Investigating Digital Storytelling Method in German as a Foreign Language Teaching

Abstract

It is obvious that current students are interested in digital technology. As a result, it is inevitable not to make use of instructional technologies. Web 2.0 tools, one of which is digital storytelling tool, hold an important place in education. One can create his/ her own story and narrate it digitally. Thus, digital storytelling is considered a recent student-centered learning method. There seems to be a scarcity of research both in Turkey and the world on German language education and digital technology.

This case study investigated the digital storytelling method in an Anatolian High School in southeast part of Turkey. With 97 student participants, this study results revealed that digital storytelling method increased student motivation and enhanced language and computer skills. This study showed that digital storytelling method can easily be applied in Turkish context and it promotes foreign language education. Based on the study results, pedagogical implications and suggestions were provided for teachers, teacher trainers, and researchers.

Keywords: Digital Story Telling, Foreign Language Education, German, Technology.

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Öz

Yabancı Dil Öğretiminde (Almanca) Dijital Hikaye Anlatım Yönteminin Araştırılması

Günümüz öğrencisinin dijital teknoloji ile iç içe olduğu aşikardır. Bunun sonucunda öğrencilere bilgi sunma konusunda teknolojiden yararlanılması kaçınılmaz bir gerçektir. Web 2.0 araçları, eğitimde önemli yer teşkil eder. Bunlardan biri de dijital hikaye anlatım araçlarıdır. Kişi kendi hikayesini oluşturabilir ve hatta bu hikayesini dijital olarak sunabilir. İşte bu doğrultuda digital storytelling yani dijital hikaye anlatımı yöntemi son yıllarda ortaya çıkan yeni bir öğrenci merkezli öğrenme metodu olarak ortaya çıkmıştır. Türkiye'de ve dünyada özellikle Almanca dil eğitimi ve dijital teknoloji ilişkisi üzerinde yapılan araştırmaların azlığı göze çarpmaktadır.

Bu eylem araştırmasında Güneydoğu Anadolu bölgesinde bir Anadolu Lisesi'nde Almanca yabancı dil öğretiminde dijital hikaye anlatma yönteminin uygulanması incelenmiştir. 97 öğrencinin katıldığı bu çalışmada verilerin ve bulguların ışığında öğrencilerin motivasyonlarını bu yöntemin arttırdığı, teknik ve yabancı dil bilgilerini geliştirdiği sonuçlarına varılmıştır. Bu araştırma dijital hikaye yönteminin rahatlıkla Türkiye'de uygulanabileceğini ve yabancı dil eğitimine katkı sunacağını göstermiştir. Dijital hikaye anlatımı üzerine vapılan evlem arastırmasının bu sonuçları doğrultusunda öğretmenlere, öğretmen arastırmacılara vetistiricilerine ve öneriler sunulmustur.

Anahtar kelimeler: Dijital Hikaye Anlatımı, Yabancı Dil Eğitimi, Almanca, Teknoloji.

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Introduction

Foreign language education at our schools is still a discussion topic for its effectiveness in our society. While grammar is still on focus, recently new different approaches are addressed. There have been studies on foreign language teaching methods. One of the new methods which appeared with the advance of digital technology is digital storytelling method. In this study, the main purpose was to investigate the digital story telling method in German language teaching and identify its role for student motivation, language and computer skills.

The 21st century has witnessed great advances in computer and the Internet technology, and these advances are expected to continue. In line with the new technologies, it is a fact that knowing a foreign language is gaining importance. In Turkey, a developing country, there are studies on foreign language teaching. As it aims for European Union membership, Turkey has to consider attainment of not only one foreign language but multiple languages as well. Computer literacy and foreign language skills are the prerequisites of our century. Providing proper training on these issues to individuals will enable them to become intellectuals who can keep up with the century (Celebi, 2006).

Emerging technology has brought new dimensions to the teaching-learning process. Modern language teaching methods and approaches which started to give priority to communicative skills have begun to emerge since the 1950s. Contemporary teaching approaches give emphasis to student motivation and active participation of the students in the learning process. It is well known that in addition to the new teaching approaches, the effective integration of new technology promotes foreign language education and computer assisted language education is inevitable today and in future (Cangil, 1999; Thorne & Reinhardt, 2008; Warschauer, 2002; Young, 2003).

1. Literature Review

Digital storytelling as a method which was developed by Joe Lambert and Dana Atchley at the Center for Digital Storytelling in UC Berkeley in 1993 depends on the premise that everyone has a story to tell (Bull & Kajder, 2004). Digital technologies serve as powerful tools to carry these stories (Bull & Kajder, 2004).

Meadows (2003) asserts that storytelling is not a new concept, but digital storytelling is fairly a new concept. Simsek (2010) defines digital storytelling as conveying stories to others through using digital tools. In this method stories are created through multimedia applications. As a new concept digital storytelling method is getting ubiquitous.



Digital stories can be created for education, information, or fun purposes. To meet such purposes digital storytelling elements have to be clarified. Digital storytelling has 5 elements: media, action, relationship, context, and communication (Nora & Fiebich, 2005):

- 1. Media: Gives information about the materials used to create the story
- 2. Action: There are 2 types of action: Movement of or within the content and movement the user needs to access the content.
- 3. Relationship: Refers to the potential relationship between the story and user.
- 4. Context: Defined as the contextual factors.
- 5. Communication: Deals with the communication in the digital environment.

Jakes and Brennan (2005) underline that a teacher has to follow certain steps to apply digital storytelling method in a classroom. Generally students write about their personal life, opinion, feelings, and experiences. Before students start writing, first, the teacher needs to explain the process and steps of writing a digital story such as constructing the introduction, body and conclusion parts and developing characters. Writing the narrative takes several drafts. Second, after the story is written, students create a folder for the multimedia elements. At the third step, students create a storyboard. At the fourth stage, students find or create multimedia materials. Some may use visuals from the web or library software while some may use their own visual materials. In the fifth stage, students design their story using the selected software. There are several software programs for digital story writing such as PowerPoint, Windows Movie Maker, Windows photo Story, Storybird and Extranormal. As a final stage, students publish and share their stories on the selected platform (Jakes & Brennan, 2005).

1.1. Digital Storytelling Research in Language Education

In their study on digital storytelling carried out with 173 teachers and students from 26 countries, Yüksel, Robin and McNeil (2011) stated that approximately 45% of the participants used digital storytelling to improve students' subject field knowledge, writing skills, technical skills and presentation skills, and they observed that digital storytelling helped students to improve all the skills specified. In addition, 35% of the data indicated that digital storytelling improved the research skills of students, and 27% of the data underlined that the academic performance of students improved. Another important point which was emphasized in the study is the intended use of the digital storytelling. When Yüksel, Robin and McNeil (2011) asked students in their studies about the intended uses of digital storytelling, a great majority of them, 85%, stated its intended use as to perform



a study that presents achievements with their experiences and facilitates the cooperation activities, 81% of them stated it as to perform group work with their friends, 71% stated it as to develop critical thinking skills, 68% of them stated it as to understand complex ideas, 64% of them stated it as to learn new contents and get to know them.

There are studies not only on English but also on other languages. Castaneda (2013) carried out an action research on Spanish digital storytelling with fourth grade high school students. In this research, Lambert's (2006) digital storytelling process and writing process approach was followed, and 12 students were asked to create their own stories. The quality of the stories created by students in a highly motivated manner were observed to be beyond the expectations of the researchers. The research findings indicated an epistemological shift in the way the students perceive the purpose of the digital storytelling task. They changed their perception from focusing on the language and technology to creating a meaningful, personal, and emotional digital story. The study showed that digital storytelling which can be incorporated into writing curriculum engages students in practicing language in a meaningful and real-life task.It is possible to encounter with digital storytelling studies in various parts of the world. Xu, Park and Baek (2011) carried out their research with 64 university students aged between 20 and 22 who lived in South Korea. The main purpose of this study is to investigate the self-efficacy perception and digital writing effects within the framework of storytelling. Participants were divided into two groups, while Movie Maker program was given to one of the groups to carry out their studies, it was not given to the other group. Statistically significant results were found when self-efficacy written scores were compared in the virtual learning environment. We can conclude that digital storytelling in a virtual reality environment is more effective than traditional storytelling. Self-efficacy and flow of writing made digital storytelling attractive in an active virtual reality learning environment. The findings of this study suggest that digital storytelling can be arranged as an authoring method which can be used in the classroom during instruction.

In the literature review carried out, no digital storytelling study with German students has been found yet in Turkey. Therefore, this research examined how digital storytelling method affected Anatolian High School students' German language learning experience and perceptions on German, and answers were sought for the following questions:

- 1. What are the thoughts and feelings of students using digital storytelling method?
- 2. What are the perceived effects of the digital storytelling method on students' German language learning?
- 3. What are the perceived effects of the of digital storytelling method on students' computer skills?



2. Method

This research, which aimed to investigate the digital storytelling method in Foreign Language Teaching (German), was designed in the form of action research (AR) using mixed-methods (Creswell, 2005; Maxwell, 2005; Yıldırım & Şimşek, 2006). It was an action research because mainly the classroom teacher was implementing a new teaching method and needed to evaluate its effects. According to Burns (2010), AR "is related to the ideas of 'reflective practice' and 'the teacher as researcher'. AR involves taking a self-reflective, critical, and systematic approach to exploring your own teaching contexts" (p.10). Removing the limitations of using only one type of method, mixed-method research design "includes philosophical assumptions that guide the direction of the collection and analysis of data and the combination of qualitative and quantitative approaches in a number of steps in the research process" (Creswell & Clark, 2007, p. 5).

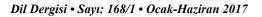
2.1. Setting and Participants

The Anatolian High School located in the Southeastern Anatolia region where the research was carried out is a new school that entered into service in the 2013-2014 academic year. The same building was temporarily shared with social studies high school as the school construction was still continuing. 469 students were enrolled in school at the time of the study. On the basis of SBS scores, it is seen that the highest score of the student enrolled in school was 389 and the lowest score was 249. When it is taken into consideration that a student can get a maximum of 500 SBS score, it is not a school which is preferred by academically successful students. Education was conducted only with 9th and 13th grades in this school at the time of the study.

431 students answered the Personal Information Questionnaire. It was emphasized that this research was absolutely not a mandatory assignment to avoid misunderstandings among students. Questions were posed to students by personal information forms distributed, and they marked the option of yes in the last question if they wanted to participate in this research. Out of 431, 97 students participated in the research. The answers of the students were not shared with anyone and were saved safely.

2.2. Data Collection

The research consists of two processes as Preparation and Implementation. The Preparation process of the research comprised the beginning of the 1st term in the 2013-2014 academic year, and the Implementation process comprised the end of the 1st term and 2nd Term in the 2013-2014 academic year.





The research data were collected by means of digital storytelling tasks which last 2 to 3 minutes and produced by the participant students using Movie Maker and PowerPoint, reflective researcher journal written by the teacher responsible for the language course, data evaluation tables, questionnaire, interviews, the files in students' computers, assignment files and e-mails. An attempt to collect data was also made by means of the forms below:

- Personal Information Questionnaire
- Interview Participation Form
- Interview Form
- 2 interviews were conducted, including before and after the study
- Perception Questionnaire
- Rubric

2.2. Data Analysis

Although data collection and analysis processes were spread over the entire research process, data were analyzed as they were collected because this research had a circular feature. Mainly the content analysis was used (Yıldırım & Şimşek, 2006). The basic steps in content analysis as described by Gall, Gall, and Borg (2007) were followed in data analysis process:

- 1. Organizing the data obtained from the open-ended questionnaires, observation/ reflective journal, interview, and typing the data in Word and Excel.
- 2. Reading the records several times to make sense
- 3. Analyzing the qualitative data using content analysis, basically, reducing data, identifying key words, and establishing categories
- 4. Evaluating the digital stories using the rubric and calculating percentages and means
- 5. Selecting direct quotations from interview and questionnaire data
- 6. Member checking for the accuracy and integrity of data
- 7. Reporting of the data analyzed

At the evaluation stage, it was intended to measure to what extent the students performed digital storytelling successfully. The rubric seen in Table 1 was used to evaluate the digital stories.

Creativity and language:	16 points
Discourse:	16 points
Grammar:	4 points



		1 (Poor)	2 (Average)	3 (Good)	4 (Strong)
Creativity and Language	Visuals				
	Vocabulary				
	Sentences				
	Details				
Discourse	Coherence				
	Cohesion				
	Plot				
	Characters				
Grammar and Mechanics					
Comments and Total Points					

Table 1: Rubric

2.4. Trustworthiness and Ethics

A reflective researcher journal was kept and the observations were written in detail throughout the research. The notes were confirmed to be accurate and complete by making students read them while performing the analyses. Because the environment where the research was carried out, people and actions were explained in detail, teachers and researchers in the similar situations can transfer this study into their environments as needed.

To ensure the trustworthiness of the study, the measures taken can be listed as follows (Brantlinger, Jimenez, Klingner, Pugach and Richardson 2005; Creswell, 2005; Maxwell, 2005; Yıldırım &Şimşek, 2006; Yin, 2003):

- a. Different qualitative and quantitative data collection and analysis techniques were used.
- b. Data were collected before, during and after implementation.
- c. Long-term and in-depth data were collected.
- d. Experts in different fields participated in data collection and analysis processes.
- e. Detailed descriptions were made.
- f. Literature review was performed simultaneously with the data collection phase.
- g. The consistency of data was taken into account.
- h. The process of the study was shaped by reflective data.
- i. The accuracy and integrity of data were controlled by participants, and their compatibility with other data was analyzed.

The records in data collection and analysis processes were kept regularly and systematically, and the consistency among data was controlled. In accordance with the analyses performed,



the data obtained were determined and analyzed according to the research purposes, and the analyses were checked by the second researcher to ensure dependability and credibility.

3. Findings

3.1. Feelings and Thoughts of the Students Regarding Digital Storytelling Experience

Throughout the project, participants were observed and all related notes were recorded. After the students finished their digital storytelling, they were asked about their thoughts and feelings in the face-to-face interviews. First of all, participants were asked whether they read a digital story before. Of the 97 students, 16 said they had read digital stories before, while 81 said they did not. Regarding their feelings, almost all participants seemed happy and enthusiastic and shared positive feelings: while 43.2 percent of the learners said they felt very good when writing a digital story, 18.5 percent said they were happy, 9.9 percent emotional, and 7.4 percent felt they were special. Around 6.2 percent of the students who wrote a story of their earthquake experience said they remembered the moment (earthquake) and felt scared.

As said by one of the participants, "Creating a digital story took my attention and stimulated the desire to learn more," this expression can set an example for increasing language learning motivation. Another participant also showed high motivation by saying "If only we could do such tasks in other lessons, we would learn in a fun way."

In the interview performed, students were asked about whether they were proud of the stories they wrote. A great majority of students by 91,8% were proud of the stories they created. In addition, students were also asked about in what aspects they were proud, and the results in Table 2 were obtained.

Reasons to be proud	Number of students	%
Because I created a nice product with my story	37	41,6
Because of the effort I made and I created it	21	23,6
Because I accomplished something by myself with my story	8	9,0
Because I did something different- created awareness	6	6,8
Because I developed myself with my story	5	5,6
Because I wrote a story using my own photographs	4	4,5
Because I received appreciation on my story by my teacher	3	3,4
Because I wrote a story in a foreign language	2	2,2
Because my self-confidence increased	2	2,2
Because I created something digital	1	1,1
TOTAL	89	100

Table 2: Students' reasons to be proud of their stories



When students were asked about why they wanted to go on digital storytelling, 62,2% of them stated that they wanted to go on because they found it entertaining and enjoyable, and 37,8% of them stated that they wanted to go on because they believed their German was improved.

3.2. Perceived Effects of Digital Storytelling Method on Students' German Learning Experiences

The number of digital stories created and analyzed is 97. These digital stories take about 2-3 minutes on average. Furthermore, when the number of sentences was taken into account, it was observed that the stories changed between 15-20 sentences on average. These phrases are formed in the format of ich (I) and Präsens (the simple present time). All of the students who took part in the study had taken German courses for the first time and at the time of the study the curriculum focused on Präsens (the simple present time). The performance of the students was positively shocking. Thanks to the fun and meaningful language practice of the digital story method, they created a variety of stories using their creativity in a very effective and different way in a short period of time.

Based on the interviews with students and in the light of questionnaire findings, it was observed that the digital storytelling method made positive contributions to the language skills of students. In addition, teacher observations also support this finding. The evaluation of the stories was carried out in accordance with a rubric. The averages of all stories extracted according to the rubric are seen in Table 3. Figure 1 also shows the percentages of all stories according to their total scores. The evaluation carried out over 36 points was discussed in 3 different frame including creativity and language, discourse (speaking-writing) and grammar. There are 9 sub-titles in three main titles. The value of each of these 9 sub-titles is a maximum of 4 points.

		Mean	Mode
	Visuals	2,98	4
Creativity and languagel	Vocabulary	3,45	4
	Sentences	3,25	3
	Details	2,75	2
	Coherence	2,89	3
Discourse	Cohesion	3	3
Discourse	Plot	3,13	3
	Characters	2,78	3
Grammar and Mechanics	Grammar and Mechanics	3,01	3

Table 3: Mean scores of all the stories



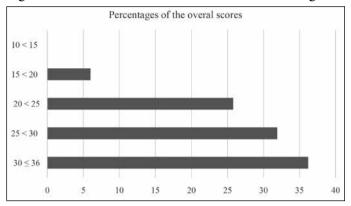


Figure 1: Distribution of total scores of the whole digital stories

In Figure 2, a section was presented from the story of the student who addressed Istanbul earthquake in illustration A, and the story of the student who addressed Van earthquake in illustration B. Students made a story of a historical event with illustrations and texts and added a music suitable for this story. Besides, students sang the stories they created with their own voices.

Figure 2: Samples of digital stories



Based on the questionnaire data, the results in Table 4 are seen when we look at what digital storytelling has brought in terms of German language learning (vocabulary, grammar, story writing). Interview data also supports this questionnaire finding as several students shared statements such as "I learned a lot through this work and I think that my German has improved."



Language gains	Number of students	%
Vocabulary increased	32	32,9
Writing skills improved	29	29,9
Pronunciation improved	19	19,6
Grammar improved	17	17,6
TOTAL	97	100

Table 4: Perceived language gains after digital story writing

3.3. Perceived Effects of Digital Storytelling Method on Students' Computer Skills

Research findings indicate that digital storytelling method contributed to students' computer skills. In the interviews conducted face to face, it was noted that students' computer skills were improved. Furthermore, the researcher/teacher observed that students have become capable of using PowerPoint and Movie Maker programs efficiently. As depicted in Table 5, students have improved their computer literacy skills by means of digital storytelling projects.

Table 5: Perceived con	nputer literacy gains	s after digital stor	y writing
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Gains	Student number	%
My typing skills improved	41	42,3
I improved my computer skills	33	34,1
I learned a computer program	23	23,6
TOTAL	97	100

Some of the important elements of digital storytelling are pictures, music and sound. Students were asked about these elements that they used in digital stories. All of the students have added pictures in their digital stories. A large proportion of the students chose pictures from the Internet on the search engines. The proportion of students who use their own photographs is only 17.5 percent. They were also asked whether they added music to their digital stories, and 84.5 percent of the students stated that they added music. The 15 students in the 15.5 percent area who answered "No, but I would like to add", were also helped and music was added to their stories in the direction they wanted. Later, the students were asked whether they made a voiceover to their digital story. Of the students, 92.4 percent said yes. The 7.6 percent of respondents who answered "No, but I would like to add", were dd", were assisted one on one and recorded their voices.



4. Discussion

The results of this research indicate many valuable findings about how digital storytelling study is implemented in foreign language education, the problems experienced and achievements, its effect on student motivation, the effect of peer and teacher feedback and the use of social media along with this method. It was observed that digital storytelling method positively affected the students' motivation to learn German. The biggest evidence for this fact is that students want to participate again in such a study and they state the reason for this desire as they believe that it is entertaining and their technical and foreign language knowledge have been improved.

The research determined the positive effects of digital story writing method on students' language learning in the German language course. All of the students stated that their vocabulary knowledge was increased, their grammar, writing skills and pronunciation were improved after digital storytelling. According to Warschauer and Healey (1998), "Computers will improve the learning process by adding another dimension to foreign language teaching when they are used properly" (p.31). When the language gains obtained in this research are compared with those obtained in other research, it is seen that there are similarities and differences. For instance, Yang Wu (2012) stated that at the end of 20-week digital storytelling study high school students significantly improved their English in terms of listening, reading, writing, interpreting and evaluating. Kesli Dollar and Tekiner Tolu (2013) stated that digital storytelling method improves the quality of stories in terms of language use and creativity based on their observations and analyses. The findings obtained from the questionnaire, interviews and observations in this research support the results of the similar studies found in the literature.

Sylvester and Greenidge (2009) stated that Web 2.0. technologies improve visual literacy. In this study, all of the students stated that they obtained achievements with respect to computer literacy. Students stated that their skills of typing on the computer, using program and writing digital story were improved. In addition to developing foreign language skills, by creating a multi-media product, students have improved their computer literacy by experiencing searching and adding pictures and music, and recording their voice, typing on the computer, and using computer programs.

There are similar studies supporting these results. Evangelista, Neri and Bergamasco (2009) reported that the fact that using technology in their drawings while writing stories increases students' technical knowledge and enables them to discover new things. Writing stories increased their interpretation and learning competency. The fact that students designed their stories in digital environment enabled them to use their creativity on texts, illustrations and other components and to create a multimedia product.



Conclusion and Suggestions

The research results have demonstrated that digital story writing is a student-centered, process-oriented and effective method, which positively affects the students' desire to learn German, and improve students' knowledge of foreign language and computer skills. In this regard, it is necessary to carry out digital-aided and student-centered studies with students. It is necessary to organize classes or laboratories where students can easily have access to computers in schools to facilitate the implementation of these activities.

The MNE (Ministry of National Education) and CHE (Council of Higher Education) should modify teacher education curriculum to boost teachers' digital technology skills and train them to effectively integrate these skills in teaching. Language teachers who want to implement digital storytelling method should primarily explain in detail the concept of digital storytelling to their students and ensure that they understand what they will do. Teachers can determine a specific working schedule and follow the functioning of the method in line with this schedule. However, students' readiness level should not be ignored, and the implementation of the method should be initiated after students reach a certain level. Teachers' feedback has a considerable influence in the implementation of digital storytelling method as it is seen in research. A teacher implementing this method should support students by providing constructive feedback to students' stories. This situation is an important factor for the student to feel motivated. Social media tools can improve the online communication between students and teachers and among students and may contribute to the development of stories.

The effects of the use of digital storytelling method in adult education can be investigated in further studies. The implementation of this method can be examined not only in foreign language but also in other branches. Peer feedback was not made obligatory in this research; another study in which it is made obligatory can be carried out and the effects of peer feedback on language learning can be investigated. In addition, the stages, challenges and outcomes of composing digital storytelling as a group needs to be examined in further research.

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