The Journal of

Teaching English

with Technology

The Journal of

Teaching English with Technology

(*TEwT*)

Publishers

IATEFL Poland Computer Special Interest Group

University of Nicosia

Maria Curie-Skłodowska University

ISSN 1642-1027

Abstracting and Indexing

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- Since the language of publication is English, at least one reviewer is a native speaker of English.
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ALL THE SUBMISSIONS SHOULD BE SENT TO

Kamila Burzyńska, *kamila.burz@wp.pl*

AND

Jarek Krajka, *jarek.krajka@wp.pl*

Chris Alexander, *alexander.c@unic.ac.cy*

Volume 18, Issue 1

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FROM THE EDITOR

by **Jarosław Krajka**

Maria Curie-Skłodowska University

Ul. J. Sowińskiego 17/336, 20-041 Lublin, Poland

jarek.krajka @ wp.pl

The eighteenth year of publication of *Teaching English with Technology, A Journal for Teachers of English* marks its opening with a rich mix of instructional contexts, digital applications and practical activities for the process of technology-enhanced foreign language learning and teaching. It is truly enriching to see how diverse the uses of similar technologies can be in different parts of the world, how, at the same time, foreign language teaching with technology can either be facilitated by the adoption of electronic solutions in the country or, on the other hand, suppressed by obstacles and barriers to technology use in all spheres of life. It is striking that the digital divide, so aptly described by Mark Warschauer and his colleagues at the beginning of the century, is still to be found in instructional contexts. At the same time, together with an increased focus on e-democracy, electronic citizenship or digital participation in administrative life of many countries, the climate for successful digitally-enhanced teaching is changing for better.

It is in this context that the current issue of *Teaching English with Technology* presents selected research studies and classroom applications from all over the world. First of all, **Asnawi Muslem, Yunisrina Qismullah Yusuf**[*] and **Rena Juliana** (Syiah Kuala University, Indonesia) address the perennial question of obstacles and barriers to ICT use among senior high school instructors. The authors conclude that limited time and tools, coupled with a poor Internet connection and a lack of knowledge and experience of ICT training still prevent teachers from taking full advantage of educational technology.

On a different note, "**The Impact of Storytelling Techniques through Virtual Instruction on English Students' Speaking Ability**" by **Farzaneh Khodabandeh** (Payame Noor University, Iran) examines the use of *Telegram* online tool for fostering oral language production through storytelling. The results of the study confirmed the positive effect of storytelling and answering the questions on *Telegram* on learners' improved speaking skills.

Rather than exploiting one particular tool, the way that technology is to be intertwined with content and language integration is the topic of the article "**Learning English while Exploring the National Cultural Heritage: Technology-Assisted Project-Based Language**

Learning in an Upper-Secondary School" by **Joanna Pitura** and **Monika Berlińska-Kopeć** (Cracow and Warsaw, Poland). The article outlines a class project that illustrates the integration of project-based learning approach in language (English) and content (Polish language and culture) learning, the execution of which necessitates collaboration in groups, as well as the use of technology in task-based instruction.

Paola Cabrera, Luz Castillo, Paúl González, Ana Quiñónez and **César Ochoa** (Universidad Técnica Particular de Loja, Ecuador) examined the use of *Pixton* comic strip generator tool for enhancing grammar and vocabulary teaching in a public high school. As the results indicate, *Pixton* proves to be an effective teaching tool that motivates students to learn grammar and vocabulary in an enjoyable way.

Fostering learner motivation through the use of digital games is addressed in the next article, "**Enhancement of Performance and Motivation through Application of Digital Games in an English Language Class"** by **Saovapa Wichadee** and **Fasawang Pattanapichet** (Bangkok University, Thailand). This is another study to prove statistically that gamification in the *Kahoot* environment makes a positive change to the language classroom.

In the Reviews section, two interesting apps are evaluated: **Musa Nushi** and **Mohamad Hosein Eqbali** (Shahid Beheshti University, Iran) take a closer look at *50LANGUAGES*, a multi-language translation and learning tool; while **Seyed Abdollah Shahrokni** (Washington State University, USA) scrutinizes an interactive video application *PLAYPOSIT*. It is to be hoped that soon the two applications will be researched in controlled settings, to see what their effect on language learning and teaching actually is.

We wish you good reading!

PERCEPTIONS AND BARRIERS TO ICT USE
AMONG ENGLISH TEACHERS IN INDONESIA

by **Asnawi Muslem, Yunisrina Qismullah Yusuf**[*] and **Rena Juliana**

Syiah Kuala University

Banda Aceh 23111, Indonesia

yunisrina.q.yusuf @ unsyiah.ac.id

Abstract

The purpose of this research is to investigate English teachers' perception and challenges of the implementation of ICT in ELT classrooms. This study used mixed methods, qualitative and quantitative in nature. A purposive sampling technique was used to select the study subjects, who are 26 English teachers from 16 public senior high schools in Banda Aceh. Questionnaires and interviews were used to collect data. The data were analysed and interpreted through qualitative and quantitative procedures. The results showed that the English teachers found ICT very helpful in teaching. However, the limited time and tools, coupled with a poor Internet connection as well as a lack of knowledge and experience of ICT training were obstacles for the teachers using ICT. The results of this study give meaningful insights for policy makers in relation to the implementation of ICT for teaching and learning in the classroom.

1. Introduction

English teachers in Aceh, Indonesia, have a low capacity for using Information and Communication Technology (ICT). Only a few schools in the bigger cities can easily access and utilize the facilities available (Silviyanti and Yusuf, 2015) even though the use of ICT or multimedia for teaching English language are generally regarded as useful to enhance students' language skills (Muslem & Abbas, 2017). In small cities such as Banda Aceh, as is explained by Maulida and Lo (2013), the financial difficulties, limited human resources and lack of government support result in less than half of the schools being unprepared to implement ICT in public school teaching and learning processes. Although Silviyanti and Yusuf (2015) discovered that most English teachers in Banda Aceh had high motivation to use ICT in their classroom, there was limited attention from the authority to provide the facilities to support their use of ICT. It is the duty of the government to meet people's needs in education by providing access to technology that can improve the quality of education in this country.

Information and Communication Technologies (ICT) have been developing rapidly in recent years. Salehi and Salehi (2012) point out that since the 1960s such technologies as televisions, tape recorders and video have been used as teaching tools. Today, ICT can be hardware such as computers, projectors, digital cameras, etc., and can also be software such as Microsoft Word, PowerPoint, etc. (Wang and Woo, 2007). In education, ICT is accepted as a meaningful medium to be used in the classroom to motivate students in learning (Wekke and Hamid, 2013). In the hands of teachers, Valk, Rashid and Elder (2010, p. 118) assert that "ICT can empower teachers and learners by facilitating communication and interaction, offering new modes of delivery, and generally transforming teaching and learning processes". Moreover, Soska (1994) elaborated upon the benefits of using ICT in teaching for instructional testing and assessment, educating culture, assisting students learning academic content and advancing students' critical thinking skills.

Schoepp (2005, p. 2) states that integrating ICT in education especially into classroom instruction is not as easy as flipping a switch; integration is a complex process and teachers may encounter difficulties or 'barriers'. Various studies have acknowledged that although teachers appear to recognize the value of ICT in education, difficulties nevertheless continue to be encountered during the process of ICT integration (Balanskat, Blamire and Kefala, 2006; Silviyanti and Yusuf, 2015). The difficulties primarily deal with teachers as they are the executors of the integration. Bingimlas (2009) provides a list of difficulties which includes lack of teacher confidence, lack of teacher qualification, resistance to change and negative attitude, lack of time, lack of effective training, lack of accessibility and a lack of technical support as barriers to ICT integration.

Many teachers encountered the problem of perception when using ICT in the teaching and learning process in the classroom (Kurniawan, 2014). Ward, Gristein and Keim (2015, p. 73) describe perception as "the process of recognizing, organizing, and interpreting sensory information". For those teachers with insufficient skills to use ICT in the classroom, it is important to provide them with special training on how to use ICT. Taiwo (2009) finds that the level and degree of technology usage further depended on the way teachers view the role of technology in classroom, and is "predicated upon what they feel technology can do in the teaching-learning process" (p. 75).

2. Literature review

Teaching English using technology is not a new concept or practice for teachers around the world (Rank, Warren and Millum, 2011), especially when English is taught in non-native speaking countries. ICT is mostly used to provide authentic materials to learners. These materials can support students in expanding their speaking, listening, reading and writing skills. There are two effective ways to improve students' language skills; staying abroad and using multimedia (Muslem & Abbas, 2017). With new information technology the world today has lost the previous barriers to communication across languages.

In line with Muslem and Abbas (2017), Jurich (2001) mentions a number of advantages of using ICT in the teaching and learning process, especially for ELT classrooms. The first is providing multi-sensory stimuli that could enhance English language skills in a short time (Garimella and Srinivasan, 2014). The second is motivation, since, as Granito and Chernobilsky (2012, p. 20) say, s"technology has the potential to be a powerful educational tool for those that have interest in it and needs to be taught and embraced at an early age". Thus, students who use technology are likely to stay on task for longer periods of time. The third is collaborative learning. Domalewska (2014, p. 28) states collaborative learning, supported by technology, can boost language development because students learn within social interactions. For example, Silviyanti and Yusuf (2015) have found blogging encourages students to give comments on each other's work, share their experiences, reflect on their own and their classmates' work and analyse it, thus developing their critical thinking skills. The fourth is cultural understanding; this is where Hollenbeck and Hollenbeck (2009, p. 5) claim that ICT provides "teachers with tools to address equity and access issues, to accelerate students' linguistic and conceptual development, to provide support for students who learn in different ways, and to create authentic and meaningful learning experiences". Technology can accommodate cultural understanding, in which students are able to interact and fully participate in their learning as they acquire language skills and cultural awareness. They can improve their ability in the English language and also learn the culture of the native speakers at the same time. Finally, technology implementation enables self-expression, which is labelled by McBride (2009) as one of the most important contexts for language use to create and encourage language acquisition.

On the other hand, the use of ICT in ELT classrooms also has some disadvantages. Kolbakova (2014) suggests that using ICT in the teaching and learning process adds more work and additional struggle from teachers to meet the needs of every student in class. ICT

may not be appropriate for all learners in all situations and purposes, and, therefore, it requires considerable learner training to make use of it successfully. Other barriers to ICT include class control, distraction, and the students' tendency to use short forms in their writing (i.e. Yusuf, Natsir and Yusra (2016) mention the limited characters in using Short Message Services (SMS) has progressed into the trends of multiple writing styles in texting). In view of that, Yunus, Nordin, Salehi, Embi and Salehi (2013, p. 1) argued that "teachers are generally weak in managing problems and planning activities involving the use of ICT in the teaching of ESL writing". One of the problems often faced by teachers using technology in writing is when students copy-paste from the Internet source, otherwise known as plagiarizing activities (Mustafa, 2016). The ease of obtaining quick and massive information from the Internet causes students to be apathetic in preparing their tasks (i.e. written tasks). Yunus et al. (2013) further explain that students' reading skills can lead to inaccurate understanding of the content when they are developed by merely scrolling the computer screen.

ICT in the classroom for teaching and learning a foreign language today is unavoidable as it is now a part of our daily life. Rabah (2015) has made a strong claim for the use of technology in learning, as it is a powerful and flexible learning tool that is needed and desired to encounter globalization challenges, advance a country's economic status, and motivate and assist students in learning. Liu (2009, p. 101) further wrote that technology has played "a greater role during class and home study, as computer-assisted instruction and interactive media technologies … supplement the traditional use of the chalk and the blackboard". In a listening class, for example, teachers can use computers and the Internet to find rich sources of authentic oral models, such as YouTube video clips, which help learners with native pronunciation and also support teachers who do not feel as confident with their own language skills. Accordingly, Silviyanti (2014) has found that the use of YouTube appeared to be interesting and beneficial for students in which they became more enthusiastic and eager to watch a video and then later on practice to pronounce the words like the native speaker(s) rather than just practicing listening by using to traditional audio instruments.

Based on the previous research, a study focusing on EFL teachers' perceptions and challenges on the use of ICT in their teaching for all public senior high schools in Banda Aceh was designed, with the following research questions in mind:

1. What are the perceptions of English teachers in public senior high schools in Banda Aceh on the use of ICT in English language teaching?
2. What are the challenges that they face in the use of ICT in English language teaching?

3. Do demographic factors (i.e. age, gender, degree and teaching experience) make a difference as regards their perceptions and challenges of using ICT?

Since ICT is now introduced at public schools in this country, this study is deemed important to further understand the teachers' perceptions and challenges on the use of ICT in their classrooms. The findings of this study can be further used to provide concrete solutions to its obstacles in implementation, either by the government, schools or the teachers themselves.

3. Methods

In this study, we employed a mixed method approach: quantitative and qualitative. This included both a quantitative analysis of questionnaire data and a qualitative analysis of focus group interview data to address the research questions (Creswell, 2003). The research questions were designed to see the Acehnese teachers' perceptions and challenges of the implementation of ICT in ELT classrooms.

The questionnaire was designed and modified from Zare-ee (2011) and Karakaya (2010) for quantitative data. It is divided into three sections. The first and second sections are basic information of the participants and were constructed and modified from the questionnaire used by Karakaya (2010). The third section was constructed and modified from the questionnaire used by Zare-ee (2011), with 20 closed ended questions provided. It focused on English teachers' perceptions and challenges of the implementation of ICT in their teaching. It was formatted by using the Likert Scale of (1) strongly disagree (SD), (2) disagree (D), (3) neutral (N), (4) agree (A), and (5) strongly agree (SA). The questionnaire is available in the Appendix.

The instrument was given to 26 English teachers in Banda Aceh, Indonesia. There were 5 teachers aged 31-35 years, 6 teachers aged 36-40 years, 8 teachers aged 41-45 years, 3 teachers aged 46-50 years and 4 teachers aged 51 years and above. As regards gender, there were 5 male teachers and 21 female teachers. In degree, there were 18 teachers who had bachelor's degrees and 8 teachers who had master's degrees. In terms of teaching experience, there were 7 teachers with 7-10 years of teaching experience, 10 teachers with 11-15 years, 4 teachers with 16-20 years and 5 teachers with 21 years of experience and above. The teachers were assured that the information they gave was confidential and used strictly for research and academic purposes only. They were given 30 minutes to answer all the questions in the questionnaire completely in front of the researchers. The data from questionnaires were

analysed quantitatively using Microsoft Excel 2010 for frequency and percentages of each item.

After the questionnaires were collected and analysed, five teachers were selected to be interviewed. They were chosen because they were identified as those who had problems with the use of ICT based on the questionnaire distributed, in which further detailed information were deemed to be needed to complement the former data. Interviews were conducted with five teachers who were asked the following questions:

1. Do you think the use of ICT is important in teaching compared to no ICT use?
2. Do you think the ICT tools and techniques available in your school are accessible for use in teaching English by the teachers and students?
3. Do you think that ICT has noteworthy values for human societies in general? Give your reason.
4. Do you think ICT can be used as curriculum materials at school? Why?
5. What do you consider to be some of the challenges of using ICT in ELT?

The questions above are constructed based on the questionnaire. The interview was conducted to know more details about their perception of the use ICT. Interviews were conducted individually and lasted approximately 15 minutes. The interview sessions were recorded with a mobile phone.

4. Findings

The results of the questionnaire are described in three sections: ICT use and literacy, English teachers' perceptions and challenges of ICT, and the relation between age, gender, degree and teaching experience of English teachers toward ICT. They are elaborated in the following sub-sections. To achieve comprehensive results, the authors conducted the interview with the participants to further understand the conclusions.

4.1. ICT use and literacy

In the first part of the questionnaire, the participants were asked to select from a list the reasons why they use ICT and select how long they use ICT in a day. This section enabled the researchers to understand the functions and importance of ICT for the language teaching practices of English language teachers in Banda Aceh. The results of this part of the questionnaire are divided into 2 sub-sections, which present the results from reasons for the use of ICT and length of ICT use.

4.1.1. Reasons for the use of ICT

Teachers were asked to choose from a list of reasons why they use ICT; the results are presented in Table 1. Frequency refers to the number of teachers who chose the items.

Table 1. Teachers' reasons to use ICT

No.	Description	Frequency	Percentage (%)
1	Chatting with students and other teachers on school/subject matter	10	38.46
2	Educational games that can be used for teaching	8	30.77
3	E-mail and mail listing	18	69.23
4	Online discussion boards on language teaching	7	26.92
5	Shopping online for teaching tools and materials	7	26.92
6	Finding materials related to lessons	25	96.15
7	Preparing presentations	17	65.38
8	Assigning homework	10	38.46
9	Video conferencing and net-meeting	4	15.38
10	Presenting course material	10	38.46
11	Online dictionaries	21	80.77
12	Web blogs (e.g. blogger)	3	11.54
13	Giving feedback to students	7	26.92
14	Others (e.g. SNS)	7	26.92

Table 1 indicates that the most frequent reason for using ICT in the classroom is for finding teaching materials (96.15%), followed by using online dictionaries (80.77%), email and mail listing (69.23%), and preparing presentations (65.38%). The least frequent rationale for the use of ICT for the teachers is for web blogs (11.54%). In between, the table also reports that teachers use ICT for chatting with students and other teachers on school/subject matter, assigning homework and presenting course material to students, searching and learning on how to play educational games that can be used for teaching, participating in online discussion boards, shopping online for teaching tools and materials, giving feedback to students and other activities such as SNS (Short Networking Site, e.g. Facebook, Twitter and others).

4.1.2. Length of the use of ICT

In this section, the teachers were asked to select from a list of how long they use ICT in a day. The results are presented in Table 2.

Table 2. The length of ICT use by the teachers

Number of teachers	Length	Percentage (%)
4	Less than 1 hour	15.38
8	1-2 hours	30.77
6	2-3 hours	23.08

5	3-4 hours	19.23
3	More than 4 hours	11.54

Table 2 shows that most teachers spend 1-2 hours a day using ICT (30.77%), followed by 2-3 hours (23.08%) and 3-4 hours (19.23%). Only 11.54% of the teachers spent more than 4 hours using ICT.

4.2. English teachers' perceptions and challenges in using ICT

This section describes the English teachers' perceptions and challenges in using ICT in the classroom. The first sub-section presents the teachers' perceptions; the second sub-section presents the teachers' challenges. The results are followed by elicitations from the interviews to complement results from the questionnaire.

4.2.1. English teachers' perceptions of using ICT

A number of twelve items (out of 20) in the questionnaire focused on English teachers' perceptions on the implementation of ICT in ELT classrooms. Table 3 displays the results.

Table 3. English teachers' perceptions on the use of ICT

No	Statement items	Scales				
		Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1	In my view, ICTs are more powerful in teaching than discussion and teaching without the use of ICT.	0%	1 teacher (3.85%)	6 teachers (23.08%)	11 teachers (42.31%)	8 teachers (30.77%)
2	ICTs (referring generally to computers, videos, hardware, software, and networks) increase my knowledge and skills as an English teacher.	0%	0%	2 teachers (7.69%)	12 teachers (46.15%)	12 teachers (46.15%)
3	ICTs are highly needed by teachers in teaching English.	0%	0%	6 teachers (23.08%)	12 teachers (46.15%)	8 teachers (30.77%)
4	ICTs can be used as advanced instructional tools in teaching English to my students.	0%	0%	1 teacher (3.85%)	20 teachers (76.92%)	5 teachers (19.23%)
5	In my view, ICTs can replace teacher in teaching English.	17 teachers (65.39%)	9 teachers (34.62%)	0%	0%	0%
6	As far as I know, ICTs can be used to effectively manipulate instructional contents and materials.	0%	3 teachers (11.54%)	11 teachers (42.31%)	12 teachers (46.15%)	0%
7	I know that ICTs can spread knowledge and information fast.	0%	0%	0%	12 teachers (46.15%)	14 teachers (53.85%)
8	In my view, ICTs are more effective for teaching and learning than books and other	0%	2 teachers	8 teachers	13 teachers	3 teachers

	printed materials.		(7.69%)	(30.77%)	(50%)	(11.54%)
9	I think ICT use does NOT have noteworthy values for human societies in general.	3 teachers (11.54%)	19 teachers (73.08%)	1 teacher (3.85%)	3 teachers (11.54%)	0 teachers (0%)
10	I think ICT use does NOT offer educational/instructional values for student in learning English.	1 teacher (3.85%)	23 teachers (88.46%)	2 teachers (7.69%)	0%	0%
12	In my view ICTs can be used as curriculum materials at school.	0%	1 teacher (3.85%)	8 teachers (30.77%)	15 teachers (57.69%)	2 teachers (7.69%)
14	I use/have used ICTs for teaching and in daily life.	1 teacher (3.85%)	0%	2 teachers (7.69%)	19 teachers (73.08%)	4 teachers (15.39%)

Table 3 shows that 100% of the respondents agree that ICT can spread knowledge and information fast, about 89% of teachers have used ICT in their teaching and daily life, 88% agree that ICTs offer educational values for students in learning English, about 77% agree that ICTs increase teachers' knowledge and skills as English teachers, about 77% agree that ICT is highly needed by teachers in teaching English, about 77% agree that ICT can be used as advanced instructional tools in teaching English to students, roughly 73% of the teachers agree that ICTs are more powerful tools of teaching than discussion and teaching without the use of ICT, roughly 73% agree that technology has noteworthy values for human societies in general, roughly 65% agree that ICT tools can provide curriculum materials at school, nearly 50% agree that ICTs are more effective for teaching and learning than books and other printed materials, and nearly 46% agree that ICT can be used to effectively manipulate instructional contents and materials. Nonetheless, 100% of teachers disagree that ICT can replace teacher in teaching English

It is principally concluded that teachers do believe that ICT supports their teaching and learning processes in the ELT classrooms. Some excerpts from the teachers that support the use of ICT in teaching corroborate that claim as below (E refers to Excerpt from the interview and T refers to Teacher):

(E1)   T2: I agree that ICT are powerful tools of teaching. Compared to printed books, ICT are more interesting. The students will not feel bored when learning English. For example, students can directly watch conversation videos and find many pictures related to the lesson. ICT makes teaching time efficient and makes teaching easier. If we do discussions using ICT, the information that we get is more varied. It makes discussion easier.

As evidenced in E1, T2 agreed that ICTs are powerful tools in teaching and this is as what Granito and Chernobilsky (2012) have earlier mentioned in their study. With ICT, students can watch videos that are closer to real life presentation compared to printed books.

It facilitates teachers' job since students can easily access more information through ICT and their increased information knowledge livens class discussions. Similarly, Hollenbeck and Hollenbeck (2009) also discuss how ICT can create a more meaningful and authentic learning environment for the students. Furthermore, most teachers believe that ICT has noteworthy values for human societies in general. An example is the fast spread of important information for the society, as provided by T3.

(E2)   T3: From positive point of views, ICTs are very helpful in our society, for example in communication and getting rapid information. For example when there is an earthquake. Aceh is prone to earthquakes. We can get information about the earthquake from our friends quickly. We can use the Internet to communicate with each other. If there is a tsunami, we can communicate with each other on where we should run for safety.

However, those who do not fully agree that ICT are more effective for teaching and learning than printed materials and that technology can be used to effectively manipulate instructional contents and materials are expressed by T1 because of the following reasons:

(E3)   T1:   ICT is just to assist us in teaching, but I see ICT sometimes makes the students lazy to think. You see, discussion in the classroom is to provoke students' critical thinking, but when they can easily get the answers from the Internet, they don't make the effort to think for the answers anymore. I can teach with or without ICT. ICT is important, but the most important thing is how the teachers teach the students. How they make the materials better understood by the students. To me, the important thing is the innovation and motivation of the students to think creatively.

Based on T1, one teacher openly pointed out that despite usefulness of ICT, technology can lead to students' apathy in thinking. By the same token, Yunus et al. (2013) as well as Mustafa (2016) have similar thoughts on students' reading and writing development if the students rely too much on ICT. What is more, T1 believes that information that is easily accessible by students in technology-based instruction can lessen their creativity in learning and thinking. Therefore, these teachers did not put the use of ICT at the forefront in their teaching; this tool is merely an addition to their teaching activities in the classroom.

Notwithstanding the positive views from the teachers on the use of ICT in the classroom and its important values for the society in general, all teachers believed that technology cannot replace their role in teaching English because ICTs cannot provide direct immeasurable emotional influence on the students such as encouragement, support, safety, character and inspiration. As summed by T4:

(E4)   T4:No tool can replace teachers in the classrooms. A tool cannot make a student happy when she is sad through expressions, emotions and encouragement. Only a human being, a teacher, can do that. A tool cannot motivate a student through real life experiences, stories and positive actions. Only a human being, a teacher, can do that. A tool cannot protect a student when she in trouble in school, again, only a teacher can do that.

4.2.2. English teachers' challenges in using ICT

Table 4 shows the findings from the questionnaire the teachers completed on the challenges they face while implementing technology in the classroom.

Table 4. English teachers' challenges in ICT use

No	Statement items	Scales				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
11	I know that many forms of ICT tools and techniques at school are accessible for use in teaching English.	2 teachers (7.69%)	1 teacher (3.85%)	1 teacher (3.85%)	18 teachers (69.23%)	4 teachers (15.39%)
13	I can avoid problems in many areas such as in handwriting and in organizing ideas when I use ICT.	1 teacher (3.85%)	3 teachers (11.54%)	10 teachers (38.46%)	10 teachers (38.46%)	4 teachers (15.39%)
15	I have no difficulty in using ICT.	1 teacher (3.85%)	3 teachers (11.54%)	6 teachers (23.08%)	13 teachers (50%)	3 teachers (11.54%)
16	I know about ICT materials related to English language learning that I can use for my teaching.	1 teacher (3.85%)	0%	4 teachers (15.39%)	14 teachers (53.85%)	7 teachers (26.92%)
17	I know how to access the Internet and get some information from it.	1 teacher (3.85%)	0%	0%	15 teachers (57.69%)	10 teachers (38.46%)
18	The Internet is easily accessible and available at school.	0%	4 teachers (15.39%)	2 teachers (7.69%)	14 teachers (53.85%)	6 teachers (23.08%)
19	Generally speaking, I have enough experiences and training on available computers and/or software.	1 teacher (3.85%)	4 teachers (15.39%)	11 teachers (42.31%)	9 teachers (34.62%)	1 teacher (3.85%)
20	I have limited time to integrate ICT in my teaching.	0%	8 teachers (30.77%)	10 teachers (38.46%)	4 teachers (15.39%)	4 teachers (15.39%)

Table 4 proves that most teachers know how to access the Internet and get some information from it, about 85% of the teachers agree that many forms of ICT tools and techniques at their school are accessible for use in teaching English, while nearly 81% know about ICT materials related to English language learning that can be used for their teaching. At the same time, about 76.93% agree that the Internet is easily accessible and available at their school, roughly 54% agree that they can avoid problems in many areas such as in

handwriting and in organizing ideas when they use ICT, and roughly 50% agree that they have no difficulty in using ICT. However, only 38.47% have enough experiences and training in using available computers and/or software, and nearly 30.78% have limited time to integrate ICT in their teaching.

Hence, it can be concluded that most public schools in Banda Aceh provide many forms of ICT tools and techniques accessible for use in teaching English and most teachers know how to use the ICT tools. Even so, problems exposed by the teachers on its accessibility in schools are as follows:

(E5)   T1:   ICT tools and techniques at school are accessible but still limited. For example, the teachers have to wait for the chance to use the projector. It would be more efficient if the school provides one projector for each class so we can use it properly without wasting time to wait for a projector from each other. We also have a problem of low Internet connection. I often waste time just to prepare the tools provided by the school. So, luckily, I have the tools I need myself. I always bring a laptop, a small projector, a set of loud speaker and any kind of cables in my car. But not all teachers can afford that. More money is needed if the school wants to make the most use of ICT in teaching.

T1 basically rendered that if the school intends to provide ICT for the teachers, then the facility should be provided for every teacher. If the facility is only available to one or two teachers, then using it effectively in teaching would be a problem since every teacher would need to wait for their chance or share. T1 also referred to the setback in which not all teachers in Indonesia with their income can afford ICT facility for their own class in school. T2 further explains the ICT tools available in his school, but the school does not provide the Internet to assist the teachers in searching for materials that can be used for teaching.

(E6)   T7:   Our school provides some tools such as computers and projectors but we do not have the Internet to be accessed. We have to use our own hotspot from our smartphones to look for teaching materials, or when we really need the Internet for teaching.

Another challenge that the teachers faced in using ICT is the inadequate time that they have to integrate technology in their teaching. About 5 teachers said that they did not have enough experience and training in the use of ICT in the classroom. T5, who lacks experience in using ICT, bluntly explained:

(E7)   T5:   The tools are accessible in my school. The Internet is also connected. But the problem is that I cannot use it. I do not know how to use any of the tools. So I decided to not use it for my teaching. To learn it would need more time, I think. I don't have time; there is a lot of paperwork

and also administrative work that I need to do for the school. I know a teacher who can use ICT but rarely uses it for teaching, because like I said, a lot of paperwork to do. So he come to class and teach by the textbooks; no time to search for new materials from the Internet and prepare them for teaching. Anyways, I am comfortable with teaching traditionally without the use of ICT.

Based on the explanation by T5 in E7, extensive paperwork from the school also hinders the teachers' motivation and effort to implement ICT in the classroom. Much of their time at school is about completing paperwork, and this becomes even harder when classes comprise large numbers of students. In Indonesia, it is very typical that a classroom of a public school consists of 40-50 students. Besides, this negative attitude is also one of the factors that hinder technology integration in the classroom for the teachers (Bingimlas, 2009).

4.3 English teachers' demographic factors and their perceptions and challenges in using ICT

The questionnaire inquires about the demographic factors such as age, gender, degree and teaching experience of the English teachers. The purpose is to see whether these factors make any difference to their perceptions and challenges in using ICT. The results are described in the following sub-sections.

4.3.1. Age

The current findings are in line with the previous studies in which the age of teachers had no effect on the implementation of ICT in language learning. Nevertheless, there was only one teacher, T5, who revealed in the interview that his age had an impact on the integration of ICT into his language teaching, "I never took part in the ICT training because I'm old".

Figure 1 shows that there is no significant difference between the age of the English teachers and their perceptions and challenges in using ICT. The mean of the teachers aged 36-40 years is slightly higher than others but not significantly different among the age of the English teachers as regards perceptions and challenges in using ICT.
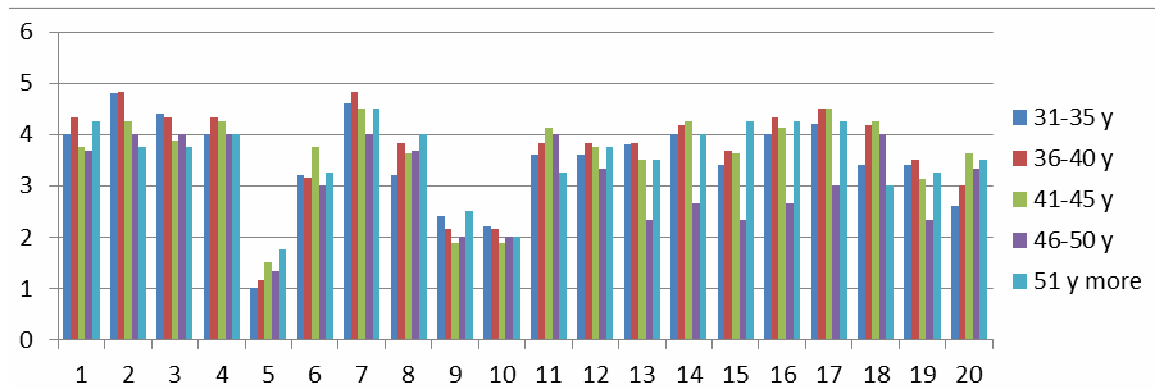
Figure 1. Age and English teachers' perceptions and challenges in using ICT.

In conclusion, the age of English teachers in this study does not have significant differences on their perceptions and challenges in their use of ICT in their language classes. However, it may have indirect effects regarding to the teaching experience. In others words, young teachers may have less teaching experience than senior teachers (Mahdi and Al-Dera, 2013, p. 62).

4.3.2. Gender

Elsaadani (2012) found that there is no difference between males and females in terms of attitude toward ICT among teaching staff; and so, gender is not a significant factor when considering attitude toward ICT by teachers. The result of other studies also revealed no significant differences between ICT attitudes of teachers in terms of gender (Cavas, Cavas, Karaoglan and Kisla, 2009). Similarly, the present study also shows no significant difference between the gender of the English teachers and their perceptions and barriers to using ICT. As evidenced in Figure 2, the mean (1 to 5) is almost the same. The mean of males is slightly higher than that of females but it is not significant. It can be concluded that both male and female teachers have the same perceptions and challenges in using ICT.
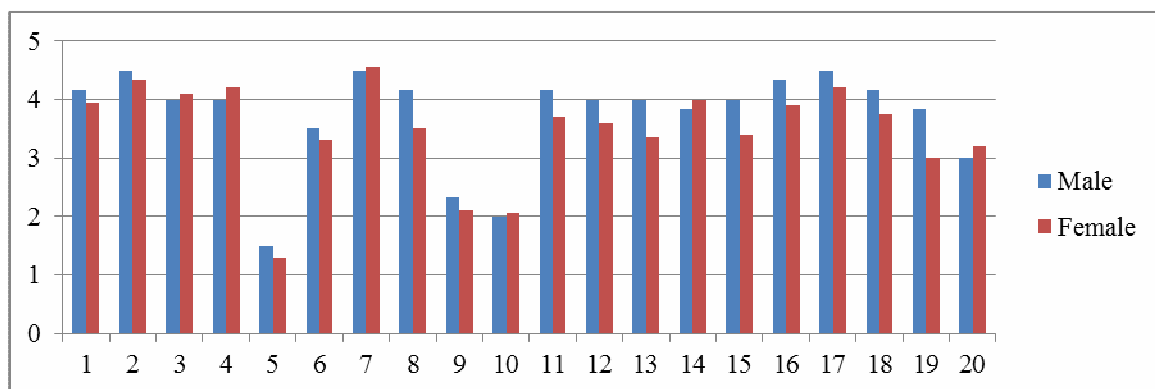
Figure 2. Gender and English teachers' perceptions and challenges in using ICT

4.3.3 Educational degree

Figure 3 illustrates that there is no significant difference between the degree of the English teachers and their perceptions and challenges in using ICT. It can be seen that the mean (1 to 5) is almost the same. The mean of teachers with a master's degree is slightly higher than that of teachers who hold a bachelor's degree.
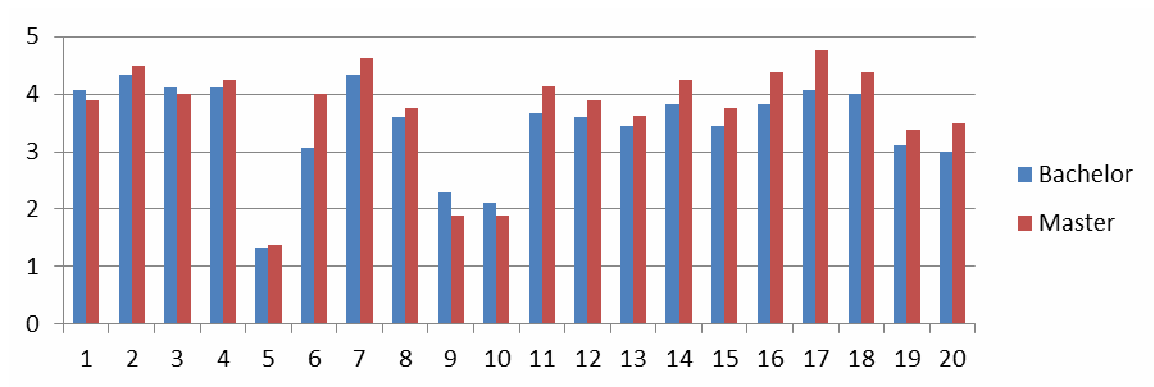
Figure 3. Educational degree and English teachers' perceptions and challenges in using ICT.

This finding is in line with the research conducted by Chemwei, Kiboss, and Njagi (2016). Their study showed that teacher-educators' educational qualifications had a positive relationship with their level of ICT integration, however, this characteristic was not found to be statistically significant. There was also no mutual supportive relationship between the ICT literacy level and the varying academic qualification attained or earned by the various teachers who participated in this study. In addition, Alazzam, Bakar, Hamzah, and Asimiran (2012) found no significant effect of the teachers' educational background and support factors on ICT use as well. It can be concluded that teachers with master's and bachelor's degrees have similar perceptions and challenges in using ICT.

4.3.4. Teaching experience

The teaching experience and their perceptions and challenges of ICT have almost the same result, in which there was no significant difference. However, as demonstrated by Figure 4, for question 20 teachers with 16-20 years experience had a different result regarding the limited time for ICT implementation, but the difference is not striking because it is between the "neutral" and "agree" options. Likewise, Niederhauser and Stoddart (2001) also did not find differences in their research for length of teaching experience. It can be concluded that

English teachers have similar perceptions and challenges in using ICT regardless of how long they have been teaching for.
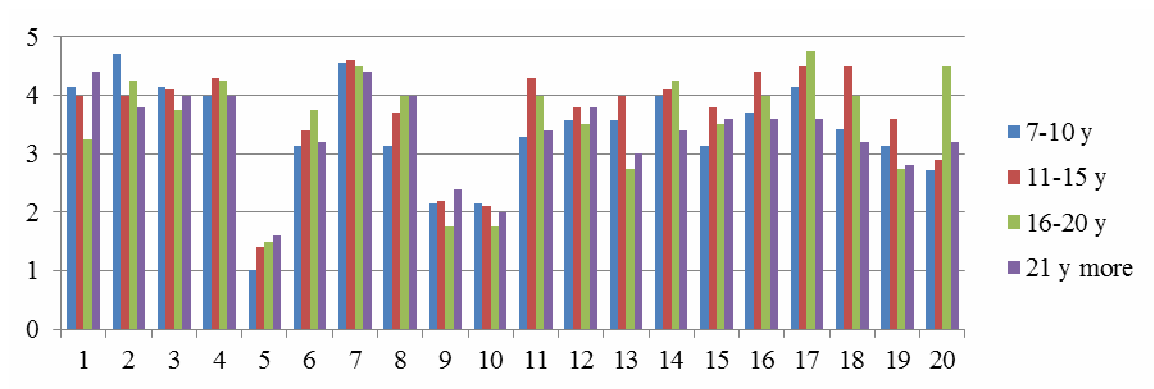
Figure 4. Teaching experience and English teachers' perceptions and challenges in using ICT.

5. Conclusions and suggestions

Based on the results of the research on English teachers' perceptions and challenges to the implementation of ICT in ELT classrooms, several conclusions can be drawn. First, the English teachers involved in this study have positive perceptions of the implementation of ICT in the ELT classroom. ICT helps them obtain information easily and swiftly. They also think that ICT makes class more interesting than discussion and teaching without using any tools. They all agree that technology is very useful as it can assist them in teaching English. Nevertheless, ICT can never replace teachers because it cannot be the living role model that the teachers can offer the students. The interviews showed that they proposed that the school should have enough funding and provide sufficient facilities for the teachers to be encouraged to use ICT in their teaching.

Second, this study demonstrates that the teachers have three major challenges in using ICT. Limited ICT tools and low Internet connection at schools are the dominant challenges. The teachers have to share the tools with other teachers and this wastes time to wait for their turn to use ICT. The last challenge is the lack of knowledge and training experience that teachers have. Some teachers have difficulty using ICT and need to learn more to improve their knowledge and skills. A solution would be to provide joint ICT workshops for school teachers so that they can learn from one another how to make effective use of technology in their teaching.

Third, the demographic factors which include age, gender, educational degree and years of teaching experience do not bring significant differences on their perceptions and

challenges to using ICT. Teachers with different demographic factors still have the same perceptions on the use of ICT and face the same obstacles or challenges in its implementation in the ELT classrooms.

Nevertheless, this research has a number of limitations. The number of respondents was restricted to English teachers in public senior high schools in Banda Aceh. Future related research should also consider all English teachers from junior high schools and all English lecturers in universities in the city. This research has discovered the perceptions and challenges generally faced by teachers in implementing ICT in the classroom. The findings can have important implications for ensuring the successful and effective use of ICT in the classroom. Therefore, school authorities must consider the cost-benefit of effective technology use by ensuring that their investments support the teachers and can overcome some of the challenges to ICT use.

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Appendix. Questionnaire

Section (1) Background Information
Please indicate your response to the following questions by checking on the appropriate circles:
1.1 Age:
- 21-25
- 26-30
- 31-35
- 36-40
- 41-45
- 46-50
- 51 and over

1.2 Gender:
- Male
- Female

1.3 The last degree completed:
- Bachelors
- Masters
- Doctorate

1.4 Teaching Experience:
- Less than a year
- 1-3 Years
- 4-6 Years
- 7-10 Years
- 11-15 Years
- 16-20 Years
- 21 Years and over

Section (2) ICT Use & Literacy
Please indicate your response to the following items:
2.1 What do you use ICT for? Please tick (√) the appropriate ones. You can choose more than one choice. You can list the choices from 1 to 15 according to your frequency of use and preferences.
- chatting with students and other teachers on school/subject matter
- educational games that can be used for teaching
- e-mail and mail listing
- online discussion boards on language teaching
- shopping online for teaching tools and materials
- finding materials related to lessons
- preparing presentations
- assigning homework
- video conferencing and net-meeting
- presenting course material
- online dictionaries
- web blogs (e.g., blogger)
- giving feedback to students
- other …………………………………

2.2 How many hours do you have access to the Internet in a day?
- Less than one hour
- 1-2 hour(s)
- 2-3 hours
- 3-4 hours
- 4 hours and over

Section (3) EFL Teachers' Perceptions and Challenges

Please indicate your reaction to each of the following statements by circling the number that represents your level of agreement or disagreement with it. Make sure to respond to each statement: SD = strongly disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Item #	Statements	SD	D	N	A	SA
1.	In my view, ICTs are more powerful tools of teaching than discussion and teaching without the use of ICTs.	1	2	3	4	5
2.	ICTs (referring generally to computers, videos, hardware, software, and networks) increase my knowledge and skills as an English teacher.	1	2	3	4	5
3.	ICTs are highly needed by teachers in teaching English.	1	2	3	4	5
4.	ICTs can be used as advanced instructional tools in teaching English to my students.	1	2	3	4	5
5.	In my view, ICTs can replace teachers' role in teaching English.	1	2	3	4	5
6.	As far as I know, ICTs can be used to effectively manipulate instructional contents and materials.	1	2	3	4	5
7.	I know that ICTs can spread knowledge and information fast.	1	2	3	4	5
8.	In my view, ICTs are more effective for teaching and learning than books and other printed materials.	1	2	3	4	5
9.	I think ICTs do NOT have noteworthy values for human societies in general.	1	2	3	4	5
10.	I think ICTs do NOT offer educational/instructional values for student in learning English.	1	2	3	4	5
11.	I know that many forms of ICT tools and techniques at school are accessible for use in teaching English.	1	2	3	4	5
12.	In my view ICTs can be used as curriculum materials at school.	1	2	3	4	5
13.	I can avoid problems in many areas such as in handwriting and in organizing ideas when I use ICTs.	1	2	3	4	5
14.	I use/have used ICTs for teaching and in daily life.	1	2	3	4	5
15.	I have no difficulty in using ICTs.	1	2	3	4	5
16.	I know about ICT materials related to English language learning that I can use for my teaching.	1	2	3	4	5
17.	I know how to access Internet and get some information from it.	1	2	3	4	5
18.	Internet access is easily accessible and available at school.	1	2	3	4	5
19.	Generally speaking, I have enough experiences and training on available computers and/or software.	1	2	3	4	5
20.	I have limited time to integrate ICTs in my teaching.	1	2	3	4	5

THE IMPACT OF STORYTELLING TECHNIQUES
THROUGH VIRTUAL INSTRUCTION
ON ENGLISH STUDENTS' SPEAKING ABILITY

by **Farzaneh Khodabandeh**

Payame Noor University,

PO box 19395-3697 Tehran, Iran

farzaneh.khodabandeh @ gmail.com

Abstract

This study examines the effect of storytelling through the use of Telegram on oral language of English foreign language (EFL) students. To this end, thirty English students aged 18 to 21 took part in the research. Before the treatment, they were interviewed by two instructors and were graded as low-proficient speakers of English. The selected participants were assigned randomly into two homogeneous groups of control (n=15) and experimental (n=15). The instructor taught four stories to both groups through the online class. The participants of the experimental group were supposed to summarize the retold stories while the participants of the control group answered the comprehension questions of the stories. All the participants were to record their voices and share them in their groups and their peers were supposed to listen to the speaker and post their comments. After the treatment, two instructors interviewed all the participants. The results of the comparison of the first and the second interview confirmed the positive effect of storytelling and answering the questions on the Telegram. The findings of this study may help the learners to enhance their English speaking skills.

Keywords: oral language; storytelling; summarizing; social networks; virtual instruction

1. Introduction

Storytelling is defined as the art of telling stories through the use of words and actions (Soleimani & Akbari, 2013) in order to engage an audience. In other words, it differs from reading a story as it narrates a tale from memory (Dujmović, 2006). Storytelling is one of the best ways to help students learn the four skills in their first and second language because of the numerous benefits embedded in stories. It also enhances learners' communication skills (Mokhtar, Kamarulzaman, & Syed, 2011). According to Sanchez (2014), storytelling is the best way to help the students learn the second language in the same way as their mother tongue. They present parts of speech such as grammar and vocabulary in a meaningful context (Amer, 2003). It also increases learner' writing skills and their visual memory (Sarıca, & Usluel, 2016). According to Miller and Pennycuff (2008), telling stories can be used as an

effective instructional strategy to increase learners' abilities in all learning areas. It is a useful teaching technique for language development and exploring meanings of experiences (Woodhouse, 2007). It also improves students' general knowledge (Alsumait, Al-Musawi, 2013). Storytelling also increases the accuracy of learners' speaking (Chalak, & Hajian, 2013).

Using storytelling as a teaching tool for improving language learners' speaking skills in virtual classes, especially with the Telegram messaging app, has not yet been researched. Thus, it is hoped that using storytelling in the Telegram class will help students improve their speaking abilities. This study is going to address the following questions:

1. Does telling stories in Telegram have any effect on the participants' speaking abilities?
2. Are there any significant differences between speaking skills of the experimental participants who retell the stories and the participants of the control group who do not?

2. Background to the study

2.1. Review of literature on storytelling

The past studies show that the use of storytelling in classrooms can contribute significantly to early literacy development. For example, Rivera Pinzón (2016) showed that storytelling and reading stories can improve both students' reading comprehension and their writing. Mello's (2001) research also demonstrated that storytelling can improve the fluency and vocabulary acquisition of children. Similarly, Mallan (1992) showed that storytelling helps students learn to listen and to participate in their everyday communication.

The effects of storytelling on learners' first language literacy were extended to second language learning too, and some researchers and teachers tried to use story telling techniques in teaching speaking and oral skills. For example, Trousdale's (1990) study showed that storytelling improves learners' English speaking abilities. Brice (2004) believes that storytelling is a great technique which can be used to increase EFL learners' oral skills. In a similar vein, Sepahvand (2014) states that storytelling is a great strategy to improve the oral speaking abilities of students as they draw students' focus on meaning rather than form. Parallel to this, Ebrahiminejad, Azizifar, Gowhary, and Jamalinesari (2014) advocate that short stories help learners improve their speaking skills and enhance their independent English language learning. The storytelling technique is believed to be one of the most enjoyable techniques which can develop students' English language (Samantaray, 2014), and Abdolmanafi-Rokni and Qarajeh (2014) believe that digital storytelling can improve students'

speaking skills much more than the traditional way of storytelling. Marzuki, Prayogo and Wahyudi (2016) showed that the implementation of interactive storytelling strategy increased the EFL learners' speaking ability and their classroom activities. At the same time, Hemmati, Gholamrezapour and Hessamy (2015) demonstrated that reading story aloud and teachers' storytelling affects students' listening comprehension.

Storytelling also develops other language skills such as vocabulary and grammar knowledge, reading and writing. For example, Mokhtar, Abdul Halim and Kamarulzaman (2010) show that storytelling improves learners' reading skills and helps them develop their vocabulary. In a similar study, Soleimani and Akbari (2013) also confirmed that storytelling increases learners' English vocabulary. This is also corroborated by Kalantari and Hashemian (2015), who showed that storytelling increases the vocabulary knowledge of Iranian English students and also boosts their motivation. Soleimani and Khandan (2013) revealed that using storytelling also helps students learn grammatical rules easily. Moreover, storytelling encourages less willing EFL learners to participate more in the classroom activities such as listening, speaking, reading and writing (Juraid, & Ibrahim, 2016).

Other studies show that the use of stories has positive effect in the classroom. For example, Samantaray (2014) believes that storytelling technique changes the environment of a tedious classroom into an exciting one. Dujmović and Bančić (2014) conclude that animated storytelling can be used as a powerful tool in the classrooms. Among these, Hemenover (2003) showed that storytelling can improve the competence of EFL learners and decrease their stress. Kalantari and Hashemian's (2016) and Martinez's (2007) studies demonstrated an increase in EFL students' motivation toward and interest in learning through telling stories. Similarly, Miller and Pennycuff (2008) observed that reluctant students tend to be motivated by engaging in storytelling activities. In addition, Cortazzi and Jin (2007) also confirmed EFL learners' improvement in their skills. Finally, storytelling provides an interacting bond between teachers and students for learning language (Hsu, 2015).

With regard to the role of storytelling in developing language learning, first of all most studies have primarily investigated using storytelling in developing language proficiency rather than in an exploratory research project employing a quantitative method together with storytelling in virtual classes. Particularly, using storytelling through Telegram has not yet, to our knowledge, been researched. Considering the importance of issue and also the literature gap on it, this study intends to investigate the role of storytelling in enhancing the speaking abilities of EFL students in virtual classes.

2.2. Previous research into teaching with mobile phones

Relatively few studies have been carried on the topic of instruction via mobile phones. Among them, Begum (2011) revealed that mobile phones have a great capacity as teaching tools. Similarly, the positive effects of teaching vocabulary through the use of SMS have been confirmed by Motallebzadeh, Beh-Afarin, and Daliry Rad (2011). In a similar study, Oberg and Daniels (2013) stated that teaching with mobile phones affects language acquisition in a positive way. Besides, Begum (2011) concluded that the learners have very positive attitudes towards learning with mobile devices. Chen (2013) suggested that for their effective usage it is necessary to guide students properly, both technologically and methodologically. In line with the abovementioned studies, Khrisat and Mahmoud (2013) contended that the participants were eager to be taught through mobile phones. Dashtestani (2016) stated that students had positive attitudes toward learning English via mobile devices. Also, Yeboah and Ewur (2014) showed the positive effects of teaching through mobile devices and concluded that mobile learning enhances students' performance.

Based on the above-mentioned studies, it can be understood that there are no studies teaching language skills primarily speaking through mobile phones and also the above-cited studies did not address the issue of language acquisition; rather, they focused on attitudes towards methods of m-learning. To put it more clearly, there are few studies which focus on teaching speaking through storytelling through the use of mobile phones in general, and with the Telegram application in particular. So, this study attempts to shed light on this issue and to contribute to this field of research.

3. Methodology

This research adopts a quasi-experimental design with one experimental and one control group. The general purpose of this study is to determine the effect of storytelling on EFL students' oral abilities via social networks.

3.1. Participants

In order to research the effect of retelling stories on oral abilities of students in the Telegram group, 30 English students were selected out of 78 male and female students of Iranian TEFL freshmen at BA level in Payame Noor University. The participants' ages ranged from 18 to 24. Having administered a test of homogeneity (TOEFL test), the researcher selected 30 (12 males and 18 females) learners for the purpose of this study. The participants were divided into two groups, each consisting of 15 subjects.

3.2. Instruments

Two parallel tests based on Test of Speaking English (TSE) were designed. One of them was used as a pre-test and the other one was used at the end of the treatment as a post-test. The primary purpose of the tests was to measure the speaking ability of the subjects before and after the treatment. There were twelve questions in each questionnaire and the participants were asked to talk about their educational and proficiency level, describe an object, narrate a given picture, give and support an opinion, compare and contrast two things, give directions and instructions, hypothesize, imagine and define something.

In order to examine inter-rater reliability, the researcher worked with another university professor. The interviews were scored independently by the researcher and the colleague rater. The participants were scored on their use of correct grammar, vocabulary, pronunciation and their ability to be fluent. The computed Pearson correlation coefficients for scoring the interviews (.91) showed a high positive relationship between the scores.

In this study, four English stories were prepared by the researcher and their PowerPoint was made along with their visual pictures.

3.3. The procedure

Before the treatment, all the participants took part in the pre-test. The participants of this study were thirteen EFL students who were homogenous in the speaking skill based on the TSE interview. The pretest took 15 to 20 minutes for each participant to complete and after getting the scores the means of their scores were calculated. Based on their results from their pre-test oral interview test, they were divided into two homogeneous groups of control and experimental. At the end of the treatment two groups were interviewed based on TSE once more.

The treatment started from 25 of July 2016 and lasted for 8 sessions successively till second of June 2016. Each session lasted almost two hours.

3.3.1. The experimental group

During the first session, the experimental group's participants were added to the Telegram group and the rules of the class were explained to them. The class time was set and all of them were to be online according to the agreed class time. In each session the researcher presented one story which was recorded beforehand in simple language along with the PowerPoint. The experimental group's participants had to listen to the recorded story and for the next session, each of them had to make the oral summary of the story and share it in the group while all the

other participants were assigned to listen to their group's story and give their feedback. The treatment of the experimental group was as follows:

1. Teaching the new words and phrases with pictures before telling the story
2. Checking the participants' comprehension of the new words
3. Sharing the PowerPoint
4. Asking the participants some general questions about the characters in the slides
5. Asking them to guess the story
6. Telling the story by sending separate slides along with sound
7. Asking the participants some detailed questions from the story
8. Asking them to listen to the story once more and send their retold stories to the group for the following session
9. Asking each participant to evaluate their peers' recorded stories

3.3.2. The control group

There were fifteen participants in the control group. Like the experimental group, the participants of the control group were taught the English stories through *Telegram*. All the procedures of story presentation by the researcher were the same in both groups except that the control group participants did not retell the stories. They just answered the comprehension questions asked by the researcher and recorded their answers and shared them in their group. The questions were as follows:

- Who were the main characters of the story? Mention their names one by one.
- Where did the story happen?
- How many characters were there in the story?
- Was there a problem in the story? What was it?
- What happened first, next, and last?
- How did the characters of the story solve the problem?
- How did the story end?

3.4. Results and findings

In order to determine whether using retelling stories has any effect on the subjects' speaking ability, after obtaining the scores of the pre-test and post-test, the mean and standard deviation of the scores were calculated. Then, in order to find out whether the differences between the groups were statistically significant, t-test analysis of the tests was run.

In order to evaluate the impact of the intervention on students' scores in the control group, a paired-samples t-test was used. As Table 1 shows (Appendix), the participants' scores increased from pre-test to post-test.

A paired-samples t-test was used to examine the effect of the intervention on students' scores in the experimental group. According to Table 2 (Appendix), the participants' scores increased from pre-test (*M* = 287.50, *SD* = 52.30) to post-test (*M* = 425.00, *SD* = 81.94), *t* (7) = -4.88, *p* < .00 (two-tailed). Their mean score was -137.50 with a 95% confidence interval ranging from -204.04 to -70.95.

In order to compare all participants' scores on pre-tests, an independent-samples t-test was conducted. As Table 3 (Appendix) shows, there was no significant difference in scores for the control group (*M* = 320.00, *SD* = 94.51) and the experimental group (*M* = 287.50, *SD* = 52.30), *t* (13) = .83, *p* = .41 (two-tailed). The differences of the means (mean *difference* = 32.50, 95% CI: -51.14 to 116.14) was small (*eta squared* = .05).

In order to answer the second research question of the study and to examine the significant differences between speaking skills of the experimental participants who retold the stories and the participants of the control group who did not, an independent-sample t-test was executed to compare all participants' scores on post-tests. According to Table 4 (Appendix), there was no statistically significant difference in scores for the control group (*M* = 431.42, *SD* = 92.27) and the experimental group (*M* = 525.00, *SD* = 81.94), *t* (13) = .14, *p* = .88 (two-tailed). The differences of the means were very small.

4. Discussion

This study examined the effect of telling stories through the use of *Telegram* and its impact on the improvement of the oral ability of EFL students. Before the treatment, the results of TSE interviews showed that the participants of both groups were homogeneous in terms of speaking competence. The findings of the post-test revealed that telling stories through virtual environment improved the speaking abilities of both experimental and control groups. Whether the participants retold the stories or just answered the comprehension question did not make any difference. This finding supports the idea of Schank (1990), who states that storytelling has positive, significant and demonstrable value in teaching.

As regaards the effect of oral retelling on the speaking ability of the students, these findings are consistent with researchers who state the effectiveness of storytelling in improving the speaking ability of language learners such as Trousdale (1990), Brice (2004),

Sepahvand (2014), Ebrahiminejad et al. (2014), Samantaray (2014), and Marzuki et al. (2016).

With reference to the instruction via mobile phones, the results of the present study are in agreement with findings of Begum (2011), Motallebzadeh et al. (2011), Oberg and Daniels (2013), and Dashtestani (2016), who revealed that mobile phones have great potential as an instructional tool.

Since speaking a language is equivalent to knowing that language (Khalaf, 2012), and the learner's ability to perform well in a second language is determined in terms of speaking skills (Sepahvand, 2014), it should be taught to language learners (Chastain, 1988). As telling stories has been considered as the original form of teaching (Pedersen, 1995), it can be profitably utilized in teaching speaking skills of non-speakers of Persian.

5. Final conclusions and implications for the future

The results illustrate the strong support for the use of oral speaking through the use of social networks, *Telegram*. One of the special characteristics of social networks is that all the members of the group can share their responses with their peers in the group and interact with one another very easily. Teaching through virtual environment responds to students' desire to talk and interact with others. Both retelling the stories and answering the questions have been effective in improving the participants' speaking ability so the results demonstrate the use of telling stories as an effective pedagogical tool in both virtual classes.

The results of the present study do offer some implications for methodologists, teachers, and learners. The results indicate the positive effect of the use of *Telegram* in EFL classes so proper procedures and techniques for developing language learners' speaking skills can be developed through social networks. As regards the way of presenting the treatment program, the findings revealed better performance of both groups who received the intended treatment through *Telegram*. The findings can help both teachers and learners to use the benefits of technology in the teaching-learning process.

The participants in this study were low-proficiency speakers of English. Some other studies can be done with intermediate participants. In this study, the focus was on improving speaking skills of non-native speakers of English, other studies can be done in the areas of writing and grammar. This study just took place in a virtual environment, while further research can compare the effectiveness of storytelling between two groups of language learners; one in a traditional classroom and the other in a virtual one.

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Appendix

Table 1. Control group: Paired-samples t-test

Control group		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre-test	320.0000	15	94.51631	35.72381
	post-test	431.4286	15	92.27289	34.87587

Control group		Paired Differences							
					95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	pre-test - post-test	-111.42857	67.18843	25.39484	-173.56751	-49.28963	-4.388	6	.005

Table 2. Experimental group: Paired-samples t-test

Experimental group		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre-test	287.50000	15	52.30406	18.49228
	post-test	425.00000	15	81.94075	28.97043

Experimental group		Paired Differences							
					95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	pre-test - post-test	-137.50000	79.59720	28.14186	-204.04492	-70.95508	-4.886	7	.002

Table 3. Comparing pre-tests of the control group and experimental group: Independent-samples t-test

	group	N	Mean	Std. Deviation	Std. Error Mean
pre-tests	control	15	320.0000	94.51631	35.72381
	experimental	15	287.5000	52.30406	18.49228

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pre-tests	Equal variances assumed	.989	.338	.839	13	.416	32.50000	38.71653	-51.14198	116.14198
	Equal variances not assumed			.808	9.087	.440	32.50000	40.22629	-58.36551	123.36551

Table 4. Comparing post-tests of the control group and experimental group: Independent-samples t-test

	group	N	Mean	Std. Deviation	Std. Error Mean
post-tests	control	15	431.4286	92.27289	34.87587
	experimental	15	425.0000	81.94075	28.97043

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
post-tests	Equal variances assumed	.057	.815	.14300	13	.888	6.42857	44.95550	-90.69188	103.54902
	Equal variances not assumed			.14179	12.170	.890	6.42857	45.33886	-92.20331	105.06045

LEARNING ENGLISH WHILE EXPLORING THE NATIONAL CULTURAL HERITAGE: TECHNOLOGY-ASSISTED PROJECT-BASED LANGUAGE LEARNING IN AN UPPER-SECONDARY SCHOOL

by **Joanna Pitura**

Pedagogical University of Cracow

Podchorążych 2, 30-084 Cracow, Poland

pitura @ poczta.onet.pl

and **Monika Berlińska-Kopeć**

21st Kołłątaj Secondary School in Warsaw

Grójecka 93, 02-101 Warsaw, Poland

monikab5 @ poczta.fm

Abstract

The quality and content of English language courses offered in secondary schools require special attention as they affect many students who learn English as one of their school subjects. Despite curricular provisions prescribing balanced development of language competence and a number of so-called "key competences", class work in Polish upper-secondary schools heavily focuses on developing students' selected language skills and language systems, i.e. the areas that are tested during school-exit exams, neglecting civic competences (i.e. group work) and digital skills. It is suggested that technology-assisted project-based language learning can help remedy this situation. Accordingly, the aim of this article is to outline a class project that illustrates the integration of project-based learning approach in language (English) and content (Polish language and culture) learning, the execution of which necessitates collaboration in groups, as well as the use of technology. It is hoped that the presented project will provide inspiration and guidance on how to engage upper-secondary school students in meaningful project work so that the development of target competences can be facilitated.

Keywords: project-based language learning; technology; upper-secondary school

1. Introduction

According to a recent Eurydice report *Key Data on Teaching Languages at School in Europe – 2017 Edition*, "English is unquestionably the main foreign language learnt in Europe. (...) in almost all European countries, English is the first foreign language or the language learnt by most students during primary and secondary education" (European

Commission/EACEA/Eurydice, 2017, p. 71). Needless to say, the quality and content of English language courses offered at schools require special attention as they affect many students who learn English as one of their school subjects. In Poland, efforts to ensure adequate foreign/second language (L2) education in schools have found their way into the *Core Curriculum for Modern Languages* – an official document that envisions the learning outcomes allowing school-leavers to effectively communicate in L2 in speech and writing (MEN, 2009[1]). In order to achieve it, curricular provisions prescribe balanced development of all language activities (i.e. speaking, writing, reading, listening, spoken and written interaction, oral and written mediation) and language systems (i.e. vocabulary, grammar, pronunciation, spelling). Apart from the aims pertaining to language learning outcomes, the Curriculum includes so-called "key competences" (e.g. digital and civic competences), the development of which is viewed as essential for effective functioning in the modern world (*Recommendation of the European Parliament and of the Council of 18 December 2006 on Key Competences for Lifelong Learning*, 2006).

In practice, however, it appears that class work heavily focuses on developing students' selected language skills and language systems, i.e. the areas that are tested during school-exit exams (Polish *matura*). English lessons are typically determined by various exam-preparation coursebooks and some learning outcomes stipulated in the *Core Curriculum for Modern Languages* tend to be neglected by Polish teachers of English. In particular, little attention is paid to developing civic competences (i.e. group work) and digital skills. Consequently, language education at the upper-secondary level may be neither stimulating nor comprehensive, depriving secondary school students of the necessary skills for adult life.

Project-based learning (PBL) can be regarded as a vehicle for helping students develop these important life skills. Among others, it allows students to engage in authentic activities, owing to which students have opportunities to learn while executing tasks, make decisions and solve problems in groups (Krajcik & Shin, 2014). PBL certainly has potential in L2 education – it can enhance students' motivation to L2 learning and develop language skills. Kolber (2012) argues that PBL can enrich school instruction if a project is designed with reference to the Core Curriculum (p. 34).

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[1] Currently, due to the ongoing reform in the Polish educational system, changes to the curricula have been implemented. Yet, the 2009 version of the *Core Curriculum for Modern Languages* is referenced to as it is still binding at the upper-secondary stage.

Regrettably, PBL is not applied in school settings on a regular basis (Kolber, 2012). One likely reason may be related to teachers' insufficient familiarity with the successful use of PBL at the upper-secondary level. Specifically, teachers may find it challenging to understand what a language project at this educational stage may involve, what outcomes to plan, how to implement and evaluate this learning experience, being limited by significant time and institutional constraints.

In view of that, the aim of this article is to support school teachers by outlining a project that can illustrate the use of PBL at the upper-secondary level. The described project integrates content (Polish language and culture) and language (English) learning, along with digital and civic (group work) skills development. It is believed that the Polish language subject (for Polish students) can constitute valuable content as it can enrich students' knowledge and develop the awareness of their own language and culture. Modern technology plays a vital role in the presented project. On the one hand, it facilitates the implementation of PBL by scaffolding the learning process and supporting group work. On the other hand, developing students' digital skills is seen as an important learning outcome, which is to be achieved through planned activities implemented in the project.

Accordingly, the present study starts with an overview of the theoretical background concerning PBL, steps to be taken by the teacher and the characteristics of the students in the project. What follows is a description of technology requirements and skills needed by students and teachers to perform project activities. Although the tasks were designed for Polish students (i.e. requiring the exploration of the Polish culture)[2], teachers in other countries can easily modify them to suit their own contexts. We hope that the presented plan will provide inspiration and guidance on how to engage upper-secondary school students in meaningful project work so that the development of target competences can be facilitated.

2. Literature review

2.1. Major principles of Project-Based Learning

PBL is a student-centred and inquiry-oriented instructional approach, defined as "a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or

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[2] The activities detailed in the current article constitute a part of a larger educational project, the aim of which was to evaluate the usefulness of gamification in developing key competences among upper-secondary school students. The project was implemented as an extracurricular activity in a Polish upper-secondary school in 2016/2017 academic year. For more details see Pitura and Chmielarz (2017).

challenge" (Buck Institute for Education, http://www.bie.org/about/what_pbl). It is a pedagogical approach that has been associated with situated and constructivist learning in which "students gain a deeper understanding of material when they actively construct their understandings by working with and using ideas in real-world contexts" (Krajcik & Shin, 2014, p. 275). Additional features attributed to PBL include in-depth inquiry, problem-solving and the application of critical thinking skills (Condliffe et al., 2017: 7).

The design of PBL experiences is governed by a number of principles, encompassing the areas of the curriculum, instruction, and assessment, as summarised by Condliffe et al. (2017). As regards curriculum design, it is recommended that PBL (1) starts with a problem to be solved by students, (2) focuses on learning goals related to school subject areas, critical thinking, self-regulation, and collaboration, (3) emphasises the process, owing to which student learning is made possible, (4) gives students enough time to conduct their investigation (pp. 5-7). Instruction in PBL, in turn, should (1) allow for construction of knowledge by engaging students in the process of inquiry, problem solving and critical thinking, (2) foster student engagement, (3) scaffold student learning by involving teachers, peers, materials, and technology in the whole process, (4) develop students' autonomy, (5) necessitate collaboration (pp. 7-10). Finally, assessment in PBL should (1) address products created by students that demonstrate student learning, (2) provide opportunities for self-assessment, student reflection and teacher feedback, (3) allow for the presentation of student products to a wider audience (pp. 10-11).

Additionally, it is claimed that the use technology can foster PBL implementation and increase its effectiveness (Condliffe et al., 2017, p. 2). Krajcik and Shin (2014) regard technology tools as helpful in facilitating learners' knowledge construction, finding, analysing, and sharing information online, collaboration, and developing multimedia products. Importantly, technology makes it possible "to extend what they can do in the classroom and serve as powerful cognitive tools that help teachers foster inquiry and student learning" (Krajcik & Shin, 2014, p. 287).

PBL is seen as an ordered process and includes a number of – variously named and defined – stages. For example, Fredricka Stoller (2006) enumerates them as follows: information collecting, processing, reporting, and evaluation (p. 27). Fragoulis and Tsiplakides (2009), following S. Kriwas, identify: "Stage 1: Speculation" (choosing the topic, raising students' interest), "Stage 2: Designing the project activities" (group formation, division of labour, choice of methodology, sources of information, etc.), "Stage 3: Conducting the project activities" (information collection, analysis and synthesis, the display

of the final product), "Stage 4: Evaluation" (of the activities, aims and goals, implementation of the process, and final products) (pp. 114-115).

2.2. Project-based language learning

PBL has been viewed as an effective and meaningful approach to both L2 learning and teaching (Beckett, 2006). It has gained the attention of many L2 researchers and practitioners as its application offers the conditions that are conducive for L2 acquisition, i.e. the opportunities for language learners to be exposed to comprehensible L2 input, to produce output, to interact in L2 and receive feedback on their production (Gass & Mackey, 2015). Project-based language learning (PBLL) is in line with various concepts in L2 learning and teaching, such as experiential learning, learner autonomy, cooperative learning, and critical thinking (Beckett, 2006: 5). What makes this approach particularly suitable for L2 learning is the authenticity inherent in this process, i.e. authenticity of text, purpose, audience and interaction (Stoller, 2006: 28). Beckett (2006) enumerates the following language-related areas in which PBLL has been of particular value: content-based second language education, English for Specific Purposes, project-based computer-assisted English as a foreign language education, community-based language socialisation, as well as teaching critical and higher order thinking and problem-solving skills (p. 4).

According to Stoller (2009), several conditions need to be fulfilled in order to create a successful PBLL experience, which largely coincide with the general PBL design principles discussed earlier in this article. In particular, PBLL should: (1) be oriented both towards the product and the process, (2) at least to a certain extent be defined by students, (3) be longer than one class period, (3) integrate all language skills, (4) integrate content and language learning, (5) involve group and individual work, (6) charge students with their own learning, (7) result in a product, (8) allow for student reflection on the process and the product (p. 24). Kolber (2012) enumerates the following features of effective L2 projects: (1) clear goals defined together with students at the initial stage of the project, (2) clear instructions including the theme, aims and methods of work, (3) clear division of labour in groups, (4) products presented to a wider audience, (5) tapping on a number of modalities – aural, visual and kinaesthetic – while receiving and conveying information, (6) reference to the situations familiar to students (pp. 34–35).

As mentioned earlier, technology has great potential for enriching the learning experience in project work and has also been applied in PBLL. Various terms are used in the

literature – such as "project-based CALL" or "PBCALL" (Debski & Gruba, 1999; Gu, 2011), "project-oriented computer-assisted language learning" or "PrOCALL" (Jeon-Ellis, Debski, & Wigglesworth, 2005), "Technology-Enhanced Project-Based Language Learning" or "TEPBLL" (Dooly & Sadler, 2016) – to denote the model of instruction which "stresses the ability of new technologies to enhance language learning based on team and individual activity that evolves around meaningful projects created by students and shared with world-wide audiences" (Debski & Gruba, 1999, p. 219). Technology can enhance PBLL as it facilitate communication, interaction and collaboration among learners and teachers, as well as enable the production of multimedia artefacts and the presentation of students' products to an audience (Gu, 2011; Debski & Gruba, 1999). Finally, technology in PBLL can be used with the aim of helping students "develop critical and creative thinking as well as the ability to produce and solve problems in a way that will have an impact on their lives and the lives of those around them" (Gu, 2011, p. 226).

Empirical research on PBLL has been growing in recent years. Research includes implementation reports (Tsiplakides & Fragoulis, 2009; Zhao & Beckett, 2014; Zhang, 2015; Petersen and Nassaji, 2016; Poonpon, 2017; Grant, 2017), studies on learner perceptions in PBLL (Kobayashi, 2006; Miller, Hafne, & Fun, 2012; Gibbes & Carson, 2013; Kuo, 2015), instructor experiences (Doherty & Eyring, 2006), studies on the effectiveness of PBLL (Simpson, 2011; Shafaei & Rahim, 2015), as well as studies that report the use of technology in PBLL (Debski & Gruba, 1999; Gu, 2011; Dooly & Sadler, 2016). The revealed benefits of incorporating project work in L2 settings can be grouped into three categories, i.e. benefits related to (1) knowledge, (2) skills and (3) attitudes. As far as knowledge is concerned, it is the consolidation of content learning that is seen as a significant outcome in PBLL. Regarding skills, gains have been reported with reference to decision-making, analytical and critical thinking, problem-solving, ability to function in groups, time management, cooperative learning. Among the attitudes, the following emerge: increased autonomy, independence, responsibility, a sense of ownership and pride in the project, stimulated interest, motivation, engagement, participation, enjoyment, improved self-confidence, self-esteem, positive attitudes towards learning, satisfaction with personal achievement, creativity (cf. Beckett & Slater, 2005; Beckett, 2006; Stoller, 2006; Tsiplakides & Fragoulis, 2009). On the other hand, some drawbacks have also been pointed out: the preparation and implementation of PBLL is time-consuming, teachers lack classroom management skills, and learners can perceive project work as difficult (cf. Gibbes & Carson, 2013).

All in all, despite its appeal, the design and implementation of PBLL with an appropriate use of technology can pose a challenge for school teachers. Based on our own success using PBL in school settings, the section below presents an outline of a project that may be relevant to L2 teachers at the upper-secondary school level. We hope that by presenting our project we will contribute to teachers' increased awareness of the value of this approach to L2 learning and teaching.

3. Description of the project "Truth about us saved on walls and in literature"

3.1. Project overview

The project "Truth about us saved on walls and in literature" was developed in cooperation of an academic teacher / CALL researcher (Author 1) and a teacher of the Polish language and culture employed in an upper-secondary school (Author 2). It is an out-of-class activity that integrates content (Polish language and culture) and English language learning, involving the use of technology and collaboration in small groups. The project necessitates the creation of a product within a period of one month. During this time students collectively gather information and resources, process and report the results. The theme, aim, method of work, as well as the product are defined by the educators, however, students are given freedom in deciding which task to embark on, how and when to execute the task. The project results in an online article featured on students' blogs or Padlets which can be accessed by the public.

3.2. The procedure

Step 1[3]

The teacher divides the class into teams comprising 3-5 students each. In teams, students choose the team's leader who will manage the team's work throughout the project. Next each team chooses the team's blogger, whose responsibility will be to start a free blog (e.g. www.wordpress.com) and to update it with regular posts, describing in English what each member does in the project. The teacher stresses that each team member needs to be involved in the project as their engagement will be evaluated and their blog posts will serve as evidence.

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[3] The stages of the project have been designed to better meet class reality and conditions.

Step 2

Students are provided with the introduction to the project and two tasks to choose from. The introduction and task description can be made available via Google Docs – the link can be forwarded to students by email. Alternatively, the teacher can start a project website using a free website builder (e.g. www.weebly.com) and provide instructions there. The text (introduction and two tasks) which the teacher can forward to his/her students is detailed below.

Introduction to the project

You are probably familiar with the Polish saying *Jak Cię widzą, tak Cię piszą*, which actually means that people are often judged by appearances and behaviour. But it is exactly this – how we behave and look – that is captured by artists, in street art or in literature. I hope that the tasks below will make you think about what truth about our lives in the modern world is saved on walls and in literature. You have two tasks to choose from. Each team chooses ONE task only.

Task 1. What do Warsaw murals say about us?

Graffiti and murals take up much of the city space in Warsaw (Poland). Artistic murals have been being created for about 10 years and the local government has increasingly supported such cultural initiatives. Murals come in various sizes: from small to big, they evoke various reactions – they amuse us, move us, or encourage us to reflect. They often commemorate important events or people. We can also find murals that depict current issues, such as multiculturalism, which can be exemplified by a mural showing people that come from various parts of the world. Without a doubt, murals change and bring variety to the Warsaw landscape, and bring old and dilapidated buildings back to life. Warsaw murals are worth seeing because our past is captured in them, our tradition is preserved, and often the truth about ourselves and our generation is hidden there.

I would like to invite you for a walk around Warsaw to take a look at the murals and to discover ones that have not been discovered yet. Next you will do a task the aim of which is to get you to:

- reflect on important events and people in our history,
- reflect on the problems that people today have to face and on how artists see and capture us in street art
- practise the skill of taking a critical look at reality and commenting on contemporary phenomena in a specific literary form.

Your task involves writing a column article in which you will include your own reflections on one specific Warsaw mural showing a present-day topic, contemporary reality, our achievements, problems or weaknesses. Add a photo / photos of the mural that is the source of inspiration for your text. For more details see assessment criteria below.

Present your work in the form of an online column article. Publish your column (the text + photos of the graffiti or mural) on your blog page or you can try out Padlet (https://padlet.com/). A YouTube tutorial on how to use Padlet can be found here: https://goo.gl/fkDLqr. If you decide to use Padlet, publish the link on your blog.

Language of the text (blog, column): English.

Your work will be assessed taking the following criteria into account:
- compliance with the task and the literary form
- an interesting title
- current topic
- clearly specified aim of the text
- clear beginning and clear end/conclusion
- interesting and original approach to the topic
- language finesse (poetic devices – min. three)
- using digression and contrasts (subjectivism in evaluating the examples; critical evaluative vocabulary)
- emotionally charged vocabulary (for example, humour, joke, irony)
- expressing opinion, prevalence of comments over information
- conclusion – for example, surprising, encouraging the reader to reflect
- attention to graphic text segmentation; organising the text (introduction, main body and end/conclusion)
- correctness: English language, spelling, punctuation, style
- length: min. 200, max. 500 words

Task 2. What does literature say about us?[4]

"Reading books is the most beautiful recreation that humankind has created" (Wisława Szymborska)

Leszek Kołakowski is an outstanding Polish philosopher. Not only is he the author of serious philosophical texts, but he is also the author of remarkable literary works. Admittedly, he raises philosophical topics, but in an allegoric and straightforward manner. *Tales from the Kingdom of Lailonia* (Polish: "13 bajek z królestwa Lailonii dla dużych i małych") is an example. These tales, just like *The Little Prince* by Antoine de Saint-Exupery, can be read by people of different ages and each reader will find something valuable there. These are stories that are presented with humour, that raise important and timeless problems, provoking questions about the condition of humankind and the world, giving rise to various reflections. Leszek Kołakowski arouses our interest to ask questions and look for answers. So this is Lailonia – a country that does not exist on any map, which humans are prompted to look for out of natural curiosity.

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[4] This task was inspired by the lesson plan designed by Justyna Sieradzka-Bizoń, available at http://legalnakultura.pl/pl/strefa-edukacji/strefa-dla-nauczycieli/scenariusze-lekcji/edukacja-filmowa

I am inviting you to have an adventure while you find out the protagonists' secrets (and also perhaps our own secrets) and discover the extraordinariness of Lailonia (and also perhaps of our own country) together with the characters in one of the tales, entitled "Outrageous mints" (Polish: "Oburzające dropsy").

I am inviting you to do the following task, which will help you to:

- reflect on the concept of stereotypes, mainly ethnic stereotypes
- consider the role that stereotypes play in social life
- learn about how stereotypes are created
- reflect on how stereotypes can be overcome
- look for and invent constructive solutions.

Your task involves reading the tale by the Polish philosopher, Leszek Kołakowski, "Outrageous mints" (In: *Tales from the Kingdom of Lailonia & The Key to Heaven*, a few sample pages available at: https://goo.gl/5882Kw). You will next present the content of the tale in the form of an online book: select artwork to illustrate it and create the text in English. Then add the continuation of the tale. Show what stereotypes are and how they are created. While continuing the story, look for solutions, pointing to ways in which stereotypes can be overcome. Present the content of this work in the form of an online book. For more details see assessment criteria below. Publish the link to your online book on your team's blog.

Present your work in the form of an online book. Use this tool to create your online book: Storybird (https://storybird.com/). A YouTube tutorial on how to use Storybird can be found here: https://goo.gl/tQ5ejb.

Language of the text (blog, online book): English

Your work will be assessed taking the following criteria into account:

- creativity and originality in showing the topic and formulating the punchline of the tale
- word-picture symmetry (matching illustrations with text)
- interesting details
- comprehensibility of the composition and content
- aesthetics of the ebook
- English language and stylistic correctness
- length: 8-12 pages

Deadline for task submission: [the teacher assigns the date, 3-4 weeks is optimum time for teams to complete their tasks]

Send the link to your blog to this address: [e.g. teacher's school email].

Leaders, do make sure that each team member is involved in task execution. Bloggers, remember to describe what each team member did during the task.

Step 3

Students work in teams on their projects outside of class and send links to their blogs on the stated date. The teacher encourages students to do parts of their work online using Google Hangouts or Skype, e.g. while planning and discussing their work.

Step 4

The teacher assesses teams' products and assigns points taking into account the criteria listed in the task (language, subject matter) as well as each team member's engagement in the project as described on the blog (assessment of group work). Suggested scoring:

- Language – max. 9 points
- Subject matter – max. 20 points
- Group work – max. 6 points
- Total – max. 35 points

The teacher sends the score and individual feedback to each team on: 1) language, 2) subject matter, 3) cooperation in the team. The teacher announces the results – team scores can be displayed in the class and/or on the project website. Additionally, the teacher can add links to teams' blogs on the project website.

Step 5

The teacher carries out the evaluation of the project by asking students what they have learned, what they liked, what was challenging for them and how they dealt with the problems, etc.

3.3. Technology requirements and skills

The teacher needs to have a computer/laptop and access to the Internet to provide project details and later to assess teams' work. A projector will be useful while introducing the project and showing the results. The students need their own computers/laptops and access to the Internet to participate in the project.

General computer/digital literacy is needed to carry out the project. No previous knowledge of the applications or online resources is required – the teacher and the students use YouTube tutorials while working towards their projects.

4. Discussion and pedagogical implications

The aim of the current article is to present a structured PBLL activity that can be implemented in an English language classroom with upper-secondary school students. The outlined project illustrates the integration of PBL in language (English) and content (Polish language and culture) instruction, the execution of which necessitates collaboration in groups and the use of technology. This project turned out to be meaningful and inspiring for students in our own experience – teams enjoyed group work and fully engaged in the project execution outside of school. The written output in English – blogs and columns – was shared with a wider audience, which contributed to students' sense of achievement, satisfaction and group pride.

The described project aims to show that the use of PBLL to integrate content and language learning can be an innovative vehicle for modern didactics. We observe that in a PBLL learning environment students have a chance to learn faster and easier while the acquired knowledge seems to be longer-lasting. If a project is designed and enacted in a carefully planned and principled manner, students are not bored and teachers can achieve the intended educational goals.

It is worth emphasizing that the integration of various school subjects is possible, even of the subjects that, apparently, do not have much in common, such as Polish, English, cultural studies, and Information Technology. By editing a column about contemporary reality in the English language, and then by posting it on a blog or Padlet, students – first and foremost – consolidate their knowledge about the genre form and the principles of writing a column. Additionally, they nurse the culture of the word on the Internet and linguistic and grammatical correctness – both in Polish and in English. Finally, it is an appropriate exercise to develop the ability to critically look at the reality and comment on contemporary phenomena in a specific literary form on the Internet in a cultivated manner.

By combining content and skills in a PBLL activity teachers can show students that the acquired knowledge serves a purpose and is useful in many areas. This approach stimulates and develops students' thinking and enables students to notice that what they learn from books at school is not detached from everyday life. Additionally, independent work on the chosen problems gives the teacher a chance to raise student commitment and interest in the topic.

Another undeniably positive effect of PBLL involves the development of skills associated with adult life. Students can practise the art of being part of and communicating in a group, i.e. expressing opinions, listening to the opinions of others, resolving conflicts,

making group decisions, keeping deadlines and undertaking the assigned duties. This kind of instruction enables young people to adopt a strategic approach to their own learning and to take responsibility for their decisions.

Being aware of the fact that new technologies constantly accompany young people both at school and in their pastime and that technology and the Internet are part young generation's life, this project accommodates the use of modern technology. It follows young people's need of being part of the digital world, but it also allows for the development of new digital skills. Teachers should not resist something that has already become a fact – it is worth giving students freedom to acquire and consolidate knowledge with technology, at the same time teaching them how to use it effectively and wisely.

Conclusion

Changes in educational practice are necessary – they should follow the civilisation trends in order to genuinely assist modern students in their development. For this reason, teachers need to apply the pedagogical solutions that allow for the acquisition of essential knowledge and skills for a fulfilling life in adulthood. PBL certainly has potential to address this need, yet, it seems that there is not enough problem-based instruction in L2 education at the upper-secondary level – the problem which may be caused by teachers' uncertainty related to the usefulness of technologically-enhanced PBLL. We hope that our project sheds some light on the specificity of technology assisted PBL in L2 education and that it will be of interest to English language teachers who will find these tasks appropriate for their upper-secondary school students.

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THE IMPACT OF USING *PIXTON*
FOR TEACHING GRAMMAR AND VOCABULARY
IN THE EFL ECUADORIAN CONTEXT

by **Paola Cabrera,** pacabrera @ utpl.edu.ec

Luz Castillo, lmcastillox @ utpl.edu.ec

Paúl González, pfgonzalez @ utpl.edu.ec

Ana Quiñónez, alquinones @ utpl.edu.ec

César Ochoa, caochoa @ utpl.edu.ec

Universidad Técnica Particular de Loja

San Cayetano Alto, Loja, Ecuador

Abstract

This study examined the use of *Pixton* for enhancing grammar and vocabulary teaching in a public high school in the South region of Ecuador. In this intervention, 163 junior high school learners and 14 pre-service English teachers participated during a period of 4 months. The data for this study was obtained by gathering information from pre and post-questionnaires, pre and post-tests, and observation sheets. Students were divided into control and experimental groups. The control group (78 students) received English lessons without using *Pixton*, while the experimental group (85 students) used *Pixton*. After analyzing the data quantitatively and qualitatively, the results indicate that *Pixton* is an effective teaching tool that motivates students to learn grammar and vocabulary in an enjoyable way; this was evident through an improvement in students' post-test scores in the experimental group.

Keywords: *Pixton*; grammar and vocabulary; comic strips; EFL teaching

1. Introduction and background

The study of grammar and vocabulary is considered an essential element when teaching and learning English as a Foreign Language (EFL). Grammar plays an important role in second language acquisition since learners can use grammar rules to build sentences in order to express themselves accurately (Mart, 2013). Another remarkable component of language teaching is vocabulary because its acquisition is crucial for successful second language learning. Certainly, vocabulary allows the use of structures and functions that benefit communication (Nunan, 1991).

An effective way to teach both grammar and vocabulary is the use of visual aids through comic strips because it is motivating and more appealing for students to learn a

foreign language (Derrick, 2008). In this context, the use of technological tools is effective for designing comic strips. One of these tools is *Pixton*, which is an attractive platform designed to create comic strips online. By means of *Pixton*, teachers can create visual materials that engage students' participation. In addition, this tool facilitates the production of dialogues using the contents of the subject in relation to their learning styles and preferences.

Some authors have investigated the connection between the use of comic strips in language learning, focusing on teaching academic reading (Engler, Hoskis & Payne, 2008), grammar activities (Kılıçkaya & Krajka, 2012), reading comprehension (Merc & Kampusu, 2013), and reading strategies (Cimermanová, 2015). Nevertheless, none of these studies have been focused on the use of *Pixton* to enhance grammar and vocabulary teaching.

Pixton is an easy-to-use and intuitive tool that promotes collaborative work, creativity, and critical thinking. It also includes options for providing feedback, sharing content online, and downloading comic strips (Lee, 2013). These features allow Ecuadorian EFL teachers to incorporate *Pixton* into their English lessons easily and become more familiarized with this tool to create comic strips. Of course, there are other online tools (e.g. *Comic Life, Make Belief Comix, Strip Generator, Comic Creator*, etc.) that are useful to create comics (Quertime.com, 2017), but *Pixton* is more accessible in the Ecuadorian context. Therefore, this study is aimed at using *Pixton* to teach grammar and vocabulary.

2. Literature review

2.1. Teaching EFL grammar

Grammar is an important component of a language that allows learners to understand its structure. It can be defined as "a system of meaningful structures and patterns that are governed by particular pragmatic constraints" (Larsen-Freeman, 2009: 518). Similarly, Mart (2013) states that grammar is a set of rules that plays a significant role in language acquisition because it helps learners combine and organize words in order to build sentences, and express their thoughts properly. Furthermore, Richards and Reppen (2014) state that grammatical knowledge involves learning the rules to form sentences, whereas grammatical ability refers to the use of grammar as a resource to communicate orally or in writing.

Regarding grammar teaching, Özcan (2015) asserts that grammar has a paramount role in teaching and learning languages, and it is one of the most challenging aspects to be taught. Grammar teaching also helps learners discover the nature of language, which consists of predictable patterns that make it comprehensible (Azar, 2007). For these reasons, teaching

grammar must be a crucial part of the teachers' methodology because it helps students develop their linguistic competence in a foreign language.

In the context of EFL methodology, grammar rules can be taught inductively or deductively. In the inductive approach learners study examples and based on these they discover the grammatical rule. Conversely, in the deductive approach the grammatical rule is first introduced and learners engage with it by practicing through the use of examples (Thornbury, 1999).

Another approach that allows students to develop both accuracy and fluency in the use of a target grammar structure is PPP (Presentation-Practice-Production). In the first stage (Presentation), an explanation of the grammar point is provided, sometimes by pointing out the differences between L1 and L2. In the second stage (Practice), students use the grammar structure through oral drills and writing tasks in order to develop accuracy. In the third stage (Production), students are given opportunities for the communicative use of grammar, which is essential to improve fluency (Larsen-Freeman, 2009).

2.2. Teaching EFL vocabulary

Vocabulary can be defined as "words we must know to communicate effectively" (Neuman & Dwyer, 2009: 385), which means that vocabulary should be considered as more than a set of single word units (Schmitt, 2008). In this respect, it is almost impossible to learn a language without words; even communication among human beings is based on words (Walters, 2004). An extensive vocabulary would allow us to use the structures and functions for comprehensible communication (Nation, 2012).

Teaching words is an essential aspect when learning a language as languages are based on words (Thornbury, 2002). In fact, in English as a Second Language (ESL) and EFL, learning vocabulary items plays a vital role in the acquisition of the four language skills – listening, speaking, reading, and writing (Nation, 2011). Stahl and Shiel (1992) state that vocabulary instruction directly improves comprehension. They point out that it is important for students to have a deep understanding of academic vocabulary in order to comprehend new concepts and communicate what we know. Therefore, the acquisition of appropriate vocabulary is the core for successful language use.

Regarding second and foreign language vocabulary acquisition, fluency and accuracy are important aspects to be developed. In this respect, the PPP approach is a common method to teach vocabulary. For example, in the presentation stage, there are some options that can be used to introduce vocabulary such as realia, pictures, actions, gestures, definitions, translation

and situations (Thornbury, 2002). The practice stage is supposed to develop accuracy through oral and written exercises, receptive-productive tasks, individual and group activities. In the production stage, which is intended to develop fluency, the activities are focused on eliciting the newly learned words (Criado, 2013).

2.3. *Pixton* as a resource for creating comic strips in EFL teaching

According to Derrick (2008), ESL and EFL teachers can use comic strips, comic books, and graphic novels to promote their students' language skills. They can also be used as a basis for different activities to motivate learners and foster significant discussions. Azman, Zaibon and Shiratuddin (2015) claim that comics constitute an opportunity for using visual techniques, which might be used by EFL teachers to encourage effective learning. In addition, comics are valuable resources because they help learners generate ideas and retrieve words for language production (Megawati & Anugerahwati, 2012).

There are many tools available that are used to design comics, for example, *Make Belief Comics, Strip Generator, Comic Life, Comic Creator, Pixton*, etc. (Quertime.com, 2017). However, some of these tools have a few disadvantages. In the case of *Make Belief Comics*, despite being a popular tool for comic making, the user cannot change the color of the characters; *Strip Generator* does not provide the opportunity to show your own style and creativity; *Comic Creator* is not very popular among users because of its website design. Other more complete tools to create comics are *ToonDoo*, *Comic Life* and *Pixton*.

In the case of the present study, *Pixton* was selected because it is an easy-to-use and intuitive tool that promotes collaborative work, creativity, and critical thinking. These characteristics help students develop their imagination, interaction, and entertainment. In addition, this software allows personalization without the need to build from scratch and is an excellent option to monitor students' comprehension of grammar and vocabulary in the target language (McMeekin, Burnham, & Dietz-Hartmann, 2016), which makes it a great tool for language teaching.

2.4. Previous studies into the use of online comic-generation applications

With respect to previous research, although there is practically no formal research on the use of *Pixton*, there are studies that address the issue of comic strips for teaching languages.

Engler, Hoskis, and Payne (2008) conducted two pilot projects involving the use of the software application *Comic Life* to supplement assigned academic readings. The first project involved 139 university students, whose English proficiency level ranged from

intermediate to high-intermediate. Half of the subjects were given a summary of a reading in the comic format, and the statistic results were compared to determine if the comic helped comprehension. The subjects were also given a questionnaire aimed at knowing their perceptions of the comic. In the second project, 48 students at the same level of proficiency developed their own comic summary of a given academic reading. This second project was evaluated through teacher observation, peer comments, and a questionnaire. The results for both of these pilot projects strongly support the efficacy of using computer-generated comics as a supplement for academic readings.

A pilot study carried out in Greece by Vassilikopoulou, Retalis, Nezi, and Boloudakis (2011) used digital educational comics in language teaching in high school. Twenty-four high school students (aged 12-13) participated; they were asked to practice digital storytelling and to design and create digital comics based on their preferences and experiences. The results of a student questionnaire indicated that the majority of them preferred their courses to be taught with the help of digital comics. This case study also showed that comics can be used in language teaching because they are widely accepted by students. In addition, the comic creation process helps students acquire linguistic skills and use their imagination for creating multimodal texts.

Kılıçkaya and Krajka (2012) integrated comic strip creation software into EFL classes for grammar activities with the purpose of seeing whether participants enjoy creating comic strips and whether this facilitates grammar and sentence writing in EFL learning. The information was collected from 25 Turkish EFL learners (aged 14-18) who were enrolled in a pre-intermediate General English class in Turkey. Learners were trained to use an online comic strip creation site (http://www.makebeliefscomix.com). Then, they created at least five comic strips (1 per week) related to the grammar topics studied for five weeks. The output produced by the participants was analyzed qualitatively to investigate their use of grammar and the quality of the sentences. The participants also completed a questionnaire about their perceptions on the use of comic strip creation in the EFL classes received. The integration of comic strip creation software into grammar activities and sentence writing in the EFL class had a positive response from students and increased their motivation.

Merc and Kampusu (2013) conducted a study to determine the effects of comic strips on EFL reading comprehension in Turkey. The participants were a total of 167 university students from lower-intermediate to upper-intermediate proficiency level, who were divided into four experimental groups. Each group had to read some texts and write about them on separate answer sheets. The Immediate Recall Protocol (IRP) was used to analyze data

obtained based on a sample value list. Results showed that all students with a comic strip effect, regardless of proficiency and text level, performed better than the ones without the comic strips. In fact, the use of comic strips noticeably improved the reading comprehension of students at both levels. Findings also showed that students are better at understanding reading texts that are accompanied by visuals.

Cimermanová (2015) examined the possible effects of using authentic comics in four novice EFL learners. The aim was to find out to what extent students apply reading strategies, namely previous knowledge, vocabulary, syntax, and context in reading new texts that included comics. The information for this illustrative qualitative study was collected from observations, discussions, verbal reports and students' writing. In order to develop reading strategies, different cartoons and comics were used. This procedure was based on the presumption that it might be easier to read the context with the support of an image since it can produce very positive feelings and higher motivation in learners. The results showed positive effects on vocabulary development and motivation to read and overcome linguistic barriers in reading authentic material through the use of context and prior knowledge.

A recent study that includes the use of comics as one of the strategies to learn a language is the one conducted by Pitura and Chmielarz (2017). The aim of this study was to investigate the usefulness and feasibility of applying gamification to an extracurricular Content and Language Integrated Learning (CLIL) project intended to develop key competences in an upper-secondary school in Poland. The Polish EFL students had to design and implement some projects that addressed contemporary, biological and social issues. The tasks of this project included a survey about the topic, interviews with scientists, and the creation of comic strips to report the conclusions. For the creation of the comic strips, the students used online tools such as *Google Forms, Storyboard That*, or *Stripgenerator*. The results show educational and emotional gains, suggesting the motivational effect of gamified extracurricular CLIL activities.

Based on the aspects analyzed in the introduction and literature review, the research questions to be addressed are the following:

- How do teachers and students perceive the use of *Pixton* to enhance grammar and vocabulary?
- How effective is the use of *Pixton* to enhance grammar and vocabulary?

3. Methodology

3.1. Setting and participants

This study was conducted in a public high school in the southern region of Ecuador. The participants were 163 students (male and female, aged 12-14 years old) who were taking EFL classes as part of the study plan established by the Ecuadorian Ministry of Education. In addition, 4 male and 10 female English teachers participated in this research.

The study followed a pre-test-post-test quasi experimental-control group design. The experimental group included 85 students, who participated in the activities using *Pixton*, and the control group, which consisted of 78 students, attended regular English classes without using this tool.

The participants received five periods (45 minutes per period) of English classes per week and were enrolled in the eighth year of junior high school. These students, according to the Ecuadorian Ministry of Education, represent the A1 proficiency level of the *Common European Framework of Reference for Languages* (CEFR; Council of Europe, 2001).

3.2. Instruments

- A pre-test was administered to students in order to determine their knowledge of grammar and vocabulary. This instrument was based on the contents of the students' course book provided by the institution and contained 20 multiple-choice items that were graded with a maximum score of 20 (see Appendix 1).

- A pre-questionnaire that consisted of 11 close-ended questions was applied to students in order to diagnose their technological skills for learning English grammar and vocabulary (see Appendix 2).

- A post-test was also administered to measure the students' level of improvement in comparison with the results obtained in the pre-test. This instrument included 20 multiple-choice questions that were graded out of 20 points (see Appendix 3).

- A post-questionnaire was applied to students with the purpose of determining their opinion on the use of *Pixton* as a resource for learning grammar and vocabulary. This instrument consisted of a combination of 11 multiple-choice and open-ended questions (see Appendix 4).

- A teachers' questionnaire, which attempted to inquire about their perceptions on teaching grammar and vocabulary through the use of *Pixton*, was also administered. This instrument consisted of a combination of 11 multiple-choice and open-ended questions (see Appendix 5).

- An observation sheet was used to register different aspects related to students' attitudes, teaching strategies, activities, and quality of the materials designed through the use of *Pixton* (see Appendix 6).

3.3. Procedure

The data for this study were gathered for a period of 4 months in the academic year 2016-2017. A quasi-experimental design was used in order to carry out this research. According to Creswell (2015), in a quasi-experimental design the participants are not randomly selected in order to test an idea, practice or procedure to determine if it influences an outcome. In this case, we have tested the use of *Pixton* and its effect on learning vocabulary and grammar in the English classroom.

The groups of students for this study were selected according to the class they were registered in in the educational institution in which the intervention was conducted. There were a total of 7 groups, out of which 4 received English classes that included activities with *Pixton* and 3 did not take classes using this tool.

Both groups were taught grammar and vocabulary by means of the textbook and supplementary materials. The activities in class included group work, pair work, dialogues, cloze activities, and practice of the four skills. In the experimental group, teachers designed supplementary materials using *Pixton* exclusively; however, in the control group, teachers used supplementary materials such as posters, flashcards, *PowerPoint* presentations, etc.

Before administering the questionnaires, they were piloted by applying them to 20 high school students in order to improve the questionnaires' reliability and validity. Due to the students' low EFL proficiency level, the pre- and post- questionnaires were translated into Spanish (the students' mother tongue). At the beginning of the five-month intervention period, a pre-questionnaire and a pre-test (in the first and second periods of class respectively) were administered to all of the 163 students. Additionally, 14 teachers were asked to respond to a questionnaire about teaching grammar and vocabulary through the use of *Pixton*. At the end of the intervention, a post-questionnaire about the experience of using *Pixton* was applied to the experimental group (85 students), and a post-test was administered to all of the participants. During the intervention period, five researchers observed 4 random lessons each (20 English lessons in total), focusing on different aspects related to students' attitudes, teaching strategies, activities, and quality of the materials designed through the use of *Pixton*. These aspects were registered on an observation sheet.

After gathering and organizing the data from the questionnaires, pre-tests, and post-tests, SPSS software was used in the analysis of the results; thus, descriptive and inferential statistics (with a confidence level of 95%) were applied, and the results of pre- and post-questionnaires, as well as pre- and post-tests from the experimental and control groups, were compared and contrasted.

4. Results and discussion

Before the intervention, a pre-questionnaire was applied in order to obtain some background information about students' technological skills for learning English grammar and vocabulary. In general terms, the technological tools that teachers use in the English classroom seem to be scarce since almost half of the students (43.56%) asserted that their teachers do not use any technological resources in their classes. However, there are some students who asserted that videos (18.4%), *PowerPoint* presentations (11.04%), and social networks (10.43%) have been used.

In relation to the use of technological tools for developing grammar and vocabulary activities, almost 60% of students (59.51% for grammar activities and 56.44% for vocabulary activities) affirmed that their teachers have not used these tools in their English lessons. However, some learners mentioned that their teachers have used technology in grammar (32.52%) and vocabulary activities (35.58%).

The majority of students affirmed that when their teachers use technological tools, they feel motivated (74.23%) because they facilitate the language learning process. On the other hand, a quarter of the students (25.76%) do not feel motivated with the use of technological tools that their teachers apply in their lessons, mainly because they consider that their low proficiency level impedes them to successfully develop the activities proposed.

Based on the opinions above, we observed that students practically had not received English lessons that incorporate technological tools, let alone online comic strips for teaching grammar and vocabulary.

4.1. Perceptions about the use of *Pixton* to enhance EFL grammar and vocabulary

At the end of the intervention, a post-questionnaire was applied to the experimental group, who considered that the use of *Pixton* for learning EFL grammar was very useful (51.06%). Furthermore, an significant amount of students (19.14%) asserted that comic strips are highly useful for learning grammar. Regarding vocabulary, *Pixton* seems to be very useful (54.97%) and some students (13.90%) believe that it is highly productive for improving vocabulary

knowledge (see Table 1). This effectiveness was confirmed in the results of the class observations, teachers' questionnaire and tests.

Table 1. Usefulness of Pixton for learning EFL grammar and vocabulary

Grammar	%	Vocabulary	%
Highly useful	19.14%	Highly useful	13.90%
Very useful	51.06%	Very useful	54.97%
A little useful	18.44%	A little useful	19.20%
Not useful	8.51%	Not useful	5.30%
No answer	2.84%	No answer	6.62%
Total	**100%**	**Total**	**100%**

Students were asked to rate the use of comic strips as original, motivating, or useful. Indeed, most of the students did rate the use of comic strips as original (50.31%), motivating (59.76%), or useful (71.67%). Teachers had a similar view regarding the use of *Pixton* in their classes. They consider that comic strips are an innovative teaching aid, which enhances motivation and allows teachers and students to create original scenes that are easy to be produced, displayed, and understood.

With respect to the characteristics of comic strips created with *Pixton*, students expressed their opinions about the language in the dialogues, the images included, the characters, and the scenery used in the comic strips (see Figure 1). As regards language, most of the students (74.53%) considered that the messages conveyed in the dialogues, as well as the images (80%), were clear and appropriate; they also liked the characters (66.41%) and the scenery used in the comic strips (69.53%). Teachers agreed with the students' positive perception of *Pixton* in terms of language, images, characters and scenery since they did not find it difficult to create the comic strips to meet the students' needs. In fact, *Pixton* allows users around the world to express themselves, share techniques, and create comics that are enjoyable, instructive, educative, and inspiring (Delwiche & Henderson, 2012).

Figure 1. A sample comic strip created with *Pixton*

In addition, almost a half of the students (41.51%) believed that their teachers' instructions were very clear when using comic strips, other students (38.99%) perceived those instructions as clear. With respect to teachers' perceptions, they did not have any difficulties in providing clear explanations.

Finally, the majority of students (85.06%) agreed that they would like their teachers to continue using comic strips in class. In addition, teachers affirmed they would like to design comic strips with *Pixton* to enhance their students' knowledge of grammar and vocabulary. In this respect, teachers can use this tool to enhance students' imagination and autonomy because the learner becomes an active agent of the learning process (Valle, 2014).

4.2 Effectiveness of using *Pixton* to enhance EFL grammar and vocabulary

The results of the pre-test administered to both groups to identify previous knowledge about grammar and vocabulary show that the experimental group obtained an average of 8.84 points and the control group 8.68 points. Thus, we can observe that, before the intervention, there was no significant difference (t= 0.2788, p= 0.7808) between these two groups in relation to their proficiency in EFL grammar and vocabulary.

As regards the post-test administered to both groups, the results show that students in the experimental group significantly increased their score (t= 3.9294, p= 0.0001). These results (see Table 2) make it evident that the use of *Pixton* helped the students in the experimental group to increase their EFL grammar and vocabulary knowledge. This means that *Pixton* was an effective tool to enhance grammar and vocabulary in these students. With

respect to the control group, the increase in the post-test scores might be attributed to the regular teaching process that English teachers followed as part of the junior high school curriculum.

Table 2. Results of the post-tests in the experimental and control group

Post-test		
Group	Experimental	Control
Mean	11.911	9.803
D	3.317	3.532
	t= 3.9294 **p**= 0.0001	

These results demonstrate that *Pixton* is an important, effective, and innovative tool to teach EFL grammar and vocabulary, which according to teachers and students' perceptions constitutes a creative option for designing didactic materials through the use of comics. Even though previous studies that explored the effectiveness of comic strips for learning a second language (Engler, Hoskis, and Payne, 2008; Vassilikopoulou, Retalis, Nezi and Boloudakis, 2011; Kılıçkaya and Krajka, 2012; Merc and Kampusu, 2013, Cimermanová, 2015, and Pitura and Chmielarz, 2017) have concluded that comic strips are very useful in this area, our study emphasizes the use of *Pixton* to teach EFL grammar and vocabulary.

5. Conclusions

The use of comic strips through *Pixton* motivates students in the learning process because it is an engaging and enjoyable tool that facilitates grammar and vocabulary learning. Furthermore, teachers believe that comics are original and useful as a teaching aid to create a good classroom environment and get students' attention when learning grammar and vocabulary.

The use of *Pixton* facilitates EFL grammar and vocabulary teaching because its characteristics allow teachers to create didactic materials as well as to use dialogues, images, characters and sceneries in comics that promote collaborative work, creativity, and critical thinking.

Clear instructions, as an essential part of the teachers' methodology when using activities with Pixton, are indispensable for successful vocabulary and grammar learning when teaching young students.

Even though at the beginning of the study the grades of the pre-test were low in both the experimental and control group, after the intervention there was an increase in students' scores. However, the improvement in the experimental group was higher than in the control group, which indicates the effectiveness of using *Pixton* to enhance grammar and vocabulary in EFL students.

Acknowledgements

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Appendix 1. Pre-test

Circle the letter of the correct answer.

1) How are you? A) I am very well, thank you. B) My name is Ahmet. C) Nice to meet you.	9. Hi, I ____ Japanese. A). is B.) are C). am
2) What is your name? A) Her name is Susan. B) I am from Susan C) My name is Susan.	10. Hello, _____ you Susan, right? A) is B) are C) am
3) Where are you from? A) I am from Cuenca. B) Good afternoon Mr Smith. C) I am ten years old.	11. This is Thomas. _____ is from Amsterdam. A) She B) He C) It
4) How old are you? A) I am from Zamora. B) My name is Clara. C) I am thirteen years old.	12. I'm from Lima. _____ is the capital of Peru. A) She B) It C) He
5) What is your job? A) My name is Murat. B) I am a teacher. C) He is from Mexico.	13. Shakira's from Colombia. She is a _____ singer. A) Colombia B) Colombian C) Colombianist
6) What color is your car? A) It is very big. B) They are green. C) It is grey.	14. The car belongs to Peter. It is _____ car. A) he B) her C) his
7) Tom is from Berlin. His nationality is ___. A) Germany B) German C) Germania	15. The bag belongs to Mary. It is _____ bag. A) her B) my C) his
8) David is from New York. His nationality is __ A) American B) Canadian C) England	16. The bike belongs to me. It is _____ bike. A) His B) Her C) my
17. The food festival is ___ January 20th. It's the ___ morning ___ 10:30. A) on / in / at B) at / on / in C) in / at / on	18. _____ the party? A) What time B) When is C) When are
19. People invite Susan to parties. She is _____ . A) chubby B) sociable C) curly	20. _____ the concert? A) What time is B) What is C) What is time

Appendix 2. **Students' pre-questionnaire**

Purpose: The aim of this questionnaire is to collect information to identify prior knowledge about the use of *Pixton* as a technological tool for learning EFL grammar and vocabulary.

Part 1: Background information

1. Gender:

Male   (   )

Female   (   )

2. Junior high school year: 8th (   )   9th (   )   10th (   )

3. Age: _____ years.

Part 2: Basic technological skills

4. Have you used technological tools for learning grammar in the EFL classroom?

Yes   (   )

No   (   )

5. Have you used technological tools for learning vocabulary in the EFL classroom?

Yes   (   )

No   (   )

6. Explain your experience while learning English by using technological tools.

_____

_____

_____

_____

7. Which of the following technological tools has been used by your teachers for teaching English?

PowerPoint   (   )

Forums   (   )

Pixton   (   )

Videos   (   )

Social networks   (   )

Others (explain): _____

Part 3: Knowledge of grammar and vocabulary

8. How do you rate your level of English grammar knowledge?

Excellent   (   )

Very good   (   )

Good   (   )

Needs improvement   (   )

9. How do you rate your level of English vocabulary knowledge?

Excellent   (   )

Very good   (   )

Good   (   )

Needs improvement   (   )

10. Do you think that the use of technological tools in the English class is motivating?

Yes   (   )

No   (   )

11. Why do you consider that the use of technology in the English class is motivating?

_____

_____

_____

_____

Thanks for your cooperation

Appendix 3. Post-test

Choose the best option.

1) How are you? A) I am very well, thank you. B) My name is Susana C) See you later	11. This is Luis . _____ is from Amsterdam. A) She B) It C) He
2) What is her name? A) Her name is Karina. B) I am from Quito. C) My name is Karina.	12. I'm from Caracas. _____ is the capital of Venezuela. A) She B) It C) He
3) Where are you from? A) I am in Ambato. B) I live in Azogues. C) I am from Guayaquil.	13. The dress belongs to me. It is _____ dress. A) his B) her C) my
4) How old are you? A) I have fifteen. B) I am fine. C) I am thirteen years old.	14. The computer belongs to him. It is _____ computer. A) he B) her C) his
5) What is your job? A) She is a teacher. B) I am a teacher. C) He works in Mexico.	15. The pen belongs to Mary. It is _____ pen. A) her B) my C) his
6) What colour is your bag? A) It is very big. B) They are green. C) It is grey.	16) The birthday party is ___ January 20th. It's ___the morning ___ 08:30. A) on / in / at B) at / on / in C) in / at / on
7) David is from Guadalajara. His nationality is ___. A) Mexico B) Mexican C) Mexicanian	17. They invite Carmita to parties. She is _____ . A) chubby B) sociable A) curly
8) Pablo is from Miami. His nationality is __ A) American B) Canadian C) England	18. What time is the soccer game? A) It's at nine to ten. B) It's on Wednesday. C) It's tomorrow.
9). Hi, I ____ Chinese. A) is B) are C) am	19. _____ the meeting? A) What time is B) What is C) What is time

10. Hello, _____ you Rose, right? A) is B) are C) am	20. _____ the concert? A) What time B) When is C) When does

Appendix 4. Student's post-questionnaire

Purpose: The aim of this questionnaire is to gather information to determine your perception on the use of comic strips as a resource to learn grammar and vocabulary in English.

Part 1: Background information

1. Gender

Female   (   )

Male   (   )

2. Junior high school year: 8vo (   )   9no (   )   10mo (   )

3. Age: _____ years

Part 2: Perceptions on the use of comic strips

4. Learning grammar in English is:

Very easy   (   )

Easy   (   )

Difficult   (   )

Very difficult   (   )

Explain your response: _____

_____

_____

5. Learning vocabulary in English is:

Very easy   (   )

Easy   (   )

Difficult   (   )

Very difficult   (   )

Explain your response: _____

_____

_____

6. How effective has been for you to use comic strips to learn grammar in English? Choose only one alternative.

Highly effective   (   )

Very effective   (   )

Scarcely effective   (   )

Non-effective   (   )

7. How effective has been for you to use comic strips to learn vocabulary in English? Choose only one alternative.

Highly effective   (   )

Very effective   (   )

Scarcely effective   (   )

Non-effective   (   )

8. How would you rate the use of comic strips to learn grammar and vocabulary in English?

	Yes	No
Original	( )	( )
Motivating	( )	( )
Useful	( )	( )

9. Which is your opinion about the next aspects?

	Yes	No
The language of the dialogues was clear and appropriate	( )	( )
The images were clear and appropriate	( )	( )
The characters were appealing to you	( )	( )
The scenery was appealing to you	( )	( )

10. The instructions given by your teacher when doing the activities using comic strips were:

Highly effective   (   )

Very effective   (   )

Scarcely effective   (   )

Non-effective   (   )

11. Would you like your teacher to continue using comic strips to teach English in the future?

Yes   (   )

No   (   )

Explain your response: _____

_____

_____

Thanks for your cooperation

Appendix 5. Teachers' questionnaire

Purpose: The aim of this questionnaire is to obtain information concerning your perceptions about the use of comic strips as a tool for teaching EFL grammar and vocabulary.

Part 1: Background Information:

1. Gender

Female (   )

Male   (   )

2. School year: 8th (   )   9th (   ) 10th (   )

   Other: _____

Part 2: Perceptions on the use of comic strips

3. According to your opinion, teaching EFL grammar is:

Very easy   (   )

Easy   (   )

Difficult   (   )

Very difficult   (   )

Why?

_____

_____

_____

4. According to your opinion, teaching EFL vocabulary is:

Very easy   (   )

Easy   (   )

Difficult   (   )

Very difficult (   )

Why?

_____

_____

_____

5. How effective is the use of comic strips for teaching EFL grammar?

Highly effective   (   )

Very effective   (   )

Inconsistent   (   )

Unsatisfactory   (   )

6. How effective do you think is the use of comic strips for teaching EFL vocabulary?

Highly effective   (   )

Very effective   (   )

Inconsistent   (   )

Unsatisfactory   (   )

7. How would you rate the following features when using comic strips for teaching EFL grammar and vocabulary?

Features	Yes	No	Explain your answer
Original			
Motivating			
Useful			
Easy to use			
Easy to access			

8. Which of the following aspects related to the use of *Pixton* did you find difficult?

Aspects related to the use of *Pixton*	Yes	No
Finding a clear and appropriate language to use in the dialogues		
Selecting characters according to the audience		
Selecting the appropriate scenery for the story		
Achieving a final version of the comic strip		
Writing clear instructions for the activities with *Pixton*		

9. To what extent do you think your students learned EFL grammar and vocabulary by using *Pixton*?

A lot   (   )

Sufficient   (   )

A little   (   )

Nothing   (   )

10. How did your students react while using comic strips for learning EFL grammar and vocabulary?

Features	Yes	No	Explain your answer
Motivated			
Interested			
Actively involved			
Unmotivated			
Indifferent			
Reluctant			

11. Would you like to continue using comic strips for EFL teaching?

Yes   (   )

No   (   )

Explain your answer: _____

_____

_____

Thank you for your cooperation

Appendix 6. Observation sheet

Questions	Yes	No	Comments
1. The material is pertinent to the class objectives.			
2. The teacher's instructions were clear when using *Pixton*.			
3. Students were motivated for using *Pixton*.			
4. The content of the material is appropriate for the students' age.			
5. The content of the material is appropriate for students' proficiency level.			
6. The scenes and characters used in the comics are properly chosen.			
7. Grammar and vocabulary in the comics are properly used.			
8. The teaching strategies are effective.			
9. The use of *Pixton* was easy for students.			
10. The use of *Pixton* was easy to handle for the teacher.			

Remarks:

_____

_____

_____

_____

_____

_____

ENHANCEMENT OF PERFORMANCE AND MOTIVATION THROUGH APPLICATION OF DIGITAL GAMES IN AN ENGLISH LANGUAGE CLASS

by **Saovapa Wichadee***

Language Institute, Bangkok University

Bangkok, Thailand

saovapa.w @ bu.ac.th

and **Fasawang Pattanapichet**

Bangkok University International, Bangkok University

Bangkok, Thailand

fasawang.p @ bu.ac.th

Abstract

The study was conducted to find out what impact a digital game had on students' learning performance and motivation. A quasi-experimental study was performed with two groups of students. The experimental group was taught using the digital game *Kahoot* whereas the control group was taught with the conventional method. Pre-tests, post-tests, and questionnaires on the students' motivation and attitudes toward gamification in language learning were the instruments used in this study. The data were analyzed using Independent t-tests and One-way Analysis of Covariance. The results revealed statistically significant differences with regard to learning performance and motivation at 0.05. The experimental group obtained higher scores than the control group, and the motivation of students in the experimental group was much higher than that of the control group. In addition, the results of a survey indicated that students had positive attitudes towards application of digital games in language learning.

Keywords: gamification; *Kahoot*; digital games; language learning; motivation

1. Introduction and background

Application of games for educational purposes has been observed for many years with an aim to increase students' motivation, which is an important, pervasive determinant of learning behavior (Schunk, Meece, & Pintrich, 2013). That is, a game-based learning context helps to shape a higher level of motivation of an individual (Ebrahimzadeh & Alavi, 2017). Games have a significant role to play to change a traditional teacher-centered classroom to learner-centered classroom. The use of games in class provides the students with an exciting learning

experience (Icard, 2014). Accumulating points and getting a sense of competition-driven systems such as competing for prize and ranking are typical features in gamification (Burke, 2014). Therefore, students become attentive because games make their learning more enjoyable (Chou, 2015).

However, the use of traditional games in class is decreasing because technology can create more interesting games which suit learners' lifestyle. Online or digital games in the instructional process is more relevant for students who can download applications to play through mobile phones. One benefit of digital games is to stimulate learning. Students can perceive the element of confrontation, gain a sense of accomplishment or loss, and receive instant feedback (Kapp, 2012). Cassady and Johnson (2002) pointed out that feedback is pivotal concerning evaluation. Given instant and pertinent feedback, learners are more likely to integrate the feedback into what they have studied and revise the learned content.

Apart from influencing the processes of learning and understanding, digital games are concerned with mental and social conditions (Lee & Hammer, 2011). When students' motivation to learn increases, they are more likely to come to class. This concept is supported by Dörnyei and Ushioda (2011), who found that motivation is closely related to participation. In addition, digital games can create a good learning environment and promote user engagement (Goehle, 2013). According to Reeve (2012), engagement refers to the degree to which a learner exhibits his/her dynamic participation, attentiveness, enthusiasm when he/she becomes involved in the process of learning, which can contribute to satisfying learning performance. On the other hand, lack of engagement can hinder the effectiveness of learning (Heaslip, Donovan, & Cullen, 2014). In conclusion, digital games can be used as an effective tool to motivate learners, enhance their enthusiasm, increase and check their comprehension (Kim, 2015; Simões, Diaz Redondo, & Fernández Vilas, 2013).

Currently, many digital games are applied in classrooms at all educational levels, and *Kahoot* is one of the best-known games used by instructors in Thailand. The *Kahoot* application is easily accessible via smartphones or PCs. Once instructors create their account, they can either formulate questions or quizzes or they may borrow those already created by others. *Kahoot* was first introduced to all teaching staff at the Language Institute in a technology-related workshop after the university had launched a policy of technology integration into learning. Later, *Kahoot* was embedded in a fundamental English course to reinforce certain behaviors such as attention and engagement of the first-year students. It was noticed that *Kahoot* made learning more enjoyable through competition. This year, *Kahoot* was used in the course taken by the second-year students.

The current study aimed to investigate the effects of *Kahoot* on students' performance and motivation. The performance focused on their learning development in grammar and vocabulary knowledge while motivation demonstrated enthusiasm in learning. In addition, their attitudes towards application of digital games were examined to gain more details. It is hoped that the results will provide insights into the use of *Kahoot* in language learning.

2. Literature review

2.1. Gamification and the theory of gamified learning

According to Deterding (2011, p. 1), incorporating games in other activities apart from non-game settings to boost engagement and motivation of the participants is defined as "gamification". In this regard, games are also applied in the field of education to facilitate learning and adjust students' behavior. Since the kind of engagement that students experience with games is based on an educational context, their knowledge increases. Gamification in education offers many benefits such as increased fun, more relaxed atmosphere, more visible learning progress, and greater ownership of learning (Leaning, 2015). According to the theory of gamified learning, two major psychological processes in which games can affect learning include a more direct mediating process and a less direct moderating process (Landers, 2015). Since learning occurs through an intermediary attitude or behavior, games should be designed to vary in context. For example, the use of more specific rules or goals in games can raise motivation to learn (an attitude) while learner cognitive strategies (behavior) will be enhanced by adaptation of a game to learner ability (Wilson *et al.,* 2009)
.

2.2. *Kahoot*: digital game in the 21st century

Digital games have already taken place of traditional ones due to the significant role of technology in language education. Among those, *Kahoot* is an example of a popular game-based Classroom Response System (Fies & Marshall, 2006). Introduced in 2013, *Kahoot* has become a well-known online game used by instructors as an intriguing tool to check learners' knowledge and increase their involvement in learning. *Kahoot* adopts gamification as a way to motivate and involve learners. With the application of *Kahoot*, an otherwise sleepy, insipid class can turn into an active and highly charged group of students eager to absorb and excel (Thomas, 2014). It can increase students' enthusiasm and motivation to learn. In terms of quizzes, *Kahoot*'s gamification makes it fun for learners attempting to get the answers right

so that their names show on the leader board. Ever since it was first introduced, *Kahoot* has benefited classes of different levels.
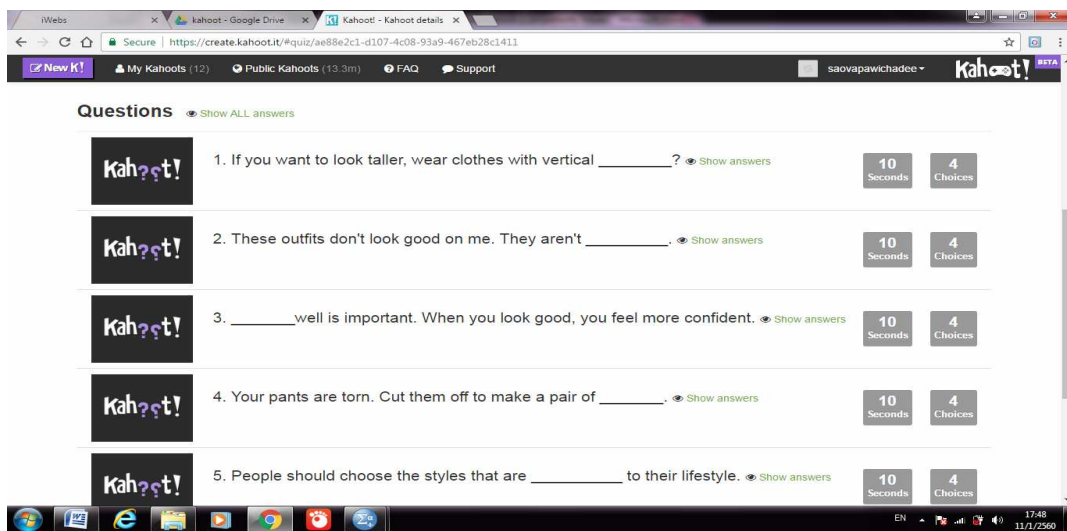
Figure 1. *Kahoot* interface of vocabulary quiz

Before the game starts, students need to register at https://kahoot.it. In this regard, they will be given a game pin number to participate in the game. Then they type in usernames of their choice and the names will appear on the players' list. Since the activities on *Kahoot* are real-time, questions and quizzes can be shown on screen using an overhead projector. Students can check their progress or points right after the game is finished. The total scores for each question are 1,000 points. The scores they earn will be based on their time usage and correctness of answering the questions (Byrne, 2013). The total number of gained scores of each player can be shown on screen at the end of the quiz (see Figure 2).

Figure 2. The scores shown in order from most to least

2.3 Related research

Many studies indicate that games help motivate students to learn (Connolly, Stansfield, & Hainey, 2011; Ebrahimzadeh & Alavi, 2017; Hanus & Fox, 2015). In addition, the application of digital games further enhances learners' enthusiasm to get involved in learning (Hakulinen, Auvinen & Korhonen, 2015; Lee & Hammer, 2011; Muntean, 2011; Poondej & Lerdpornkulrat, 2016). Students' active participation plays a vital role in enhancing learning effectiveness. It has been found that learner engagement contributes to successful learning performance (Carini, Kuh, & Klein, 2006; Klem & Connell, 2004; McMahon & Portelli, 2004). That is, the more students become involved in the learning process, the more progress they make in their learning.

According to Good and Brophy (2000), highly motivated learners had a higher level of academic accomplishments than their unmotivated counterparts did. However, some studies revealed games might not be useful in terms of learning achievement. For instance, Dominguez, de Navarrete, de Marcos, Fernández- Sanz, Pagés, and Martínez-Herráiz (2013) conducted a study in which gamification was integrated into the course in order to gauge its impact on university students. It was found that the students became more motivated and involved in their learning, however, their levels of achievement remained unchanged. Thus, it is crucial for instructors to find ways to increase both motivation and achievement.

It has also been found that using digital games in the learning process brings benefits for learners as regards developing their problem-solving skills as they spend time practicing the skills in games (Gee, 2003). They also become better prepared to meet challenges such as chaos and frustration since game participants will have to deal with their curiosity and disappointment (Lazzaro, 2004). According to Hamari and Koivisto (2013), most studies about gamification reveal its favorable aspects. However, the levels of success greatly depend on the people who use it and the environment in which it is used. They also found that the same features of gamification might be favored by some but frowned upon by others.

3. The current study

This study aimed to determine how game-based learning affects students' learning performance and motivation as well as investigate their views on gamification. The study adopted a quasi-experimental design. To this end, the following research questions were addressed as follows:

1. Does gamification affect students' learning performance?

2. How does the learning motivation of students in the experimental group differ from that of students in the control group?

3. What are students' attitudes towards application of digital games in language learning?

3.1. Population and samples

The population included 2,645 students (67 sections) who registered for EN013 (3 credits) in semester 1 of the academic year 2017 at a private university in Thailand. Two sections of the students were sampled based on cluster sampling because they all had already been grouped in their own sections. There were 31 males and 46 females. One section comprising 38 students was selected to be the experimental group while the other was chosen to be the control group (39 students). They were the second-year students from School of Humanities and Tourism Management, majoring in Hotel Management, aged between 18 and 24. Both groups were required to attend 3 hours a week for 14 weeks.

3.2. Procedure

Ten vocabulary quizzes and five grammar quizzes were prepared to engage the students in both groups in reviewing the lessons taught each time. However, while the control group was given a revision by means of doing paper quizzes, only the experimental group was treated with *Kahoot*. Students could see how many points they earned at the end. Meanwhile, the control group did the same quizzes, but on paper, and were told about their earned scores in the following week. For both groups, the purpose of doing quizzes was to investigate how well students understood grammar and vocabulary. They were informed that the scores gained from those quizzes would not affect their grades, but the scores they earned from the post-test (30 points) would be calculated for grading in this course. The post-test was done on paper after the course had finished.

3.3. Data collection tools

This study employed three tools to evaluate how *Kahoot* affected learners. The first tool was English proficiency tests which were used to find out the effect of digital game, Kahoot on learners' language performance. The pre-test and the post-test, 30 points each, were written tests designed to test the students' grammar and vocabulary in EN013. Students in both groups were required to take these tests. The tests were set and their validity was approved by three experts from the English Department, Bangkok University, who reviewed and modified

the test items. The researcher created an evaluation form so that each test item was also examined to ascertain that it was in keeping with the objective. In order to calculate the Item-Objective Congruence (IOC) Index, three types of answers were given the following scores: 1 was congruent, 0 was questionable and -1 was incongruent. All the items in this study were congruent because they scored higher than 0.5 on the IOC Index. Some language changes were made in two items. Then 30 students who were not the participants in this study were assigned for the pilot test.

The second tool was a questionnaire modified from Keller's Course Interest Survey (Keller, 1987). It comprised ten items and examined learners' motivation after 12 lessons were completed. Then it was distributed to both groups on week 14 which was the last week. For each item, learners gave their feedback by selecting one out of five levels of their agreement from "mostly agree" to "mostly disagree". The validity of the questionnaire was achieved by obtaining three experts' approval. The questionnaire items were read and answered by 30 students; they were the same group who had been asked to do the pilot test. To gauge the readability, the coefficient alpha technique was applied. Its reliability coefficient being .86, thus, the questionnaire was found to be reliable.

The last tool was a questionnaire investigating students' points of view on gamification. Only students in the experimental group were required to complete this questionnaire after the intervention. The seven items in the questionnaire had been created based on literature review and examined for content validity. As evaluated by three instructors, it was higher than 0.5. The initial version of the questionnaire was piloted before real use. 30 students from the same pilot group were assigned to do this questionnaire. The reason for choosing this group was because they used to join in the *Kahoot* activity in previous semester. The comments from the students enabled the researcher to adjust the language. This was done to ensure that the questions were easy to understand and could elicit the required information.

3.4. Data analysis

The data was analyzed using SPSS (version 16.0). Internal consistency of pre-test scores was assured for homogeneity and normality. An analysis result of the pre-tests of both the control and experimental groups through an independent samples t-test revealed a significant difference. Therefore, one-way analysis of co-variance was conducted with the post-test scores using the pre-test scores as a covariate, and the result yielded a significant difference. The motivation data from both groups collected at the end of the course were calculated. The

P values of the motivation scores of the two groups, when compared with an independent *t*-test, were statistically significant (lower than 0.05). The feedback on the gamification method from the experimental group was treated with mean and standard deviation and interpreted as various levels as follows:

1.00-1.50 meant a very low level of approval   1.51-2.50 meant a low level of approval
2.51-3.50 meant a moderate level of approval   3.51-4.50 meant a high level of approval
4.51-5.00 meant a very high level of approval

4. Findings

Research Question 1: Does gamification affect students' learning performance?

Prior to the use of the gamification technique, the test mean score of the students in the control group was 14.15 with standard deviation of 2.23 and that of the experimental group was 12.63 with a higher standard deviation of 3.37. An independent samples t-test was employed to examine any significant difference. The finding showed that a difference existed at a significance level of .05 ($p< .05$). This means that both groups were not equal.

Table 1. Independent sample t-test results of pre-test scores

Group	n	Mean	SD	df	t	p	d
Control Group	39	14.15	2.23	75	2.330	.023	.681
Experimental Group	38	12.63	3.37				

Therefore, the one-way ANCOVA was instead applied in the comparison of the post-test mean scores. For data analysis, the covariate was the pre-test score, the independent variable was the instruction methods, and the dependent variables were the post-test and motivation scores. Homogeneity was validated through the test for homogeneity of regression coefficients and ANCOVA was used for analysis. As can be seen from Table 2, the outcome revealed that the mean scores of both the control group and the experimental group carried a significant difference ($F = 25.039$, $p = .000$). The assumption then was substantiated. That is, students in the experimental group achieved higher test scores than those in the control group. The mean scores were 22.74 and 19.91 accordingly.

Table 2. ANCOVA test result of learning performance

Source	SS	df	MS	F	Sig.
Corrected Model	566.674a	2	283.337	49.468	.000
Intercept	255.395	1	255.395	44.590	.000
Pre-test	528.359	1	528.359	92.247	.000
Group	143.415	1	143.415	25.039	.000
Error	423.846	74	5.728		
Total	35963.000	77			
Corrected Total	990.519	76			

a. R Squared = .572 (Adjusted R Squared = .561)

Table 3. Mean scores result of learning performance

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	**Upper Bound**
1. control	19.916[a]	.390	19.139	20.693
2. experimental	22.744[a]	.395	21.956	23.532

a. Covariates appearing in the model are evaluated at the following values: pre-test = 13.40

Research Question 2: How does the learning motivation of students in the experimental group differ from that of students in the control group?

To examine their motivation to learn, the questionnaire was distributed to both groups at the end of the course. The result indicated that the average score of motivation of students in the experimental group (Mean = 3.42, SD = .44) was much higher than that of the control group (Mean = 3.02, SD = .66). It interestingly reveals that greater motivation is found in the experimental group for all items on the questionnaire. It is also found that the highest mean score of both groups was the same item ('I am very satisfied with the course') even though the mean scores were rather different (Mean = 3.79, 3.38). However, the second mean scores of two groups were different. The experimental group indicated item no. 1 ('I enjoy studying English', Mean = 3.58) while the control group chose item no.3 ('I think the given tasks are not too difficult', Mean = 3.28).

Table 4. Comparisons of mean scores of learning motivation

Motivation	Control		Experimental	
	Mean	**SD**	**Mean**	**SD**
1. I enjoy studying English.	2.92	.84	3.58	.92
2. I actively participate in the activities of this course.	2.85	.81	3.32	.74
3. I think the given tasks are not too difficult.	3.28	1.02	3.32	.66

4. I am very satisfied with the course.	3.38	.99	3.79	.66
5. I feel confident that I will do well in this course.	3.10	.85	3.50	.80
6. The content of this course is useful to me.	3.00	.89	3.26	.72
7. The content in this course motivates me to learn.	2.87	1.00	3.50	.65
8. The activities in the course capture my attention.	2.87	.95	3.42	.76
9. This course can develop my language proficiency.	3.03	1.01	3.26	.64
10. The amount of work in the course is suitable.	2.87	.95	3.21	.81
Average	**3.02**	**.66**	**3.42**	**.44**

To find out whether there was a statistically significant difference between the two groups, the mean scores were compared by using an independent samples t-test. The result revealed a statistically significant difference in the motivation at the level of .05 as shown in Table 5 (*p* =.003).

Table 5. Independent sample t-test results of learning motivation

Group	n	Mean	SD	df	t	p	d
Control Group	39	3.02	.66	75	-3.11	.003	.606
Experimental Group	38	3.42	.44				

Research Question 3: What are students' attitudes towards application of digital games in language learning?

Based on the findings, students in the experimental group accepted the gamification technique at a high level, the average mean being 3.58 as shown in Table 6. That is, overall, the students accepted the gamification technique as they expressed positive views towards it. Students seemed to favor *Kahoot* as a learning tool. Item No. 1 ('This technique made the course more fun') had the highest mean (Mean = 3.87), and item No. 2 ('I like a competition in this technique') had the second highest mean (Mean = 3.76). Item No. 4 ('This technique increased my interest in the lessons') came third with a 3.53 mean score. Item No. 5 ('This technique enabled me to learn better') had the lowest mean score (Mean = 3.45). It was at a moderate level.

Table 6. Students' attitudes towards the gamification technique

Statement	Mean	SD
1. This technique made the course more fun.	3.87	.58
2. I like competition in this technique.	3.76	.67
3. This technique increased engagement with the class.	3.50	.69
4. This technique increased my interest in the lessons.	3.53	.56
5. This technique enabled me to learn better.	3.45	.55
6. This technique is suitable for the language class.	3.50	.56
7. I want this technique to be used in other courses.	3.46	.50
Average	**3.58**	**.35**

5. Discussion

In this experiment, *Kahoot* was introduced in class and its effects on students' learning performance were studied. In addition, their learning motivation and attitudes towards the gamification technique were analyzed based on the course feedback survey. Many findings should be brought to discuss as follows:

The first issue to be discussed is the effect of *Kahoot* on students' language proficiency. Based on the finding, there was a significant difference in post-test scores between the two groups of students. This implied that gamified learning generated more achievement. This is probably due to the fact that the students in the experimental group had an opportunity to revise what they had learned through competition (Kim, 2015). They had more fun playing *Kahoot* games while gaining knowledge. Moreover, *Kahoot* allowed for more engagement in the learning process, and the instructors were able to check student involvement in the activities very easily. The result is consistent with the study conducted by Goehle (2013), who indicated that digital games do not only create a good learning environment, but they also provide more engagement. That is, the competition nature of the games encourages learners to join, enhancing enthusiasm and involvement in learning (Hakulinen *et al.,* 2015; Lee & Hammer, 2011; Muntean, 2011). The more they participated in the games, the more they gained knowledge. As predicted, they obtained better performance than those in the control group. The finding can be used to support the claim that *Kahoot* can stimulate learning and language improvement can occur in a fun learning environment.

The second issue is the increase of the students' motivation. One of the interesting results of this study is that the use of *Kahoot* games had an impact on learner motivation. That is, the experimental group showed much higher motivation than the control group. This is probably because students' learning effort can be observed using *Kahoot* games (Attali &

Arieli-Attali, 2015). In other words, providing instant feedback has a great effect on their motivation. *Kahoot* makes the lessons more interesting, giving all students an opportunity to participate and get feedback or results at once. While playing the game, they can see the tentative winner on the screen. In the past, doing paper-based exercises was the only one way to check if students understood the lessons or not, and they might not be informed of the feedback immediately. The use of digital games for doing exercises or quizzes is, therefore, better than the traditional way. Moreover, since students are in the digital age, they are immersed in technology in daily life. As such, applying technology in the classroom motivates them to learn more when compared to the traditional style of learning. The atmosphere in the experimental class is competitive and fun. They compete in game-like quizzes with enjoyment. The current study proves that learning can come with enjoyment as the students in the experimental group had higher motivation than the control group (Mean = 3.58, 2.92). The finding is in accordance with Lee and Hammer (2011), who asserted that digital games can be used to stimulate learning since they influence mental and social conditions.

The finding also revealed that students viewed the use of digital games in language learning positively. Three reasons can be used to explain this result. First of all, students are accustomed to using a variety of technologies in daily life. A mobile phone is the best equipment for playing games in class because all students have it. Secondly, *Kahoot* allows them to compete with their friends through application on mobile phone. They paid more attention during the lessons since they needed to make use of knowledge in the competition. This interest led to improved learning performance as shown in previous studies (Hidi & Renninger, 2006; Oblinger, 2004). Lastly, the components of *Kahoot* games are suitable for educational purposes. That is, *Kahoot*'s features (e.g. screen, music) are well-designed to draw the players' attention, and the quizzes are provided based on their ability. The finding is in accordance with Kiili's (2005) research, according to which using appropriately challenging activities relative to students' competences could boost students' interest and help enhance students' learning performance. Learning with fun can create good atmosphere. That is why students highly agreed that gamified learning made the course more fun. It can be concluded that *Kahoot* is a good digital game that can be used to increase students' interest in language learning and to make learning more fun.

6. Conclusions and directions for future research

The findings reveal that the gamification technique not only increased students' motivation, but also enhanced their learning outcomes. This indicates that the application of digital games can transform any contents that are boring or difficult like aspects of grammar or vocabulary to be interesting and easier to understand. Games can make students enjoy attending the class. Since the game concerns winning and losing, instructors need to inform them of the real purpose of gamifying language activities. That is, what they can gain more than competition and enjoyment is learning something new such as grammar and vocabulary knowledge. As such, when a correct answer is shown, instructors should explain and give details about it. This is in accordance with what Marklund and Alklind (2016) recommend in that tasks for teachers should be clear from the start when using games in class.

Although gamification proves to be a highly useful way of teaching English, there are many questions to be addressed. First, after exposing to the *Kahoot* games, it is crucial to find out at what point the students will become bored. Secondly, future studies may be conducted to compare other free digital games in relation to language performance; the results can be useful for selecting suitable games for the future courses. It is possible to study if the number of games have an impact on their learning performance. In this regard, it is important to find out which game is the most appropriate to the content of study. Next, to gather more extensive data and statistics, future studies should involve a larger number of students which is a limitation of this study. Then the feedback may reflect what students think and how the gamification technique affects them more clearly. Finally, other research tools such as interviews should also be employed in order to make the studies more comprehensive.

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*50LANGUAGES***:**

A MOBILE LANGUAGE LEARNING APPLICATION

(App Review)

by **Musa Nushi** and **Mohamad Hosein Eqbali**

Shahid Beheshti University

Daneshjo Boulevard, Evin Sq. Tehran, Iran, 1983969411

M_nushi @ sbu.ac.ir / mohamad.h.eghbali @ gmail.com

Application Details:

Publisher: *50languages*

Product Type: Mobile Application Software

Language(s): Multilingual

Level: Any

Media Format: APK/IPA

Operating Systems: Android/iOS

Hardware Requirements: Smartphone/Internet Connection

Supplementary Software: None

Price: Free**,** offers in-app purchases

1. Introduction

In today's world, technology is changing the landscape of education and this includes second language (L2) learning and teaching too (Chapelle, 2007; Otto, 2017, Stanley, 2013; Wang & Winstead, 2016). Technology helps students in a variety of ways: it helps them visualize concepts better, communicate with each other and with the teacher more effectively, makes them more motivated, and learn a lot on their own (Baleghizadeh, 2015). Teachers can also utilize technological innovations to provide learners with multimodal feedback (Elola & Oskoz, 2016), help integrate assessment with instruction (Jamieson & Musumeci, 2017), encourage learner autonomy (Al-Jarf, 2012), and develop higher order thinking and meet the needs of low performing learners with learning handicaps (Roblyer & Doering, 2010).

Among the technological innovations, mobile and hand-held devices such as smart phones, tablet computers, laptops, MP3 and MP4 players, iPads are particularly helpful due to their practicality and popularity. In fact, Mobile Assisted Language Learning (MALL), a subset of M(mobile)-learning, is a rapidly growing field with important implications for

language learning and teaching (Pachler, Cook, & Bachmair, 2010; Thornton & Houser, 2005; see also Burston, 2013 for a review of MALL studies). Commenting on the contributions of MALL to L2 learning, Jalalifarahani and Ghovehnodoushan (2011) write that "among the most noted affordances for MALL is ubiquitous access to learning anytime at any place that the user has reception" (p. 527). The idea of learning a language anytime, anywhere with the use of mobile devices can motivate learners and encourage them to take the responsibility of their own learning process, which in turn can make them feel that they have the authority over the process (Thornton & Houser, 2005).

The current passion towards MALL, however, should not make us forget that many of the mobile applications for language learning and teaching "have been developed by people outside of the field of second language pedagogy and their effectiveness cannot and should not be taken for granted," (Nushi & Jenabzadeh, 2016, p. 30). Cowan (2015) also points out the recent shift towards MALL "lacks a focus on the usefulness of language-learning apps and how to integrate them into lessons," (p. 3). Similarly, Kim and Kwon (2012) add "the widespread use of smartphones has brought numerous mobile applications to second language (L2) learners but discussion about its effectiveness has not been settled yet within the field," (p. 31). The necessity for critical research on the available language learning applications, therefore, is essential to make language learners and teachers alike aware of the advantages and disadvantages of working with such software inside and outside of the classroom. The present article aims to review one mobile language learning application named *50languages* and explore its potential for L2 learning.

2. Description

To use the app, learners must first download it from Google Play/App Store so they could run the app on their Android/IOS devices. *50languages* offers more than 50 languages, and is available in about 3,000 combination of languages. Learners can choose what language they speak and from there, they are presented with a list and can choose what language they want to learn.

Because of the system of storing its database this app has utilized, very rare combination of languages has become available. As seen in Figure 1, a learner speaking Polish can learn Farsi through her native language. In all of the languages, two native speakers, a man and a woman, are recorded saying similar words, phrases, and sentences. Moreover, all 50 languages can be learned through each other since the app simply changes the place of the first language with the target language.
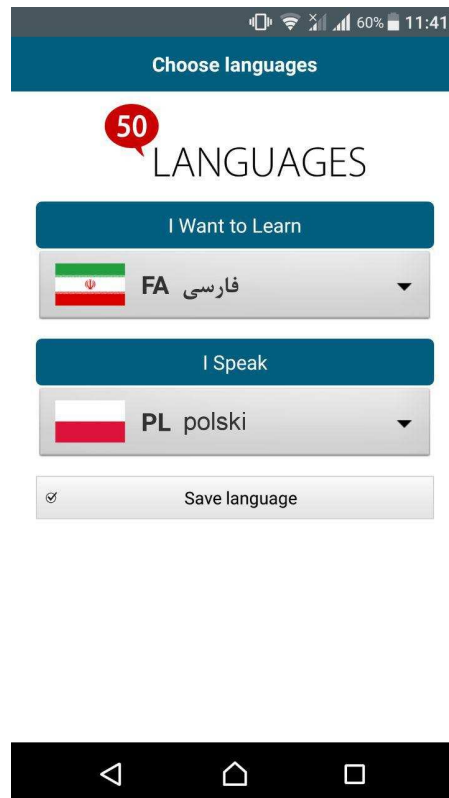
Figure 1. Many combinations of languages offered by *50languages*

After the learners have chosen the language they want to learn and the one they already know, they are presented with a list of many features of the app. They range from learning *Alphabet*, *Numbers* to *Phrase book*. The Phrase book is mainly the place the learners go to learn new materials, and it is the place where all the recorded audios are presented. Every Phrase book in every language offers 100 lessons in bunches of tens (see Figure 2), with each lesson focusing on a specific subject (see Figure 3).
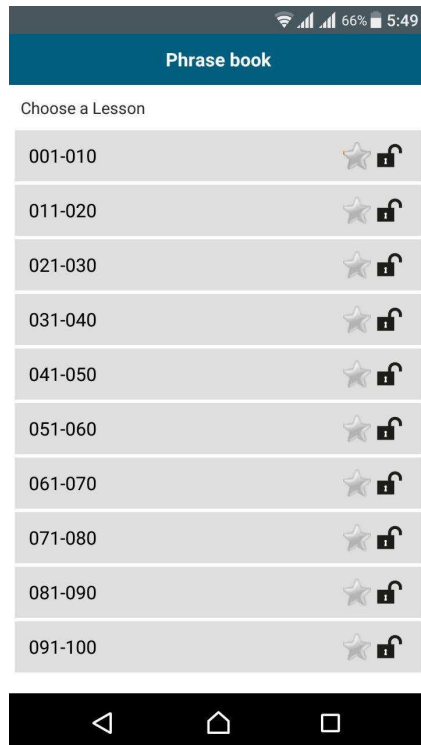
Figure 2. Inside a Phrase book

Figure 3. Inside a lesson

Figure 4 shows that every lesson contains four parts:

1. Word List

2. Flash Card

3. Take Test

4. Did you know? (This one simply provides fun facts about languages. They are all in English.)

Each section has an empty star placed next to it. As the learner explores each one, once he/she is learning the new materials and providing the correct answers whenever questions are asked, the star gradually fills up. Once the star is completely full, the learner knows he/she does not need to go back to that section again, although he/she can if desired. No recommendations are given by the app and the learner can proceed as he/she wants.
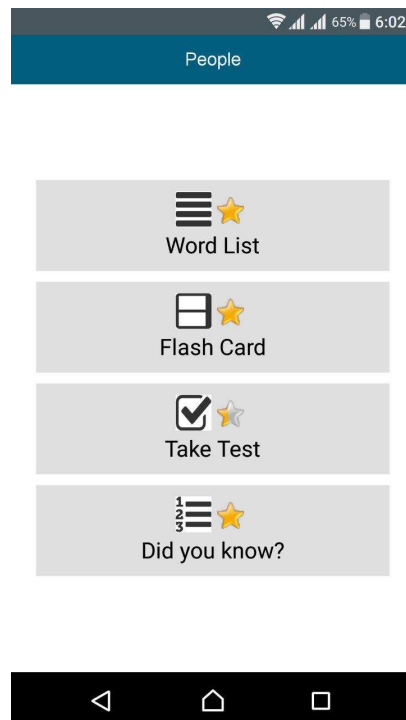
Figure 4. Different sections of a lesson

In the Word List, learners find a list of words, phrases and complete sentences with the translation in their chosen language. The first lesson in every language is under the category of *People*. It starts with the word *One* and ends with the complete sentence *They are all here*, with a number of other words, phrases and sentences in between these two. Learners are exposed to these in both written and spoken form. As mentioned earlier, the spoken form is provided twice, once said by a male and another time by a female. Learners can go about exploring the lesson, tapping on each part to hear the pronunciation, looking at the translation provided, and even recording their own voice and comparing it with that of a native speaker (see Figure 5).

Figure 5. Inside Word List

Once the learner is done with the new materials, she can go back one step to explore other sections of the lesson. No hint is given as what to do to next. The second part, *Flash Card*, is placed next. Inside this section, the words, phrases and sentences learnt in the Word List are presented again, but in a flash card manner (see Figure 6). A word, phrase or sentence from the first language appears at the top of screen and the learner is expected to remember its target language counterpart, both in written and spoken form. The written and spoken forms are provided at the bottom of the screen, in case the learner fails to remember them. It is also possible to mark a specific text for future learning sessions.

Figure 6. Inside a flash card

Once all the materials in this section have been covered, the learner can press 'Back' and continue to the next section which tests the knowledge of the learner (see Figure 7). The app does not suggest any recommended time as to when it is better to test your knowledge of the materials, but it seems these sections should be covered one after another. *50languages* provides a variety of tests. They include writing, listening, reading tests, but no speaking tests. The tests, except for *Word Order*, directly or indirectly test the learners' vocabulary (see Figures 8, 9 & 10).
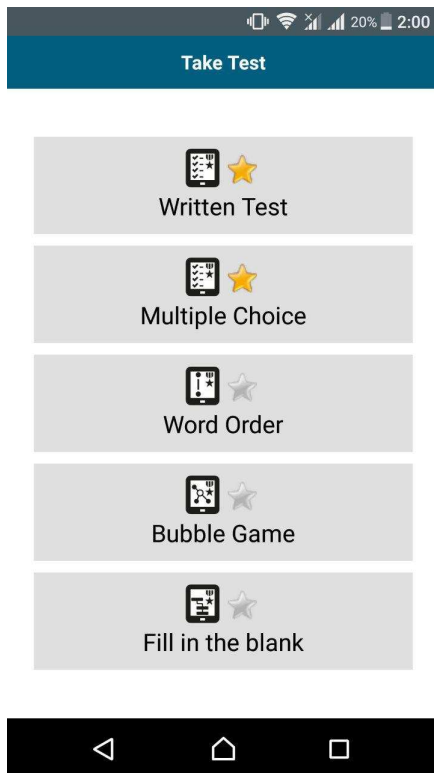
Figure 7. Types of tests
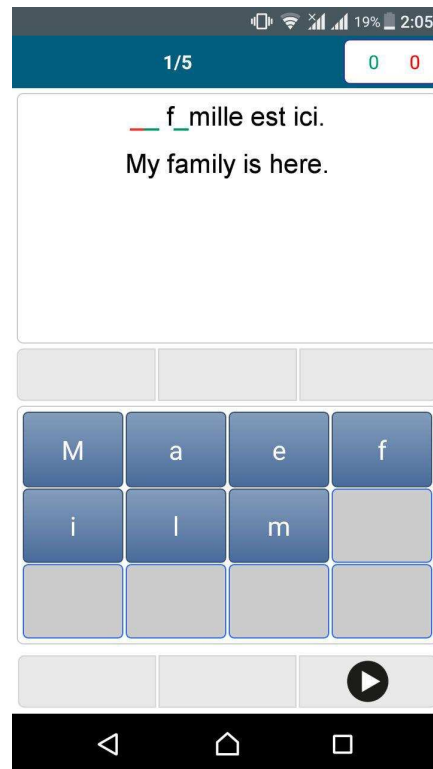
Figure 8. Written Test
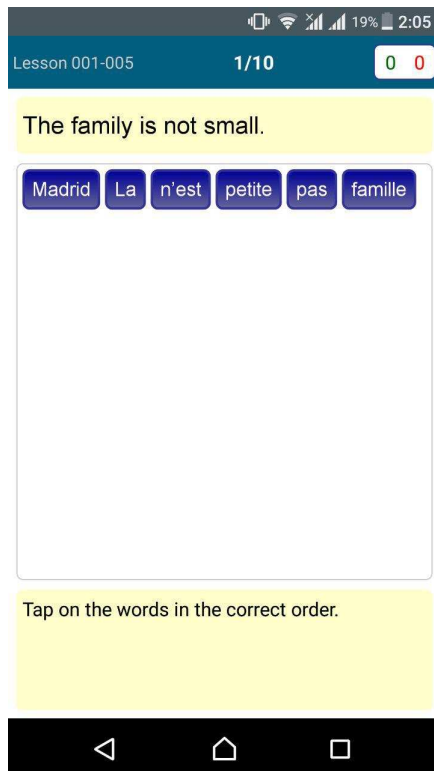
Figure 9. Word Order
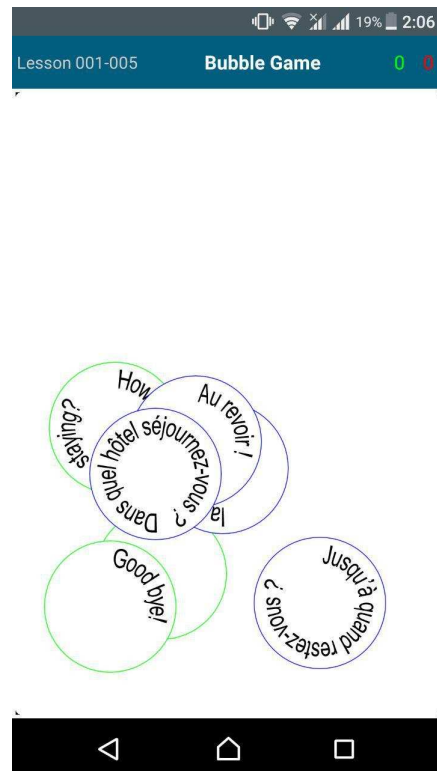
Figure 10. Bubble Game

Other interesting sections of the app include the teaching of the alphabet, the numbers of the target language. There are also some vocabulary games, crossword puzzles, cloze tests,

and even radio stations. *50languages* offers a wide range of games and fun, most of which are in the app and some are on its website.

It must be noted that this app only works through translation and does not provide any grammatical instruction in any stage. It only works with vocabulary and grammar, which are to be learned inductively by the learner. When mistakes are made, *50languages* does not provide any explanations as to why the mistake is a mistake; it only lets the learner know that a mistake has been made. It does not have a community of learners, teachers or any human interaction of any kind either – the app itself is the learner's only companion.

3. Evaluation

50languages is a free mobile and web-based app, offering a lot of content for its users. The lessons are divided into different subjects, teaching the basic vocabulary for each language. The learners are not expected to be able to talk fluently or be experts in the target language, rather *50languages* tries to get to the 'point' of every subject as soon as possible and equips the learner with the basics needed for communicating within that particular subject in that language. If we consider this as the app's main objective and not learning the new language fully and completely, the app has been more or less successful. If not, there are many aspects in which the app fails to deliver, at the least, helpful assistance.

First, the contents do not seem to be backed by any particular scientific method or approach, at least none is claimed by the developer on its website. In the initial stage of learning a language, some very random and disjointed words appear for the learner to learn; for example, the equivalent of "child", "my family" and "My family is not small" is given to the learner. Although they are all categorized based on themes, there is not any meaningful context to these new materials, except for the title of the theme. This can prove to be very confusing sometimes. Imagine that the learner does not know the Chinese alphabet and suddenly the first lesson presents a sentence in Chinese. The only resort for the learner is to memorize the shapes of the letters, pronunciation, and the meaning of the sentence but no real meaningful communication is happening.

Second, *50languages* relies heavily on the learner's native language and if you take that away from the app, it practically loses its ability to teach and present new materials. The app developers' lack of attention to teaching materials in appropriate context makes it very dependent on its Translation Tool – Google Translate - which takes the learner out of the app and into the chaos of the Internet. This, particularly, could be a problem for beginners. But again, if we consider the app as only a means to learning the basics of the language, its

translation tool actually comes in very handy. For long-term learning, however, the goal should be to depend less on the speaker's native language and more on the target language.

Third, the lack of human interaction in *50languages* is something to be cautious about when using this app. In fact, the failure to support synchronous speaking and listening activities and promote collaborative learning are among the main problems of many language learning apps (Kukulska-Hulme & Lesley, 2008). To address this issue, some language apps (e.g., *Busuu*, *Duolingo*) have tried to bring about a community of learners to together to they could help each other out, using forums or even commenting on the materials presented by the app. *50languages* does not provide any feedback on learners' use of the language; the only time they are provided with any feedback is when they take different tests at the end of each lesson.

On the positive note, the app's Pronunciation Tool can be very useful and effective; *50languages* has a built-in voice recorder with which the learners can check and double-check their pronunciations with that of a native speaker without having to exit the app or even move from page to page. In the case of a language like English, the app opts to use the American accent for all its English content. Another great merit of the app is the range of languages it covers. As mentioned earlier, this app claims to cover the basics of more than 50 languages and provides more than 2,500 combination of languages that can be learned by each other, a feature which is simply amazing. For instance, *Duolingo*, the most popular app on the market does not even come close. *50languages* is a great language learning app for polyglots and anybody who wants to learn the basics of a language quickly. We recommend the app as a useful supplement when learning a second language – but not a substitute.

4. Conclusion

As a free language learning app assistant, *50languages* enjoys many great features. The variety of languages, built-in Pronunciation Tool, and 'to-the-point' teaching process makes the app a value learning tool for many learners. However, as mentioned earlier, *50languages* is not a tool on which one should not be solely dependent; its over-reliance on the learners' native language, lack of contextualization of the new materials and coverage of only the basics of the languages do not make the app a good companion for more determined learners of a language and for those who want to achieve fluency. Nonetheless, *50languages* will surely be of great assistance to polyglots and to people who want to learn the basics of a specific language. This might have been the developers' original aim. Polyglots can easily

switch between languages as they wish, learn new materials in the language of their choice and move on to the next language once done with the previous one.

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*PLAYPOSIT***:**

USING INTERACTIVE VIDEOS IN LANGUAGE EDUCATION

(App Review)

by **Seyed Abdollah Shahrokni**

Washington State University

Department of Teaching and Learning, Cleveland 316,

College of Education, Pullman,

WA 99163, USA

s.shahrokni @ wsu.edu

Application Details:

Title: *Playposit* (formerly known as *eduCanon*)

Publisher: Benjamin Levy, Swaroop Raju, Susan Germer

Product type: Web and iOS application

Language(s): Multilingual

Level: Any

Media format: Video/audio/picture/text

Operating systems: Any device with an active connection to the internet and a browser

Hardware requirements: iOS/Internet Connection

Supplementary software: None

Price: Basic Plan: Free; Premium Teacher plan: $89/year; Blended School plan: $990/year

1. Introduction

Educational videos are among the most influential and authentic tools in foreign language education (Choi & Johnson, 2007; Erbaggio, Gopalakrishnan, Hobbs, & Liu, 2012; Hafner, 2014; Mackey & Ho, 2008; Mirvan, 2013; Shih, 2010; Wang, 2014). The reason that videos are particularly popular in foreign language education is that they are multimodal, that is, even in their basic form, they provide students with auditory, visual, contextual, verbal, and non-verbal sources of input, which can enhance comprehension (Gernsbacher, 2015; Hoven, 1999; Seo, 2002) by providing comprehensible input (Krashen, 1981, 1985). Moreover, some researchers (e.g. Borrás & Lafayette, 1994; Danan, 2004; Davey & Parkhill, 2012; Hsu, 1994; Hsu, Hwang, Chang, & Chang, 2013; Markham & Peter, 2003; Montero Perez, Peters, Clarebout, & Desmet, 2014; Plass, Chun, Mayer, & Leutner, 1998; Vanderplank, 2016) have

attempted to make videos more educationally purposeful through captions (texts in the original language) and/or subtitles (texts in the target language), supporting listening comprehension and vocabulary development.

However, although captions and subtitles contribute to the comprehensibility of input by adding an extra layer of cognitive processing (Bird & Williams, 2002) to videos, asking comprehension questions both during and after the video is also important. Comprehension questions help students attend to the materials at hand and allow educators to decide if they are progressing effectively through the materials. Not only is asking comprehension questions encouraged in foreign language classes, but also educators are advised to ask effective questions – those engaging higher order thinking skills (HOTS) – so that students develop critical thinking skills (Egbert, 2007, 2009). Accordingly, using instructional videos in the teaching-learning process, augmented with effective comprehension questions, can be where *Playposit* can support learning in language classrooms.

2. Features

Playposit (formerly known as *eduCanon*) is an application used to make interactive videos, known as *bulbs*. The videos can be extracted from one of many resource-sharing websites or from a repository of pre-made bulbs. Having chosen a suitable video, educators can play and edit it based on their educational objectives. Subsequently, the educators can add interactivities (e.g., multiple-choice items) to specific frames of the video, and then share it with the students. As the students are watching the video, they will be prompted to respond to the interactivities as the player slider passes through the linked frames. The teacher can then check the students' responses through the analytics capability of the application. The main features of *Playposit* are:

1. A free basic plan allowing educators to create unlimited bulbs, monitor students' progress, have access to a repository of videos, and the capability to share contents with colleagues.
2. A variety of assessment measures, including *multiple-choice*, *free response*, *reflective pause*, *discussion forum*, *polling survey*, *check all (that apply)*, *fill blank*, *website*, and *web embed*.
3. Easy, intuitive interface.
4. Compatibility with all platforms.

3. Evaluation

Access (clarity, instructions, usability, navigation, safety)

Working with the website is relatively straightforward. Users can easily locate videos online through two sources: *pre-made bulbs* and *video channels*. Having found a suitable video, the educators can easily select and transfer it to their album and start editing it based on their educational goals.
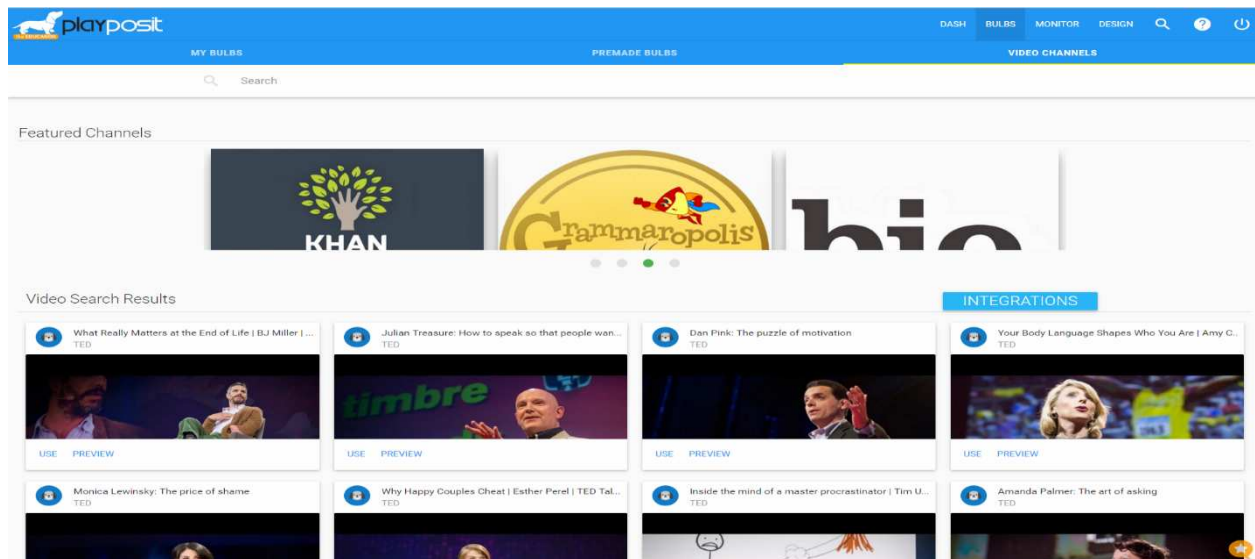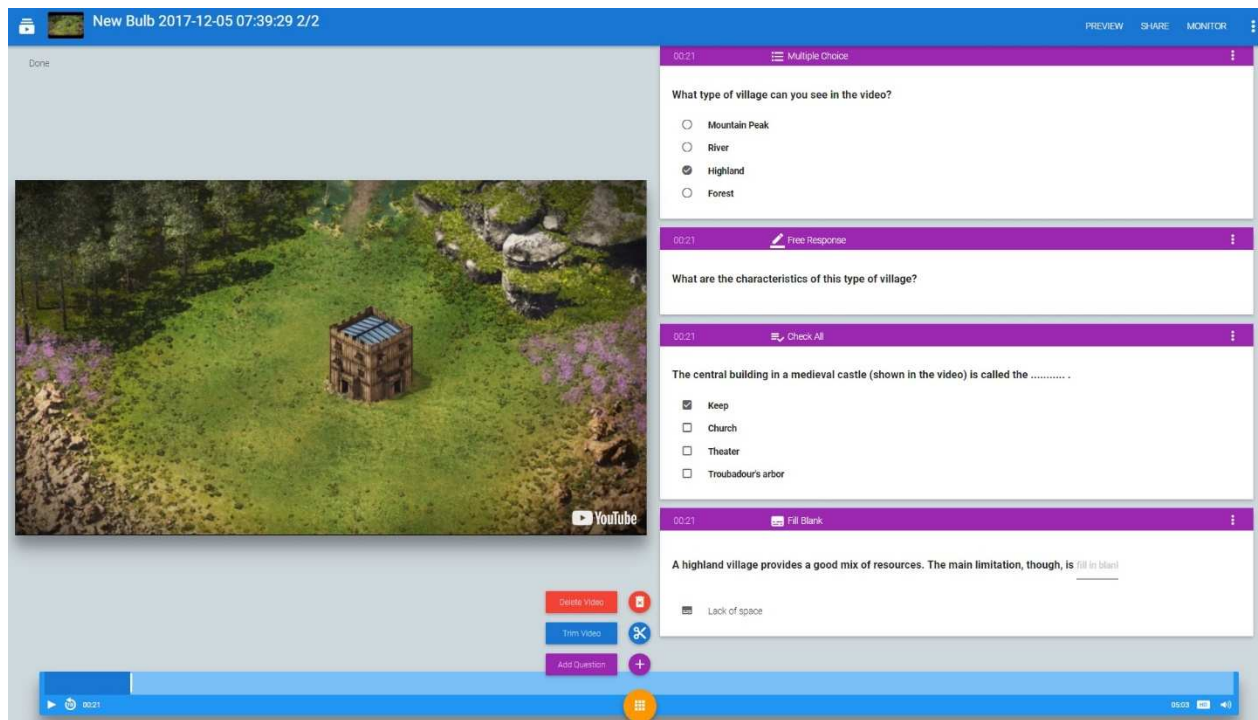
Figure 1. Video channels

The intuitive video playback and editing tools create an even greater ease of access for users. Users can play the video via the simple built-in interface, and attempt to edit, and add questions to it wherever necessary. As can be seen in Figure 2, a series of interactivities, that is, questions (multiple-choice, free response, checking the correct answer, and filling in the blanks) have been attached to the twenty-first second of the sample video.

Figure 2. Editing the video and adding questions

Likewise, the student view is unobtrusive, that is, the technology does not interfere in the learning process, or, simply said, it does not get in the way. When the video slider reaches the position of keyframe (the starting frame of the interactivity), the application divides the screen into two halves, one containing the interactivity, and the other containing the paused video. After the students respond to the prompt, the video playback will resume.

Figure 3. Student view

As can be seen in Figure 3, the slider has reached the keyframe and, hence, the video has stopped and the students have been prompted with the first question (multiple-choice) in the series (see Figure 2). Once the students answer the question, the video will resume and they will be prompted with subsequent questions (free response, checking the correct answer, and filling in the blanks).

Additionally, *Playposit* conforms to the norms of TESOL Technology Standards Framework (2008) in observing the learners' safety while browsing the Internet. Although, according to Standard 3, learners should generally exercise caution while working online, the application does not pose a threat to their safety by presenting them with unwanted pop-ups or redirections to third-party websites and applications.

A variety of interactivity types

Playposit provides users with eight interactivity types to be added to the videos. These (see Figure 4) include the following:

1. **Multiple-choice**: Traditional multiple-choice questions consist of a problem, a set of alternatives, and one correct response.

2. **Free response**: Essay questions help assess the learners' opinions about a particular topic and, hence, encourage their higher-order thinking.

3. **Reflective pause**: Pre-organizers and/or guided instruction allow the learners to reflect upon key ideas before or while watching the video.

4. **Discussion forum**: As the name suggests, this interactivity allows the educators to create a discussion forum for students to engage in dialogues and debates based on what they watched, encouraging their critical thinking, peer-feedback, analysis, synthesis, and evaluation.

5. **Polling survey**: Through this item, the educators solicit students' ideas about a topic related to the video.

6. **Check all**: These items help assess the students' breadth of knowledge by having them choose more than one correct answer among a set of alternatives.

7. **Fill blank**: Auto-graded fill-in-the-blank items allow the educators to examine the students on their knowledge of the topic, vocabulary, grammar, etc. by having them provide the missing words which have been intentionally left out in a phrase, sentence, paragraph, and/or text.

8. **Web embed**: This interactivity allows the incorporation of other third-party media in the form of a web address.

Figure 4. Interactivity types

These measures allow the teacher to pose questions, provide resources, create discussions, and elicit opinions while the students are engaged in watching the video. These assessment tools can potentially address diversity by targeting skill levels, providing a more realistic picture of the students' progress. For instance, a free-response writing task can more appropriately be used to tap into an advanced student's writing skill, while a multiple-choice item may be used for lower-proficiency levels, as the psycholinguistic processes and micro/macro writing skills involved in tackling a multiple-choice item are comparatively more limited (Brown, 2004; Farhady, Jafarpur, & Birjandi, 1994). Therefore, these measures, if used effectively, can provide a more realistic picture of the students' skills, encouraging the development of HOTS (Egbert, 2007, 2009). Finally, the teacher can access the detailed reports of the students' performance and provide them with feedback if/when necessary.

Feedback

The application offers simple yet informative analytics on the students' interaction with the videos. These statistics can be viewed by hovering the mouse pointer over the *analytics* section of the interface accessible to the educators. This feature grants the educators access to the students' answers. Based on the analytics, the educators can provide students with feedback on their performance.
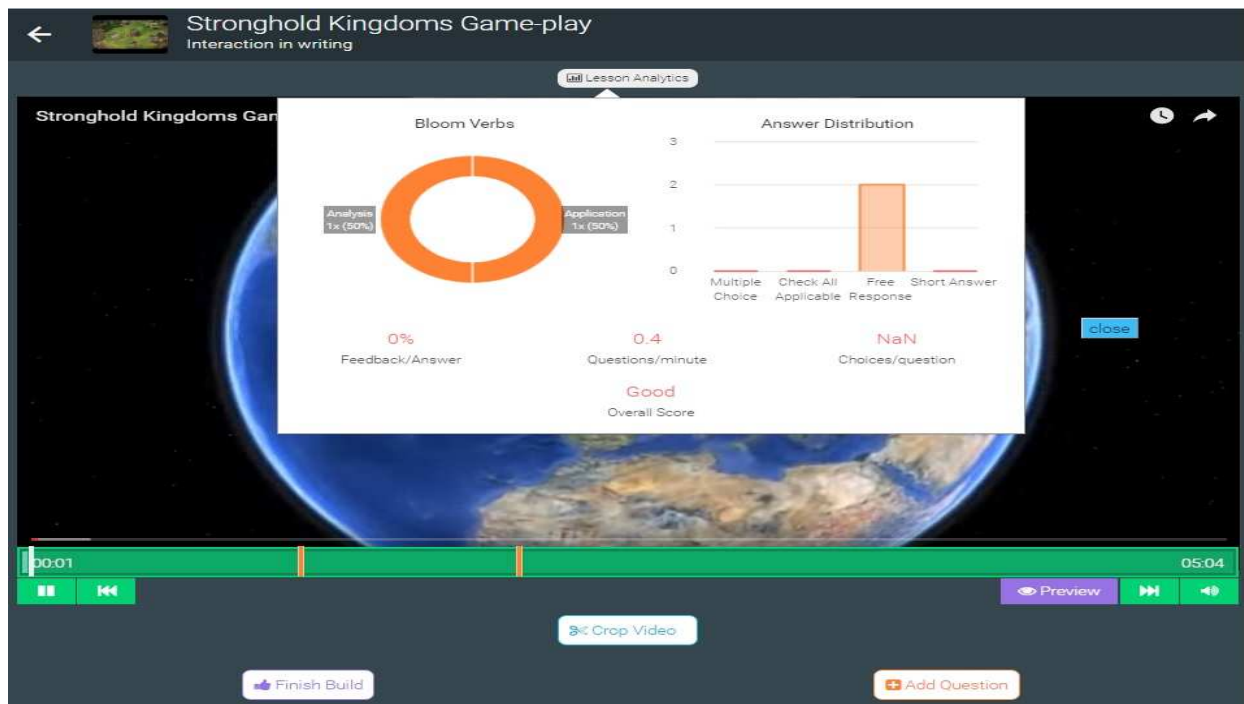
Figure 5. Analytics

Engagement

Engagement is usually defined as "absorption in an activity and implies motivation to do the activity" (Egbert, 2007, p. 4). An engaging task has the following features:

1. **Authenticity**: It is authentic to students, that is, the students feel that they can learn from it.

2. **Connections/interest**: It is interesting to students because it is connected to their lives, making the students feel that performing it can have an important effect on their lives both in and out of the class.

3. **Social interaction**: It provides students with opportunities to interact with each other throughout the learning process. Researchers (e.g., Lantolf & Thorne, 2007; Vygotsky, 1978; Wertsch, 1985) have found that social interaction is a key to learning, as it leads to a deeper sense of attention and focus on task.

4. **Feedback**: It provides students with sufficient feedback which is given right when the students need it rather than later.

5. **Challenge/skills balance**. It has a good balance of challenge and skill for students to solve it. Research (e.g., Csikszentmihalyi, 1990; Egbert, 2004) suggests that when a task is too challenging, the students feel frustrated and demotivated to tackle it. Furthermore, when a task is too easy, it leads to boredom. Therefore, an engaging task needs a balance of challenge and skill.

Accordingly, as videos are authentic, multimodal, and potentially interesting and connected to the students' lives, they can be considered engaging materials (if chosen properly). *Playposit* uses these potentially engaging materials and adds various interactivities (see Figure 4) to them, allowing for HOTS, social interaction, and feedback. The responsibility of realizing the final requirement of an engaging task, that is, a balance between challenge and skill level, is upon the teacher to create for the model to work. Therefore, *Playposit* can be considered a potentially engaging tool which can support students' learning.

User plans

Playposit is offered under three plans: *basic*, *premium teacher*, and *blended school*. The basic plan is fairly limited, but it provides users with basic affordances they need to create educational activities. For instance, they can create unlimited bulbs and see analytics on unlimited students' performances. With other plans; however, the educators have access to all interactivity types (see Figure 4). In addition, the educators can grant students privileges to create their own bulbs and use a more advanced interface to edit videos. Under the *blended school* plan, the application has all the other previously mentioned features along with professional development capabilities, providing educators with training.

Figure 6. User plans

4. Conclusions

Allowing educators to integrate videos as authentic materials in the teaching-learning process, *Playposit* is an application with many useful capabilities. Firstly, the software allows users to

easily locate, edit, and share educationally appropriate videos in a safe environment. The educators can search video-sharing websites, download an appropriate video, trim it based on the teaching-learning objectives, and share it with students. Likewise, the students' access to the video occurs in the same safe environment where the materials are provided unobtrusively. Furthermore, as the application requires only an active Internet connection to operate, it can run on all system platforms.

Secondly, through a variety of interactivity types, the educators can manage the learning process more effectively, assessing the students on their comprehension of the materials and, at the same time, providing them with constructive feedback. For instance, an educator can start a *Playposit* task with a reflective pause interactivity to let the students set goals and understand what the purpose of the task is, and, on a broader sense, how it can connect to their lives. Then, as the video rolls, the educator can engage the students' HOTS by asking effective questions – those asking the students to analyze, synthesize, and evaluate (Bloom,1956; Egbert, 2009) – and have them interact with their peers through the discussion forum. The combination of appropriate videos, effective questions, and interactivity types can potentially result in the development of students' creative and critical thinking skills, and an engaging learning experience. Besides, the educators can monitor the students' progress and provide them with feedback using the analytics feature of the application.

Finally, even under a basic plan, the educators would still have access to useful tools to create an engaging learning task for the students. These tools, *multiple-choice*, *free response*, and *reflective pause*, along with other characteristics of this plan (see above) can be used effectively to support the teaching-learning process with technology. However, the social aspect of the application, which is available to premium and blended-school users, is locked for basic-plan users, with the teaching-learning dynamics following a one-on-one educator-student pattern. Therefore, depending on the users' goals and budget, *Playposit* can be employed in each capacity to support the teaching-learning process.

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Volume 18, Issue 1

Teaching English with Technology

January -2018