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Language Education Through Digital Storytelling: A Systematic Compilation Study

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Abstract

The main purpose of this research is to present a systematic review of research using digital storytelling in language education. When the theses and articles made between 2004-2022 in the literature were examined, 32 studies in which the digital storytelling method was used in language education were reached. The systematic review technique was used in the study in which the qualitative method was used. The obtained data were analyzed by content analysis. At the end of the research, it was stated that the digital story method in language education was used for four basic language skills, but 51% of the studies were about the skill of telling; most of the studies using digital stories in language education were prepared in quantitative (56%) and qualitative research (25%); it has been seen that the digital story method has a positive effect on the acquisition and development of all language skills.

Keywords: Mother tongue education, language skills, digital storytelling.

Dijital Öyküleme Yoluyla Dil Eğitimi: Bir Sistematik Derleme Araştırması

Öz

Bu araştırmanın temel amacı, dil eğitiminde dijital öyküleme yöntemini kullanan araştırmaların sistematik bir derlemesini sunmaktır. Alanyazında 2004-2022 yılları arasında yapılmış tez ve makaleler incelendiğinde, dil

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eğitiminde dijital öyküleme yönteminin kullanıldığı 32 araştırmaya ulaşılmıştır. Nitel yöntemin kullanıldığı araştırmada sistematik derleme tekniğinden yaralanmılmıştır. Elde edilen veriler içerik analizi ile incelenmiştir. Araştırmanın sonunda dil eğitiminde dijital öykü yönteminin dört temel dil becerisi için kullanıldığı ancak araştırmaların %51'inin anlatma becerisine yönelik olduğu; dil eğitiminde dijital öykü kullanan araştırmaların büyük bir kısmının nicel (%56) ve nitel araştırma (%25) deseninde hazırlandığı; dijital öykü yönteminin bütün dil becerilerinin kazandırılması ve geliştirilmesi süreçlerine olumlu etki sağladığı görülmüştür.

Anahtar Kelimler: Ana dili eğitimi, dil becerileri, dijital öyküleme.

1. INTRODUCTION

Advances in technology have enabled the use of multimedia tools in the educational process. A traditional education tool with the inclusion of information and communication technologies tools in the education process. The format of the stories, which are traditional stories, has changed and a new genre, digital stories, has emerged. When the literature is examined, it is seen that digital stories are used in many curriculum areas, but the researches focus on the use of these stories in language education.

Constantly reviewing and addressing the concept of education emerges as an indispensable phenomenon in order to adapt to the times (Ateş, 2022). The ineffectiveness of educational practices, the constantly changing living conditions in the world, and the inability to fully adapt the existing understanding of education to this process are the necessary reasons for changing and updating education practices (Gardner, 2007). In this context, as a radical change in the field of education, a constructivist view has emerged that has changed the processes of learning since the 17th century (Ateş, 2022).

The constructivist view, which accepts that reality is not one, but local and multiple, argues that the real world cannot be understood with only one method. In general, constructivist approaches agree with the view that learners are active, reach understanding by choosing, and construct their own knowledge holistically through both individual and social activities (Yurdakul, 2005).

As of 2004 curriculum reform in our country, constructivist learning approach has been adopted and the change in the education process has been kept pace with the global world (Altunkaynak & Çağımlar, 2023). All curricula have been updated accordingly. However, when the current situation is evaluated, it is seen that student-centered education in schools is still not fully implemented (Education Monitoring Report, ERG, 2009). With the updated curricula, deficiencies in reaching the expected goals in the teaching process necessitate different and applicable new searches. When learning a topic, students often think of "Why do I have to know this?" or "Where will I use this?". At this point, there is a need for bridges that can meet the learning needs of students and enable them to relate to the learned subject and daily life. Context-based learning approach acts as a bridge in

this respect. This approach is explained as teaching content learning by using the situations, events and problems that students encounter in their daily lives as a context (Altunkaynak & Çağımlar, 2023). Presenting the content with stories related to daily life helps to establish the context and makes learning more effective (Bennett, 2003). In this way, it has been observed that success towards the course interest (Ellis & Gabriel, 2010) and motivation increase and permanent learning is provided. From this point of view, it is possible to say that the teaching process is more effective for both teachers and students if the concept and content knowledge in a lesson is meaningfully associated with daily life.

The story, which helps to convey the different aspects of people and their real or imaginary worlds through the language of words, is one of the important text types that has existed since ancient times and will continue to exist in the future (Feight, 2016). It is possible to evaluate the story as a creative art that enriches the world of language and thinking and informs the individual. Storytelling encourages children's ability to interpret and understand events, supports listening and speaking skills, develops imagination, helps them to have fun and excitement, and respect different cultures. It is also the most natural way to go to the world of books and reading. The story, which is the narration of complex experiences, increases the motivation by activating the emotions in the fantasy world of the reader and ensures the realization of meaningful learning (Turgut, 2015). This situation has enabled storytelling to be used as a learning tool in every period from pre-school to higher education. Developments in technology have led to significant changes in education as well as affecting all areas of life. The fact that educational activities integrated with technology have a positive effect on the learning process of students has enabled traditional stories to be presented with ICT (Information and Communication Technologies) tools. This situation has created a new genre called digital story. Although digital story is a relatively new concept in the literature, it is a subject that has been defined and studied in various ways by different researchers. Robin (2007) the digital story; video, audio, picture, image etc. Foley (2013) describes it as a short film told firsthand, shown on a computer monitor, television or projected onto a screen. According to Reinders (2011) digital story is the telling of stories in electronic form. The contents can be prepared by the students themselves as well as by an expert, and this requires combining the relevant story with text, audio, music, video, and photographs (Ateş, 2022). The Digital Storytelling Association, on the other hand, states that it describes digital storytelling as a modernized version of the traditional art of storytelling, thanks to the use of digital media. Based on the definitions in the literature, it is possible to explain the digital story as combining the traditional story with sound, music, photographs and projecting it on a screen. The digital world has transformed the traditional story into an audio and visual structure called digital story.

Research shows that digital storytelling tools not only help bridge the gap between the technology-filled world outside of school and the traditionally low-tech school environment, but also

provide a number of benefits to students who cannot be reached through traditional methods (Ateş, 2022). The use of digital stories in the learning process increases the interest and attention of the students and thus ensures their willingness to participate in the process. Digital stories, which enable the integration of visual images with written text, both improve and accelerate students' understanding (Sur, 2022). In addition to remembering information in the learning process, digital stories help students understand ways to explore and apply knowledge effectively. Through digital storytelling, students; In addition to bringing language skills, it is possible to improve access to information, analysis of information, research, perspective development, organization, time management, technology and presentation skills. In addition, digital storytelling, used in both mother tongue and foreign language education, facilitates students to learn new words, enables them to delve deeper into the text, and facilitates the understanding of the technical aspects of the language.

In this research, it is aimed to examine the studies on digital storytelling in the literature in all aspects (purpose, result, keyword, research design, data collection tool) and to determine the effect of digital stories on success in both mother tongue and foreign language education with meta-analysis. Although scanning and systematic compilation studies on digital storytelling method have been carried out in the literature, no study has been found that examines digital storytelling research in all its aspects and combines experimental studies with meta-analysis method.

2. METHOD

In this section, the research model, the study group of the research, the methods and techniques used in data collection, preparation and analysis are explained.

Purpose of the research

The main purpose of this research was determined as "to make a systematic compilation of academic studies conducted between 2004-2022 on the digital storytelling method used in language education". In line with this main purpose, the sub-objectives of the research were formed as follows.

1. What is the distribution of studies using digital stories in language education according to language skills?

2. What are the aims of research using digital stories in language education?

3. What is the distribution of studies using digital stories in language education according to research designs?

4. What is the distribution of studies using digital stories in language education according to data collection tools?

Pattern of the Research

The systematic review method was used in this study, which aims to examine the studies on digital storytelling in language education from its structuring to its conclusion. A systematic review is a review of a clearly defined problem using systematic and clear methods to identify, select, and critically evaluate relevant research, and to collect and analyze data from studies included in the review (Creswell & Plano, 2014). In this study, it was aimed to identify and evaluate the studies conducted in Turkey on digital storytelling in language education. Millar (2004) emphasized that certain steps should be followed in systematic review studies. Accordingly, in the systematic review; It is necessary to clearly define the purpose, select the articles included in the research according to the determined criteria, and make inferences with the information obtained from the articles. In this context, the structure of this research was formed by paying attention to the specified rules. In the systematic compilation process carried out within the framework of the determined research questions, the studies conducted between 2004 and 2022 were examined. 32 studies published between these dates; Obtained from ERIC, ULAKBIM, Academic Google databases. While scanning, the keywords 'digital storytelling in language education' were primarily preferred in the Turkish search. While deciding on the studies included in the evaluation, attention was paid to the fact that the studies were only related to digital storytelling in language education. While making the evaluation, only the sections related to digital storytelling in Reward education were taken into consideration. On the other hand, the published studies included in the study consisted of only articles (20). Theses, papers and books were not included in the research. While selecting the determined articles; As stated in the rule of systematic review, the aim and questions of the research were the main determinants.

In this framework, in this study, which was designed according to the systematic review method, the researches;

1. It was published between 2004-2022,

2. There is an article about digital storytelling in language education,

3. It has been taken into account that it includes digital storytelling expressions in language education.

The effect of the digital storytelling method on comprehension (reading and listening) and narration (speaking and writing) skills was examined separately.

Table 1. *Descriptive Statistics Results of Studies Included in the Systematic Review*

		f	%
Type of work	Article	20	62.5

	Thesis	12	37.5
	Total	**32**	**100.0**
Year of study	2022	3	9,4
	2021	2	6,3
	2020	2	6,3
	2019	12	21,9
	2018	3	9,4
	2017	2	6,3
	2016	1	3,1
	2015	1	3,1
	2014	1	3,1
	2013	-	
	2012	-	
	2011	3	9,4
	2010	1	3,1
	2009	1	3,1
	2008	2	6,3
	2007	-	
	2006	1	3,1
	2005	1	3,1
	2004	1	3,1
	Total	**32**	**100**
Sample	16-30	8	25
	31-50	14	44
	51-70	5	16
	71 +	5	16
	Total	**32**	**100**
Education of the sample group level	The study in which the kindergarten was sampled	6	19
	Study in which primary school was sampled	9	28
	Study in which secondary school was sampled	8	25
	High school	6	19
	University	3	9
	Total	**32**	**100**

As can be seen in Table 1, 62% of the studies using the digital storytelling method are in the type of articles. While the majority of the studies were carried out in 2019, 2020, no research was conducted in this area in 2005 and 2009. In the majority of the studies, 31-50 people were taken as a sample, and the sample group was selected from primary school students.

3. RESULT

In the research, "How is the distribution of studies using digital stories in language education according to basic language skills?" The question was determined as the first sub-goal. The distribution of studies according to skills is given in Table 2.

Table 2. *Distribution of Studies Using Digital Story in Language Education by Skills*

Theme	Code	f	%
language skills	Write	4	13
	Read	6	19
	Listening	7	22
	All	5	16
	Digital Literacy	4	13
	Affective Factors	6	19
	Total	**32**	**100**

As seen in Table 2, 22% of the studies in which the digital story method is used in language education are for listening skills, 13% for writing skills, and 16% for reading skills.

In the research, "How is the distribution of studies using digital storytelling method in language education according to research designs?" question was determined as the fifth sub-objective.

Table 3. *Distribution of Studies Using Digital Story in Language Education According to Research Designs*

Theme	Code	f	%
Method	Quantitative	18	56
	Qualitative	8	25
	Mixed	3	9
	Meta analysis	2	6
	Unspecified	1	3
	Total	**32**	**100.0**

As seen in Table 3, 56% of the studies in which digital storytelling method is used in language education are quantitative, 25% qualitative, 9% mixed, and 6% meta-analysis research. The research design used in 3% was not specified. In the research, "How is the distribution of studies using digital storytelling method in language education according to data collection tools?" The question was determined as the third sub-objective.

Table 4. *Distribution of Studies Using Digital Story in Language Education by Data Collection Tools*

Theme	Code	*f*	%
Data collection tool	test	11	34
	questionnaire	9	28
	meeting	5	16
	rubric	3	9
	scale	1	3
	digital story	3	9
	Total	**32**	**100**

As seen in Table 4, in the studies examining the digital storytelling method in language education, 34% of the studies were used as a test, 16% as an interview, 9% as a rubric, 3% as a scale, 9% as a digital story data collection tool.

4. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

According to the first finding obtained from this study, 28% of the studies in which the digital story method was used in language education were based on writing skills, 23% on speaking skills, 14% on reading skills, 13% on listening skills, and 12% on all language skills. 4% is for digital literacy, 4% is for affective factors. The result shows that the digital story method is used for four basic language skills in language education, but 51% of the studies are prepared for the skill of telling.

When the literature is examined, no study has been found that shows which skills digital storytelling studies focus on. Based on this finding of the research, it is possible to say that digital stories, which are created by enriching the stories with visual and auditory tools, are an effective method that can be used to improve students' speaking, listening and writing skills. The fact that the

stimuli are auditory explains the less number of studies on reading skills, but the finding obtained draws attention to the scarcity of studies on listening skills.

The fact that listening is a neglected skill area compared to other language skills suggests that listening skills are less involved in digital storytelling studies (Doğan, 2010). The number of studies on digital literacy, affective factors and all language skills constitute the least percentage of all studies.

According to the second finding obtained from the research, it is seen that a significant part of the studies using the digital storytelling method in language education aims to develop four basic language skills. Apart from this, there are also studies that aim to teach vocabulary, develop literacy skills, determine the trend of research, develop high-level thinking skills, compare the traditional method and the digital storytelling method. While the effect of digital storytelling on reading, writing, listening and speaking skills can be examined in separate studies (Mirza, 2020), there are also studies in the same research (Moradi & Chen, 2019). According to the third finding of the study, studies using the digital storytelling method in language education have concluded that this method positively affects students' language achievement and affective factors related to language skills, and is effective in teaching vocabulary. However, Çiftçi (2019) determined the effect of digital stories on reading skills of primary school students; Sudarmaji, Mulyana, and Kar Siyah (2020) examined the effect of digital storytelling method and traditional method on writing success and could not find a significant difference between the two methods. Although no significant difference was found in the two studies, the literature shows that using digital storytelling in language education is an effective method in achieving the determined goals. According to the fourth finding of the study, the keywords in the studies using digital stories in language education are related to language skills, technology, education, thinking, method and affective factors. Keywords related to language skills, technology and education are more comprehensive and varied than keywords related to thinking, method and affective factors. In a significant part of the digital storytelling studies (78%), aiming to develop basic language skills enabled the keywords to focus on language skills, education and technology. The distribution in the purpose of the research played an important role on the distribution of keywords.

According to the findings obtained from the research, most of the studies using digital stories in language education were prepared in quantitative (56%) and qualitative research (25%). The least used research design was meta-analysis (6%). The pattern of 3% of the studies was not specified. Wu and Chen (2020) conducted a systematic review study on research using digital storytelling method in education and concluded that 26 of 57 studies used qualitative research method and 11 of them used quantitative research method. This finding of the study does not coincide with other research findings in the literature. Studies show that the digital story is only used to examine the effect of language education on success. The fact that the main purpose of the studies in which digital storytelling is used in language education is to develop the four basic language skills of students with digital stories has

caused the researchers to use the quantitative method more and less the qualitative method. The findings of the research show that the mixed design, which combines qualitative and quantitative methods, is rarely used in digital storytelling studies. This situation is thought to be an important deficiency for studies in which the digital storytelling method is used in language education. The sixth finding of the study is that more than 50% of the studies using digital stories in language education are tests, scales and questionnaires; 33% said that interview forms were used. The fifth and sixth findings of the study support each other. In 41% of the studies, planning according to the quantitative research design also included data collection tools in quantitative research.

It enabled the use of the test, scale and questionnaire used. The fact that the application and evaluation of these measurement tools is relatively easy compared to other measurement tools enables them to be used intensively in research.

The research shows that the digital story method has a wide effect on comprehension and all language skills. Özkaya (2020) conducted a meta-analysis study with 11 studies, that digital stories have a high effect on the development of Turkish language skills; Similarly, Rahman and Bakar (2020) concluded in their systematic review study that digital stories are an effective method in improving speaking skills. Both current research and literature show that digital stories are an effective method for developing language skills. Digital stories, being an audio and visual material, are one of the effective tools that can be used to improve the four basic skills in language education.

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