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Mobile applications in language learning

Abstract: Mobile technology has become an essential part of our everyday life. Recently, mobile devices have been incorporated into learning processes, including language learning. Mobile applications (apps), which have been developed to enhance language skills such as listening, speaking, reading and writing, have started to play an important role when it comes to mobile learning. Allowing students to use mobile learning apps in language acquisition has transformed traditional teaching methods and learning processes into a more enjoyable journey breaking down the barrier between school and life.

Introduction

The world where we live creates a different generation approximately every 20 years. They are all labelled with specific names and formed by different features. Currently, there are five general trends and social patterns identified by sociologists. They are designated as Traditionals, Baby Boomers, Generation X, Generation Y, and Generation Z. Every generation differs from the other in terms of qualities and attributes (Bozavli 2016). While the Traditionals respect the rules and prefer working in the background, Baby Boomers question authority and express their opinions. The X generation considers life-work balance very important, opposingly, the Y generation are extremely achievement oriented. A Z generation, currently attending a school, grew up with modern technological tools, therefore Z generation students are reasonably tech-savvy, impatient, and interactive.

It can be said that the qualities and the features of all generations are affected by the place and period of time when they were raised and educated. Cultural origin influences classroom expectations, behaviour, and experience. In other words, where and how the learners grew up and were educated affect how they perceive formal learning. Despite sharing some characteristics, there is no one solution to accommodate the learning preferences of all generations. In the process of learning, it is necessary to use a diversity of methods and techniques in order to address a diversity of preferences (Levonius 2015).

This case study is dedicated to Z generation students, born after 2000, as they are a part of educational institutions today. It is necessary for all educators to understand a new generation of students in order to better meet their educational needs. Prensky (2001) and Schroer (2008) claim that the current generation is the most diverse ever, as they are growing up in a very different environment to previous generations. As a result, their thinking, preferences, expectations, needs, and learning style have changed completely. In order to help raise the level of learning, instructors must consider the dispositions and needs of their students, and the nature of education must be revamped. Wang (2017) is convinced this can be achieved by using technology in the class. As technologies represent a revolutionary approach to education, the aim of this study is to prove its benefit in the English learning process by using mobile phones as a cognitive tool to enhance students' learning in using constructivism approach.

Teachers are advised not to throw away all the traditional methods in favour of the new technology based teaching strategies, but to innovate, to technify, and to adapt reasonably. The traditional methods of teaching English as foreign language (EFL)

are still useful, they just need to be updated and combined with the new trends in education.

A constructivist approach in a combination with mobile learning

In the past, there was a teacher at the centre of the learning process, using traditional pedagogical methods based mostly on drill. Educators and books were recognised as the most frequent sources of information and they were regularly used in the class. Recently, the nature of education has changed. Learning has transformed into the student-centred process where the learners have a wide range of tools and sources, through which the information can be reached, including mobile devices. The implementation of mobile technology in the classroom seems to be essential since it makes a part of students' everyday life. The combination of mobile technology with traditional methods of learning makes the learning process updated, interesting, and productive. The combination of the two pedagogical approaches used in the classroom setting is defined as blended learning. According to Veselá (2009), blended learning is the use of different elements of education in such a way that the learning process has a positive effect on learner achievement. The philosophy of blended learning is to focus on increasing motivation, personal intuition, knowledge and skills acquirement, and co-responsiveness of the learner to the learning outcomes. Regarding this, it is important to bring the mobile technology into the class and to try to reach the optimal results in the process of language learning by using it. According to Woodcock, Middleton and Nortcliffe (2012), ownership of smartphones amongst the students has grown fast. They are available and constantly used by young adult learners, therefore, the potential for smartphones

in the education process, suggesting the ubiquity, multi-functionality and connectivity of mobile devices, offers a new, powerful learning environment.

As Ally (2004) notes, smart devices are neutral to teaching and learning theories. They can be used with both traditional learning theories and new learning theories, and optimally utilized in the development of higher thinking skills and problem solving. The technology integration can effectively support constructivism, which is one of the proper theories for the activation of the role of technology in the learning process. The technology only needs to be set in the right direction to apply the principles for the constructivist learning. Constructivism, according to Vygotsky (1978), maintains that knowledge is constructed by the individual rather than being transmitted to the learner from outside source. Learning is seen as a process of knowledge construction by integrating experience into the learners' prior knowledge. It means that learner plays an active role in the knowledge building. To build knowledge, interaction with others, such as peers and teachers, is essential.

The principles mentioned above were maintained in the current study which was conducted at Secondary vocational school of gastronomy and tourism. Traditional education was not replaced by the new technology based teaching strategies, on the contrary, traditional pedagogical approaches were supported by using mobile devices, in the English course.

Case study methodology

During the research, quantitative and qualitative data were collected to support the study. 19 fourth-year students participated in the study, at the Secondary vocational school of gastronomy and tourism of Nitra, Slovakia. Those participants attend an English course for three 45-minute lessons a week. The course focuses on

improving students' language skills and developing their vocabulary knowledge. The curriculum is based on an intermediate students' book called *Solutions*. The book contains 10 units divided into different topics. For the case study, additional materials, including the text dealing with the topic "travelling", were chosen. Students were divided into two groups. There were 10 students in the experimental group, where the mobile application was used, and 9 students in the control group, without using the application in the process of learning. All of the students were born between 2000 and 2001, and their English proficiency level is statistically similar.

The instruments for the quantitative study include two vocabulary tests and a questionnaire, while the interview is a qualitative method for analyzing the data. The vocabulary test was arranged according to the multiple testing approach. Fifteen words were selected randomly from the reading additional material. The test had three parts, including matching, gap filling, and translation.

In this case study, traditional learning methods in combination with mobile learning treatment was used. The first lesson of the current study was dedicated to the pre-test with the purpose to determine whether both of the groups were at the same proficiency level. During the second lesson, students were given an article dealing with the topic "travelling". Each of them were supposed to read the entire article. Right after, 15 words related to the article were given to participants for them to build definitions for each word using their background knowledge. In this process, the principles of constructivist learning were applied as they had to exercise their own knowledge in interaction with their peers, in order to come up with the corresponding definitions that were written into the exercise books afterwards. Later, the participants from the experimental group were divided into three groups. Two groups consisting of three students, and the other consisting of four. All three groups of students joined

the game called KAHOOT, which requires a mobile device to run its website. The game can be played either as a single player or in team mode. For the purpose of study, the team mode was used to support the principles of constructivism-based learning. Every group of students used only one mobile device, therefore, the owner of the smartphone was asked to enter the game by using a generated game code. At the beginning of the game, each group of students created a nickname, later displayed on the screen. The purpose of the game was to answer 15 multiple choice questions focused on vocabulary. Students were supposed to choose one correct definition of the word provided in the quiz. The correct answer was shown immediately after each group of students had chosen one definition, so they had the opportunity to compare the answers from KAHOOT with their own ideas. This activity also served as consolidation of vocabulary. The group with the highest number of correct answers in the shortest period of time received the highest score, consequently, being the winner of the quiz. The third lesson started with a warm-up activity using KAHOOT. The students were divided back into the same groups as the previous lesson. This time, the questions consisted of word definitions in which they needed to find the matching word out of four options. By playing this game, the participants entered into a competitive setting, which helped to increase their interest and motivation. Soon after, students were asked questions related to travelling while being encouraged to use the vocabulary provided in the sentences. The fourth lesson was dedicated to the post-test, aimed at examining the effect of using the vocabulary learning mobile application. An interview was carried out to find out the effectiveness of the application by asking the participants their opinions on the activities.

Meanwhile, the students from the control group adopted the traditional learning methods. They went through the article provided in the additional materials, and they

were supposed to find out and define the meaning of the words by using dictionaries. Students were also required to review the target words by finishing the exercises provided by teacher. The control group was also tested on vocabulary achievement. The data from the experimental group and the control group were collected and the results were compared.

Results

After the 4-lesson case study on implementing combined learning, including traditional learning methods in combination with mobile assisted language learning, the results gained from the data analysis can be summarized both in terms of students' vocabulary acquisition and students' opinion on the implementation of the mobile devices into the learning process. The results from the statistics of the control group and experimental group in the pre-test and post-test, as well as the data from the questionnaire and interviews were collected and presented in the following tables.

As it is shown in Table I, the main score of the post-test of the two groups were 82% and 76%. As it can be seen, in both groups there were significant differences between the pre-test and the post-test scores. As expected, the figures of the post-test scores were higher. Both groups improved their vocabulary learning but the group which implemented the mobile assisted language learning into the process of vocabulary achievement improved more than the control group.

Table I. *A comparison of the two test scores between the experimental group and control group*

GROUP	PRE-TEST SCORE	POST-TEST SCORE
EXPERIMENTAL GROUP	55%	82%
CONTROL GROUP	56%	76%

Quantitative data analysis indicates that the effects of the implementation of the constructivist mobile-assisted language learning were as positive as expected. It is evident by the fact that the score in the vocabulary post-test of the experimental group is higher than that of the control group. The results released from the current case study seem to indicate that the students using mobile devices in the English language class are more likely to understand, learn, and remember the meaning of the words, which leads to the further application of vocabulary knowledge in context. However, the study was carried out in a small group of students and for a short period of time, therefore, general claims cannot be made. Further studies need to look at the effectiveness of mobile learning with different courses.

In order to improve the vocabulary acquisition process, 10 students of the experimental group were required to answer the questionnaire after they finished their 4-class study. Three-scale ranging from "disagree" to "agree" was used. The results are presented below in Table II.

Table II. *Responses from student questionnaires*

ITEMS	DISAGREE	NEUTRAL	AGREE

1	I feel relaxed when I learn through KAHOOT application.	0%	0%	100%
2	I enjoyed learning through KAHOOT application more than traditional methods.	0%	20%	80%
3	Interacting with KAHOOT helped me to remember my English vocabulary better.	0%	30%	70%
4	I prefer working in group better than alone.	10%	20%	70%
5	I would like the app to be implemented in future lessons.	10%	20%	70%
6	I think I will use other educational app in the future.	30%	30%	40%

The questionnaire for the students was designed by the author, and it consisted of six items to measure the students' attitude toward the use of the mobile application in the process of language learning. The 10 case study questionnaire was collected and analysed. The participants provided supportive opinions on the implementation of the vocabulary learning application called KAHOOT. From Item 1, all of the participants agreed that they feel relaxed while learning through the KAHOOT application. From Item 2, 80% of students agreed that learning through KAHOOT is more enjoyable than with the traditional methods of learning. A similar experiment conducted by Wand and Suwanthep (2017) shows that more than 68% of the students from their experimental group preferred the usage of mobile applications in learning over traditional methods. It can be said that the data gained from the current study are

comparable to those from the experiment conducted by Wang and Suwanthep. The same experiment showed that the mobile application helped 91% of students to remember target words better. As shown in the Table II above, 70% of students from our experimental group expressed that interacting with KAHOOT helped them to remember their English vocabulary better. Moreover, from Item 5, 70% of participants would like the app to be implemented in future lessons. Additionally, from Item 6, 40% of the participants think they will use other educational app in the future. To compare the current study with that conducted by Wang (2017), 38% of the participants of their experiments expressed that they will use other educational app as well.

In order to gather more informative data, 5 students from the experimental group were chosen to participate in the interview. The interviewees expressed positive opinions on the implementation of mobile learning into the process of learning. All of them enjoyed learning in groups because they felt more comfortable after discussing the ideas with their peers. They could rely on someone, therefore, they felt more confident. For example, student 1 said: "*I feel more relaxed when working in couples. It is easier to take decisions*". Secondly, all of the interviewed students agreed that they felt more motivated when the competitive environment was created. Student 3 said: "*I love competitions. It is fun*". Additionally, student 3 said: "*We should use the mobile learning more often. It feels like we are playing the game, not studying. It is not stressful*". The rest of the students agreed on this claim.

To summarize, students' responses in the questionnaire and interviews provided vast information about using the mobile application to improve EFL learners' vocabulary acquisition. Most of them were satisfied with the implementation of mobile

assisted language learning in the process of language education and agreed on further usage of mobile devices in the classroom setting.

Conclusion

In order to accommodate the learning needs of the generation currently attending schools, it is important to update the traditional methods of teaching and make the learning environment appropriate to modern students. Teachers are advised to innovate, to change, and to update the pedagogical methods used in the past, and combine them with the technology based teaching methods, in order to meet the needs of today students. As the ownership of smartphones has rapidly grown up and mobile devices have become available, the update of educational system can be done by implementation of mobile assisted language learning in the process of learning. This paper is dedicated to the usage of vocabulary learning application and its combination with traditional learning methods in the process of vocabulary acquisition. In order to evaluate the effectiveness of the mobile learning, qualitative and quantitative data were collected and analyzed. On the basis of the results of the post-test scores, questionnaires, and interviews it can be said that the mobile learning application had a positive effects on improving language learning. Students can actively construct the definition of the target words. Moreover, most of the students expressed positive opinion on the implementation of the mobile assisted language learning. Regarding this, it is required for EFL teachers to implement the mobile learning applications in the process of English language acquisition.

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