Use of digital stories to develop listening comprehension skills

Fatih Mehmet Ciğerci
Bilecik Seyh Edebali University, Turkey
Mehmet Gultekin
Anadolu University, Turkey

The aim of this study was to determine the effect of digital stories on the Turkish (mother language) listening skills of fourth grade students. The study used a mixed methods and was conducted in two fourth grade classrooms (ages 9-10 years) in a primary school in Eskisehir city, Turkey, during the 2014-2015 spring semester. During the 8-week application process, Turkish lessons were conducted using digital stories and activities were designed depending on the digital stories. While the lesson plans were put into action by the classroom teacher, the researcher observed the process. Research data were obtained also from a listening comprehension test, and teacher and student interviews. Quantitative data from the listening comprehension test was analysed using t-tests, and the qualitative data was subjected to descriptive analysis. A significant difference was found between the post-test listening comprehension scores for the experimental and control groups. The qualitative data from student and teacher interviews, and from classroom observations, showed that digital stories, listening activities based on the stories, and the creation of a more engaging and motivating classroom environment had positive effects on listening comprehension skills in the experimental group.

Introduction

Listening plays an important role in individuals' daily and educative lives. Listening skills are acquired and developed naturally at pre-school. An effective mother tongue education at school makes it possible to raise students who can comprehend, synthesise and evaluate what they listen to. Despite its critical role in language acquisition and effective communication, listening in educational environments does not get enough emphasis and is generally neglected. Wacker and Hawkins (1995) stated that listening skill is the most commonly used skill at a rate of 45% in daily life. Listening is the only comprehension skill used by individuals during their preschool period, and also in school, before they learn to read and write.

Özbay (2009) pointed out that there is a direct relationship between listening and speaking and that the individuals whose listening skills are not developed will not be able to speak well. He also stated that the relationship between listening and writing is in such a way that without well-developed listening skills, it is not possible for someone to have well-developed writing skills. On the relationship between listening and reading, Emiroğlu and Pınar (2013) stated that the development of comprehension skills in children is dependent on vocabulary and that vocabulary development can be performed via listening and reading.

The *Turkish Course Teaching Program* by the Ministry of Education, Elementary Education (2009) emphasised that language acquisition begins with listening and that listening provides a basis for the other skill areas, and that individuals make use of their listening skills to perform the act of learning. For these reasons, language teaching activities should be designed in such a way that they are able to attract the learners' interest, make learners willing, and lead them to give attention to the listening text. Especially in teaching children language, it is of great importance to use listening texts which are suitable for the students' level, and make them active listeners through enjoyable listening activities. Also, various teaching methods and techniques should be used to lead students into positive attitudes towards listening, and to develop their listening comprehension skills. For this purpose, technologies in educational settings can provide richness in teaching-learning processes, and also help to develop digital literacy skills, and media and technology skills. Thus integrating technology in learning and teaching settings will be a source of motivation for both teachers and students. The fact that accessing information technology is easy and low-cost in today's world accords high importance to including technology in education policies, and bringing it into classroom settings.

One of the fields in which technology is utilised is language teaching. Stories evoke children's imaginary world and develop vocabulary, reading, speaking, listening and writing skills in both mother tongue and foreign language education. Digital stories, a way of expressing stories by using technology, are effective tools for developing students' listening skills (Verdugo & Belmonte, 2007). Digital stories can be defined as using computer-based tools and multimedia such as graphics, video, pictures, photographs, music, voice over and texts to tell personal, historical stories or stories that inform or instruct (Robin, 2006; Jakes & Brennan, 2005; Chung, 2007). Digital stories are often computer or web-based forms of traditional stories. Gregori-Signes (2008) classified digital stories into two categories, social digital stories and educational digital stories, whilst Robin (2006) categorised the types of digital stories as personal narratives, stories that examine historical events, and stories that inform or instruct.

Rapid progress in low-cost information technology helps to popularise digital stories, and facilitate their use in classroom settings for pedagogical purposes (Meadows, 2003; Robin, 2006, 2008; Smeda, Dakich & Sharda, 2012; Robin & McNeil, 2012). In particular, stories used in language education have gained a new form with the help of digital and multimedia technologies, thereby becoming more important in language education settings (LaFrance & Blizzard, 2013). However, notwithstanding the potential benefits of the digital stories, there is limited research into how digital stories contribute to children's listening comprehension skills in primary or elementary schools (Verdugo & Belmonte, 2007).

There are five skill areas (listening, speaking, reading, writing, visual reading and visual presentation) in the *Turkish Course Teaching Program* (2009). Depending on year levels, objectives in the five skill areas are categorised under certain titles. Objectives in listening skills in the Turkish Course Teaching Program (2009) are categorised under the titles:

- Applying the rules for listening
- Listening comprehension
- Listening according to types, methods and techniques

There are 45 objectives under these titles, with 22 listed under the title of "listening comprehension skills".

The aim of this study is to determine the effect of digital stories on developing the listening skills of fourth grade primary school students in Turkish (mother language) courses, using the research questions:

- Is there a difference in *Listening Comprehension Test* (Kaya, 2012) scores between groups using traditional teacher-led and digital stories?
- How do participants view the activities used with the digital stories?
- How does the teacher view the activities used with the digital stories?

Literature review

Despite the potential benefits of digital stories, there are few studies on the use of digital stories in language skill areas, especially on listening. In the study by Collen (2006), students in one group listened and watched two digital stories in class, and students in another group listened to the two stories read aloud by the researcher. Listening activities in both classrooms were video recorded, and during the activities students were required to ask questions about what they listened to, and the researcher also asked questions concerning comprehension. Students who watched and listened to digital stories concentrated better and gave more attention during listening. They also gave a higher number of correct answers to questions on the stories. Verdugo and Belmonte (2007) in a quasi-experimental study examined the effects of digital stories on the listening comprehension skills of 6th year students, and concluded that students in the experimental group outperformed the control group.

Abidin, Pour-Mohammadi, Souriyavongsa, Da and Ong (2011) investigated the effects of digital stories on the listening comprehension skills of pre-school students in a foreign language learning context. In their study, the experimental group watched digital stories and a post-test showed a significant gain over the control group. Sandaran and Lim (2013) conducted a study of the effects of digital stories on listening comprehension skills with 9-year old third grade students in a Malaysian primary school which used instruction in Chinese. Students listened and watched eight fairy tales designed as digital stories. Preliminary findings obtained from observations showed that the students' interest, concentration and motivation increased substantially, and their listening comprehension skills developed during the listening activities. However, they stated that in order to develop listening comprehension skills, there should be vocabulary teaching activities before the students listened to and watched digital stories.

Besides these studies, others have investigated the effects of digital stories and digital storytelling on other language areas (writing and reading) in mother language or foreign language teaching. These include studies on the development of writing skills in foreign language education (Abou Shaban, 2015; Abdollahpour & Asaszadeh, 2012; Chuang, Kuo, Chiang, Su & Chang, 2013), and studies on the development of writing skills in mother language education (Baki, 2015; Foley, 2013; Çıralı, 2012).

Method

This study aimed to determine the effect of digital stories on developing the listening skills of fourth grade primary school students in a Turkish course. The study was based on a mixed methods approach, using both qualitative and quantitative methods, carried out in two fourth grade classrooms in a primary school in Eskisehir city, Turkey, during the 2014-2015 spring semester. The school is located in an urban area of the city and the participants were from middle class family backgrounds.

A quasi-experimental design used a pre-test and post-test with control and experimental groups. There were five fourth grade classrooms in the school and in order to select the experimental and control groups, the *Listening Comprehension Test* (Kaya, 2012) was administered as a pre-test in all five classrooms (Stage 1, in Figure 1). Scores in the *Listening Comprehension Test* from each classroom were analysed using *SPPS*, and two classrooms were selected on the basis of closeness of pre-test scores.

Students in the classrooms selected to be the experimental and control groups were informed about the study and they were required to fill a personal information form. In order to gain initial information about teaching and learning in the Turkish lessons and about student-student and student-teacher relationships, the researcher made classroom observations for three weeks. The researchers observed the experimental group's teacher requiring the students to read aloud the listening text in the textbook, whilst in the control group the teacher herself read aloud the listening texts.

In the second stage of the study, eight digital stories with different themes and the lesson plans and learning materials based on the digital stories were used for eight weeks by the classroom teacher in the experimental group. During this period, the researchers' role was to observe the process. The teacher in the control group conducted her lessons in accord with the Turkish teaching program, using the traditional read-aloud technique during the listening activities. The researchers also observed the Turkish lessons in the control group for eight weeks.

In the third stage, the *Listening Comprehension Test* (Kaya, 2012) was conducted in both the experimental and control groups. Then, interviews were held with the teacher and the students in the experimental group, using semi-structured interview forms developed by the researchers with advice from experts in Anadolu University Primary Education Department. Interviews were audio recorded for descriptive analysis. Finally, in the fourth stage the qualitative and quantitative data were analysed and interpreted.

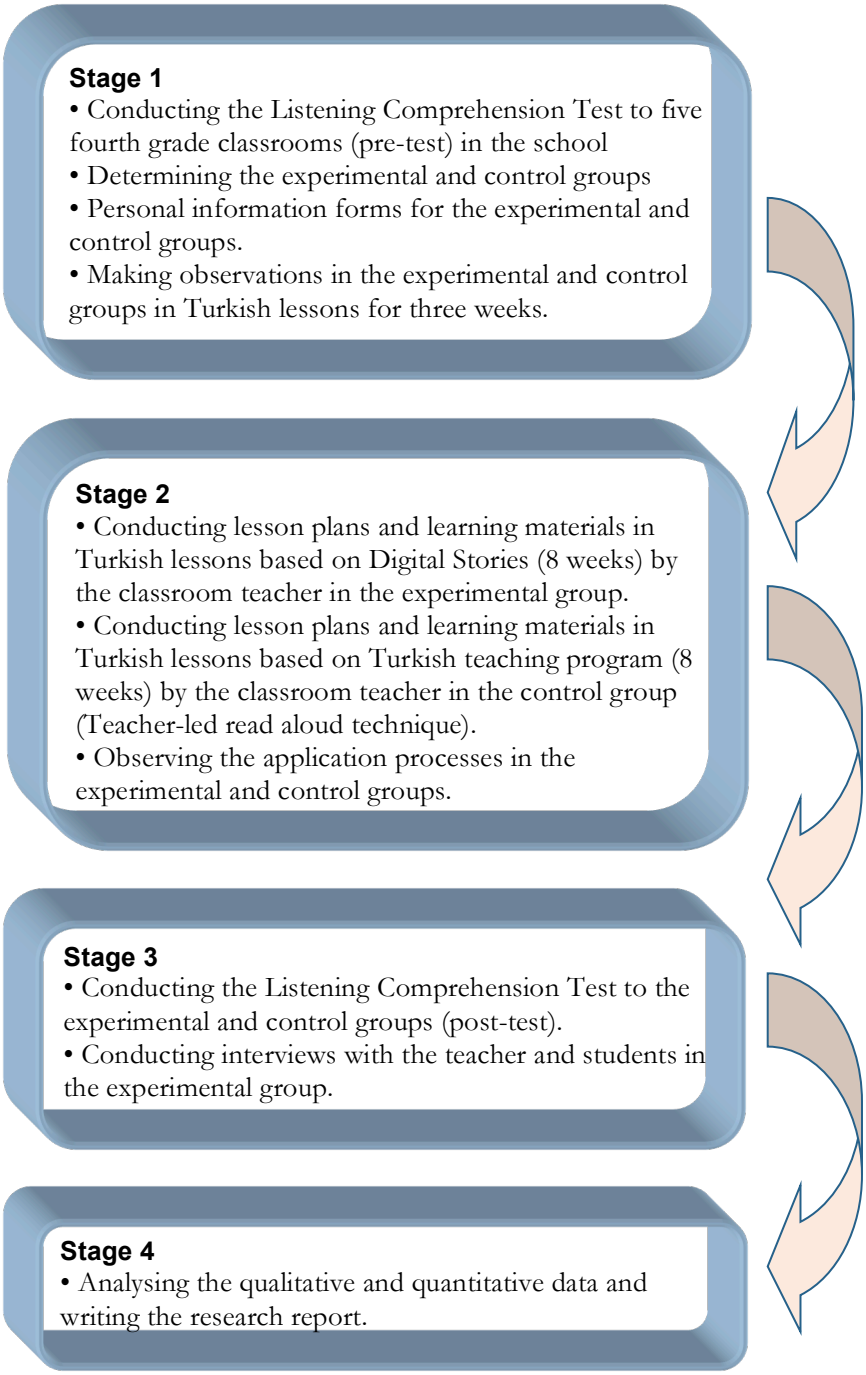

Figure 1: The research process

Participants

There were 32 students in the experimental group, but one student did not participate in the pre-test and another did not participate in the post-test, so they were excluded from the study. On the other hand, there were 30 students in the control group. All 30 students in the control group's classroom participated in pre and post-test.

There were 15 females and 15 males in both the experimental and control groups. At the beginning of the research process, the aim, scope and significance of the study and activities to be held in the following the Turkish lessons were explained to the classroom teachers of both groups.

Data collection instruments

The following data collection instruments were used to collect qualitative and quantitative data for this study.

Personal information form
Data about the students in both the experimental and control groups was obtained from a personal information form, developed by the researcher and comprising five questions about the gender of the students, parents' educational background, number of siblings, and the occupations of parents.

Listening Comprehension Test
In order to measure and evaluate the listening comprehension skills of the students, the *Listening Comprehension Test* developed by Kaya (2012) was used. The content validity of the test was obtained with reference to the listening objectives in the *Turkish Course Teaching Program* (MEB, 2009) for the fifth grade. Opinions of experts in the field were obtained and a pilot study was conducted to assess the validity of the test. To determine internal consistency of the test, KR-20 and Cronbach alpha coefficients were obtained as .77. Since this study was conducted with the fourth grade students, only test items consistent with the fourth grade listening comprehension objectives were used. There are two additional listening comprehension objectives in the Turkish Teaching Program for fifth grade classes, compared with the Turkish Teaching Program for fourth grade classes. Accordingly, the original test comprising 41 items was reconstructed in accord with fourth grade listening objectives in the Turkish Course Teaching Program (2009), with the number of the test items being decreased to 39. For the reliability study of the reconstructed test, it was administered to 184 primary school fourth grade students in two primary schools in Eskisehir, Turkey, and a Cronbach alpha coefficient .77 was obtained. The content validity of the test was obtained with reference to the fourth grade listening objectives in the Turkish Course Teaching Program (2009).

The test comprised fourteen fill-in-the-blanks items, twenty four multiple choice items and one picture-cued (ordering the pictures) item. All the items in the test were prepared in accordance with the listening comprehension objectives in the Turkish Teaching Program.

Observation

Observation was used in order to gain information about the teaching and learning process in the Turkish lessons and about student-student and student-teacher relationships in the experimental group for three weeks before the intervention. The researchers observed that the teachers in both groups followed the traditional read-aloud technique in listening activities and they got their students to do listening activities in the course books. It was also observed that most of the students seemed bored and avoid participating in the activities. During the application period, while the teacher in the experimental group conducted the Turkish lessons by applying the lesson plans and learning materials based on the eight digital stories, the researcher observed the process.

Semi-structured interviews

Two interview forms, for the teacher and for students, were developed by the researchers based on advice from three experts in Anadolu University Primary Education Department. The questions in the interview forms sought the opinions about whether the digital stories and the listening activities based on the digital stories were effective in developing listening skills. The teacher, for instance, was asked what he thought about the use of digital stories to develop listening skills of the students, what he thought about the listening activities based on the digital stories, and whether digital stories had any effect in developing the listening comprehension skills, and if so, how. The students were also asked what they thought about the digital stories they had watched and listened to, what listening activities they did based on the digital stories, which of the listening activities they liked most and why, which listening activities they found to be difficult and why, and what changes they observed in their listening. A pilot interview was first conducted with five students and later, necessary corrections and/or additions were made on the interview questions with the help of the experts in the field. The final student interview form was used for the rest of the classroom (25 students). All the interviews with the students and the teachers were conducted during 4-8 May 2015 and were audio recorded.

Data analysis

Three research questions were addressed in this study. The first question of the study was about the effectiveness of digital stories in developing listening comprehension skills. These skills were measured by conducting a pre and post-test *Listening Comprehension Test* with the control and experimental groups. The study's quantitative data gathered from this Test were analysed using *SPSS* program. Since the students' Test scores were normally distributed, the data were analysed using parametric tests. Within this context, a *t*-test was applied.

As to the qualitative data of the study, the researcher conducted semi-structured interviews with the students and the teacher in the experimental group. For this purpose, a questionnaire including questions about the listening activities based on eight digital stories was designed by the researcher and submitted to four field experts in Anadolu University Primary Education Department to evaluate for comprehensibility, relevance to the subject matter, and inclusion of the required information. Based on the views of these

experts, the questionnaire was finalised, and interviews were audio recorded during 4-8 May, 2015.

A descriptive analysis was used for the interviews after the recordings were transcribed into computer files and checked independently by the two researchers. The listening comprehension objectives listed in the Turkish Course Teaching Program by the Ministry of Education (2009) were accepted as the themes, and the researchers identified coding keys independently. Then together, the researchers reviewed the mappings into coding keys, by which the views of the students and the teacher were classified and arranged under each listening comprehension objective. For presenting the findings obtained from the descriptive analysis, the researcher decided on the selection of illustrative quotations to be included in the research report.

Results

Test scores of the experimental and control groups

In order to check if the scores of the students in the experimental and control groups in *Listening Comprehension Test* had a normal distribution, the Shapiro-Wilk test values were determined ($p>0.05$). Then, the pre and post test scores of the students in the experimental and control groups were analysed with an independent samples *t*-test analysis. The mean, standard deviation and Cronbach's alpha values are given in Table 1.

Table 1: Results of the *Listening Comprehension Test* (pre and post-tests)

Group	Test	*n*	Mean	Std dev	Cronbach's alpha
Experimental	Pre-test	30	27.37	3.77	.74
	Post-test	30	32.17	2.99	.73
Control	Pre-test	30	26.83	5.72	.74
	Post-test	30	27.80	4.39	.73

As shown in Table 1, the experimental group attained about 5 points increase between pre-test and post-test mean score. The control group attained about 1 point increase. In order to determine whether these increases were significantly different, a *t*-test was used (Table 2).

Table 2 shows there was no significant difference between the experimental and control groups before the application process ($t_{(28)} = 0.426$, $p>.05$). After the application process there was a significant difference on behalf of the experimental group ($t_{(28)}= 4.495$, $p<.05$). Accordingly, it can be said that there is an increase in the listening comprehension achievement of the students in the experimental group after the application process.

Table 2: *t*-test results for the experimental and control groups

Group	Test	*n*	*t*	*p*
Experimental	Pre-test	30	0.426	0.672
Control	Pre-test	30		
Experimental	Post-test	30	4.495	0.000
Control	Post-test	30		

Opinions of students and the teacher about listening activities with digital stories

There are thirty three objectives under the title of listening comprehension skills in the Turkish Course Teaching Program (2009) for the fourth grade. In the interviews, the students presented their opinions about some of these skills. The results under this title are illustrated with quotations from the interviews and the researchers' observations. The quotations were translated into English by the researchers.

Two of the objectives under the title of listening comprehension in the program are related to the ability to use visuals in order to make sense of what students have listened to, and the ability to envisage what they have listened to. In this context, eight to ten visuals (pictures) were used in each digital story in the study. Some of the students in the experimental group said that the visuals used in the digital stories helped students to follow the stories and understand them better the following during the interviews. One of the students said:

> The pictures in the digital stories have made us feel how the stories would continue.

About the use of visuals in the digital stories, another student said:

> I think that when there are visuals, I could comprehend what I listen better. While listening to the digital stories, I understand the pictures better and put them into their place.

Another student mentioned improved remembering:

> I learn how to listen and I learn more by listening. In the past, I used to listen but forget very soon. But with the digital stories, I do not forget anything because there are visuals in them.

Two other objectives in listening comprehension concern students' ability to predict the content of what they are going to listen to by knowing the title of the listening text, and ability to predict how the event they are listening to may continue and end. Based on this objective, the students were required to predict how the events in the digital stories would continue and end. One of the students mentioned:

> We were trying to predict the story. I was wondering more and more as different predictions came from my friends. It was a very different activity for me.

Another student said:

> I liked the pre and while listening activities especially those predictive ones, because when I predicted the story and they came true, I felt happy.

Four objectives in the teaching program focus on vocabulary. These concern students' abilities to predict the meaning of the words that they do not know as they listen; distinguish between the real and/or figurative meaning of the words; distinguish between the homonymic words; and distinguish between the synonyms and antonyms of the words they listen to. Relating to this objective, students were given activity papers. Two students said about the activities in vocabulary development:

> I liked all the activities, but I had difficulty in vocabulary activities in "Sarbon Asısı" because I did not know the meaning of words like "anthrax", "cholera". We did the activity before the listening, so I could match the meanings of some words. But after I listened to the stories, I learnt the meaning of those words and I even learnt new words.

> The digital stories taught me many words. I could figure out the meaning of some new words when I listened to the story carefully. I learnt the meaning of other words in the activities before and after the listening. One more thing, I learnt the figurative meanings and idioms of lot of words, thanks to the digital stories. I began to use them while writing and speaking.

Based on student opinions about the vocabulary activities, it can be said that such activities helped their vocabulary, taught them new words, and that they began to use these new words in speaking and writing. It can also be said that some students had difficulty in predicting the meaning of the words before the listening; however, in while-listening and post-listening, they could figure out the meaning of the words.

Another objective is that the students will be able to make inferences from what they have listened to. One of the students said about the related listening activities:

> I think that the digital stories informed us. I think that they both informed and amused us. I think that they enriched our visual knowledge. We learnt that we will always lose if we do evil things and if we do good things, we will also receive kindness. From the legends, we learnt about our past.

During the interviews, some of the students made general evaluations about the listening activities and their effects on listening comprehension. One of these general evaluations stated:

> I liked the puzzles, writing the features of the characters, cause and effect activities because they were amusing and instructive as well. The story map activities were very good and enjoyable. At the very beginning I thought that the activities and digital stories would be boring, but as we did the activities, I enjoyed them. My listening changed and I listened more carefully now and therefore I could answer the questions better.

Another student made the following evaluation about the listening activities:

> We tried to predict the content of the stories. The teacher asked questions about the events. We talked about the stories after the teacher gave us the titles of the stories. While we were listening to the digital stories, the teacher paused at some places and asked us how the story would continue. After the listening we did many activities; matching, writing the characteristics of the animals, Wh- questions, finding our own solutions to the problems in the stories. I think that I had difficulty in matching the words, but I can listen better now. I can listen very attentively and I can understand what I listen to. I can listen to my friends better now.

Another student, similarly, made these comments on a number of the listening activities:

> I liked the visual presentations in the digital stories. I liked the puzzle, writing the features of the characters and the cause-effect activities. I can find the cause and effect relationship. As I listened and watched the digital stories carefully, I could answer the Wh- questions easily. I can easily predict the story from its title and what will happen in the story. I can also take notes or do activities while I am listening. I can keep everything in my mind and remember the details because I not only listened but also watched the digital stories. I think that the listening of my friends improved, as well. I believe that they are also able to do the activities better. I learnt the rules of listening and thus I began to listen."

Activities related to all the objectives under the title of listening comprehension were carried out during the 8-week application process. While some objectives were included in all the lesson plans based on the digital stories, other objectives took place in different parts of the lesson plans. Students' opinions suggest that they found digital stories and the listening activities entertaining and instructive, and that they made use of the visuals in the stories to better understand them. They followed and predicted events in the stories, and they did many of the post-listening activities. While the majority of the students liked all the activities, some had difficulty in some activities, including vocabulary, finding the main idea, and making inferences during the activities. However, it was stated by students, and also observed by the researchers, that students who had difficulty in vocabulary activities in pre-listening overcame this difficulty while they were watching and listening to the digital stories.

Besides the interviews with the students in the experimental group, the researchers also conducted an interview with the teacher after the application process in order to get the opinions of the teacher on how effective the digital stories and listening activities are in developing listening skills, and also what he thought about the use of digital stories. The teacher said:

> The biggest reason why I preferred to use the digital stories in my class was that I wanted to improve my students' listening and attention in listening; that is, I wanted them to devote themselves to what they listen to. Since the listening texts were not provided in written forms, they listened to and watched the digital stories more carefully and did the activities. In other words, they gave attention to what they listened to. What is my aim here? It is to improve their attention, and the digital stories worked well. They realised that if they did not listen to the stories well, they would not be able to do the activities and they would have problems because they did not have the listening texts in front of them. And as you observed, they all listened very carefully.

> Besides, I observed that my students' perspective towards listening changed. Before this application, they did not like most of the listening activities, but now they are very interested in listening. When we did the listening activities in Turkish course book before this application, the students were not able to catch details completely. Since there were no visuals and they did not listen to the texts carefully, they were not successful at the prediction activities.
>
> In fact, I think I had better say that as you know there are lists of listening objectives for each theme in our course book; I believe that my students were able to obtain those listening objectives through the use of the digital stories. Previously, we did not study some of the listening objectives in the course book. But this application we conducted in my class proved to be successful and the students were able to pay attention to the stories. Some of my students previously did not participate in the classroom activities and were passive, but with this application those students improved their listening and began to participate in the activities willingly.

The teacher pointed out that thanks to the digital stories and the listening activities based on the digital stories, his students improved their listening and they listened to the digital stories and did the activities very carefully. Founded on this statement, it can be said that the students paid attention while listening as required in the Turkish Course Teaching Program. In addition, the teacher also emphasised that as the students watched and listened to the digital stories carefully, they were able to do the listening activities more effectively and that the listening activities in the course book are not enough to improve their listening skills. The teacher also expressed that they had the chance of doing studies and activities for all listening objectives listed in the Turkish Course Teaching Program and that the listening comprehension objectives turned into skills by the use of digital stories and the listening activities based on the digital stories. Another important finding of this study, as the teacher stated, was that the students who did not participate in classroom activities in Turkish lessons and listening activities before began to participate in the activities willingly and thus their listening skills developed.

Discussion

This study examined the effect of digital stories on the listening skills in Turkish course. The post-test results of the *Listening Comprehension Test* (Kaya, 2012) showed that the experimental group outperformed the control group. It could be argued that as Verdugo and Belmonte (2007) pointed out, the use of various multimedia, including graphics, audio, video, effects and pictures in digital stories and the pedagogical practice of digital stories enhanced the students' attention and concentration on the oral input received. We could also argue that the students listened to and watched all the eight digital stories twice during the application process, which enabled the students to be exposed to the language for longer times. Besides, the classroom observation reports and the interviews with the teacher and the students provided positive feedback on the students' performance of the listening tasks and the effects of digital stories on developing listening comprehension skills.

These results of the study accord with some other quantitative studies that used digital stories to develop the listening skills of the students. Collen (2006) studied the effects of digital stories on listening skills and found that the students in the experimental groups gave more correct answers to questions after they listened to and watched digital stories. Verdugo and Belmonte (2007) examined the effects of digital stories on the listening comprehension skills of six year old students in foreign language, and concluded that the students in the experimental group were more successful. In another experimental study, Abidin, et al. (2011) researched the effects of digital stories on the listening comprehension skills of pre-school students in foreign language teaching. The experimental group who watched digital stories were more successful.

From the qualitative data gathered through student and teacher interviews and observations, we observed that the digital stories and the listening activities had positive effects on the development of the listening comprehension skills of the students in the experimental group. These findings correspond to the findings from other qualitative studies that investigated the development of listening skills by using multimedia such as video and animation (Abdollahpour & Maleki, 2012; Abidin et al., 2011; Bull and Kajder, 2004; Collen, 2006; Demirer, 2013; Iubbad, 2013; Kahraman, 2013; Lin and Duy, 2014; Özdener & Eşfer, 2009; Sandaran & Lim, 2013; Shin & Park, 2008; Tsou, Wang & Tzeng, 2006; Verdugo & Belmonte, 2007; Woottipong, 2014; Yang & Wu, 2012; Yoon, 2013).

There may be some underlying reasons for digital stories being effective for developing listening skills. During the 3-week observation period before the application process, the researchers observed that both the teachers in the two groups used a read-aloud technique in listening activities and the experimental group teacher skipped most of the listening activities in the course book. It was also observed that the students became bored during the listening activities and the students in the experimental group stated they did not like listening activities and that they became bored. However, with the use of digital stories, they stated that they enjoyed the lessons and were engaged with the activities. Even, the teacher in the experimental group stated that those who did not participate in the activities began to participate willingly, and became more interested in digital stories and the listening activities. Most of the students as well as the teacher pointed out that the use of digital stories created an engaging and motivating classroom, which also led the students develop positive attitudes towards Turkish lessons and listening activities. Therefore, it can be put forward that the engaging and motivating atmosphere thanks to the use of digital stories, which are quite different from what the students were used to could also be an important positive factor for the development of listening skills. As Yüksel (2011) pointed out, thanks to digital stories and activities, the willingness of students and their participation show an increase as the classroom atmosphere changes.

This study shows that student watching of the digital stories, instead of only listening, is an important factor in helping the development of the listening skills. As listening activities accompanied by watching could be more influential, listening texts in language arts course books could be supported by multimedia. Teachers could use and/or produce digital stories instead of using traditional CDs which do not include any visuals, or instead of reading the listening texts aloud.

Conclusion and recommendations

In future studies, teachers could be provided with workshops on creating digital stories and with various samples of various digital stories, and they can be encouraged to share their digital stories on the Internet. Besides digital stories created by teachers, students could be encouraged to prepare their own digital stories. In today's education world, students at different levels are all required to be equipped with information, media and technology skills in many disciplines (language arts, arts, mathematics, economics, science, geography, history, etc.) One of the ways for students to obtain and develop such skills, sometimes called 21st century skills, is to produce digital stories (Robin, 2006; Yang & Wu, 2012). While producing their own digital stories, students will make use of information technologies and media, and they will also attain a deeper understanding in related disciplines. In order for students to develop their information, media and technology skills and to produce their own productions like digital stories, digital storytelling courses could be included in curriculums. The process of creating digital stories will also enhance communication skills such as organising their ideas, asking questions, expressing opinions, etc. (Robin, 2008).

Families play a great role in their children's language development, especially in the early learning years. Therefore, parents could be included in future studies on digital storytelling. Parents can be encouraged to become engaged in creating digital stories with their children, and/or by providing them with various digital stories, they can be encouraged to use them in the home setting for their children's language development.

Most of the studies on the use of digital stories in language teaching focus on foreign language education. There are few studies in which digital stories are used for mother language teaching. Therefore, further studies on the use of digital stories to develop various language skills in mother language education could be conducted by researchers.

Finally, due to engaging and motivating nature of digital storytelling, digital storytelling processes and digital stories can be used in other subject areas, and the effects of digital storytelling and digital stories can be examined for different age levels.

Acknowledgment

This study is adapted from the dissertation by Fatih Mehmet Cigerci entitled *The use of digital stories to develop listening skills in the elementary school fourth grade Turkish course* and was supported by Anadolu University Scientific Research Project Coordination Unit (Project Number: 1407E343). The dissertation is available in Turkish at http://www.yoktez.gov.tr/

References

Abdollahpour, Z. & Asaszadeh, N. (2012). The impact of exposure to digital flash stories on Iranian EFL learners' written reproduction of short stories. *Canadian Journal on Scientific and Industrial Research,* 3(2), 40-53.

Abidin, M. J. Z., Pour-Mohammadi, M., Souriyavongsa, T., Da, C. & Ong, L. K. (2011). Improving listening comprehension among Malay preschool children using digital stories. *International Journal of Humanities and Social Science,* 1(14), 159-164. http://www.ijhssnet.com/journals/Vol_1_No_14_October_2011/21.pdf

Abou Shaban, S. S. (2015). The effects of digital storytelling, storytelling and story-reading on enhancing Palestinian ninth graders' paragraph writing skills. *European Journal of Educational Studies*, 7*(*1), 23-34. http://dergipark.gov.tr/ejes/issue/5167/70255

Baki, Y. (2015). *Dijital öykülerin altıncı sınıf öğrencilerinin yazma sürecine etkisi. [The effect of digital stories on the six grade students' writing process]*. Unpublished doctoral dissertation, Ataturk University, Institute of Education Sciences, Erzurum, Turkey.

Bull, G. & Kajder, S. (2004). Digital storytelling in the language arts classroom. *Learning & Leading with Technology*, 32(4), 46-49. https://eric.ed.gov/?id=EJ697294

Chuang, W. T., Kuo, F. L., Chiang, H. K., Su, H. Y. & Chang Y. H. (2013). Enhancing reading comprehension and writing skills among Taiwanese young EFL learners using digital storytelling technique. *21st International Conference on Computers in Education.* Indonesia: Asia-Pacific Society for Computers in Education. https://www.research gate.net/publication/287425876_Enhancing_reading_comprehension_and_writing_ skills_among_Taiwanese_young_EFL_learners_using_Digital_Storytelling_technique

Chung, S. K. (2007). Art education technology: Digital storytelling. *Art Education,* 60(2), 17-22. http://dx.doi.org/10.1080/00043125.2007.11651632

Çıralı, H. (2012). *Dijital hikâye anlatımının görsel bellek ve yazma becerisi üzerine etkisi. [The effect of digital storytelling on visual memory and writing skills]*. Unpublished masters dissertation, Hacettepe University, Ankara.

Collen, L. (2006). The digital and traditional storytimes research project: Using digitized books for preschool group storytimes. *Children and Libraries*, 4(3), 8-18. http://laurencollen.com/CAL_winter06_collen.pdf

Demirer, V. (2013). *İlköğretimde e-öyküleme kullanımı ve etkileri. [The use and effects of e-storytelling in elementary education]*. Unpublished doctoral dissertation. Necmettin Erbakan University, Institute of Education Sciences, Konya.

Emiroğlu, S. & Pınar, F. N. (2013). Dinleme becerisinin diğer beceri alanları ile ilişkisi. [Relationship between listening and other skill types]. *Turkish Studies - International Periodical for the Languages, Literature and History of Turkish or Turkic,* 8(4), 769-782. http://dx.doi.org/10.7827/TurkishStudies.4965

Foley, L. M. (2013). *Digital storytelling in primary-grade classrooms*. Unpublished doctoral dissertation. Arizona State University, Phoenix, Arizona. https://repository.asu.edu/attachments/110570/content/Foley_asu_0010E_12913.pdf

Gregori-Signes, C. (2008). Integrating the old and the new: Digital storytelling in the EFL language classroom. *Revista para Profesores de Inglés*, 16(1), 43-49. https://www.academia.edu/2486449/Integrating_the_old_and_the_new_Digital_storytelling_i n_the_EFL_language_classroom

Iubbad, S. H. (2013). *The effectiveness of a multimedia based learning program on developing seventh graders' listening comprehension skills and attitudes in Gaza governorate*. Unpublished masters thesis. The Islamic University, Gaza.

Jakes, D. S. & Brennan, J. (2005). Capturing stories, capturing lives: An introduction to digital storytelling. http://www.jakesonline.org/dstory_ice.pdf

Kaya, M. F. (2012). *İlköğretim 5. sınıf öğrencilerinin dinleme becerilerinin web tabanlı bir sistem yardımıyla ölçülmesi. [Measuring listening comprehension skills of 5th grade school students with the help of a web based system]*. Unpublished masters dissertation. Osmangazi University, Institute of Education Sciences, Eskisehir.

LaFrance, J. & Blizzard, J. (2013). Student perceptions of digital story telling as a learning-tool for educational leaders. *NCPEA International Journal of Educational Leadership Preparation,* 8(2), 25-43. http://files.eric.ed.gov/fulltext/EJ1016281.pdf

Lin, L. F. & Duy, L. D. (2014). The impacts of the video-based Internet materials on international students' listening comprehension. *International Journal on Studies in English Language and Literature,* 2(8), 106-115. https://www.arcjournals.org/pdfs/ijsell/v2-i8/12.pdf

MEB (2009). *İlköğretim Türkçe dersi öğretim programı ve kılavuzu (1–5. Sınıflar).* Ankara: Milli Eğitim Bakanlığı Yayınları.

Özbay, M. (2009). *Bir dil becerisi olarak dinleme eğitimi*. Ankara: Akçağ Yayınları.

Özdener, N. & Eşfer, S. (2009). A comparative study on the use of information technologies in the development of students' ability to comprehend what they listen to and watch. *International Journal of Human Sciences,* 6(2), 275-291. https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/778/412

Robin, B. R. (2006). The educational uses of digital storytelling. In C. Crawford (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2006,* 709-716. Chesapeake, VA: AACE. http://digitalstorytelling.coe.uh.edu/articles/Educ-Uses-DS.pdf

Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory Into Practice,* 47(3), 220-228. http://dx.doi.org/10.1080/00405840802153916

Robin, B. R. & McNeil, S. G. (2012). What educators should know about teaching digital storytelling. *Digital Education Review,* 22, 37-51. https://eric.ed.gov/?id=EJ996781

Sandaran, S. C. & Lim, C. K. (2013). The use of digital stories for listening comprehension among primary Chinese medium school pupils: Some preliminary findings. *Jurnal Teknologi,* 65(2), 125-131. http://www.jurnalteknologi.utm.my/index.php/jurnalteknologi/article/view/2358

Shin, B. J. & Park, H. S. (2008). The effect of digital storytelling type on the learner's fun and comprehension in virtual reality. *Journal of the Korean Association of Information Education,* 12(4), 417-425. http://www.earticle.net/article.aspx?sn=98239

Smeda, N., Dakich, E. & Sharda, N. (2012). Digital storytelling with Web 2.0 tools for collaborative learning. In A. Okada, T. Connolly & P. Scott (Ed.), *Collaborative learning 2.0: Open educational resources*. 145-163. Hershey: IGI Global.

Tsou, W., Wang, W. & Tzeng, Y. (2006). Applying a multimedia storytelling website in foreign language learning. *Computers & Education,* 47(1), 17-28. http://doi.org/10.1016/j.compedu.2004.08.013

Verdugo, D. R. & Belmonte, I. A. (2007). Using digital stories to improve listening comprehension with Spanish young learners of English. *Language Learning & Technology,* 11(1), 87-101. http://llt.msu.edu/vol11num1/ramirez/

Wacker, K. G. & Hawkins, K. (1995). Curricula comparison for classes in listening. *International Journal of Listening,* 9(1), 14-28. http://dx.doi.org/10.1080/10904018.1995.10499139

Woottipong, K. (2014). Effect of using video materials in the teaching of listening skills for university students. *International Journal of Linguistics,* 6(4), 200-212. http://dx.doi.org/10.5296/ijl.v6i4.5870

Yang, Y. C. & Wu, W. I. (2012). Digital storytelling for enhancing student academic achievement, critical thinking and learning motivation: A year-long experimental study. *Computers & Education,* 59(2), 339-352. http://doi.org/10.1016/j.compedu.2011.12.012

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), 25-34. http://dx.doi.org/10.5861/ijrset.2012.204

Yüksel, P. (2011). *Using digital storytelling in early childhood education: A phenomenological study of teachers' experiences.* Unpublished doctoral dissertation, Middle East Technical University, Graduate School of Natural and Applied Sciences, Ankara, Turkey. http://en.academicresearch.net/using-digital-storytelling-in-early-childhood-education-a-phenomenological-study-of-teachers-experiences/169/

Dr Fatih Mehmet Ciğerci is an Assistant Professor in the Child Development Department at Bilecik Seyh Edebali University, Turkey. His current research interests are focused on primary education, mother language teaching, education technology, digital storytelling, and teacher professional development.
Email: fatihcigerci@gmail.com

Dr Mehmet Gultekin is a Professor in the Primary Education Department, Faculty of Education at Anadolu University, Turkey. His research interests are program development in education, elementary education teaching programs, teaching and learning, and social studies.
Email: mgulteki@gmail.com

Please cite as: Ciğerci, F. M. & Gultekin, M. (2017). Use of digital stories to develop listening comprehension skills. *Issues in Educational Research*, 27(2), 252-268. http://www.iier.org.au/iier27/cigerci.pdf