THE JOURNAL OF TEACHING ENGLISH FOR SPECIFIC AND ACADEMIC PURPOSES
Vol. 5, N° 2, 2017, pp. 321–332

UDC: 811.111'276/'243:(004.38:004.738) DOI: 10.22190/JTESAP1702321K

MOBILE PHONES AS LEARNING AND ORGANIZATIONAL TOOLS IN THE ESP CLASSROOM

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Abstract. *Mobile phones can be a real disruption to learning in class when used inappropriately. But in the hands of teachers who know how to use them right, mobile phones can become powerful learning tools and resources. Given the readiness to experiment, teachers and students can transform the classroom, reshape the learning and make best use of phones for learning and organizational purposes.*
The idea of this paper is to show whether mobile phones used in the ESP classroom really have the potential to help students learn more and grasp that knowledge. For the purpose of this research, mobile phones were used in the ESP for Computer Sciences class at the South East European University for the in-class learning, as well as for the outside informal learning. A short questionnaire was assigned at the end of the semester measuring students' satisfaction and motivation with the learning outcomes in such a mobile learning environment. As it will be demonstrated in the paper, mobile phones in the classroom do not necessarily mean that teachers lose control of the class, as long as they control what the students use the phones for. The paper will show that by using mobile phones in the classroom teachers can create personalized learning environment, thus transforming the students into active and more autonomous researchers.

Key words: *mobile learning, ESP, learning environment, autonomous research, learning tools*

1. INTRODUCTION

Technology brings the world to the classroom; the times are changing and education together with the society enhances students' motivation. Effective language teachers should be enthusiastic and creative because language learners can lose their motivation and desire easily (Ellis, 1997:56). Providing learners with optimal learning conditions and opportunities to meet the standards for language learning is only part of the instructional technology. It is essential for teachers to also consider how to use technology so that it supports effective learning. In this context, it is also very important not to overwhelm the class with technology since students will fail to recognize the benefits of that particular technology for language learning. In addition, just by simply using a specific technological tool in the classroom one cannot guarantee increase in students' learning and attention in the class.

The author of this paper uses the five guidelines described below by Egbert (2005:7) in her study of implementing CALL in the classroom. The guidelines are compiled and

Submitted May 29th, 2017, accepted for publication June 10th, 2017

summarized from the educational technology literature. They are similar to those for general educational technology and mainstream classroom settings, but they may be applied differently in language learning contexts. Although these guidelines are written broadly for any CALL audience, they should be considered for implementing in English for Specific Purposes (ESP) instruction as well:

1. *Use technology to support the pedagogical goals of the class and curriculum* - Rather than designing instruction to use the technology and to learn technology skills, technology use must be subordinated to the learning goals. In other words, teachers should not use the computer/mobile phone simply for its own sake.
2. *Make the technology accessible to all learners* - The technology should be used to address the learners' needs and be useful for a variety of instructional purposes. For example, some students prefer visual activities and others prefer verbal ones; hence, technology that allows learners to choose whether information is presented through pictures or written text would meet more students' needs than technology that does not offer learners a choice.
3. *Use the technology as a tool* - Computers are often said to play at least three roles in the classroom: tutor, teacher, and tool (Levy, 1997). The computer as tutor presents drills and practice, usually with some explanatory rules. The computer cannot actually serve as a teacher, either, because it is not intelligent or capable of individualized, creative feedback. The most useful way to look at technology is as a tool that supports learning in a wide variety of ways.
4. *Use technology effectively* - *Effective* means that students learn language better or faster using the technology than they would have using the tools that would ordinarily be available.
5. *Use technology efficiently* - *Efficient* indicates that technology accomplishes learning goals with less time and work for teachers and learners.

The abovementioned guidelines postulated by Egbert are used as signposts for implementing mobile learning in this particular ESP classroom. They ideally describe what the main use of mobile phones should be in the classroom and should be used as underlying principles for creating mobile learning environment.

This paper will try to shed light on the potential that mobile phones have in helping students learn more in the ESP classroom. Through the actual use of the phones in the class instruction and a short questionnaire as a follow up, the paper will demonstrate that phones can create a personalized learning environment which is motivating and challenging at the same time.

2. LITERATURE REVIEW

Mobile learning is becoming more and more popular among educators and students because it provides "anytime, anywhere" learning environment. The classroom is no longer the primary learning space and students' learning extends outside the traditional setting. The formality of the classroom is alleviated by the development of the digital content thus transforming the classroom into a collaborative learning space where the students bring in the outside learning experience and combine it with the in-class learning.

In a fast changing educational setting, learning technological possibilities are emerging and they are replacing the old and obsolete ways of teaching and learning. The face of

education is evolving and the schools of the future should be open to different trends and resources that have not been used previously in education, but show significant potential for teaching and learning. Ware and Helmich (2014) point out that the digital turn in education has inspired numerous scholars to speculate on how educators might influence new technologies to redefine how schooling and learning intertwine.

The relationship between information technology and ESP remains under a strong influence of the evolution of computer-assisted language learning (CALL) alongside developments in applied linguistics and language teaching (Arnó-Macía, 2012). Arnó-Macía states that as technology entered ESP classrooms, teachers started using interactive multimedia packages, Internet resources, and various tools designed to create specialized materials with a view to promoting learners' engagement with relevant target situations.

Computer-assisted language learning can promote collaborative learning, when learners' experience centered knowledge construction and learners have more comfortable and less face-threatening environment for interaction than if they are experiencing instruction and discussion in a traditional classroom setting (Dickinson, et al., 2008).

It is not only that the classroom is changing but students are changing as well. Marc Prensky (2001:1) published his paper on a new generation of students: the 'Digital Natives.' The basic thrust of Prensky's argument is that a new group of students coming into universities has been fundamentally different from any that educators had seen before. Educators need to realize that Digital Natives have "spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age." Prensky maintained that the digital culture and environment in which the Digital Natives have grown up has changed the way they think: "It is now clear that as a result of this ubiquitous environment and the sheer volume of their interaction with it, today's students think and process information fundamentally differently from their predecessors (p.1)."

Prensky (2001) not only pointed to the supposed natural technological affinity and literacy of the Digital Natives, he also expressed concern at the lack of technological literacy among educators. He labeled lecturers in higher education 'Digital Immigrants,' meaning they are foreigners in the digital lands of the Net Generation. Further, Prensky regarded the discrepancy between the Natives and the Immigrants as the "the biggest single problem facing education today" (p. 2). This radical claim has been tested and retested over the years among students worldwide. The question that educators are trying to answer is whether is it true that students are really *digital natives* when it comes to learning and whether educators are *digital immigrants* when it comes to technology enhanced instruction.

Students are the center of the teaching and learning activities. Mobile learning adds to students' interests, needs and experiences. Keegan (2001) defines mobile learning as running of education on PDAs, pocket PCs and mobile phones. Norbrook and Scott (2003) point out that the most motivating factor when using a mobile device is the immediate availability of the device. Laurillard (2007) suggests that the mobility of digital technologies change the nature of the physical relations between the teacher, the student and the object of learning.

Jarvis and Achilleos (2013) focus on the use of cell phones in L2 learning outside the classroom and support a change of acronym from computer assisted language learning (CALL) to mobile assisted language use (MALU). In addition, Kukulska-Hulme (2009) suggests using the texting function on phones to build vocabulary. Furthermore, Kiernan and Aizawa (2004) investigated different ways of using mobile phones in the classroom

and found out that that texting, accessing e-mail for practice reading and writing, using phones for speaking activities can all be effective activities in the language classroom. Also, Bibby (2011) conducted a study on students' preferences between PCs and mobile phones in language learning, with the phones being the apparent favourites.

Mobile learning may be a cost-effective and flexible alternative to classroom learning, but if not executed appropriately it may be a waste of time and money as well. Technology can equip students to independently organize their learning process. Instead of being passive recipients of information, students using technology become active users (EDC, 2011). For that purpose, students need to use different technological tools in the classroom. Hamilton (2007) points out that limiting the classroom to one tool and one type of technique eliminates the central component of integration. Only when we combine the technology of today with life skills students will need, does the learning become authentic and valid. Today's students want to learn in a different way than they did in the past, and they want their education to be significant and meaningful.

3. The Importance of Using Technology in the ESP Instruction

Technology has been utilized in ESP instruction since the introduction of the computer into the classroom, throughout the development of Internet and the World Wide Web and to the very invention of mobile and cloud-computing technologies. According to Bloch (2013), technology in ESP teaching has provided access to authentic texts and has been used as a tool for helping with traditional (face-to-face) type of language learning. It has been used as an ESP repository for authentic materials such as online newspapers and magazines, news broadcasts, lectures, etc. Technology has furthermore helped bringing relevant language experience from outside and has helped teachers to utilize authentic materials such as digital media (Facebook, Twitter, etc., within the classroom setting, providing students with opportunities to engage in significant and genuine discourses related to their areas of study.

Technology also offers various visualization tools that can be used in language learning (Krajka, 2015). When it comes to ESP instruction, these tools can be utilized for content and topics visualization, as well as for the vocabulary learning. The use of technology in ESP instruction has revolutionized the ways ESP materials developers and course designers produce learning materials for ESP instruction (Butler-Pascoe, 2009). Dudley-Evans and St. John (1998) suggest that ESP is an independent and a separate activity and has its own ESP research agenda within the field of applied linguistics. Furthermore, ESP instruction has its own methodology and its research is interdisciplinary. Therefore, it is a fallacy to generalize the findings of the use of technology in EFL contexts to the field of ESP instruction.

Summing up the previous research one can conclude that the research on technology and ESP instruction is still at the beginning stages. There are a number of topics and technologies that have not been adequately researched. More needs to be done, specifically innovative and inventive applications need to be further investigated and examined.

According to Bloch (2013) another key problem that has to be researched more is how to put into practice new technologies that are continually being introduced. He believes that the choice of the most suitable technology in the ESP classroom depends on various factors, the most important of them being the problem the teacher wants to address, and/or the learning objective that needs to be accomplished, which in numerous cases involves a belief that learning to use the technology itself can fulfill the needs of the learner.

3.1 Mobile phones in the ESP instruction

The affordances of new technologies make it possible for individuals to participate in the production and sharing of digital media and interact with a potentially global audience, in a way that is largely self-directed (Ito et al., 2008:2). In addition, the new technologies offer the potential for autonomous language learning, especially in the context of "globalized online spaces" such as Flickr, YouTube, and FanFiction.net, where it is possible to share and discuss a range of digital artifacts (Benson & Chik, 2010:63).

According to Al Shehri (2011), evidence is required to understand how mobile language learners interact with their surrounding environment and utilize the functionalities of their mobile phones to better understand the potential of out-of-class learning. In addition, concepts of student-centered learning as well as mobile social-networking and collaborative learning have not been adequately investigated so far. Computer and internet technologies have been frequently used in language learning contexts to enhance student-centeredness, students' engagement, interaction, and collaboration (Nah, 2008).

In a fast changing educational setting, learning technological possibilities are emerging and they are replacing the old and obsolete ways of teaching and learning. The face of education is evolving and the schools of the future should be open to different trends and resources that have not been used previously in education, yet show significant potential for teaching and learning. According to Aaron and Roche (2012:101), "Today's millennial students are digital natives. Technology is so entrenched in their lives that they don't even realize they are using technology". Ware and Helmich (2014) point out that the digital turn in education has inspired numerous scholars to speculate on how educators might influence new technologies to redefine how schooling and learning intertwine. Cell phones with wireless Internet access offer a world of possibilities for classroom instruction. With the great development of cell phone functions and features now teachers can also realize the instructional potential of cell phones in EFL classroom.

Newly released, large-screen mobile devices, or tablets, such as the Apple iPad, Google Tablet, and HP Slate, along with smart phones, iPods, and mp3 players that students are already using, offer a variety of educational affordances. Yamada et al. (2011) tested the effectiveness of learning materials through mobile phones and the findings revealed that the use of mobile learning materials increased students' listening comprehension and motivation to learn.

Burston (2011) points out that students constantly view the use of mobile technology in a positive way due to its 'anytime, anywhere' possibilities. Read and Kukulska (2015) carried out a research on the use of Audio News Trainer (ANT) mobile app among students and concluded that the app had positive effects on the listening comprehension and enhancing their motivation.

As far as Macedonia is concerned, there is no real research carried out on the use of mobile phones in the classroom, neither on the side of the students, nor on the side of the teachers as well.

4. METHODOLOGY

In order to conduct this short research a quantitative method was used. For securing more objective data, the students were also engaged in class discussions every time after a particular mobile component was used in the class. The questionnaire was created after

a thorough examination of different questionnaires and methods in the field of mobile assisted language learning. In order to evaluate whether the use of mobile phones is an effective approach for this group of students, the study addressed two main questions about learning:

(Q1) What is the potential of using mobile phones in the ESP instruction? (Q2) Did students improve their language skills? Adherent to these questions were the following as well:

1. Do ESP students consider the use of mobile phones as an effective way of learning English for Specific Purposes?
2. Do ESP students consider smartphones an appropriate technology for language learning?
3. What type of language learning activities do students engage in on their smartphones most frequently?

Building on previous research, this short study explored and documented first-hand experiences and perceptions of the ESP students.

4.1. Participants

The participants of the study were 10 ESP students from the Computer Sciences and Technology Faculty who were in their second year of studies, i.e. the fourth semester. This was their last semester of English classes with previously having three semesters of English. The questionnaire was carried out during the 2017 spring semester and it was carried out during class time. It is important to mention that prior to this semester students have never had any experience with using mobile phones as educational tool in the classroom. However, during the 2017 spring semester they were continuously exposed to the use of mobile phones in the classroom instruction.

4.2 Data collection instruments

In order to conduct this research and gather useful information, quantitative method of data collection was used. The researcher examined questionnaires from distinguished experts in mobile learning in order to design the questionnaire. In addition, by selecting and using some of the activities and strategies in the classroom, the researcher also determined whether students recognize the need for mobile learning in the class.

To investigate students' experience and satisfaction with the use of mobile phones in the classroom a questionnaire was used. The questionnaire consisted of three parts and it was adapted and combined from two different questionnaires from Palalas (2011) and Gaudreau et al. (2013). The first part focused on students' use of mobile phones during a typical class and it had six questions based on 1-5 point Likert scale of never, very rarely, rarely often to very often. The second part consisted of seven 1-5 point Likert scale questions of strongly agree, agree, no opinion, disagree to strongly disagree and it focused on the effectiveness of the ESP course with mobile instruction. The last part focused on the advantages and disadvantages of using mobile phones in the classroom. The students had to choose from a list of already prepared advantages and disadvantages and they were asked to comment on their choice.

4.3. Data collection and analysis

The data were collected and analyzed according to the following procedure:

- The questionnaire was distributed during class time and administered to total of 10 students, all from the CST faculty. The gathered data were analyzed descriptively by calculating the means and the percentages.
- The comments were respectively gathered and included in the final results, thus shading more personal insight of students' perceptions on using mobile phones in the classroom.

5. THE RESULTS

5.1. Students' use of mobile phones during a typical class

Students were asked to evaluate how they are using their mobile phones during a typical class on a scale anchored from 1 to 5 (1 = *never*; 2 = *very rarely*; 3 = *rarely*; 4 = *often*; 5 = *very often*). Their answers are presented in the table below:

Table 1 Students' use of mobile phones during a typical class

	Never	*Very rarely*	*Rarely*	*Often*	*Very often*
1. Searching complementary information on Internet			20%	40%	40%
2. Sending emails from the phone				50%	50%
3. Navigate on websites that are class-related		10%		70%	20%
4. Taking notes on the phone		30%	30%	40%	
5. Visiting social networking sites		20%	20%	60%	
6. Use the phone to take pictures	10%	40%	40%		10%

Adapted from Gaudreau, Miranda & Gareau, 2013
http://www.sciencedirect.com/science/article/pii/S0360131513002546

As the results show, the highest number of students uses mobile phones to navigate on websites that are class related and use the phones to send emails. They also search for class related information and take notes on their phones. However, students also visit social networking sites during class time. This should be further researched in terms of what is the purpose of their search and how it is connected to the class. The least number of students use the phones to take pictures in class.

5.2. The effectiveness of the ESP course with mobile instruction

Here students were asked to evaluate the effectiveness of the course when mobile instruction took place. They had to evaluate the instruction on the same scale from 1-5 (1 = *never*; 2 = *very rarely*; 3 = *rarely*; 4 = *often*; 5 = *very often*). The answers are listed below:

Table 2 The effectiveness of the ESP course with mobile instruction:

	Strongly agree	*Agree*	*No opinion*	*Disagree*	*Strongly disagree*
1. Mobile learning provided an effective way to learn English	10%	70%	20%		
2. I have improved my proficiency through the classroom lessons.		90%	10%		
3. Smart phones are user-friendly learning technology	20%	50%	20%	10%	
4. Mobile lessons provided an easy, enjoyable way to learn.	10%	70%	10%	10%	
5. I learned better with the smart phone.		30%	30%	40%	
6. I would download different apps to learn English.		90%	10%		
7. The phone is a distraction in class.		30%	30%	40%	

(Adapted from Palalas, 2011, http://ialltjournal.org/index.php/ialltjournal/article/view/130)

As the results point out, improving students' proficiency is by far the most effective part of the mobile instruction. Next to it is the students' willingness and readiness to download apps for autonomous studying of the language. However, there is a certain amount of students that regard the phone as a distraction in class and do not feel like they learned better. But, on the other side, many students found mobile lessons to be fun and enjoyable.

5.3. Advantages and disadvantages of using mobile phones in the classroom

In the last part of the questionnaire, the students were asked to choose those advantages and disadvantages of mobile phones in the classroom that apply to them. They could choose as many as they want, as long as they referred to them personally. Listed below are their answers:

Table 3 Advantages of using mobile phones in the classroom

Tick the ones that apply to you:
- Instant access to online data – 70%
- Learning while on the move – 50%
- Learning pronunciation – 20%
- Fun – 30%
- Collaborative learning – 40%
- Instant feedback – 70%

Table 4 Disadvantages of using mobile phones in the classroom:

- Typing on the screen is not easy – 20%
- Lack of Wi-Fi/Slow 3G/4G – 90%
- Battery problems – 40%
- Downloading materials is time-consuming – 20%
- Lacking interactivity – 30%
- Technical problems – 40%

(Adapted from Palalas, 2011, http://ialltjournal.org/index.php/ialltjournal/article/view/130)

As it can be seen from the collected information, the instant access to online data and the instant feedback are by far the biggest benefits of using mobile phones in the ESP classroom. Students find it useful when they can get immediate access to a desired information and when they need to search for online data. In addition, getting and providing instant feedback in class is considered to be particularly useful and constructive as well. Furthermore, some of the students consider collaborative learning and the option to learn while on the move to be beneficial and few of them regard mobile phones as fun to learn from in class.

When it comes to disadvantages, connectivity (lack of stable Wi-Fi, slow 3G/4G), technical and battery problems are rated as the greatest barriers to the effectiveness of mobile phones in the learning context. Students also named the difficulty of typing on the screen, downloading time and the lack of interactivity as drawbacks in their ESP learning experience.

5.4. Limitations of the study

The first limitation would be that the number of participants was rather small, having only 10 students in the ESP group. The other limitation would be the fact that these particular ESP students studied Computer Sciences and were quite adept at the use of technology per se. The situation may be different if another set of students is exposed to the same mobile instruction. Given the fact that there is almost no research done on the use of mobile phones in the ESP instruction in Macedonia, this study finds its value in this perspective. Moreover, the correlation between the simple use of the phones in the classroom and the actual improvement of the language learning has not been adequately explored. Regardless of the number of participants, the study itself is helpful in establishing solid ground for further research in this area.

6. CONCLUSION

It is an undeniable fact that mobile phones are ubiquitously present all around us. Moreover, phones are an extremely powerful tool for learning and organizing the teaching and learning process. Due to phones, ideas and individuals can connect and collaborate anytime, anywhere. Failing to recognize that simple fact is failure on the part of the teachers. The goal of the ESP teacher in the classroom should be to fully maximize the potential of the mobile phones and teach students how to take advantage of the phones. The goal is learning, not using phones to learn, but if phones can facilitate that learning than we have chosen the right path.

As a conclusion, listed below are few examples of maximizing the potential of the phones in the ESP classroom. The examples provided show that with careful planning, mobile phones can be used as very helpful learning and organizational tool. Each of these examples has been used with the students in this study and has proven to work seamlessly in class, if used correctly.

1. *Providing and receiving immediate feedback/taking a quick poll of the students* – here many online polling services can be used, but the one that has been used in this ESP class is polleverywhere (see the link in the reference). The teacher can track instant answers from the students and it is free for classrooms of 40 people or less. The free account is limited to 40 responses per poll.
2. *Quick class research* – in groups students undertake research tasks. Mobile phones provide instant access to online data and that can be very practical in the classroom.

3. *In-class discussion forums on Google Classroom* – the teacher posts a question and students comment and reply through their phones during class time. The immediate answers can be projected on the board and that additionally motivates students.
4. *Mobile phones as text book option* – downloading class material can be a solution for countless printing and copying, especially if more than one book is included in the syllabus.
5. *Phone blogging* – students write blogs on their phones using wordpress platform. The blogs are simple and short and use more informal English.
6. ***Seamless cloud learning*** **-** students can transit from working in the classroom to working at home, as long as they have access to a phone, laptop or tablet.
7. *Taking class notes* – students use the camera to take pictures of the notes or the teacher takes picture of the reading material and posts it on Google Classroom.
8. *Mobile phones used as stopwatch for presentations* – this is particularly helpful if the class presentation is given within time frame.
9. *Getting notifications on Google Classroom on new announcements and assignments* – students get immediate notification on their phones when a homework or an announcement is posted.

Mobile phones have a lot of potential to be used in the classroom. Unfortunately, not a lot of research has been done in Macedonia regarding this issue. The purpose of this paper is shedding some light on the alternative methods of learning English in the ESP classroom. If used correctly mobile phones can be friends instead of foes in the classroom.

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