies in the second half of the 20th century, became mass produced for the general public in 2010 with Apple’s iPad, “a touch-screen device intermediate in size between a laptop computer and a smartphone” (Levy). These last two devices, the smartphone and the tablet, are in fact miniaturized computers, have complex multimedia possibilities and features, as well as internet connection and touch-screen interface, therefore they can be easily used for an infinite variety of actions and activities, many of which their original inventors and designers probably did not even envisage.

Education is one such possibility and this timeline provided above is closely linked to the *m-learning* timeline. In 2005, John Trexler defined *m-learning* as “any educational provision where the sole or dominant technologies are handheld or palmtop devices’. This definition may mean that mobile learning could include mobile ‘phones, smartphones, personal digital assistants (PDAs) and their peripherals, perhaps tablets but not perhaps laptops, desktops in carts etc.” (Traxler). In 2009, he revisited the definition in an article that discussed the developments in the field in more detail and acknowledged that

the concept of mobile education or mobile learning is still emerging and still unclear. How it is eventually conceptualized will determine perceptions and expectations,

and will determine its evolution and future. There are different stakeholders and factors at work in this process of conceptualising mobile education and the outcome is uncertain. There are obviously definitions and conceptualisations of mobile education that define it purely in terms of its technologies and its hardware, namely that it is learning delivered or supported solely or mainly by handheld and mobile technologies such as personal digital assistants (PDAs), smartphones or wireless laptop PCs. These definitions, however, are constraining, technocentric, and tied to current technological instantiations. We, therefore, should seek to explore other definitions that perhaps look at the underlying learner experience and ask how mobile learning differs from other forms of education, especially other forms of e-learning. (Traxler 13)

Thus, the concept resists defining due to the multitude of media and the ongoing technological advances, as well as to the indecision about characterizing it according to medium or experience. In 2010, El-Hussein and Cronje agree that the concept cannot be clearly defined yet and plead for a change of mindset in education that should reflect the changes in society, given the technological advances:

Research and reflections on mobile learning should stimulate multidisciplinary and interdisciplinary thinking and methods in education. They should facilitate our understanding of outdated concepts and rigid assumptions about learning and what it may be in a society that has changed (at least from a technological point of view) out of all recognition in the past few decades. In this sense, it is impossible to attribute one fixed meaning to the concepts of mobile learning (El-Hussein, Cronje 14).

Pieri and Diamantini do not dwell on formulating a definition, but rather express a positive view of *m-learning*, which they see not as a part of *e-learning* (learning using electronic technologies) but as a natural evolution of it, as a liberation of learning, as well as an expression of learning on the go, with the important option of cutting back on wasted time:

With mobile learning the learning phase is not bound to a location with specific characteristics, potentially becoming omnipresent learning. For example, delays during commuting and travelling on the underground become potential learning moments. In general, any moment which would otherwise be “wasted,” or that before now could not be enriched with didactic contents, has now become a potential learning moment thanks to mobile learning (Pieri, Diamantini 184).

This is probably the most important aspect of *m-learning*, that is offers many options, that it is not confined to a fixed location and it basically depends on the imagination of the user because the resources it offers are endless. Regarding these aspects, Klopfer and Squire refer to their own presentation from 2002 and maintain the same characteristics for handheld computers in 2008, namely that they convey the following educational attributes: portability, social interactivity, context sensitivity, connectivity, and individuality (Klopfer, Squire 204). In the conclusion of their 2011 study on mobile learning, Hashemi et al. state that “mobile learning is currently the most useful tool in ICT world. It is believed that mobile learning

could be an essential factor in involving young adults in learning, where more traditional methods have failed” (Hashemi et al. 2481).

Now, restricting the term to our current needs, namely *m-learning* that specifically targets language learning, it is easy to deduce, by reducing the definition, that “Mobile Assisted Language Learning (MALL) is any type of language learning that takes place with the help of portable devices” (Rahimi, Miri 1471). In terms of how much this technology has been thus far used, if we take into account the fact that the smartphone boom occurred in 2007-2008, this means that there is a window of ten years, more or less, of actual time when education in general and language learning in particular could have shifted significantly towards *m-learning*. However, a 2017 study conducted by Robert Godwin-Jones that analyzes the research accomplished in this time period offers the logical explanation that, even though the smartphones with the features we know today appeared first ten years ago, this does not mean that all users gave up their own devices and switched to smartphones overnight (Godwin-Jones 5). It also suggests that MALL has evolved slowly and it is not truly implemented in classrooms or outside them, teachers being generally reluctant to use this method for anything other than drill exercises, and most often ignoring the most prominent components of this concept, namely the communication and collaboration features (Godwin-Jones 4). The author also suggests that the projects taken into consideration by his study, and that have been conducted over this ten-year period, may not reflect very well the use and role of smartphones (the most common mobile devices anyone can possess) in language learning because these studies have some limitations, that is, they are usually focused on teacher-centred activities (institutional, in-class instruction where the teacher chose the activities), the devices used vary (PDAs, tablets, smartphones etc.), most activities are focused on vocabulary (e.g. SMS use for word lists), and the students’ devices used in the studies are loaned and not owned (which prevents personalization, settings customization or the use of desired apps) (Godwin-Jones 5). However, the conclusion is positive and, given that smartphones or similar technologies appear to remain a part of our lives in the foreseeable future, “The main challenge is to provide to students the skills and knowledge to be informed and engaged online learners. Important in that process is presenting persuasive illustrations of learning connected to students’ lives (present and future) and to bring those experiences into the classroom.” (Godwin-Jones 13). Other similar studies (Darmi, Albion 2014; Muchtar 2017) have positive conclusions (learners accept and enjoy the use of mobile devices, especially since learning can take place in both formal and informal settings) and plead for variety in the implementation of MALL projects.

Learner motivation and the role of MALL in tertiary education

Students come to university for many reasons and while most of them are motivated one way or another to graduate and get the expected degree, others give up on the way, after the first or second year, and some even right before graduation, for various reasons ranging from failing exams and not getting the required number of credits to not being able to pay tuition or not being able to write or finish writing their thesis. While the number of students enrolling in higher education is not very high to begin with, university drop-out rates are high everywhere in the world and they are mostly caused by high tuition fees and lack of career perspectives, which are in turn due to system failures such as the lack of insightful career counselling based on the realities of the job market. A 2018 Washington Post article indicates that “more than half of students who start college drop out within six years” (Selingo). A

2018 article in *The Guardian* speaks of similar issues in the UK where “almost one in five undergraduates quit[ting] by the end of their first year at the worst affected institutions” (Weale), but rates vary. Romania is in a similar situation with over a quarter of undergraduates never finishing their degree (Ziarul Financiar), according to a 2017 article. The causes for university drop-out are many, complex and different depending on country. But one in the myriad of such causes is motivation.

Motivation can be extrinsic (such as passing an exam or future career perspectives) or intrinsic (enjoying the learning process and feeling better about oneself) (Harmer 51), but there are many factors that can influence motivation. Some learners are highly motivated while others have actual contempt for a particular discipline, English in our case. In a comprehensive study on motivation, Williams and Williams see this aspect affected by five main ingredients: the student, the teacher, the content, the method/process and the environment (Williams, Williams). Each of these ingredients is analyzed in detail as there are many factors that affect them. However, given the premise of this paper, I will refer only to their discussion on method/process, a very influential aspect in terms of motivation. Of the 15 points they make in terms of method, at least six are more relevant for this discussion, namely:

1. Incentives: helping the students getting a scholarship or job; also, “the incentive of time” (Williams, Williams 11) is stimulating and something that MALL can offer, since mobile-related activities can happen out-of-class and the teacher thus offers more of his or her time for interaction with the student.

2. Experiential learning or self-learning: this is “when an individual is actively involved with concrete experience, that is, a student cognitively, affectively, and behaviourally processes knowledge, skills, and/or attitudes such that knowledge is created through the transformation of experience” (Williams, Williams 11) and MALL, again, has the resources to create more real-life situations and interactions than the ones constructed especially for the classroom environment.

3. “Flexible and stimulating just-in-time training and interactivity: One way to support students in seeking out responsibility and working toward goals to which they are committed is to use flexible and stimulating just-in-time training which allows the student to train at his or her own pace and time. The key to effective use of this training is interactivity.” (Williams, Williams 12). Needless to say that interactivity is a fundamental aspect of MALL.

4. Different types of framing, which means “different preferences or shifts in judgment”, which leads to an “enjoyable experience” and, consequently, an enhanced motivation (Williams, Williams 13).

5. Guided discussions are perceived as strong motivation enhancers (Williams, Williams 13) and MALL is a perfect method for such a task, as it can happen in both formal and informal environments, in the classroom and outside it and, given the safe distance provided by the medium, it helps shy learners or those with lower proficiency levels to overcome their insecurities and participate.

6. “Positive social interactions: When students have positive social interactions with their peers or teacher, they will become more engaged in learning. Social interaction can occur when students work in groups, have group discussions, group projects, and group presentations.” (Williams, Williams 13). This is, again, a perfect task for MALL because interactivity is its main feature, as often stated previously in this paper.

In the case of ESP, motivation is usually considered a given. Since the domain is so targeted, the learners are expected to have high levels of motivation which will remain high throughout the entire learning process, which is a wrong premise. The ideal conditions for an ESP class, as suggested by theorists, are hardly ever met and there are in fact more chances for homogenous groups in EFL than in ESP, where students come from different backgrounds, with varying levels of English proficiency and with incongruous levels of motivation. Hutchinson and Waters indicate that a student highly motivated by their domain will not transfer this motivation in the ESP class if the methods or materials are dull and uninteresting (Hutchinson, Waters 61). Similarly, just because we find ourselves teaching a group of students that are enrolled in a particular program, we must not assume that all of them love that domain and might not be victims of circumstance:

There is also a danger in assuming that someone really wants to become an engineer simply because he happens to be studying engineering and that, therefore, teaching texts should be based exclusively on his subject specialism. In many educational systems, entry to the subject specialism of one's choice is dependent on school exam grades. It may be that our hypothetical engineering student really wanted to study medicine but failed to achieve sufficiently high grades. He may, therefore, have negative feelings towards engineering and may be poorly motivated to study engineering texts in his English class (Kennedy, Bolitho 15-16).

I have had similar experience with biology students. Every year I find that a percentage of 1st year biology students either failed the medicine entrance exam or are spending a year in biology as an interlude to try again for medicine the following year. They are usually very good students but are less motivated in the ESP class when I use topics and materials related to plants, animals or the environment and more motivated when I use materials related to human anatomy or laboratory work.

Two relatively recent surveys on motivation in ESP students reach similar conclusions, namely that extrinsic motivation trumps the intrinsic one, but they are still both important. Katsara's study in 2008 concludes that, while "good performance is what mostly motivates students", "intrinsically assigned tasks motivate them" even though they "appear to care for good marks instead of an enthralling learning experience" (Katsara 10). In their 2015 study, Navickienė, Kavaliauskienė and Pevcevičiūtė find that English proficiency is directly linked to the level of motivation, a situation I encounter in my classes all the time. Their conclusion is, on the one hand that "high English proficiency subjects are more extrinsically motivated than low English proficiency subjects" (Navickienė, Kavaliauskienė, Pevcevičiūtė 107), and on the other hand

subjects with low level of knowledge of the English language have lower motivation at learning ESP at university, the attendance is low; accounting for the tasks is minimal. Though students understand the importance of the language learning, they find the ESP course not very attractive as they cannot cope with the tasks, they try to apply their old school skills and habits of learning everything by heart, translating texts, or presenting reading for speaking; feel not able to equal to peers; are ashamed of their low level of English knowledge; have negative attitude to the subject (Navickienė, Kavaliauskienė, Pevcevičiūtė 107).

MALL can address these issues in combination, making the extrinsic goals more easily achievable through an engaging and pleasurable process that offers so many options that no one should be left behind. Certain apps or courses of action can be suggested to students with low levels of proficiency so that they can use them in their own time and catch up with the issues of grammar and vocabulary their colleagues are already familiar with. I had two such cases this year with two students (level A1) who managed to improve their knowledge, vocabulary more than grammar, with the help of apps I recommended. These apps present English issues in pleasant and interactive ways, with pictures and sound, so that learners can practice spelling but also hear the pronunciation. In a different case, the student liked the idea of communicating with me on WhatsApp and exchanging ideas and opinions in English. She too admitted to improved proficiency as a result. Such possibilities could become a viable solution, given that most ESP groups are rather heterogenic in terms of proficiency and some students cannot keep up, get discouraged and, like in the study quoted above, they would rather not attend the class, which traps them in a vicious circle that never leads to improvement or learning. These are just two options, but MALL can offer considerably more variety.

MALL opportunities for learners

Anything that one can think of, someone has already created an app for. Of, course, some are very good and some are poor in quality, variety, content and accuracy, so users be aware. This brings to light another issue. The internet is loosely regulated and users can fall prey to manipulations and predators small and large. The content created and published online can come from anybody, whether qualified in a field or not, whether innocuous or dishonest. Open-source, open-content projects, such as Wikipedia, and crowdsourcing have numerous advantages and promote accessibility, knowledge and progress, but a considerable amount of content does not benefit from serious oversight, is not regulated, the authors possibly have a political agenda and therefore, the sources should be subject to at least minimal scrutiny by the users before the information provided is taken for granted. Recent scandals such as the ones involving major social media platforms and the insecurity of the users' personal information serve only to emphasize the concern we should have when entering the online medium.

Major issues such as political agendas or manipulative content are hardly the domain of language learning, but competence is, therefore the English teacher should check any language learning apps before recommending them to the students. However, the young generation of today was born in the internet era and they are rather well versed in the use of the online medium. It is their second nature and they are apparently much better equipped to handle the internet hurdles. In fact, several news outlets reported in January 2019 on a study that had discovered people over 65 were the most "aggressive [...] in spreading misinformation" (Choksi). Young people, our students, are more sceptical in believing everything posted online. But their phones are an extension of themselves and much of their life is lived in the virtual medium. So, if we want to use the online medium for learning we do not have to make special efforts to bring them in. They are already there. We just have to find them and by that I mean we have to find a way to pique their interest.

The major features that make mobile devices useful are the applications, which are infinitely diverse and can be installed on smartphones or tablets. Apart from a vast amount of

games and a myriad of other types of apps, there are also educational applications which inform, teach, help to check, assess or practice various items of knowledge, from math to languages. In terms of learning English in general and ESP in particular, the variety of apps is immeasurable. There are dictionaries (bilingual, synonyms/antonyms, phrasal verbs, idioms, or specialized on certain sciences or areas of activity – from aviation to agriculture and from cooking to medicine), there are apps that teach English grammar (specialized on tenses, prepositions, irregular verbs, adjectives vs. adverbs etc.), and there are apps that teach, practice and test English vocabulary (from beginner to advanced and from everyday words to specialized terminology, including word formation). There are also apps that help with pronunciation and spelling.

In terms of ESP, specifically English for scientific purposes, students can expand their knowledge of specialized English, and of their specialism at the same time, by exploring numerous MALL resources, from informative apps (books, apps that simply offer information on various topics such as the environment, pollution, climate change, genetics and numerous other topics), to games (quizzes on science, biology, ecology, agriculture etc), to community outreach, project promotion, social platforms and chat groups where they can discuss with their peers from other countries and exchange ideas using English and the vocabulary of their domain. At classroom level, mobile devices can be useful to download information, to watch videos that can trigger discussions, to find information (on websites or dictionaries), to verify or clarify certain concepts with the aid of visuals easily found online and many other instances when the role of smartphones or tablets should not be dismissed, but incorporated into the learning process.

Conclusion

Technology must be integrated in education because we cannot ignore the era in which we live. It is better that young people acquire the skills to deal with it and use this knowledge in their lives and future careers rather than miss opportunities. Knowing how to deal with technology, how to find information and how to filter it is an important competence we must cultivate, not ignore or reject. Using these skills and knowledge to further English proficiency is a benefit.

We are living in interesting times, in which teachers and learners must try to work together to understand how portable, wireless technologies may best be used for learning. Teachers' pedagogical expertise will continue to play an important role, but it needs to be re-examined and expanded to address the specific attributes of mobile learning. Just as e-learning has undergone an evolution, from a position where "delivery" of learning was paramount, to current thinking which encompasses a learner-generated content perspective, mobile learning is undergoing a similar evolution (Kukulska-Hulme 161).

In fact, the entire pattern of message delivery has shifted in recent years, mostly due to the expansion of social networks and of the online medium. For example, if twenty or thirty years ago we received information exclusively from the official news outlets (TV or newspapers), nowadays users are no longer just at the receiving end, but they create content (in blogs or other platforms such as Twitter, Facebook and others). The negative implications, namely the spread of fake news and unchecked content, are another matter best left for a

different discussion. But by extension, learners can create their own content and make their own choices according to needs. That does not make teachers obsolete but partners in the learning process. The positive aspects are that this type of methodology offers more independence and promotes continuous learning outside the classroom, it also offers more freedom in the choice of content learners wish or need to learn, it teaches them extra skills (how to search, create, filter, display or transmit information in the learning context), and it encourages interaction in more life-like situations that learners may encounter in a job or other conditions they train for.

MALL can improve motivation and promote learning through various types of activities, but most of all through open-mindedness and imagination. Instead of regarding students' smartphones as a nuisance in class, teachers should change perspective and turn them into a valuable resource for learning. Many teachers still struggle with the idea of involving this type of technology in the learning process and also with the idea of relinquishing control of this process, which makes Joel Block affirm: "ESP teachers therefore require a level of flexibility in deciding the kinds of tools they would like to use." (Block 392). But if such prejudices are overcome, the results can be surprising in a very positive way, precisely because this approach offers more freedom of choice:

What makes mobile technology so intriguing is that it has an affinity with movement between indoors and outdoors, across formal and informal settings, allowing learners to lead at least some of the way [...] Mobile technology takes learning out of the classroom, often beyond the reach of the teacher. This can be perceived as a threat, so the challenge is to develop designs that clearly identify what is best learnt in the classroom, what should be learnt outside, and the ways in which connections between these settings will be made. (Kukulska-Hulme 164)

My own experience has shown me that flexibility in this regard can go a long way. Over the recent years, I have often noticed that students are using their phones less to check in with social media in class, but more, surprisingly, to look up unknown words in dictionary-type applications, to retrieve (from e-mail applications) and read materials they received from me in advance but failed to print in time for class, to search for visual aids (the image of an unknown animal, for example) or terms I may mention in class, to check with online encyclopaedias (generally Wikipedia, which is the most available in a normal query), to search for information that might challenge the one I give them, and other such instances. At first, this behaviour appears threatening, being regarded as a subversion of the teacher's authority. But challenging traditional norms and roles in the learning process leads to more gains than losses if there is flexibility and receptivity towards the new media and attitudes of young people. It is better to incorporate rather than reject or impose. Failing to exploit these valuable resources in class and constantly admonishing the students for using their phones instead of paying attention to the teacher or the activity would represent a major oversight and would actually discourage them and inflict negative emotions towards the class and teacher, and ultimately towards the learning process, which is the primary goal of the English teacher.

WORKS CITED

- “ANOSR: Abandonul universitar face ravagii în rândul studenților. Mai bine de un sfert dintre studenții admiși la programele de studiu de licență și de master nu își finalizează studiile” *Ziarul Financial*, 02 October 2017. <https://www.zf.ro/profesii/anosr-abandonul-universitar-face-ravagii-in-randul-studentilor-mai-bine-de-un-sfert-dintre-studentii-admisi-la-programele-de-studiu-de-licenta-si-de-master-nu-isi-finalizeaza-studiile-16750412> Retrieved November 3, 2018.
- Bloch, Joel. “Technology and ESP.” *The Handbook of English for Specific Purposes* 1st edition, Ed. Brian Paltridge, Sue Starfield. John Wiley & Sons, 2013. 385-401.
- Chokshi, Niraj. “Older People Shared Fake News on Facebook More Than Others in 2016 Race, Study Says” *The New York Times*, 10 January 2019. <https://www.nytimes.com/2019/01/10/us/politics/facebook-fake-news-2016-election.html> Retrieved January 20, 2019
- Darmi, Ramiza, Peter Albion. “A Review of Integrating Mobile Phones for Language Learning.” Presented at the International Conference on Mobile Learning 2014. https://www.researchgate.net/publication/290305000_A_review_of_integrating_mobile_phones_for_language_learning Retrieved August 22, 2018.
- El-Hussein, Mohamed Osman M., Johannes C. Cronje. “Defining Mobile Learning in the Higher Education Landscape.” *Educational Technology & Society* 13, 3 (2010): 12–21.
- Godwin-Jones, Robert. “Smartphones and language learning.” *Language Learning & Technology*, 21, 2 (2017): 3–17. Retrieved from <http://llt.msu.edu/issues/june2017/emerging.pdf>
- Harmer, Jeremy. *The Practice of English Language Teaching*, 3rd edition, London: Longman, 2001.
- Hashemi, Masoud, Masoud Azizinezhad, Vahid Najafi, Ali Jamali Nesari. “What is Mobile Learning and Capabilities?” *Procedia - Social and Behavioural Sciences* 30 (2011): 2477- 2481.
- Hemmendinger, David et al. “Computer.” *Encyclopaedia Britannica*. 2018. <https://www.britannica.com/technology/computer> Retrieved January 2019.
- Hosch, William L. “Smartphone”, *Encyclopaedia Britannica*. 2018. <https://www.britannica.com/technology/smartphone> Retrieved January 2019.
- Hutchinson, Tom, Alan Waters. *English for Specific Purposes: A learning-centred approach*, Cambridge: Cambridge University Press, 1991.
- Katsara, Ourania. “Aspects of Motivation within the Context of an ESP course.” *English Specific Purposes World* 3, 19, 7 (2008): 1-26.
- Kennedy, Chris and Rod Bolitho. *English for Specific Purposes*, London, MacMillan Press Ltd., 1991.
- Klopfer, Eric, Kurt Squire. “Environmental detectives: The development of an augmented reality platform for environmental simulations.” *Educational Technology Research and Development* 56, 2 (2008): 203-228.
- Kukulska-Hulme, Agnes. “Will mobile learning change language learning?” *ReCALL* 21, 2 (2009): 157-165.

