



Received: 31.05.2019  
Received in revised form: 19.03.2020  
Accepted: 28.03.2020

Okumus, A. (2020). The perceptions and preferences of 8<sup>th</sup> grade students in digital storytelling in English. *International Online Journal of Education and Teaching (IOJET)*, 7(2), 585-604.

<http://iojet.org/index.php/IOJET/article/view/654>

## THE PERCEPTIONS AND PREFERENCES OF 8TH GRADE STUDENTS IN DIGITAL STORYTELLING IN ENGLISH

*Research Article*

Ayşegül Okumus 

Başkent University

[aysegulokumus.52@gmail.com](mailto:aysegulokumus.52@gmail.com)

Ayşegül OKUMUŞ is doing her MA at the Department of English Language Teaching at Middle East Technical University in Ankara, Turkey. She is currently working as a research assistant at English Language Teaching Program at Başkent University.

Copyright by Informascope. Material published and so copyrighted may not be published elsewhere without the written permission of IOJET.

# THE PERCEPTIONS AND PREFERENCES OF 8<sup>th</sup> GRADE STUDENTS IN DIGITAL STORYTELLING IN ENGLISH

Ayşegül Okumuş  
[aysegulokumus.52@gmail.com](mailto:aysegulokumus.52@gmail.com)

## Abstract

Digital storytelling is the focus of the present study due to scarcity of studies in Turkey. This study investigates the perceptions of 8<sup>th</sup> grade students on the integration of technology via Digital Storytelling to English courses. Another aim is to find out students' preferences for topic and characters in their digital stories. The study was conducted with 15 students in a public school. The data were collected through pre-survey, digital stories, and post-survey. The study was carried out in a month period in which 5 different digital stories were created. The findings based on qualitative and quantitative analysis indicated that the perceptions of the participants toward the use of digital storytelling in English lessons were positive before and after the implementation process with no significant difference between them pre and post-tests. In general, the participants wanted to keep using digital storytelling because they believed digital storytelling is motivating, contributes to language learning, and enables collaboration. The topics preferred were adrenalin, love, sadness, friendship, and fear. The characters were generally female heroines. The implications are that digital storytelling can be integrated into speaking, listening, grammar, vocabulary and writing activities since it is an engaging way of practising language skills.

*Keywords:* Digital Storytelling, Students' Perceptions and Preference, Pixton

## 1. Introduction

With the advent of technology, there have been lots of attempts to integrate technology into courses for educational purposes. This leads us to the term "Computer Assisted Language Learning". Computer Assisted Language Learning (CALL) is defined as "the search for and study of applications of the computer in language teaching and learning" (Levy, 1997). Now, CALL is in the phase called "integrative CALL" following the behaviourist and communicative phases (Warschauer, 1996). In this phase, Web 2.0 tools play an important role. They are online software and applications which enables communication, interaction, collaboration, creation of new contents with images and audios, editing, having social networks and sharing (Alexander, 2006). Blogs, wikis, social networking sites and digital story tools can be considered as examples of Web 2.0.

The field of English as a Second Language has been affected by this trend as well (Blake, 2007; Chappelle, 2003). Hence, there has been a change in language teaching practices (Blake, 2007). Information and Communication Technologies (ICT) have created great opportunities to make use of digital tools for teaching English. There have been various instructional tools integrated into English courses. One of these tools which has emerged over the last ten years is digital storytelling. Digital storytelling is the practice of combining still images with a narrated soundtrack like voice and music or computer-generated text (Bull & Kajder, 2005; Robin, 2008). It enables learners to tell their story in a digital way. As this age's students are called 'Digital Natives (Pyrensky, 2001a, 2001b) and are fond of technological tools and applications, Digital Storytelling can be an appealing way to teach English to them. It can be even way more appealing if we let them create their own stories via Digital storytelling websites and applications because it engages these students through their learning process

(Campbell et al.,2001; Robin, 2016). As they create their own stories, they are not passive receivers yet active creators in the learning environment (Niemi & Multisilta, 2016). In addition, students can practice their language skills, reading, writing, listening, and speaking. Instructional tools also back up students' creativity, critical thinking, meaning construction, independent learning, and motivation (Grgurović & Chapelle, 2008). Ultimately, a learning environment which is collaborative, flexible, and effective can be formed via technological tools (Sadik, 2008).

## 2.1. Literature Review

### 2.1.1. Theory Behind Digital Storytelling

A learning theory refers to the attempt to explain how learning occurs, and a paradigm to understand what the learning process includes basically (Hill, 2002). The learning theory behind Digital Storytelling is Constructivism which "proposes that learning environments should support multiple perspectives or interpretations of reality, knowledge construction, and context-rich, experience-based activities." (Jonassen, 1999).

There are various activities which can be done in a constructivist learning environment. Some include creating concept maps, cartoons, charts, multimedia presentations, and digital stories etc. Thanks to these activities, a learning environment can be transformed into a constructivist one where active, intentional, collaborative, complex, conversational, contextualised and reflective learning occur (Jonassen, 1999). According to Constructivism, the learner should be at the centre of the learning process as they construct the knowledge based on their personal experience (Merill, 1991) and help each other by asking and answering questions and working together to construct the knowledge (Bouman, 2012). Thus, Constructivism forms the foundations of Digital Storytelling for teaching and learning. It can be a beneficial mean of integrating digital media into the process of innovative teaching and learning. In addition to making contributions to the technological skills of the students, it can help teachers design learning environments which allow for engaging activities, collaboration, peer-to-peer communication (Dakich, 2008). As Behmer (2005) emphasized, the combination of digital storytelling and constructivism provides learners with such a learning environment that it makes them make use of their communication and technological skills on a task they are expected to complete in collaboration with their peers. Furthermore, the convergence of student-centred learning strategies proposed by Barret (2005) shows that Digital Storytelling helps and supports these strategies which are student engagement, reflection for deep learning, project-based learning, and the effective integration of technology into instruction.

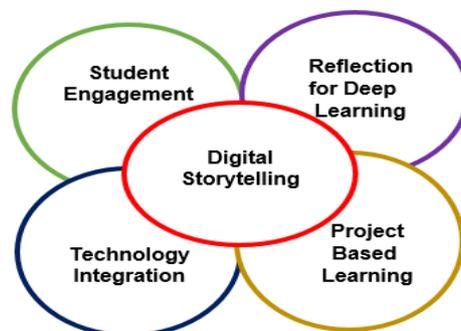


Figure 1. Convergence of Student-Centred Learning Strategies

### **2.1.2. Previous Studies on Digital Storytelling**

Some studies have been conducted on the use of Digital Storytelling as an instructional tool in English courses so far. The reason is the fact that the language of pictures and music helps lower-level students to communicate when they do not have the necessary language to communicate exclusively in writing (Reinders, 2011).

Seng (2017) investigated 34 primary four teachers' and 116 primary four students' perceptions of storytelling as a teaching and learning tool. Both questionnaires and interviews were administered to both teachers and students. 98.3% of the students expressed that they enjoyed listening to and reading stories, whereas 81 % of them liked acting out parts of the storytelling. However, some teachers did not try to integrate storytelling into their English classes because of lack of training and support from administration. Based on the analysis of questionnaires and interviews, it can be said that there are language and socio-emotional benefits which students can gain from storytelling. Both parties have positive perceptions of storytelling as a language learning tool.

Another research was conducted on the effect of digital storytelling technique on the perceptions of students toward instructional technologies (Balaman, 2016). Twenty students from a public vocational school were divided into seven groups and prepared digital stories. Before and after the implementation, pre and post-tests were administered, and interviews were also performed after the implementation. Based on the analysis, Balaman (2016) claimed that Digital Storytelling had a positive effect on students' attitudes toward education technologies, and it can also increase the level of knowledge and interest upon subject via using the education technologies.

Another study was done by Yoon (2013) to explore the effects of using digital storytelling in English lessons on Korean ELL learners' attitudes and perception toward learning English. Thirty-two 5<sup>th</sup> grade students took part in a 12-week study. Self-evaluation and lecture review reports were analysed as qualitative data while pre- and post-survey were conducted to collect data on learning attitude and reading comprehension of the students. Digital storytelling had a positive effect on attitudinal changes in learning English, deeper understanding of the lesson, active participation, and led to positive change in student motivation and involvement.

Dollar and Tolu (2015) worked with sixty-three 5<sup>th</sup> grade students to investigate the implementation of digital story writing in English via Storybird, free online story reading and writing website. The analysis was done based on classroom observation, interviews with the students and their teachers, and the written stories. The results showed that digital story writing can be used as an effective technique to promote writing and there was a positive change in students' motivation and involvement, and they were also eager to continue using it.

One of the studies conducted in Turkey on digital storytelling focused on how 77 junior students of English Language Teaching (ELT) program perceive the world of stories for young learners. Content analysis of EFL students' digital stories for young learners in terms of topic and characters revealed that friendship and philanthropy were the common topic and the heroes were generally male, children or animals (Bozdoğan, 2012).

Smeda (2014) conducted a research to find out the pedagogical aspects of digital storytelling and its effect on students learning. A new e-learning Digital Storytelling (elDist) framework which is based on learners' needs and capabilities was developed. Primary and secondary levels in one Australian school participated into the study. Both teachers and students experienced digital storytelling. In order to collect quantitative data, rubric

evaluation was used while interviews and observations were administered for qualitative data. The findings showed that teachers can benefit from digital storytelling as an instructional tool to design constructivist learning environment. Hence, student engagement can be increased, and educational outcomes can be improved with this approach.

Pixton, a digital storytelling tool, was used to support grammar and vocabulary teaching in a state school located in Ecuador (Cabrera et al., 2018). There were 163 junior high school students and 14 pre-service English teachers as participants. In order to collect data, pre and post questionnaires, pre and post-tests, and observation sheets were applied. While experimental groups took lessons given with the help of Pixton, the control group did not receive any treatment. According to the analysed data, the fact that the experimental group performed better in post-tests proved Pixton to be an efficient mean of teaching grammar and vocabulary in an enjoyable way.

Having discussed these aspects, the aims of the present study are to explore the perceptions of students toward digital storytelling and their preferences of topic and characters and ultimately to promote 21st century skills like Communication and Collaboration (Robin, 2008). There is a need to do research on digital storytelling because there are not many studies conducted in the context of public schools in Turkey. In addition, as the students of this generation are “Digital Natives”, we need to adjust the teaching and learning methods based on their needs and interests. One way of doing this is to integrate digital tools into English Language Teaching (ELT) field. If we are to benefit from educational technology tools, it is of significance that we as teachers need to know which tools work in the classroom environment and what our learners think of these tools as means of teaching and learning English. Moreover, it is also important to gather data to make deductions about the effect of technology integration via digital storytelling on students learning, motivation, engagement and how teaching practices are transformed with this technology integration (Barret, 2005). That is why we need to do classroom research so as to find answers to these questions.

This study was a small scale, empirical study within the scope of public secondary schools in Turkey. The subjects of the study were 8th grade students. They created digital stories via Pixton in collaboration with their classmates and teacher. Pre and post-surveys, and five digital stories created by the students were the main source of the data for this study. The data were analysed to learn about perceptions toward the use of digital storytelling in English lessons and preferences of the students for story topic and characters in their own stories. Based on this ground, the research questions to be addressed were the followings:

1. What are the perceptions of students on the integration of technology via Digital Storytelling to English classes?
2. What are the students’ preferences for topic and character in their own digital stories?

### 3. Methodology

#### 3.1. Participants

The study was conducted in a public school in the region of Central Anatolia of Turkey. The participants were 15 eighth grade students; eight of them were female (53,33%) while seven of them were male (46,67%). Their age ranged from 13 to 14 ( $M=13.33$ ). They have been learning English since fourth grade. They had two hours of English a week in fourth grade, four hours a week in fifth, sixth and seventh grades. In eighth grade, they had 6 hours of English a week. According to the Turkish Ministry of Education, these students represent the A2 proficiency level of the Common European Framework of Reference for Languages (CEFR; Council of Europe, 2001).

### **3.2. Data Collection Instruments**

For the present study, three data collection instruments were used: a pre-survey, digital stories created by the students, and a post-survey.

The pre-survey was designed for collecting demographic data and data on experience in technology, finding about the students' readiness and perceptions toward technology integration through digital storytelling into English courses. The Part A and Part B in pre-survey were adapted from a previous research conducted by Cirit (2015) on the perceptions of the ELT pre-service teachers on the integration of web 2.0 tools to the courses for alternative assessment. There were three sections in pre-survey: Demographic information and experience in technology (PART A), Perceptions of technology (PART B), Open-ended questions (PART C). In the demographic data and experience in technology part, the subjects were expected to fill in the parts asking for their age, gender, their experience in internet technologies, their proficiency in computer use, how long they have been using computer, how they access the internet, the purpose of their computer use, and their experience in digital storytelling, and with which tools and how many times they have experienced digital storytelling. Part B was designed on a four-point Likert scale with values ranging from 1 to 4. One stands for "Totally Disagree" while 4 stands for "Totally Agree". In total there were 10 statements in part B. The subjects were posed questions about their perceptions of the integration of technology via Digital Storytelling to English lessons. In Part C, 2 open-ended questions were included about their favourite topic for story writing and which type of stories they like most so as to explore their preferences for topic in story writing.

The second data collection instrument was digital stories created by the students in collaboration with their friends and teacher via Pixton, which is an online digital storytelling tool. There were five digital stories which were analysed in terms of topic, and characters.

The post-survey was the last data collection instrument. The post-survey consisted of three sections: demographic data and experience in technology (Part A), perceptions about technology integration via digital storytelling (Part B), and open-ended questions and suggestions (Part C). In the demographic data and experience in technology section, the items were the same as the items in pre-survey. In the second section, the participants revealed their perceptions about the integration of technology with a digital storytelling tool called Pixton into English lessons. Ten items in the post-survey were the same with the ones in Part B of pre-survey. The reason for which I made use of the same questions of pre-survey is to learn if the perceptions of the students toward technology integration via digital storytelling has changed after the implementation of digital storytelling. In the last section (Part C), five open-ended questions were posed to the participants. These questions asked for three things they liked about digital storytelling activities in class, the challenges they faced while using digital storytelling in class, and whether they would like to use it in their future English lessons. Two of these questions were seeking suggestions on different ways of using digital storytelling in English and, further comments and questions on digital storytelling.

### **3.3. Data Collection Procedure**

The data for the present study were gathered in a month in the academic year of 2018-2019. This was a small-scale empirical study and both quantitative and qualitative data were gathered to carry out the research. While qualitative data were collected with the help of open-ended questions in pre- and post-surveys and digital stories created by the students, pre- and post-surveys were administered to collect the quantitative data. Digital stories were created via an instructional tool called Pixton.

There were four steps to follow in data collection process. First, the students were informed that the data gathered from them would be used for the study that the researcher carried out. They were also told that participating to the research was on voluntary basis and they may leave the survey undone. Thus, it was made sure that they do not have to participate to the research and their performance will not influence their total grade of English.

First, pre-survey was introduced to the students and the instructions for how they were supposed to fill in the surveys and what is expected from them were explained. If they had any questions about the research or the surveys, they were encouraged to ask beforehand. After their questions were answered, the consent form was sent to their parents as they are under 18 on December 5, 2018. Then, all the students accepted to take part in the study and they filled in the pre-survey and gave it to the researcher on December 12, 2018.

Secondly, the researcher made a presentation about what “Digital Storytelling” is and how to use Pixton on December 12, 2018. The students were provided with a step-by-step instruction on the smartboard so that they learn how to use it. In case they need any assistance about a problem, the researcher would be there to solve any problem. After the introduction, the students were divided into three groups which are character, background and story writers on December 13, 2018. Each group had a mission: Story writer group was to write the story, character group was to choose the characters based on the story written, Background group was expected to select the setting from the alternatives provided on Pixton. Each student had the chance to work in different groups. Thus, they had experienced all the story writing process. The students had the opportunity to write five stories in one month.

Lastly, on January 2, 2019, the post-survey was administered after the students had been given parent consent form and reminded of the fact that it was not obligatory to take part in the study. During the survey, the researcher explained the questions so as to make them clear.

### **3.4. Data Analysis Methods**

The quantitative data gathered with the pre- and post-surveys were statistically analysed by using a statistical analysis program. For analysis, the items in both pre- and post-surveys part B were designed on a four-point Likert Scale from 1 to 4. What these scores stand for is as follows: Strongly Agree = 4, Agree= 3, Disagree = 2, Strongly Disagree= 1. As mentioned before, the two sections were Demographic data and experience in technology (Part A), perceptions about technology integration via Digital Storytelling (Part B). After gathering and entering the data into the software, the mean scores for the items in pre and post-surveys Part B were calculated, and normality tests were run. As the result of Shapiro-Wilk test and the visual inspection of the histograms indicated that data was not normally distributed,  $W(15) = .758$ ,  $p = .001$ . Therefore, the means of pre- and post-surveys were compared via Wilcoxon Signed Ranks Test, non-parametric test for dependant-sample, to see if there is any significant change in the students’ perception of technology integration through digital storytelling to English lesson.

The qualitative data were collected with the help of the open-ended questions in pre and post-surveys. The digital stories were analysed in terms of topic and characters. The data were analysed with the constant comparative method (Creswell, 2013). In constant comparative method, each information taken from the data collection is compared to the categories emerging (Creswell, 2013). The themes appeared were put under basic categories and themes.

## 4. Findings

In order to answer the research questions of the present study, the qualitative and quantitative data were collected with pre-survey, digital stories, and post-survey, and analysed. The aim of gathering both types of data is to find out the perceptions of the subjects about the integration of technology via digital storytelling into English lessons and their preferences for topic and characters in their own digital stories.

When the means of pre-survey and post-survey were compared in terms of any significant difference in the students' perception of technology integration through digital storytelling to English lessons, the results of non-parametric test, Wilcoxon Signed Ranks Test, turned out to be non-significant,  $Z = .205$ ,  $p = .838$  as presented in Table 1.

Table 1. *The Results of Wilcoxon Signed Ranks Test*

Posttest-Pretest	N	Mean Rank	Sum of Ranks	z	p
Negative Ranks	5	5.10	25.50	.205	.838
Positive Ranks	5	5.90	29.50		
Ties	5	-			

### 4.1. Pre-Survey Findings

#### 4.1.1. Pre-Survey Part A: Findings

There were 10 questions in pre-survey Part A and they were asking for demographic information and experience in technology and digital storytelling. The results of the analysis were presented with tables and figures.

More than half of the participants (60%) have been using computer and internet technologies for at least 6 years. The participants make use of different means to access to the internet. While almost all students had smartphones as a way of accessing the internet, eight students had the opportunity to use tablets as the tool to access to the internet. Only seven of them chose computers or laptops for this question. All the students could access to the internet via Smartboard in their classrooms, which was the other option. Most of the participants (66,67%) expressed that they are advanced internet user whereas only five of them (33,33%) defined themselves as intermediate internet users.

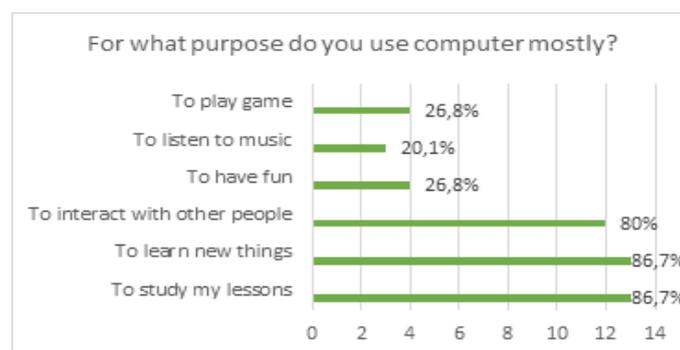


Figure 1. *The purpose of computer uses mostly*

As it is indicated in figure 1, 86,7% of the participants used computer both to study lessons and learn new things. Almost all the participants (80%) used it to communicate with other people. Eleven of the participants specified other purposes such as playing game, having fun, and listening to music.

As for the knowledge in digital storytelling, the students did not have any idea about what digital storytelling is. Although the students did not have any experience in digital storytelling, they all indicated that they have known the tool called “Movie Maker”.

#### 4.1.2. Pre-Survey Part B: Results

In the second section of the pre-survey, the goal was to learn how the participants perceive the technology integration via digital storytelling into English lessons before the intervention. There were ten items designed on a four-point Likert Scale from 1 to 4. What these scorings stand for was as follows: Strongly Agree = 4, Agree= 3, Disagree = 2, Strongly Disagree= 1. The means of each item and frequency for each score were presented in Table 2.

Table 2. Results of the questions in pre-survey Part B

Items	General Perception		Mean		Number of Items	
	Item Means	Mean	SD	Answer Choices	f	P
1. I use the Web 2.0 tools (wikis, blogs, social networking sites etc.) actively in my daily activities.	3,73	,594		Disagree	1	6,7
				Agree	2	13,3
				Totally Agree	12	80,0
2. I believe I am more motivated by the use of technology in my course.	3,87	,352		Agree	2	
				Totally Agree	13	
3. I think technology should be integrated to our lessons more.	3,80	,414		Agree	3	20,0
				Totally Agree	12	80,0
4. I learn better if I get to practice what I have learned with the help of multimedia such as images, videos, maps etc.	3,60	,507		Agree	6	40,0
				Totally Agree	9	60,0
5. I like my teacher to use digital stories to teach me English.	3,67	,488		Agree	5	33,3
				Totally Agree	10	66,7
6. Technological tools distract me in my learning.	1,67	1,234		Totally disagree	11	73,3
				Disagree	1	6,7
				Totally agree	3	20,0
7. I enjoy acting out parts of the stories read by me, my classmates or my teacher during English language lessons.	3,73	,458		Agree	4	6,7
				Totally Agree	11	73,3
8. I believe the use of technological tools will contribute to my success in English courses.	3,87	,352		Agree	2	13,3
				Totally Agree	13	86,7

9. I enjoy listening to digital stories in English during English language lessons.	3,73	,458	Agree	4	26,7
			Totally Agree	11	73,3
10. I think digital storytelling will contribute to my language.	3,84	,414	Agree	3	20,0
			Totally Agree	12	80,0
Note: SD: Standard Deviation, f: frequency, p: percentage					

Based on the analysis of ten questions, the students have a highly positive perception toward the use of technology via digital storytelling in English lessons. They generally chose “agree” and “totally agree” as an answer for the questions 1,3,4,5,7,9,10. Especially for the questions 2 and 8, they have the most positive perception ( $M=3.87$ ). However, for the question 6, almost all the students ( $n=11$ ) chose “Totally Disagree” as an answer ( $M=1.67$ ).

In the question 6, while 12 students chose “Totally Disagree” and “Disagree”, only 3 of them opted for “Totally Agree”. As the number of participants who selected “Totally Disagree” is 11, it can be said that they believe that technological tools do not distract them during their learning. On the other hand, there were a few students who think that technological tools distract their attention during learning. Nevertheless, this may not necessarily mean that they are against technology integration to their lessons.

All in all, as indicated in table 2, the subjects hold a positive view of the technology integration via digital storytelling with the mean of 3,547. Most of the students ( $n=12$ ) expressed that technological tools should be integrated into English lessons. The reason behind this opinion is that they feel more motivated with the help of the technology ( $n=15$ ). In addition, all the students ( $n=15$ ) think that they learn better when there is multimedia such as images and visuals. They also enjoy listening to stories and acting out the stories ( $n=15$ ). Moreover, all of them believe that technological tools will make a significant contribution to their language skills as well as to their success ( $n=15$ ).

#### 4.1.3. Pre-Survey Part C: Results

In Part C, two open-ended questions were asked, which are as follow;

##### 4.1.3.1. *What is your favourite topic for story writing?*

The subjects were expected to write the topic which they like to write about in story. There were 34 responses in total given by 15 participants. The most favourite topic for story writing is Adrenalin because 10 of the participants mentioned it. The second most favourite topics are Love and Sadness with the percent of 18, which is followed by Friendship and Fear (15%). The least favourite ones are Travelling and Respect with the percentage of 3.

##### 4.1.3.2. *Which types of stories do you like most?*

The participants were asked of their favourite type of stories. There were 42 types of story written. According to figure 4.9, the type of story which the students like most is Action with the percentage of 24 followed by Horror with 21%. In the second place, there are Romance stories (12%) followed by Comedy and Historical stories (10% each). Science-Fiction, Detective, Realistic and Travel stories are the least favourite story types with the percent of 5 each as only 2 students mentioned these in their answers.

## 4.2. Digital Stories Created via Pixton: The analysis of Topic and Characters

The students created 5 digital stories in collaboration with their classmates in a month. The digital stories were analysed in terms of the topic and the characters with constant comparative method (Creswell, 2013). The aim of this analysis is to find out the students' preferences for topic and characters in digital story writing.

Table 3. *Coding Categories for Digital Stories created by students*

Category	Explanation
Topic	What is the story about?
Characters; -Gender -Roles	General features of the characters such as their gender and their roles in the story.

Five digital stories were analysed following the coding displayed in table 3. The topics of the five digital stories are the adventures of a princess, betrayal of a friend, creating a dinosaur, a teenage boy's change and love, the adventures of two Vikings. Almost all include some action and most of the stories have happy ending. The topics can be categorized as adrenalin, love, sadness, fear and friendship. The genres for these stories can be sorted as adventure, action, horror, science-fiction, historical, and romance.

As for the characters in the stories, there were 22 characters in total; 17 of them were males while only 5 of them were females. In almost all stories, females were the heroines. However, in one of the stories, there were both male hero and female heroine. When it comes to the roles of the characters, there was a variety of roles which the characters play. In the digital story called "Dark Night", there was a princess, her friend and a servant who turns into a creature at nights. In the second story called "Betrayal", there were a female thief and a male thief, a servant and a rich man. In the third story named "Dinosaur on the run", a scientist, his helper and a super woman were the main characters. In the other story called "Nerd Hasan", Hasan and Emma were teenagers and students. In the last story called "Two Crazy Vikings", there were two Vikings, a woman, two soldiers. Overall, although the stories were created by both female and male students, the heroines of the stories were generally females. The female and male characters had a variety of roles to play in the stories.

## 4.3. Post-Survey Findings

The analysis of the post-survey provided the researcher with the information on the subjects' demographic data, experience in digital storytelling, their perception of technology integration via digital storytelling.

### 4.3.1. Post-Survey Part A: Findings

There were ten items posing questions on the subjects' demographic data and their experience in technology and digital storytelling. There were 15 students participated to the study in pre-survey phase. In post-survey, 15 students joined the survey in total. The number of participants in pre and post-survey were even. The data gathered via post-survey were analysed statistically and displayed with the help of a table, bar graphs and pie charts.

After the implementation, there were 2 basic users (13,33%), 8 intermediate users (53,33%), and 5 advanced users with the percentage of 33,33. The results of the question "How proficient do you feel as an internet user?" in pre-survey were compared with the results of the same question in post-survey. Based on what it is stated, there is an increase in the basic level by 13,33% and intermediate level by 20% whereas the number participants who are advanced as an internet user decreased by 33,34%. After the implementation, the participants changed their view on their own proficiency level as internet users.

The participants learned what digital storytelling is after the implementation. The question was asked to establish the fact that they had no idea about it before they experience it. In post-survey, all the participants chose the option “Yes” as they have learned digital storytelling during the implementation (100%). The sixth question post-survey asked if the participants had any experience in Digital Storytelling. While they had no experience in digital storytelling according to the results of pre-survey, they had the chance to experience it during the implementation (100%). In post-survey, they were expected to answer this question because their answer to the question 5 was “Yes”.

The participants were asked how many times they have tried digital storytelling. In pre-survey, they did not answer the question as they were to skip the question if they do not know what digital storytelling is. During the implementation, they had the chance to try it more than three times (15; 100%). The subjects were asked of the tools with which they have experience before. They stated that they have had experience with Movie Maker in pre-survey. In post-survey, it is shown that they have experienced Pixton which was the tool they used to create their digital stories during the implementation.

#### 4.3.2. Post-Survey Part B: Results

The perceptions of the subjects about the technology integration via digital storytelling are revealed. This section consisted of 10 four-points Likert scale type questions whose values ranged from 1 to 4. What these values meant as follows: *Strongly Agree* = 4, *Agree*= 3, *Disagree* = 2, *Strongly Disagree*= 1. The means of each item and frequency for each score were presented in Table 4.

Table 4. *The results of the questions in Part B in post-survey*

Items	General Perception		Mean	SD	Number of Items		
	Item Means	3,599			10	f	P
1.I use the Web 2.0 tools (wikis, blogs, social networking sites etc.) actively in my daily activities.	3,80	,414			Agree	3	20,0
					Totally Agree	12	80,0
2.I believe I am more motivated by the use of technology in my course.	3,73	,458			Agree	4	26,7
					Totally Agree	11	73,3
3.I think technology should be integrated to our lessons more.	3,73	,458			Agree	4	26,7
					Totally Agree	11	73,3
4.I learn better if I get to practice what I have learned with the help of multimedia such as images, videos, maps etc.	4,00	,000			Totally Agree	15	100,0
5.I like my teacher to use digital stories to teach me English.	3,93	,258			Agree	1	6,7
					Totally Agree	14	93,3
6.Technological tools distract me in my learning.	1,40	,632			Totally disagree	10	66,7
					Disagree	4	26,7
					Agree	1	6,7

7.I enjoy acting out parts of the stories read by me, my classmates or my teacher during English language lessons.	4,00	,000	Totally Agree	15	100,0
8.I believe the use of technological tools will contribute to my success in English courses.	3,80	,414	Agree	3	20,0
			Totally Agree	12	80,0
9. I enjoy listening to digital stories in English during English language lessons.	3,93	,258	Agree	1	6,7
			Totally Agree	14	93,3
10.I think digital storytelling will contribute to my language.	3,80	,414	Agree	3	20,0
			Totally Agree	12	80,0

Note: SD: Standard Deviation, f: frequency, p: percentage

In question 1, almost all the participants (n=12 for Totally Agree; n=3 for Agree) stated that they use Web 2.0 tools actively in their daily lives. For question 2 and 3, the mean is 3,73, which means that almost all participants think that they are more motivated by the technology integration (n=15) and therefore they believe that technology integration should be increased in their courses (n=15). In question 4, all the participants stated that they learn better if they can practice what they have covered with the help of multimedia such as images, videos, maps etc. As a result, the question 4 is the item with the highest mean, 4,00 among all ten questions. In question 5, except for one participant 14 participants selected the option 'totally agree' to express that they like their teacher to use digital storytelling to teach English. The question 6 is the item with the lowest mean, which suggests that the technological tools do not distract them during their learning process. The question 7 with the mean of 4,00 indicates that the participants enjoy the acting out parts of the stories read by them, their classmates or their teacher during English language lessons. In question 8, many participants stated that technological tools will make contributions to their success in courses. Therefore, in question 10, they indicated that digital storytelling will contribute to their language. In question 9, almost all said that they enjoy listening to digital stories in English lessons (M=3,93). Overall, the mean of all the items in part B is 3,599, which proves that the students support the technology integration via digital storytelling to English lessons.

#### 4.3.3. Post-Survey Part C: Results

In post survey part C, there were 5 open-ended questions posed to collect qualitative data on the perceptions of the participants about the use of digital storytelling in English lessons. The data of the post-survey part C were collected, translated into English and analysed via constant comparative method (Creswell, 2013). The results are presented under each question.

##### 4.3.3.1. *What are the things that you liked about Digital Storytelling activities in class? Please, write at least three by giving reasons.*

In question 1, the participants were asked to write three things which they liked about digital storytelling activities in class and explain the reasons why they liked these things. In total, there are 47 points mentioned.

It was observed that they liked working collaboratively while they were working on their story, which is the most mentioned aspect the participants liked. Secondly, they stated that it

facilitates the students-centred learning because they had the opportunity to write their own stories and make their choices on their own. Additionally, they indicated the pros of the digital storytelling tool such as easy to navigate and the variety of the choices provided. Next, they said that digital storytelling activities help them practice their language skills like writing and speaking. One of the aspects mentioned once is creativity. They believe that these activities improve their creativity.

During the analysis, the researcher made the initial categorization of the subjects' responses and these categories were classified under the basic themes. The basic themes and the category for the question 1 as follows:

#### **a) Perceptions toward Digital Storytelling**

With the help of the first question in post-survey Part C, the data on the perceptions of the participants toward digital storytelling can be gathered. The three things the participants liked about the digital storytelling activities were coded under five basic themes.

##### **a.1) Digital Storytelling activities support Collaborative Writing:**

The analysis of the responses given by the students indicates that they enjoy the digital storytelling activities because they had the chance to work with their friends as a team on their story. Some sample comments showing that they like writing in collaboration with their classmates are given below:

*I like it because we can work on the story in groups and we had the chance to work both on the story, the characters and the background as a team. (P7)*

The comments above proves that the students have a positive perception toward digital storytelling because they enjoy the activities on which they work collaboratively.

##### **a.2) Digital Storytelling activities facilitate Student-Centred learning:**

The subject pointed out that they like the idea of writing their own story by making their own decisions. Their opinions are as presented in their comments below:

*I like it because we had the opportunity to decide everything such as characters and background of our own story. (P11)*

The comments above show that the students like learning and studying in a student-centred environment.

##### **a.3) Digital Storytelling activities help me practice my language skills:**

Another point mentioned by the participants is that they have the opportunity to practice their language skills such as writing and speaking. There are various language skills pointed out in the responses. These skills are mentioned as follows;

*I like it because it was fun to act out the stories which we created. (P7)*

*Third, I like it because it facilitates my language learning process. (P10)*

Just like the comments indicate, the students practice their language skills depending on the way the digital storytelling activities are done in English lessons.

##### **a.4) Digital Storytelling Tool, Pixton, has some advantages.**

One of the mostly mentioned aspects the participants liked about Digital storytelling is about the characteristics of the tool. There are a few points appeared in the comments. These comments are as the followings:

*First, it is easy to navigate the website because we can change the characteristics of our characters easily on smartboard. (P8)*

*First, we can play with the characters, change their positions and moves in the way we want to. Second, I like choosing the background because there are lots of choices. (P13)*

As presented in the comments above, the students like the website called Pixton because it has easy navigation and offers lots of choices for the characters and the background.

#### **a.5) Digital Storytelling activities improve my creativity:**

This is the least mentioned aspect because there is only one participant pointed out this aspect of these type of activities. Only comment including this aspect is as follows:

*Third, it is a creative website. Thus, we can improve our creativity as well by writing our story. (P8)*

This student believe that it can improve their creativity since it is a creative website and it makes them think creatively while they are writing their story.

*4.3.3.2. What are the challenges you faced while you are using Digital Storytelling in class, if any?*

In second question in post-survey Part C, the participants were expected to write the challenges they faced while they were using Digital storytelling in class. There was only one challenge they pointed out in their comments, which is as follows:

*I had difficulty in decision making process because everyone had different ideas about which character to choose and what to write as a story. (P2)*

While twelve of the participants stated that they had difficulty in making decisions, only three of them did not experience any difficulty during this process.

*4.3.3.3. Would you like to use Digital Storytelling tools in your future English lessons? Why? Why not?*

In question 3, the researcher asked the participants whether they would like to use Digital storytelling tools in their future English lessons by giving their reasons. All participants indicated that they would like to continue using the Digital Storytelling tools in their future English lessons as they are beneficial for their language skills just as indicated in figure 4.15. In total, there were 26 reasons mentioned.

During the analysis, the researcher made the initial categorization of the subjects' responses and these categories were classified under three basic themes. These basic themes and the category for the question 3 are as follow:

#### **b) Perceptions toward Digital Storytelling Tools**

With the help of question 3 in post-survey part C, the researcher collected data on the participants view on the digital storytelling tools and their willingness to continue using these types of tools.

##### **b.1) Digital Storytelling tools are beneficial for my language:**

Most of the participants pointed that they would like to continue using the digital storytelling tools because they believe that the digital storytelling tools are beneficial for their language with the percentage of 46 (f=12). The comments showing these beliefs are as follow:

*I would like to use it in my future English lessons because we can learn new vocabularies while we are writing our stories and it is both fun and useful for my English. (P3)*

*I would like to use it in my future English lessons because it is a practical way to learn a language and is an alternative way of learning English. (P10)*

*I would like to use it in my future English lessons because I can understand the meaning of the words better. As there are dialogues in our stories, I can write dialogues better in English. (P15)*

Just like mentioned in the comments above, they believe that the digital storytelling tools contribute to their language in a positive way.

### **b.2) Digital Storytelling tools have some benefits:**

Almost half of the participants mentioned the benefits of the digital storytelling tools (f=7). They pointed out the positive effects of the visuals on them. They think that these tools are an alternative way of learning English. The comments about the benefits of the digital storytelling tools are as the followings:

*I would like to use it in my future English lessons because I feel like I can understand English better when there are visuals and digital stories. (P4)*

*I would like to use it in my future English lessons because I think digital stories help me learn English. (P8)*

As presented in the comments, the students want to benefit from the digital storytelling tools because they learn better when there are visuals and stories integrated into English lessons.

### **b.3) Digital Storytelling tools are fun:**

Twenty-seven percent of the subjects wants to continue using the digital storytelling tools because these tools are fun (f=7). These comments are presented as follow:

*I would like to use it in my future English lessons because it is both fun and useful for my English. (P14)*

In the comment above, the participants stated that the digital storytelling tools are fun. Therefore, they want to keep using these tools in the future.

*4.3.3.4. In what other ways would you suggest Digital Storytelling to be used in English lesson? (For example, how often and for which topics?)*

In question 4 in post-survey part C, the participants were asked to make suggestions for other ways the digital storytelling can be used in English lessons. There were types of activities, topics and some frequency adverbs suggested in responses. There were 35 types of activities, five topics and 4 frequency adverbs indicated.

As displayed in figure 4.16, there are six types of activities proposed for future use in English lessons. The activities suggested mostly are vocabulary (40%) and speaking activities (31%). The least mentioned one are grammar activities and the use of digital storytelling as a reflection task (3%).

As for the topics suggested to be used in digital storytelling activities, the stories of the inventors can be described, which is the most mentioned topic (f=4). The second topics with the frequency of 2 are writing personal stories and phone conversations. The least mentioned topics are adventure stories (f=1) and creating TV shows about different cuisines (f=1). As

displayed in figure 4.18, there are four different frequency of adverbs. The participants would like digital storytelling to be used at least three times a month. Mostly, they want to use it either always or twice a week with the percentage of 37,5. Some want to use it four times a week (n=3;18,75%).

During the analysis, the researcher made the initial categorization of the subjects' responses and these categories were classified under three basic themes. These basic themes and the category for the question 4 as follows:

### c) Digital Storytelling in English Lessons

The researcher gathered data on the possible uses of digital storytelling in English lessons, topics and how often it can be used in the lessons.

#### c.1) There are various digital storytelling activities to be done in English lessons:

The participants suggested six different activities in which digital storytelling can be used. The comments including these activities are as follow:

*We can use it for creating a role play, digital stories, and reading new stories. (P9)*

*I suggest it to be used to learn new vocabularies and practice our reading skills. We can use it for learning English grammar in context. (P11)*

*I suggest it to be used as a reflection task. We can write our thoughts and what we have learned after each lesson we had. (P14)*

Considering the comments above, the activities suggested are vocabulary, reading, grammar and speaking activities. It is also suggested to be used as a reflection task by one of the participants.

#### c.2) The topics are suggested to be used for Digital Storytelling:

In question 4, the participants suggested some topics which can be used for digital storytelling. The comments present some of the topics below:

*We can use it for telling the stories of inventors. (P2)*

*We can use it for writing about adventures and our personal stories. (P5)*

*We can use it for writing a phone conversation or a Tv show about different cuisines. (P7)*

*I want to use it to share my happy moments with digital storytelling. (P13)*

As also seen in the comments, the students want to work on the stories of the inventors, adventure stories, personal stories, phone conversation, Tv show about different cuisines in digital storytelling activities. One of them also mentioned sharing happy moments with digital storytelling.

#### c.3) The frequency for using Digital Storytelling is offered:

Some of the participants made an offer on how often they can use digital storytelling. They expressed their choice with the comments below:

*I think we can use it twice a week. (P4)*

*I think we can use it four times a month to create our digital stories. (P10)*

The comments reveal that the students would like digital storytelling to be integrated into their English lessons at least twice a week and at most four times a month.

#### 4.3.3.5. Any other comments or questions about Digital Storytelling?

In part C question 5 in post-survey, the participants were asked to write their comments and questions about Digital Storytelling. The comments and questions of the subjects made were as the followings:

##### 4.3.3.5.1. Comments

The participants commented on the digital storytelling tool. They pointed out that Pixton is a good website and digital storytelling is a fun way to learn English. Thus, they can understand English better. Therefore, they want to use it more often in the future. Some emphasized that they can use it for other lessons as well. One of the participants wish they could change the dresses of the characters. In addition, one of them stated that he liked digital storytelling so much that he created his own account on Pixton.

##### 4.3.3.5.2. Questions

There was only one question about digital storytelling posed by the participants. The question is “Why don’t we use digital storytelling in other lessons?”, which suggests that they want to use digital storytelling not only in English lessons but also in other subjects.

All in all, they displayed a positive attitude toward the integration of technology via digital storytelling to their English courses based on their responses and comments.

## 5. Discussion

The present study aimed to find out the perceptions of the students toward the technology integration via digital storytelling and their preference for topic and characters in their own digital stories. In order to gather data, pre- and post-surveys were conducted, and digital stories were created by the students.

The results of the pre-survey revealed that the students had a positive perception toward the integration of technology via digital storytelling ( $M=3,547$ ). The similar results were reached via the post-survey regarding the perceptions of the students about the digital storytelling as an educational technology tool ( $M=3,599$ ). Although there is not a significant difference between the results of the pre-survey and post-survey part B, the students have a positive perception of digital storytelling integration into English lessons both before and after the implementation. These results are in line with the results of the previous studies conducted by Seng (2017) as it is found that both teachers and students have a positive perception of digital storytelling as a language learning tool. The results of both pre-survey and post-surveys indicated that the students are motivated by using technological tools in their courses ( $M=3,87$  in pre-survey;  $M=3,73$  in post-survey). This result ties well with previous studies wherein digital storytelling leads to positive change in students’ motivation and involvement (Yoon, 2013). In addition, the researcher has verified that digital storytelling affects the students’ perceptions toward educational technologies positively (Balaman, 2016), which is the case in the present study ( $M:3,87$  in pre-survey;  $M: 3,73$  in post-survey). The students stated that they like their teacher to use digital storytelling to teach English ( $M=3,67$  in pre-survey;  $M=3,93$  in post-survey), listening to digital stories in English lessons ( $M=3,73$  in pre-survey;  $M=3,93$  in post-survey), and acting out the digital stories ( $M=3,73$  in pre-survey;  $M=4,00$  in post-survey). Thanks to these activities, they also believe that digital storytelling will contribute their language ( $M=3,80$  in pre-survey;  $M=3,80$  in post-survey). These are consistent with what has been found in previous studies carried out by Seng (2017), Yoon (2013), and Balaman (2016). Additively, the students pointed out that they want to keep using digital storytelling tools in their future English lessons, which is in accordance with the findings reported by Dollar and Talu (2015). This shows that their

interest into digital storytelling is not temporary. Moreover, the students mentioned that they liked digital storytelling because they had the opportunity to write their own story and they could make their own decisions regarding the characters, the background and the flow of their story. These comments mean that the students like studying in a constructivist learning environment as they construct the knowledge based on their experience. This result was suggested by a previous study that teachers can benefit from digital storytelling as an instructional tool to design constructivist learning environment, which can lead to an increase in student engagement into the lessons (Smeda, 2014). Furthermore, the students suggested some activities to use with digital storytelling. These activities include speaking activities such as creating role plays and acting out the stories written, reading activities, learning new vocabularies and using them in context via digital stories, and learning grammar. One of the previously conducted studies suggested the digital storytelling to be used to teach grammatical structure and vocabulary by the teachers (Cabrera et al., 2018). The suggestions made by the students joined the present study were in line with this result. One of the students put forward a suggestion for using digital storytelling as a reflection task which they used to write their thoughts and what they learned in the lessons. This result goes beyond previous reports, showing that the students, also known as digital natives, can come up with brand new ideas related to the use of digital tools in their courses.

As for the second research question of this study, it is about the preferences of the students for topic and characters in their own digital stories which were created via Pixton. The open-ended questions in pre- and post-surveys and the digital stories were analysed to find out answers for this question. To start with the topics, they recommended topics like adrenalin, love, sadness, friendship, fear, travelling, and respect in pre-survey before they experience digital storytelling. When the digital stories were analysed, it could be seen that the topics which are adrenalin, love, sadness, friendship, and fear are the same offered by the students in pre-survey. The type of stories written by the students can be categorized as adventure, action, horror, science-fiction, historical, and romance. These are also in accordance with what they mentioned in pre-survey as their favourite story types. However, these results are not totally in line with what Bozdoğan (2012) revealed as the common topics which are friendship and philanthropy in digital stories created for young learners by prospective English teachers. Additionally, the characters in the stories were analysed. Contrary to the findings of Bozdoğan (2012), the researcher did not find that the heroes were generally male, children or animals. On the contrary, the females were the heroines in this study although the stories were created by both female and male students.

## 6. Conclusion

Overall, the analysis of both quantitative and qualitative data gathered via pre- and post-surveys, and digital stories created by the students revealed that the students have a positive perception toward the integration of digital storytelling into English lessons. The findings of this study can be understood as the students would like to use digital storytelling as well as technological tools in the future. The common topics among the digital stories written by the students consist of adrenalin, love, sadness, friendship, and fear. The characters of these stories are generally female heroines. As for the implications for English Language Teaching, digital storytelling can be integrated into the lessons in forms of speaking, listening, grammar, vocabulary and writing activities since it is a fun and engaging way of practising language skills, thus the students can be motivated towards English lessons. Lastly, the limitation of the present study is that there is not any comment on the use of digital storytelling in English lessons by English teachers. Therefore, it will be of significance that future research investigates the teachers' perspective on the integration of digital storytelling into English lessons with surveys and interviews.

## References

- Alexandar, B. (2006). Web 2.0: A new wave of innovation for teaching and learning? *EDUCAUSE Review*, 41, 2, 32–44.
- Balaman, F. (2016). The effect of digital storytelling technique on the attitudes of students toward teaching technologies. *Pegem Eğitim ve Öğretim Dergisi*, 6(2), 147-168. DOI: <http://dx.doi.org/10.14527/pegegog.2016.009>
- Barrett, H. (2005). Digital storytelling research design. Kean University Digital Storytelling Conference.
- Behmer, S. (2005). Literature Review Digital storytelling: Examining the process with middle school students. In Proceedings of the Society for Information Technology & Teacher Education International Conference (pp. 822-827).
- Blake, R. (2007). New trends in using technology in the language curriculum. *Annual Review of Applied Linguistics*, 27, 76-97.
- Bouman, K. (2012). Retention of Learning: Student-led Classrooms or Traditional Classrooms? Master of Science in Education. Southwest Minnesota State University.
- Bozdoğan, D. (2012). Content Analysis of ELT Students' Digital Stories for Young Learners. *Novitas-ROYAL (Research on Youth and Language)*, 2012, 6 (2), 126-136.
- Bull, G. & Kajder, S. (2005). Digital storytelling in the language arts classroom. *Learning & Leading with Technology*, 32 (4), 46-49.
- Cabrera, P., Castillo, L., González, P., Quiñónez, A., & Ochoa, C. (2018). The Impact of Using " Pixton" for Teaching Grammar and Vocabulary in the EFL Ecuadorian Context. *Teaching English with Technology*, 18(1), 53-76.
- Campbell, L. O., Planinz, T., & Miller, M. (2016). Integrated digital storytelling: An active learning strategy for building 21st Century skills. In EdMedia: World Conference on Educational Media and Technology (pp. 1820–1825). Association for the Advancement of Computing in Education (AACE).
- Chapelle, C. A. (2003). English language learning and technology: Lectures on applied linguistics in the age of information and communication technology (Vol. 7). John Benjamins Publishing.
- Cirit, N. C. (2015). Assessing ELT Pre-Service Teachers via Web 2.0 Tools: Perceptions toward Traditional, Online and Alternative Assessment. *Turkish Online Journal of Educational Technology-TOJET*, 14(3), 9-19.
- Council of Europe (2001). Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Strasbourg: Language Policy Division, Council of Europe.
- Ben Salah, H. (2015). Creswell, JW (2013). Qualitative inquiry and research design. Choosing among five approaches (3e éd.). London: Sage. Approches inductives.
- Dakich, E. (2008). Towards the social practice of digital pedagogies. In G. N. E. D. Yelland (Ed.), Rethinking education with ICT: New directions for effective practices: Sense Publishers (pp. 13-30).
- Dollar, Y. K. & Tolu, A. T. (2015). My first digital story: a case study with 5th grade Turkish English language learners. *International Association of Research in Foreign Language Education and Applied Linguistics ELT Research Journal*, 4(3), 172-185.
- Grgurović, M., and Chapelle, C. (2007). Effectiveness of CALL: A meta-analysis and research synthesis. Paper presented at CALICO 2007, San Marcos, Texas.
- Hill, W. F. (2002). Learning: A survey of psychological interpretation: Allyn and Bacon, Boston, MA.

- Jonassen, D. H. (1999). Designing constructivist learning environments. *Instructional design theories and models: A new paradigm of instructional theory*, 2, 215-239.
- Levy, M. (1997). *CALL: context and conceptualization*. Oxford: Oxford University Press.
- Liu, KP., Tai, S.J.D. & Liu, CC. (2018). Enhancing language learning through creation: the effect of digital storytelling on student learning motivation and performance in a school English course. *Educational Technology Research and Development*, 66(4), 913-935. DOI: <https://doi.org/10.1007/s11423-018-9592-z>
- Merrill, M. D. (1991). Constructivism and Instructional Design. *Educational Technology*, May, May (1991, pp 45-53).
- Niemi, H., & Multisilta, J. (2016). Digital storytelling promoting twenty-first century skills and student engagement. *Technology, Pedagogy and Education*, 25(4), 451-468.
- Prensky, M. (2001a). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6. Retrieved from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>
- Prensky, M. (2001b). Digital natives, digital immigrants, part II: Do they really think differently? *On the Horizon*, 9(6), 1-6. DOI: <http://dx.doi.org/10.1108/10748120110424843>
- Reinders, H. (2011). Digital Storytelling in the Foreign Language Classroom. *ELTWO Journal*, 3.
- Robin, B. R. (2008). Digital Storytelling: A Powerful Technology Tool for the 21st Century Classroom. *Theory into Practice*, 47, 220-228.
- Robin, B. R. (2016). The power of digital storytelling to support teaching and learning. *Digital Education Review*, 30, 17-29.
- Sadik, A. (2008). Digital storytelling: A meaningful technology-integrated approach for engaged student learning. *Educational Technology Research and Development*, 56, 487-506. DOI: <http://dx.doi.org/10.1007/s11423-008-9091-8>
- Seng, C. S. H. (2017). Teachers' and Students' Perceptions of Storytelling as a Language Teaching and Learning Resource. PhD thesis, University of Sheffield.
- Smeda, N. (2014). *Creating constructivist learning environments with digital storytelling* (Doctoral dissertation, Victoria University).
- Warschauer, M. (1996). Computer-assisted language learning: An introduction. In S. Fotos (Ed.), *Multimedia language teaching* (pp. 3-20). Tokyo: Logos International. DOI: <http://www.ict4lt.org/en/warschauer.htm>
- Yoon, T. (2013). Are you digitized? Ways to provide motivation for ELLs using digital storytelling. *International Journal of Research Studies in Educational Technology*, 2(1), 1-10. DOI: 10.5861/ijrset.2012.204.