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Examination of the Effects of Digital Story Applications on Digital Parenting and Technology Usage Attitudes

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ABSTRACT

Children's active participation in the internet causes them to face online risks. In this direction, parents have the most prominent role in ensuring children participate in a safer and more conscious internet world and protect them from online risks. However, it is seen that most of the parents need help to keep up with the social transformation at a sufficient level. At this point, parents need to examine the concept of digital parenting. In this context, digital story activities were considered an effective tool. A digital story is defined as presenting narration based on sound, pictures, graphics, motion graphics, images, music, and text in an interactive digital environment. Based on all these situations, this study aims to reveal digital parenting competence and raise awareness by examining the effect of digital story activities on digital parenting on parents' digital parenting attitudes. At the same time, technology use attitudes of parents are revealed by examining their technology use. This research was designed with a mixed-method research model. The study group of the research consists of 40 parents with primary and secondary school students in the Science and Art Center with different socio-demographic characteristics in a province in the northwestern part of Turkey. A personal information form, a semi-structured interview form, and two different scales were used in the study. The most important result of this study is that design-based teaching activities such as digital story development contribute to the development of parents' awareness of digital parenting.

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Dijital Hikaye Geliştirme Etkinliklerinin Ebeveynlerin Dijital Ebeveynlik ve Teknoloji Kullanım Tutumlarına Etkisinin İncelenmesi

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ÖZET

Çocukların internet dünyasında aktif yer alması onları çevrim–içi risklerle karşı karşıya kalmasına neden olmaktadır. Bu doğrultuda çocukların daha güvenli ve bilinçli internet dünyasında yer alması ve çevrim-içi risklerden korunmalarında en büyük rol ebeveynlere düşmektedir. Fakat ebeveynlerin birçoğu toplumsal dönüşüme yeterli düzeyde ayak uyduramadığı görülmektedir. Bu nokta ebeveynlerin dijital ebeveynlik kavramını irdelemeleri oldukça önemlidir. Bu bağlamda dijital hikaye etkinliklerinin etkili bir araç olacağı düşünülmüştür. Dijital hikaye, etkileşimli dijital bir ortamda, ses, resim, grafik, hareketli grafik, görüntü, müzik ve metne dayalı anlatımın sunulma süreci olarak tanımlanmaktadır. Tüm bu durumlardan hareketle bu araştırmanın amacı, dijital ebeveynliği konu alan dijital hikâye etkinliklerinin, ebeveynlerin dijital ebeveynlik tutumlarına etkisini inceleyerek dijital ebeveynlik yeterliliğini ortaya koymak ve farkındalık kazandırmaktır. Aynı zamanda ebeveynlerin teknoloji kullanımları incelenerek teknoloji kullanım tutumları ortaya koymaktır. Bu araştırma karma yöntem araştırma modeliyle desenlenmiştir. Araştırmanın çalışma grubunu, Batı Karadenizin bir ilinde farklı sosyo-demografik özelliklere sahip Bilim ve Sanat Merkezinde ilkokul ve ortaokul öğrencisi çocuğu olan 40 ebeveyn oluşturmaktadır. Araştırmada kişisel bilgi formu, yarı yapılandırılmış görüşme formu ve 2 farklı ölçek kullanılmıştır. Bu araştırmanın en önemli sonucu dijital hikaye geliştirme gibi tasarım tabalı öğretim etkinliklerinin ebeveynlerin dijital ebeveynlik ile ilgili farkındalığının geliştirilmesine katkı sağlamasıdır.

1. Introduction

Individuals of all ages use even these technologies, it is observed that children are the ones who spend the longest time. Among the increasing yearly number of internet users, children as users have a significant place. Children use information technologies for many different objectives such as simple access to information, communicating, expressing emotions and opinions independently, amusement, game etc. (Durak & Kaygın, 2018). While using information technologies, children encounter some online risks (Gökçearslan et al., 2021). When the online risks children encounter is observed, they can be classified as content risks (wrong or harmful information), risks from related persons (cyberbullying or communicating with strangers), commercial risks (cyber fraud or pirate software) and hidden risks (sharing or stealing the personal information) (Livingstone & Haddon, 2009). At this point, parents have a big role in children's being in safe and in their being conscious internet users and in protection of them from online risks they may encounter. Yet, it is observed that most of the parents are not conscious enough about computer and internet use. At this point, parents must question digital parenting concept and share their experiences (Durak & Kaygin, 2020; Vezne, Atman-Uslu & Yildiz-Durak, 2022). In this study, it is aimed that parents develop their digital parenting awareness by using digital stories which subject digital parenting.

In line with the contributions of digital era, traditional storytelling produces digital stories by uniting multimedia technologies. Digital story can be described as the transfer of a scripted narration into digital environment by supporting it with various sounds and images. Digital storytelling is telling the story via digital technologies. A short film shooting the growing up of the food, a podcast about the medieval age, a blog novel about America in 1968, a repeating video about mother-daughter relation can be shown as examples for digital storytelling (Alexander, 2017). Digital story can be created via many applications (glogster, bitstrips, bitmoji, powtoon, animato, creaza, goanimate etc.) which can be accessed through the computer environment or through mobile devices (Yildiz Durak, 2018). The traditional storytelling has a characteristic of teaching-learning method for people. By turning the stories into digital stories now through the adaptation of technology to education, it is used as a content type in the teaching learning process throughout different disciplines (Lee, 2014; Yılmaz, Üstündağ, Güneş & Çalışkan, 2017). As well as they are used at such levels as preschool, elementary school, secondary school and higher education; digital stories are also used during teachers' education. However, when the literature is examined, it is observed that digital story activities are mostly performed with children,

youngsters, and teachers or prospect teachers. There is a need for further studies on the use of digital storytelling as a teaching activity in adult education.

1.1. Aim of the Research

The research aims to enable awareness by examining the effect of digital story activities about digital parenting on parents' digital parenting attitude. In the same time, by examining technology usage of the parents, their technology usage attitude will be manifested. In line with this aim, answers were searched for the below questions.

Sub-questions of the research are listed as follows:

- How are the parents' pretest and final test scores of digital parenting attitude and technology usage attitude?
- Is there a meaningful difference when the pretest scores are controlled between the study group to which digital story activities about digital parenting is applied and the control group's digital parenting attitude?
- Is there a meaningful difference when the pretest scores are controlled between the study group to which digital story activities about digital parenting is applied and the control group's media and technology usage and attitude?
- Do the parents' digital parenting attitude and their media and technology usage and attitudes differentiate based on gender, gender of the child, daily frequency of technology usage and age?
- What are the opinions of the study group about the application process during which digital stories are used?

2. Conceptual Framework

2.1. Digital Story

Development of the technology has made different and innovative educational approaches emerged. With the developing and disseminating technology, innovative educational approaches has started to emerge in learning-teaching environments. According to Robin (2006), story which is an effective method in learning and teaching was transferred to digital environments with the development of technology. Digital storytelling is an effective and strong learning strategy which has emerged through the use of simple technological instruments in the learning-teaching process (Robin & McNeil, 2012). The primitive men used cave walls to picture their stories. Today different technological instruments are needed and used for digital storytelling. Web 2.0 instruments, which is one of them, are technological environments which have a simple interface and in which users can easily

digitalize their stories. By putting together some media elements like picture, video and music; teachers, students or individuals can create digital stories through Web 2.0 instruments (Karoğlu, 2015).

The stories which can be written, read, stored and released in technological environments constitute the concept of "digital story". Digital storytelling in general is described as "the presentation process of the narration which is based on sound, picture, graphic, sprite graphic, image, music and script in an interactive digital environment" (Figa, 2004).

By enabling the learning environments to be attractive, digital storytelling makes the topic or the event intended to be narrated become more sufficiently understandable. As it happens for the traditional storytelling, when it comes to digital storytelling, the story also happens within the cycle of an event or a theme and it has an opinion. Digital story is a multimedia application which lasts nearly a few minutes and is created by composing the story intended to be told with a combination of images, sounds, and videos (Robin, 2006). Generally lasting 2 to 5 minutes, used to narrate a topic or situation; digital story is expressed as a narrative art (Doğan & Robin, 2008; Garrety, 2008; Kulla-Abbot, 2006; Maddin, 2011).

In educational environments, digital stories are used for such fields as literature, creative writing, social and cultural sciences, language learning, etc. As well as it is frequently used in educational environments, it is also being used for more than one informal field like psychology, history, public service announcements informative for the society, health, etc. (Karoğlu, 2015; Robin 2008). In the same time, there are many studies which mention the contributions of digital storytelling consisting a wide array of students from preschool to university. As an educational instrument, digital storytelling makes various contributions in learning-teaching process. As well as students themselves can create digital stories, they can also use digital story created by their teachers in order to understand a subject (Robin, 2006). Digital storytelling is not only created via Web 2.0 instruments but, they can also be created via such instruments as Scratch, MovieMaker, Microsoft Powerpoint, Microsoft Photostory (Karoğlu, 2015).

2.2. Digital Story Creation Process

In this part, the components a story should consist and the steps of digital story creation are explained.

Components of the Effective Digital Story

There are seven basic elements an effective digital story should have (Keleş, 2019). These elements are opinion, a stunning question, an emotional content, economy, an effective dubbing, power of the music and rhythm (Sarıtepeci,2016; Bull & Kajder, 2005).

Opinion: It is the step during which opinion of the person who created digital story and the message wanted to be conveyed through the story he/she structured with his/her experiences are set forth. The significant point in this step is that individuals constitute the very base of the story with their own opinions (Bull & Kajder, 2005).

A Stunning (Dramatic) Question: It is a question which attracts the attention, interest of the ones who watch the story and reply of which comes out at the end of the story. In this step, the narrator does not directly ask the question; the audience indirectly perceives the question at the beginning of the story or during the story (Robin, 2008).

An Emotional Content: It is the step during which the contents enabling the audience to get connected emotionally are placed in digital story. Pictures, musics etc. influencing the audience and making his/her emotions revealed should be used. It is important that the interaction of the audience and the story is enabled (Robin, 2008).

Economy: The most difficult of the components within digital story creation process is the economy element. In this step, sufficient contents should be included in order to tell the story. It is quite important to avoid from unnecessary details. The content intended to be told should be created in a short and clear way without boring the audience (Bull & Kajder, 2005).

An Effective Dubbing: An effective dubbing enables story to be understood better and gives further meaning to the story. In this step, it is important that voice tone is set properly and the voice is used clearly. Because an effective dubbing is one of the most important components contributing to the efficiency of digital story (Keleş, 2019).

Power of the Music: Determining the music suitable for the script of the story is an important element in order to beautify, support the story and make the story gain depth. One should be careful while determining the music; the determined music should be in relation with the theme of the story and with the message wanted to be told (Robin, 2008). The lyrics of the music in the story should be paid attention as well. The background music lyrics may cause problems in conveying the message in the story to the audience (Sarıtepeci,2016).

Rhythm: Another element digital story should have is rhythm. It is also expressed as the speed of the pace or the speed control (Robin, 2008). The speed of the prepared story should be neither very fast nor very slow. Audience

should be able to follow the story in a proper rhythm. The rhythm of the story should be set in a way which will be able to attract the attention of the audience and which is suitable for the theme (Sarıtepeci, 2016).

Steps of Digital Story Creation

The process of digital story creation is comprised of specific steps. While these steps do not have a determined standard, digital story creation process prepared by various researchers displays similarities (Jakes & Brennan, 2005; Robin, 2008).

In this study, the steps which construct digital story creation process according to Jakes and Brennan (2005), are used. Jakes and Brennan (2005) listed digital story creation process in six steps: writing, script, storyboarding, locating multimedia, creating digital story and sharing digital story.

Writing: In the writing step, the theme in digital story should be determined at first. Realistic or fiction-based stories are written in relation with the theme determined. More than one story essays are conducted. It is important that the story script is written in a way to attract the interest and the attention of the audience. A well written digital story is one of the most important elements setting forth the effectiveness of the story (Kajder, 2004; More, 2008; Xu, Park & Baek, 2011).

Script: After writing step, necessary layout about the story is completed. It comes to script development step. By creating various scripts, attraction of the story is tried to be increased.

Storyboarding: As well as storyboarding can be developed on paper, various programs and online instruments (storyboardthat.com etc.) can also be used (Sarıtepeci, 2016). In this step; where, when and how to use such multimedia instruments as image, picture, sound, music, video, etc. suitable for the selected script are determined. Digital story is lay out in a way to be able to control and organize the script flow. This step during which the screening time of the story scenes are determined is a planning process.

Locating Multimedia: In this step, multimedia instruments like image, picture, sound, music, video etc. which are suitable for the theme of the story, characters it includes and the content are located. Necessary locating which is indicated in the storyboard is conducted to the multimedia instruments to be used in digital story. While multimedia instruments can be created in such ways as computer, camera, dubbing device etc., they can also found in internet environment (Yılmaz, Üstündağ & Güneş, 2017).

Creating Digital Story: Digital story creation process starts via story script and storyboard. In this process, video organizer programs like Movie Maker, Photo Story or online instruments can be used. Selected multimedia

instruments are located into digital story creation program in the way they were determined and at the position they were located during storyboarding step. Many layout like transition time and effects of the placed multimedia instruments, the music inserted to background and dubbing are conducted in this step.

Sharing Digital Story: In sharing digital story step, designer of the digital story can share it with others in classroom environment, face to face or in online environment. Sharing of it in online environment may increase the mass that can access to digital story (Jakes & Brennan, 2005; Yılmaz, Üstündağ & Güneş, 2017). When the study on digital stories is started, it is expressed that knowing the steps of digital story creation will be beneficial in digital story creation process (Robin, 2008).

2.3. Digital Story Types

Digital stories are used for different purposes and in different types. Digital stories are divided into three as personal, historical and informative stories (Robin, 2008). Digital story types are explained respectively as follows:

Personal Stories: They are the stories in which persons tell the events and the topics they attach importance in their own lives. These stories are;

a) Character stories: they are the stories, which are also named as commemoration, about an important person in life.
b) Adventure Stories: they are the stories about the adventures and the happening events in life.
c) Success Stories: they are stories about gained successes.
d) Stories of a place in life: they are the stories about and important place in life.
e) Other Stories: love stories in life, invention/discovery stories, imaginary/fiction stories etc.

Stories About Historical Events and Topics: They are the stories examining the events, persons and societies in order to understand and tell the issues in history.

Informative Stories: They are the stories created for the purpose of informing audience or students about a specific topic, concept or application.

2.4. Digital Story and Adult Education

Primitive men transferred their knowledge, tradition and cultural values by telling stories (Kulla-Abbott, 2006). Since it emerged, storytelling is regarded as an educational instrument. In order to correlate technology with learning-teaching process, digitalized world make digital storytelling become an important instrument beginning from preschool reaching to adult education (Duman & Göcen, 2015; Özpınar, 2017). It is necessary to know the

knowledge, concept and theories told about the subject in digital story process and to use these knowledge within the process. It should be planned that these knowledge is applied through suitable strategy, method and techniques in accordance with the target audience to whom digital story will be told (Pamuk, Ülken & Dilek, 2012). Many studies conducted in the literature set forth that digital storytelling method has positive effects on students. It can be said that digital storytelling method has the quality to meet today's educational needs. It is observed to more actively include students into educational environment in learning-teaching process. Since students are active in digital story creation process, it can be said that it develops their critical thinking skills, study and creative writing skills and technological literacy (Dogan & Robin, 2008). When these positive contributions are taken into consideration in terms of students, it is thought that usage of digital storytelling method also in adult education will contribute to teaching process (Pekyürek et al., 2023).

2.5. Digital Parenting

Parents are mother and father who are as well as biologically responsible for growing up the child, who are also responsible for enabling him/her to grow up in psychological terms. It can be argued that parenting role is one of the most important roles of women and men. Couples having children adopt important responsibilities through parenting role in physical, psychological and social development of the child, supporting and guiding their education, enabling him/her to adopt positive attitudes and behaviors. Different roles await parents in each environment and situation children encounter. Advancements in technology brings together changes in societies and individuals, in this point roles to be undertaken by the parents also changes (Yurdakul et al., 2013). In digitalized world; individuals in the society, particularly children and youngsters do not know what kind of a relation they should have with technology. Responsibilities and roles of parents differentiate in digitalized world (Yaman, 2018).

Role of the parent in digital era is not introducing technology to child and enabling him/her to access to it. Benefiting from the opportunities in digital environment, children's and youngsters' uncontrolled use of technology leaves them alone with various risks and dangers. One of the responsibilities to be undertaken by parents is the protection of children from the problems in digital environment and raising awareness of them. At this point, the indicated responsibility and the role is concept of digital parenting (Canbek & Sarıoğlu, 2007).

In digitalized world, while technology has positive aspects, opportunities; it also has negative aspects and risks (Yildiz Durak & Avcı, 2022; Yildiz Durak & Saritepeci, 2020). Important and key roles go to parents to care for the children who are not aware of these risks and who encounter risks (Yurdakul et al., 2013). However, it is

observed that parents are not aware of digital parenting roles. It can be said that parents adopt an extremely free role by not being able to maintain the control about children's technology use and spending excessive time in digital environment. Such parenting approach and children's uncontrolled technology use cause domestic communication problems.

In the study conducted by Güngör (2014), moreover, it is indicated that family members themselves and children use technology in an uncontrolled way, and child regard technology as a parental responsibility. It is mentioned that this situation will cause deterioration in physical and psychological health of the child (Ateş & Durmuşoğlu-Saltalı, 2019; Çakır, 2013). In another study conducted by Çevik and Çelikkaleli (2010), it is indicated that children of the parents who display uncaring and uncontrolled attitudes have higher technology usage and addiction rates compared to the children of the parents who display an authoritarian attitude which maintains necessary control, which is democratic, protective and in full control. However, in the study conducted by Çalışkan and Özbay (2015), it is indicated that the parents who mostly display an extremely authoritarian attitude, completely forbid use of digital instruments in order to protect their children from negative aspects of technology. In this situation, moreover, it is emphasized that problematic usage is increased by children's use of technology while parents are unaware.

It is observed to be not possible that children and youngster are kept away from digital environments in this era. It is necessary that the parents notice that digital world is an indispensable element in their own lives and in their children's lives. In the same time, it is important that parents adopt digital parenting role (Atman-Uslu & Yildiz-Durak, 2022). When the concept of "Digital Parenting" in the literature is reviewed, Huang et al. (2008) identified it as the protection in digital environment, monitoring and managing child's internet use, finding knowledge and source in line with their needs and having communication. Yurdakul et al. (2013), moreover, identified digital parenting as the individual who behaves according to the needs and expectations of digital era, who have basic or intermediate level of technological literacy, who is aware of the benefits digital environment provides, who is able to protect oneself and his/her children against risks and threats of digital environment, who behaves respectfully in digital environment as well and who is model for his/her children, and who does not quit following the advancements in digital world. In the same time, they classified digital parenting as digital literacy, being aware, ethics, innovativeness and control (Yurdakul et al., 2013).

3. Method

3.1. Research Model

In this research, qualitative and quantitative research methods were used together. The research is designed with mixed method research model. In the quantitative dimension, experimental design was applied; in the qualitative dimension, however, interviewing was utilized. Within content of this research, for the preferred mixed method, the explanatory sequential mixed methods design developed by Creswell and Creswell (2017) was taken into consideration. According to this design, at first quantitative data are collected and analyzed in the research, and then the data is collected by determining the participants of the qualitative research. Finally, qualitative data is related with the quantitative data by analyzing the qualitative data (Creswell & Creswell, 2017). The methodological process in this research is also graded as the collection of quantitative and qualitative data (See Table 1).

Table 1.

Experimental design

Group	Task	Assignment Type	Used Tools / Application	Pretest	Posttest
G1- *Experimental group*	Experiment	Random assignment	Digital Story	O1.1. Personal Information Form O1.2. Digital Parenting Attitude Scale O1.3. Media and Technology Usage and Attitudes Scale	O2.1. Personal Information Form; O2.2. Digital Parenting Attitude Scale; O2.3. Media and Technology Usage and Attitudes Scale O2.4. Semi-Structured Interview Form
G2- *Control group*	Control	Random assignment	Content Presentation Videos	O1.1 O1.2 O1.3	O2.1 O2.2 O2.3

In the quantitative dimension of the research, pretest and final test control grouped quasi-experimental design was adopted as the model of the research. In the qualitative dimension of the research, pretest and final test control grouped quasi-experimental design was adopted as the model of the research. In the qualitative dimension of the research, data was collected from all the participants taking part in the experimental group through the semi-structured interview form. With application of the qualitative data only to the experimental

group, collection of parents' opinions about the use of digital story was aimed within context of the main objective of the research. The results reached through quantitative data was tried to be explained through qualitative data.

3.2. Participants

Participants of the research is composed by 40 parents who are from Bartın city and have different socio-economic characteristic, and whose children are elementary and secondary school students at Science and Art Centre. While determining the sampling; among the sampling methods which are not based on possibility, purposeful sampling method was used. In purposeful sampling, the researcher selects the suitable sampling himself/herself for the aim by considering various criterion situations (Arslantürk, 2008). In selection of the participants of the research, parents who are from Bartın city and whose children are elementary and secondary school students at Science and Art Centre were preferred because of such reasons as simple communication opportunities, availability of the computer classroom, lesson hours of the students at the school being during evening, convenience of parents' work hours, etc. Study (21) and control(21) groups were created through random method within the participants. 42 parents were participated voluntarily to the study; however, two parents who work as nurse and 112(emergency like 911 in USA) staff as 2 scales were not included to the evaluation because they could not fill in the final test due to their intense work tempo in fight with Covid-19. For this reason, the data collected from 40 parents were used in the study.

3.3. Data Collection Instruments

Personal Information Form

It was prepared by the researcher. In 6-item first part of this form, participants were asked to reply their gender, age, educational status; gender of their child, the school child attends to and the parental status towards the child. In the second part asking internet and technology usage statuses, moreover, there are totally 3 items.

Digital Parenting Attitude Scale

As the first data collection instrument utilized in this study, it is the scale titled "Digital Parenting Attitude Scale" which was used in order to reveal digital parenting attitudes. This scale was developed by İnan-Kaya, Bayraktar and Yılmaz (2018). The scale is composed of 13 items, moreover, it is replied through five-Likert (Strongly Agree, Agree, Neutral, Not Agree, Strongly Not Agree) scaling. The scale's Cronbach's alpha coefficient calculated within frame of this study is 0.971.

Media And Technology Usage and Attitudes Scale

As the second data collection instrument utilized in this study, it is the scale titled "Media and Technology Usage and Attitudes Scale" which was used in order to reveal media and technology attitudes. This scale was developed by Özgür (2016). The scale is composed of 60 items in total. The first part comprises 40 items related with smartphone usage, social media usage and social media sharing, making online calls, email, short messages, watching video, playing game, phone call and watching television; it is replied through ten-item (never, once in a month, several times in a month, once in a week, several times in a week, once a day, several times a day, once an hour, several times an hour and every time) scaling. The second part, moreover, is composed of 5 items; it is related with making friends in internet environment and social media friendship, it is replied through the options as 0 to 751 friends or more. The third part, on the other hand, is composed of final 15 items; it is replied through five-Likert ("5-Strongly Agree, 4-Agree, 3-Neutral, 2-Not Agree, 1- Strongly Not Agree") scaling.

Semi-Structured Interview Form

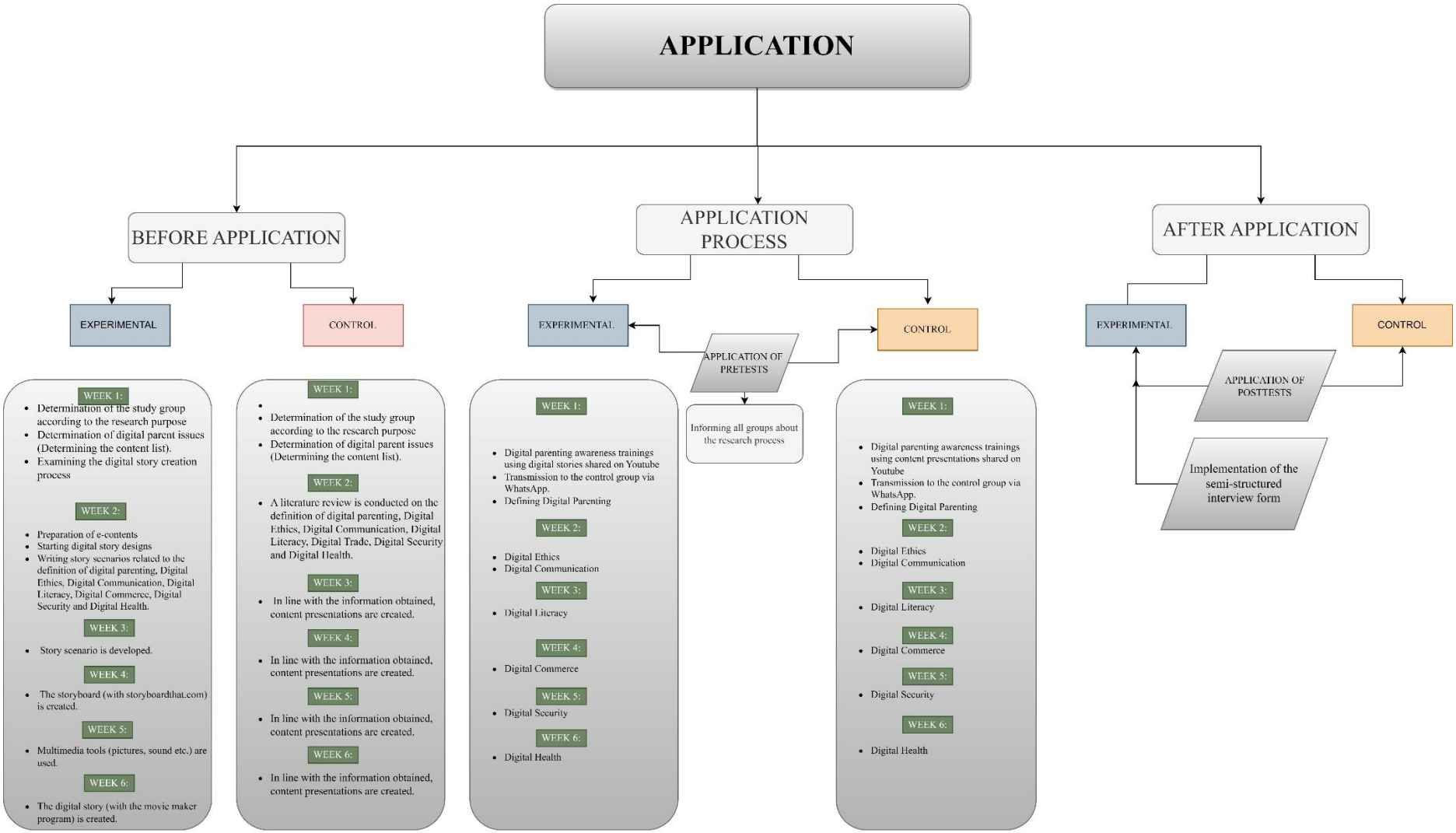
In order to reveal the contributions of digital story activities about digital parenting to the parents, semi-structured interview form was prepared by the researcher. Semi-structured interview form is composed of 7 open ended questions. In this form, there are 6 open ended questions about digital story activities and 1 question about digital parenting awareness. Semi-structured interview form is organized by consulting expert opinions.

3.4. Application

In this part; studies which were attained throughout the application process; pre-application, during the application and post-application studies were included. These parts were summarized in Figure 1.

Figure 1.

Studies Before, During and After Application in the Research



Pre-Application

In the research, pre-application training content of the experimental group and the control group was prepared. Designing of e-materials through which the prepared educational content will be presented was started. For the experimental group, digital stories in compliance with the content were designed. For the control group, moreover, content presentations were created. Pre-application studies were presented in annexes Table A and Table B. According to the content list presented in Table A, application contents of study and control groups were accomplished. Creation process of the education content which will be given to study and control groups was presented in Table B. In line with the process presented in Table B, the researcher prepared digital storytelling activities and presentation contents. In this study, the steps structuring digital story creation process according to Jakes and Brennan (2005) were used. Jakes and Brennan (2005), listed digital story creation process in six steps: writing, script, storyboarding, locating multimedia, creating digital story and sharing digital story. The operations done in digital story creation process are explained in detail as follows.

Writing**:** Subjects of the stories are determined based on the educational content list which will be provided in order to develop digital parenting competence. Primarily, stories in harmony with the subject content were written on paper.

Scripting**:** Necessary editing operations were done on the written stories. By developing scripts, attention is drawn to the main theme in the story.

Storyboarding: While creating storyboards, online instruments were utilized. By utilizing Storyboardthat.com site, multimedia instruments (image, sound, etc) suitable for the script were selected.

Locating Multimedia: Multimedia instruments (image, sound, video, etc) suitable for the characters and the events in the story were selected. In compliance with the storyboard; arrangements like dubbing, image, content, etc. were done.

Creating Digital Stories: Based on the story script, digital story creation process was started. All selected multimedia instruments like picture, sound, music, etc. were located to Movie Maker video arrangement program based on the storyboard. Such proceedings were done like firstly locating scenes (storyboards), then dubbing of the scenes and lap dissolves. After attained arrangements, digital story is recorded as video. Digital story and video presentation examples developed in the process are presented in the appendix section.

Sharing Digital Story: Digital stories were shared with the participants every week via YouTube during the application process. Created digital stories were shared with the experimental group in the application process after pretest was done.

Application Process

Pretest Application: Nearly one week before the application process starts, "Digital Parenting Attitude Scale" and "Media and Technology Usage and Attitude Scale" were applied to the applicants in online environment. Application of the pretest started in the same time period for the study and the control groups and it lasted nearly one week.

Sharing Digital Story with the Experimental group: Application process of the research was attained during the second semester of 2019-2020 academic year for 6 weeks with attendance of the parents whose children are elementary and secondary school students in Bartın Science and Art Centre. By foreseeing the fact that it is not possible to collect all parents together in the same day and time during the application step, online application was preferred. Study and Control Group participants created two different WhatsApp groups. For six weeks, the videos shared in YouTube were forwarded via WhatsApp. Digital stories were shared respectively based on developing digital parenting competence training program which was created beforehand.

Sharing Content Presentations with the Control Group: Content presentations were shared with the control group in line with developing digital parenting competence training plan. Content presentations continuing for six weeks were also shared in YouTube and forwarded to the participants via WhatsApp. In name of achieving interaction with the participants in WhatsApp group, question answer and discussion methods were utilized.

Post-Application

Application of the Final Test: During the week after the application, "Digital Parenting Attitude Scale" and "Media and Technology Usage and Attitudes Scale" were applied to the participants in the study and the control groups in online environment.

Semi-Structured Interviews: Following the final test, semi-structured interview form was applied to the experimental group participants. By directing 7 questions to the participants, data were collected in the name of examining the contribution of digital storytelling activities to digital parenting attitude development.

3.5. Data Collection and Analysis

Executing online interviews with the participants, information about the study was given. Data collection instruments were applied to the participants in online environments. In this study, quantitative and qualitative research methods were used together.

In the quantitative part of the study, data were collected through the application of "Digital Parenting Attitude Scale" and "Media and Technology Usage and Attitudes Scale" to the participants. The quantitative data gained from the study and the control groups were primarily analyzed. For the analysis of the quantitative data, SPPS 22 (Statistical Package for Social Sciences) program was utilized.

The qualitative data in the study were gained from semi-structured interview form which the participants replied in the final test of the experimental group. For the evaluation of the qualitative data, content analysis method was utilized. Coding of the qualitative data was done together with a second coder.

4. Findings

In this part, the results gained in the research were listed respectively and these results were tried to be examined by comparing with similar studies.

4.1. Findings on the First Sub-Question

To find the reply for this sub-question, arithmetic mean and standard deviation were utilized. Related findings were presented in Table 2.

Table 2.

Parents' digital parenting attitude and media and technology usage and attitude pretest and posttest scores.

Scale	Group	N	Pretest		Posttest		Difference
			$\bar{x}$	Sd	$\bar{x}$	Sd	(Posttest-Pretest)
Digital Parenting Attitude Scale	Experiment	19	49.4737	6.23047	49.6316	4.37430	0.1579
	Control	21	47.4286	3.89322	46.5238	5.15382	-0.9048
Media and Technology Usage and Attitudes Scale	Experiment	19	262.9474	51.08541	265.9474	56.53364	3.0000
	Control	21	272.0000	58.16356	280.4762	69.54468	8.4762

When the Table 2 was examined and when the scores collected from the study and the control groups for digital parenting attitude scale were reviewed, it was observed that there was increase in the attitude scores of the experimental group after calculation (gap= 0,1579); there was decrease, moreover, in attitude scores of the control

group (gap= -0,9048). When the scores of the study and the control groups for media and technology usage and attitude scale were examined, it was observed that there was increase in usage and attitude scores of the study and the control groups after calculation (gap= 3,0000; 8,4762).

4.2. Findings on the Second Sub-Question

In order to find the reply of this sub-question, ANCOVA was utilized. Related findings were presented in Table 3.

Table 3.

ANCOVA results regarding the difference between the experiment group and the control group's digital parenting attitudes.

Group	$\bar{\chi}$	Adj. Mean	Source	Sum of Squares	df	Mean Squares	F	p	Partial Eta Squared
Experiment	49,631	49,390	Pretest	119,111	1	100,048	5,668	,023	,136
			Method	25,879	1	25,879	1,231	,274	-
			Error	756,544	36	21,015			
Control	46,523	47,034	Total	93132,000	40				

As it was observed in Table 3, statistically there was not a meaningful difference between final test scores of digital parenting attitudes which were edited based on the pretest scores of the groups ($F(1\text{-}36)= 1.231$, $p>0.05$). Within this context, it can be said that digital parenting attitude scores of the parents participating to the study did not change at meaningful level based on the experimental calculation.

4.3. Findings On the Third Sub-Question

To find the reply of this sub-question, ANCOVA was utilized. Related findings were presented in Table 4.

Table 4.

ANCOVA Results Regarding the Difference Between the Experiment Group and the Control Group's Media and Technology Usage and Attitudes.

Group	$\bar{X}$	Adj. Mean	Source	Sum of Squares	df	Mean Squares	F	p	Partial Eta Squared
Experiment	265.9474	269.209	Pretest	57104.693	1	57104.693	21.826	.000	.377
			Method	28.588	1	28.588	.011	.917	-
Control	280.4762	277.256	Error	94188.854	36	2616.357			
			Total	3150095.000	40				

As it was observed in Table 4, statistically there was not a meaningful difference between groups' media and technology usage attitudes final test scores which were edited based on pretest scores (F(1-36)= 0,11, p>0.05). Within this context, it can be said that media and technology usage and attitudes scores of the parents participating to the study did not change at meaningful level based on the experimental calculation.

4.4. Findings on the Fourth Sub-Question

In order to find the reply of this sub-question, ANOVA and T-test were utilized. T-test was utilized in order to determine whether digital parenting attitude and media and technology usage attitudes of the parents differentiate meaningfully based on gender. Related findings were presented in Table 5.

Table 5.

T-test Results of Parents' Digital Parenting Attitude and Media/Technology Usage and Attitude Scores By Gender.

Scale	Gender	N	$\bar{X}$	SD	t	df	p
Digital Parenting Attitude	Female	31	48.2581	5.10534	0.626	38	0.541
	Male	9	47.1111	4.75511			
Media and Technology Usage and Attitudes	Female	31	264.4194	65.26090	-2.104	38	0.049
	Male	9	305.1111	46.15854			

According to Table 5, it was observed that parenting attitude scores of women parents ($\bar{X}$=48,26; SS=5.11) were higher compared to men parents ($\bar{X}$=47,11; SS=4.76). Media and technology usage and attitude scores of men parents ($\bar{X}$=305.11; SS=46.16), moreover, were higher compared to women parents ($\bar{X}$=264,42; SS=65.27). When T-test results were reviewed, while there was not a meaningful differentiation between digital parenting attitude scores of the parents based on gender (t=0,626; p >0,05); statistically there was a meaningful difference between media and technology usage and attitude scores (t= -2,104; p <0.05).

T-test was utilized to determine whether digital parenting attitude and media and technology usage and parents' attitudes differ meaningfully based on the gender of their child. Related findings are presented in Table 6.

Table 6.

T-test Results of Parents' Digital Parenting Attitude and Media/Technology Usage and Attitude Scores by Their Children by Gender.

Scale	Gender of their child	N	$\bar{X}$	SD	t	df	p
Digital Parenting Attitude	Female	18	48.0000	5.30261	0.00	38	1.00
	Male	22	48.0000	4.85014			
Media and Technology Usage and Attitudes	Female	18	262.4444	74.82625	-0.971	38	0.340
	Male	22	282.6818	52.15671			

According to Table 6, it was observed that digital parenting scores of the parents having girl and boywere equal ($\bar{X}$=48,00). Media and technology usage and attitudes score ($\bar{X}$=282,69; SS=52,16) of the parents who have boywere higher compared to the score ($\bar{X}$=262,44; SS=74,83) of the parents having girl. When T-test results were observed, there was not a meaningful difference between digital parenting attitude scores of the parents based on children's gender (t=0,00; p >0,05). Similarly, there was not a meaningful difference based on media and technology usage and attitudes score as well (t= -0,971; p >0.05).

ANOVA test was utilized to determine whether digital parenting attitudes and media and technology usage and attitudes of parents differentiate meaningfully based on daily frequency of technology usage. Related findings were presented in Table 7.

Table 7.

Descriptive Statistics Based on Daily Technology Usage Frequency and ANOVA Test Results According to The Daily Frequency of Technology Use.

Scale		N	$\bar{X}$	SD		Sum of Squares	sd	Mean Squares	F	p
Digital Parenting Attitude	1-3 hours	18	48.9444	5.94556	Within groups	29.608	2	14.804	.581	.564
	4-6 hours	15	47.1333	4.13809	Between groups	942.392	37	25.470		
	7-9 hours	7	47.4286	4.11733	Total	972.000	39			
	Total	40	48.0000	4.99230						
Media and Technology Usage and Attitudes	1-3 hours	18	265.1667	65.93334	Within groups	3114.513	2	1557.257	.376	.689
	4-6 hours	15	276.3333	69.49272	Between groups	153249.262	37	4141.872		
	7-9 hours	7	289.2857	44.22938	Total	156363.775	39			
	Total	40	273.5750	63.31925						

According to Table 7, digital parenting attitude score of the parents who daily use technology for 1-3 hours were higher ($\bar{X}$=48.94; SS=5.95) compared to scores of other groups. Digital parenting attitude score of the parents who daily use technology for 4-6 hours, moreover, was lower ($\bar{X}$=47.13; SS=4.14) compared to other groups. Media and technology attitude scores of the parents who daily use technology for 7-9 hours were higher ($\bar{X}$=289.29; SS=44.23) compared to other groups. Media and technology attitude score of the parents who use technology daily for 1-3 hours was lower ($\bar{X}$=266.17; SS=65.93) compared to other groups. It was observed that digital parenting attitude scores of the parents do not differentiate meaningfully based on their daily frequency of technology usage (F(2-37)=0,581; p>0.05). Media and technology usage attitude scores of the parents also do not differentiate (F(2-37)=0,376; p>0.05) meaningfully based on their daily frequency of internet usage. T test was utilized to determine whether digital parenting attitude and media and technology usage attitudes of parents differentiate meaningfully based on age. Related findings were presented in Table 8.

Table 8.

Descriptive Statistics by Age Levels and T-Test Results According to Age Levels.

Scale	Age	N	$\bar{x}$	sd	t	df	p
Digital Parenting Attitude	20-35	12	48.65	4.90516	0.556	38	0.584
	36-50	28	47.72	5.09071			
	Total	40	48.00	4.99230			
Media and Technology Usage and Attitudes	20-35	12	257.42	61.06994	-1.079	38	0.292
	36-50	28	280.50	64.07837			
	Total	40	273.58	63.31925			

According to Table 8, digital parenting attitude score of the parents aged between 20-35 were higher ($\bar{X}$=48.65; SS=4,9) compared to the parents from other age groups. Media and technology usage and attitudes score of the parents aged between 36-50 were higher ($\bar{X}$=280,50; SS=64,08) than the score of the parents from other age groups. It was observed that digital parenting attitude score of the parents do not differentiate meaningfully (t=0.556; p>0.05) based on age. Media and technology usage and attitude scores also do not display meaningful difference (t=-1.079; p>0.05) based on parents' gender.

4.5. Findings On the Fifth Sub-Question

The data gained through the semi-structured interview form to find reply to this question were analyzed via content analysis method. During the data analysis, 25 codes and 5 themes were created.

Contributions of Digital Story Activities: Participants' Opinions were consulted through directing the questions "Did Digital Story Activities About Digital Parenting Make Contribution to You? What were The Contributions of Digital Story Activities About Digital Parenting to You?". In this theme, contributions of digital story activities to the participants were presented in Table 9.

Table 9.

Contributions of Digital Story Activities.

Theme	Codes	f
Contributions of Digital Story Activities	Embody and memorize information	3
	Gaining digital literacy	5
	Realizing the risks in digital environment	3
	Reminding of old information	3
	Realizing that you have wrong information	1
	Getting new information	5

When the opinions of the participants in Table 9 were examined, it was expressed that digital story activities about digital parenting contributed the biggest to enabling adoption of digital literacy (f=5) and new knowledge (f=5). Moreover, it was observed that following this, it contributes to concretizing and enabling the information memorable (f=3), remembering the previous knowledge (f=3) and noticing the risks in digital environment (f=3) respectively. Additionally, it was detected that only one person noticed (f=1) that he/she has wrong information about digital story activities. Some participant opinions are as follows:

(OP4) "It contributed to my motherhood and academic life. I believe that it contributed me to use technology more effectively, more beneficially and in a questioning way. Thank you..."

(OP17) "Noticing that there are some mistakes I did, acquiring information about the issues I did not have idea about and adopting several information about which I can warn my child ."

Effects of Digital Story Activities to Digital Parenting Awareness: In this theme, effects of digital story activities on digital parenting awareness were presented in Table 10.

Table 10.

The Effects of Digital Story on Digital Parenting Awareness

Theme	Codes	f
The Effects of Digital Story on Digital Parenting Awareness	Realizing the online risks children may face	5
	Keeping track of children's technology use	3
	Realize and adopt the role of digital parenting	6
	Learning digital parenting responsibilities	6

When the participant opinions in Table 10 were examined, it was expressed that digital story activities about digital parenting affected digital parenting awareness mostly in terms of noticing and adopting digital parenting role (f=6) and learning digital parenting responsibilities (f=6). It was observed that it affected noticing online risks children may encounter (f=5) and monitoring children's technology usage (f=3) respectfully. Some participant opinions are as follows:

(D18) "As a mother, I realized the significance of my responsibility more clearly."

(D5) "It affected my awareness, I was paying attention already, I gained more information thanks to this activity."

The Most Favored Three Features of Digital Story Activities: In this theme, the most favored three features of digital story activities were presented in Table 11.

Table 11.

The Three Favorite Features of the Digital Story.

Theme	Codes	f
The three favorite features of the digital story	Understandable and easy access	2
	Embody information	3
	Voicing the digital story	4
	Entertaining while training	3
	Visual line characters	6
	Dialogues in the story	5
	Provide brief and concise information	7

When the participant opinions in Table 11 were examined and the most favored features of the applied digital story activities were reviewed, it was expressed that the most liked ones were giving brief and basic information (f=7) and the visual cartoon characters used in digital story (f=6). Following them, other most favored features were dialogues (f=5) and dubbing of digital story (f=4) respectfully. Additionally, it was observed that the participants also liked concretization of the information (f=3) and clear and simple access (f=2) features of digital story activities. Some participant opinions are as follows:

(OP1)"Storifying real life events, authenticity of stories' graphics and dubbing, stories' being not boring."

(OP4)"Up-to-date videos concretized the subject, simplified learning and it addresses to all strata; its being beneficial."

The Most Unfavorable Three Features of Digital Story Activities: In this theme, the most unfavorable features of digital story activities were presented in Table 12.

Table 12.

The Three Most Disliked Features of the Digital Story.

Theme	Codes	f
The three most disliked features of the digital story	Long dialogues	1
	Smallness of the images	2
	The simplicity of the story	1
	Pause in voiceover	3
	Being time consuming	1

When the participant opinions in Table 12 were examined and the most unfavorable features of the conducted digital story activities were reviewed, it was observed that pauses in dubbing (f=3) and smallness of the used images (f=2) come the first. Then the participants expressed that they did not like digital story activities' being

time-consuming (f=1), banality of the story (f=1) and lengthiness of the dialogues (f=1) respectfully. Some participant opinions are as follows:

(OP12) "Pauses and stuck in dubbing, smallness of the images."

(OP4) "Time-consuming to watch and banality of the story."

Improvement Suggestions for Digital Story: In this theme, improvement suggestions for digital story were presented in Table 13.

Table 13.

Suggestions for Improving the Digital Story.

Theme	Codes	f
Suggestions for Improving the Digital Story	Improving images in size	2
	Long dialogues are not included in writing	1
	Improving voice over	4

When the participant opinions in Table 13 were examined and their solution suggestions for improving unfavorable features were reviewed, it was observed that the dubbing (f=4) improvement comes first. Then it was detected that the participants suggest improvement of the images in size (f=2) and unavailability of written presentation of the long dialogues (f=1) respectfully. Some participant opinions are as follows:

(OP12) "Dubbing can be more professional, images can be bigger and following the speech bubbles can be enabled, story can be made more attractive through help of sound effects."

(OP16) "Dubbing and images can be improved."

5. Discussion and Conclusion

In this study, by examining the effect of digital story activities about digital parenting on digital parenting attitudes of the parents, setting forth digital parenting awareness were aimed. In the same time, setting forth technology usage and attitudes of the parents was also aimed. Within context of these targets, analyses were conducted, and the findings were discussed based on sub-questions.

In this study, the digital parenting attitude of the parents increased after the proceedings performed via digital story activities. In the control group, however, there was decrease in attitude scores. In the study they conducted with elementary school teachers and prospect teachers, Göçen-Kabaran et al. (2019) concluded that their attitude scores about giving computer-assisted education did not display a meaningful difference before and after digital

story workshop. However, it was indicated that attitude scores of the participants about giving computer-assisted education displayed increase after the application. Also, in both of the conducted studies, a meaningful differentiation between the attitude scores was not observed. It was remarked that people's attitude resisting to the change is the collection of emotion, opinions, and behaviors. People's attitudes change in a specific time period in line with new information and experiences. Accordingly, change of attitudes may happen as long as the application process lasts for an extended period.

Media and technology usage and attitudes of the parents in study and control groups increased due to the proceedings conducted within frame of the research. In a study conducted by Livingstone et al. (2017), it was reported that technology usage and competence of parents also affects children's technology usage and competence. Within this context, it can be said that media and technology usage and attitudes of parents affect digital parenting attitudes. At the same time, it can be said that parents' digital literacy affects digital parenting attitudes.

It was observed that statistically there was not a meaningful difference between digital parenting scores of parents based on gender. Despite there was not meaningful difference, it was observed that women parents' digital parenting attitude scores were higher compared to men parents. Also in the study conducted by Yaman et al. (2019), differentiation in digital parenting self-efficacy level was not observed based on gender. However, in his doctorate thesis, Yaman (2018) reported that mothers have higher digital parenting self-efficacy perception level based on the parenting role compared to fathers. When the other studies in the literature were examined, it is indicated that housewives have higher digital parenting behavior than working women and fathers (Baker, Sanders & Morawska, 2017; Doğan, 2013; Livingstone et al., 2018). At this point, it can be argued that women's parenting role as a mother, digital parenting attitude, awareness and behaviors are higher.

Statistically a meaningful differentiation was observed in media and technology usage and attitude scores of parents based on gender. Media and technology usage and attitude scores of male parents are higher than women parents. In their study in which they reported EUKO (EU Kids Online II, 2010) findings, Kaşıkçı et al. (2014) also informed that there is a big difference between internet use of men parents and women parents in Turkey. It was reported that while 49% of male parents and only 23,5% of female parents in Turkey use internet, 87% of male parents and 82% of female parents in Europe use internet.

In this study, a meaningful differentiation was not observed in digital parenting scores of parents based on child's gender. It was observed that digital parenting scores of parents having girl and boy children are equal. Also in

the study conducted by Durak (2019), a differentiation was not observed in the parenting mediation for children's internet usage scores of parents based on children's gender. Different from this study, it was observed that parenting mediation scores of the parents having girl children were lower compared to the parents having boy children.

Statistically a meaningful difference was also not observed in media and technology usage and attitude scores of parents based on children's gender. It was found that media and technology usage and attitude scores of the parents having boy children are higher than parents having girl children.

In this study, it was observed that digital parenting attitude scores of parents do not differentiate meaningfully based on daily frequency of technology usage. Digital parenting attitude scores of the parents using technology for 1-3 hours daily resulted higher than the parents using technology more often daily. Also in the study conducted by Baker, Sanders and Morawska (2017), it was indicated that lengthiness or shortness of daily internet usage time does not create a different risk between the families. Also in the study conducted by Durak (2019), it was stated that parenting mediation for children's internet usage scores of parents did not differentiate based on daily frequency of technology usage. On the other hand, it was emphasized that the scores of the parents using technology for 1-3 hours daily are lower than the scores of other parents.

Media and technology usage and attitudes scores of parents also do not differentiate based on parents' daily frequency of technology usage. Media and technology usage and attitudes scores of the parents using technology for 7-9 hours daily are higher compared to other groups. According to the data of Household Information Technologies (IT) Usage Research by TÜİK (Turkish Statistical Institute) (2019), 98,3% of the individuals aged between 16-74 years regard themselves as continues internet users, moreover, 90,8% stated that they use internet almost every day.

In this study, it was observed that digital parenting scores of parents do not differentiate meaningfully based on gender. However, despite there is not meaningful difference, digital parenting attitude scores of the parents aged between 20-35 years are higher compared to the parents aged between 36-50 years. In the study conducted by Durak (2019), it was revealed that parenting mediation scores differentiate meaningfully based on age group of the parents. It was emphasized that the mediation score of the parents in 31 and 40 age groups are high; the mediation score of the parents in 20 and 30 age groups are low. In a study conducted by Eşgi (2013), it was informed that digitally migrant parents regard internet usage of their digitally native children as problematic. At this point, it can be said that digitally migrant parents' excessive generation gap affects parenting attitudes. In his

doctorate thesis, Yaman (2018) indicated that digital parenting self-efficacy perception level decreases as parents age. He underlined that this differentiation is small. In another study conducted by Valcke et al. (2010), it was informed that age of parents affects internet parenting styles.

It was observed that statistically, there is no meaningful difference in media and technology usage and attitude scores of parents based on age. Even there is not a meaningful difference, it was revealed that media and technology usage and attitude scores of the parents aged between 36-50 are higher compared to parents aged between 20-35. Moreover, in the study conducted by Baker, Sanders and Morawska (2017), it was stated that parents' internet usage is related to parents' age. Thus, also in this study and in other studies in the literature, it is observed that difference in media and technology usage decrease based on gender.

In qualitative part of the research, when the contributions of digital story activities about digital parenting applied to the experimental group were examined; the opinion came forth that it contributed most in terms of enabling adoption of digital literacy and gaining new information. However, it was observed that it contributed to digital awareness of parents mostly in terms of noticing digital parenting role and adopting it, learning responsibilities of digital parenting, protecting children from online risks and monitoring children in online environments. When the findings gained through the qualitative study conducted by Atman-Uslu and Yildiz-Durak (2022) were reviewed, the result was reached that digital parenting awareness dimensions of parents were five as productive use of technology, protecting from online risks, being role model, being open to digital ignorance and innovations. The findings in both studies are consistent for each other. Within this context; as digital parenting quality of parents increase, it can be said that they monitor children's behaviors in online environments, they are aware of the risks children encounter and they incline children to use internet safely.

When the most favored three features of digital story activities which emerged as a result of qualitative interviews with parents were reviewed, the result was reached that the most favored features in digital story are giving brief and basic information, used visual cartoon characters and dialogues and the story. According to Digital Storyboarding Centre founders of which are Joe Lambert and Dana Atchley, seven basic components of digital storyboarding are summarized as opinion, a dramatic question, an emotional content, dubbing skill, power of story music, simple content and proceeding speed. Also in this study, it can be said that the features parents liked most are emphasized as brief and basic information and simple content components; dialogues in the story and emotional content component.

When the most unfavorable three features of digital story activities conducted with the parents in the experimental group were reviewed, the result was reached that these are the pause in dubbing, smallness of the used images and digital story activities' being time-consuming. In the study conducted by Rossiter and Garcia (2010) which handles usages of digital story, the result was reached that women participants were indicated to pay attention to digital voice and to the diction (correct usage of the words) at most in digital stories; the majority of the participants creating digital story added their own voices to their stories, they regard this as a learning instrument. In line with this, importance of the sound element in digital story activities has emerged once again.

Among the solution suggestions by parents to improve unfavorable features of digital story activities, the most suggested ones were determined as improvement of dubbing, improvement of images in size and written presentation of long dialogues. Also, in the qualitative study conducted by Uslupehlivan et al. (2017), prospect teachers reported their improvement suggestions for digital stories as preparation of visual and auditory elements more elegantly and the written parts in the story to be brief and short. The qualitative data in these two studies are consistent with each other. For a digital story to be successful, the content needs to be brief and short, and images and auditory elements need to be in harmony with the script.

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Ethical Declaration

All procedures performed in studies involving human participants were in accordance with ethical standards. The study was approved by the Bartın University Social Sciences and Humanities Research Ethics Committee (Protocol number: 2020-SBB-098).

Conflict Interest and Author Contributions

- First author have made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data.

-The second author have been involved in drafting the manuscript or revising it critically for important intellectual content. The author has given final approval of the version to be published.

6. References

Alexander, B. (2017). *The new digital storytelling: Creating narratives with new media–revised and updated edition*. Santa Barbara, CA: ABC-CLIO.

Arslantürk, Z. (2008). *Araştırma metot ve teknikleri*. Çamlıca Publication.

Ateş, M., & Durmuşoğlu-Saltalı, N. (2019). KKTC'de yaşayan 5-6 yaş çocukların tablet ve cep telefonu kullanımına ilişkin ebeveyn görüşlerinin incelenmesi. *Gazi Eğitim Bilimleri Dergisi, 5*(1), 62-90. https://doi.org/10.30855/gjes.2019.05.01.004

Atman-Uslu, N. A., & Yildiz-Durak, H. (2022). Parental awareness and supervision to prevent cyberbullying: Scale adaptation and a review in terms of demographic variables. *Children and Youth Services Review, 133*, 106329. https://doi.org/10.1016/j.childyouth.2021.106329

Baker, S., Sanders, M. R., & Morawska, A. (2017). Who uses online parenting support? A cross-sectional survey exploring Australian parents' İnternet use for parenting. *Journal of Child and Family Studies, 26*(3), 916-927. https://doi.org/10.1007/s10826-016-0608-1

Bull, G., & Kajder, S. (2005). Digital storytelling in the language arts classroom. *Learning& Leading with Technology, 32*(4), 46-49.

Canbek, G., & Sağıroğlu, Ş. (2007). Çocukların ve gençlerin bilgisayar ve internet güvenliği. *Politeknik Dergisi, 10*(1), 33-39.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.

Çakır, H. (2013). Taking the opinions of parents and specifying the effects on students about computer games. *Mersin University Journal of the Faculty of Education, 9*(2), 138-150.

Çalışkan, Ö., & Özbay, F. (2015). Estrangement based on the exercise of technology and parents' attitude among the primary education students between the ages of 12-14: A case study of Düzce. *Journal of International Social Research, 8*(39). 441-458.

Çevik, G. B., & Çelikkaleli, Ö. (2010). Adolescent' friends attachment and internet addiction accordign to gender, perception parents attitudes and parents educational levels. *Journal of the Cukurova University Institute of Social Sciences, 19*(3), 225-240.

Dogan, B., & Robin, B. R. (2008). Implementation of digital storytelling in the classroom by teachers trained in a digital storytelling workshop. In K. McFerrin, R. Weber, R. Carlsen, & D. Willis (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 902–907). Chesapeake, VA: AACE.

Duman, B., & Göçen, G. (2015) The effect of the digital storytelling method on pre-service techers' creative writing skills. *Anthropologist, 20*(1- 2). 215-222.

Durak, A. (2019). *Investigation of parental mediation according to some variables.* [Unpublished master's thesis]. Bartın University.

Durak, A., & Kaygın, H. (2018). Reflections from technology usage: parental views on values that are degenerated by the use of technology. *Bartın University Journal of Faculty of Education, 7*(3), 1035-1053. https://doi.org/10.14686/buefad.425146

Durak, A., & Kaygin, H. (2020). Parental mediation of young children's internet use: Adaptation of parental mediation scale and review of parental mediation based on the demographic variables and digital data security awareness. *Education and Information Technologies, 25*(3), 2275-2296. https://doi.org/10.1007/s10639-019-10079-1

Eşgi, N. (2013). Comparison of digital native children's and their digital immigrant parents' perceptions related to internet addiction. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 28*(28-3), 181-194.

EU Kids Online (2010). *Questionnaires for children and parents*. http://www2.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20II%20(200911)/Survey/Master%20questionnaires.aspx

Figa, E. (2004). The virtualization of stories and storytelling. *Storytelling Magazine, 16*(2), 34-36.

Garrety, C. M. (2008). *Digital storytelling: an emerging tool for student and teacher learning*, [Unpublished Doctoral Dissertation], Iowa State University.

Göçen-Kabaran, G., Karalar, H., Aslan Altan, B., & Altıntaş, S. (2019). In-service and preservice classroom teachers in digital story workshop. *Cumhuriyet International Journal of Education, 8* (1), 235-257. https://doi.org/10.30703/cije.469461

Gökçearslan, Ş., Yildiz Durak, H., Berikan, B., & Saritepeci, M. (2021). Smartphone addiction, loneliness, narcissistic personality, and family belonging among university students: A path analysis. *Social Science Quarterly, 102*(4), 1743-1760.

Güngör, M. (2014). Pre school children's watching television habits and parental attitudes. Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,11(28), 199-216.

Huang, G., Li, X., Chen, W., & Straubhaar, J. D. (2018). Fall-behind parents? The ınfluential factors on digital parenting self-efficacy in disadvantaged communities. *American Behavioral Scientist, 62*(9), 1186-1206. https://doi.org/10.1177/00027642187738

İnan-Kaya, G., Bayraktar, D. M., & Yılmaz, Ö. (2018). Digital parenting attitude scale: validity and reliability study. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi, 46*, 149-173. https://doi.org/10.21764/maeuefd.390626

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

Kajder, S. (2004). Enter here: Personal narrative and digital storytelling. *The English Journal, 93*, 64-68.

Karoğlu, A., K. (2015). The changing nature of storytelling by means of technology in the instructional process: digital storytelling. *Eğitim Teknolojisi Kuram ve Uygulama, 5*(2), 89-106. https://doi.org/10.17943/etku.29277

Keleş, D. (2019). *Öğretmen adaylarının tekno-stres incelenmesi: Dijital hikâye örneği*. [Unpublished master's thesis]. Kastamonu University.

Kulla-Abbott, T. M. (2006). *Developing literacy practices through digital storytelling.* [Unpublished Doctoral Dissertation]. University of Missouri.

Lambert, J., & Hessler, B. (2018). *Digital storytelling: Capturing lives, creating community*. Routledge.

Lee, L. (2014). Digital news stories: Building language learners content knowledge and speaking skills. *Foreign Language Annals, 47*(2), 338-356.

Livingstone, S., & Haddon, L. (2009). EU kids online. *Journal of Psychology, 217*(4), 236–239.

Livingstone, S., Blum-Ross, A., Pavlick, J., & Ólafsson, K. (2018). In the digital home, how do parents support their children and who supports them? Parenting for a digital future: survey report 1. http://blogs.lse.ac.uk/parenting4digitalfuture/2018/02/06/inthe-digital-home.

Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online: The role of digital skills in emerging strategies of parental mediation. *Journal of Communication, 67*(1), 82-105. https://doi.org/10.1111/jcom.12277

Maddin, E. (2011). Using TPCK With digital storytelling to investigate contemporary issues in educational technology. *Journal of Instructional Pedagogies*, 1-11.

More, C. (2008). Digital stories targeting social skills for children with disabilities multidimensional learning. *Intervention in School and Clinic, 43*(3), 168-177.

Özgür, H. (2016). Adapting the media and technology usage and attitudes scale to Turkish. *Educational sciences: Theory & Practice, 16*, 1711–1735.

Özpinar, İ. (2017). Matematik öğretmeni adaylarının dijital öyküleme süreci ve dijital öykülerin öğretim ortamlarında kullanımına yönelik görüşleri. *Bartın University Journal of Faculty of Education, 6*(3), 1189-1210.

Pamuk, S., Ülken, A., & Dilek, N. (2012). The investigation of preservice teachers' technology integration competencies from technological pedagogical content knowledge framework. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 9*(17), 415-438.

Pekyürek, M. F., Yildiz-Durak, H., Saritepeci, M., Aydoğdu, Y. Ö., & Akdoğdu Yildiz, E. (2023). Examining the usability of e-content in different forms for increasing digital parenting competencies. *Journal of Learning and Teaching in Digital Age, 8*(1), 82-92.

Robin, B. (2006). The educational uses of digital storytelling. In *Society for Information Technology & Teacher Education International Conference* (pp. 709–716). Association for the Advancement of Computing in Education (AACE). Orlando, Florida, USA.

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

Robin, B. R., & McNeil, S. G. (2012). What educators should know about teaching digital storytelling. *Digital Education Review*, (22), 37-51.

Rossiter, M., & Garcia, P. A. (2010). Digital storytelling: A new player on the narrative field. *New Directions for Adult and Continuing Education, 126*, 37-48.

Sarıtepeci, M. (2016). *Dijital hikâye anlatım yönteminin sosyal bilgiler dersinde etkililiğinin incelenmesi*. [Unpublished doctoral dissertation]. Gazi University.

Türkiye *İstatistik Kurumu (2019). Hanehalkı Bilişim Teknolojileri (BT) Kullanım Araştırması, 2019*. http://www.tuik.gov.tr/PreTablo.do?alt_id=1028.

Uslupehlivan, E., Kurtoğlu Erden, M., & Cebesoy, Ü. (2017). Öğretmen adaylarının dijital öykü oluşturma deneyimleri. *Uşak Üniversitesi Sosyal Bilimler Dergisi (UUSBD)*, 10, 1-22.

Vezne, R., Atman Uslu, N., & Yildiz Durak, H. (2022). Modeling of variables related to parents' awareness in Cyberbullying Prevention. *Current Psychology*, 1-18. https://doi.org/10.1007/s12144-022-03837-x

Xu, Y., Park, H., & Baek, Y. (2011). A new approach toward digital storytelling: An activity focused on writing self-efficacy in a virtual learning environment. *Educational Technology & Society, 14*(4), 181-191.

Yaman, F. (2018). *Türkiye'deki ebeveynlerin dijital ebeveynlik öz yeterliliklerinin incelenmesi* [Unpublished doctoral dissertation]. Anadolu University.

Yaman, F., Dönmez, O., Akbulut, Y., Kabakçı Yurdakul, I., Çoklar, A., & Guyer, T. (2019). Exploration of parents' digital parenting efficacy through several demographic variables. *Eğitim ve Bilim, 44*(2019) 149-172. http://dx.doi.org/10.15390/EB.2019.7897

Yılmaz, Ö., Mutlu Bayraktar, D., & İnan Kaya, G., (2017). Ebeveynlerin dijital medyadaki risklere yönelik bilgi düzeyleri ve dijital ebeveyn eğitimi. In *International Educational Technology Symposium – IETS-2017* (pp.129-130). Sivas.

Yılmaz, Y., Üstündağ, M. T., & Güneş, E. (2017). Investigation of digital story development stages and tools as teaching materials. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi,17* (3), 1621-1640. https://doi.org/10.17240/aibuefd.2017.17.31178-338851

Yılmaz, Y., Üstündağ, M. T., Güneş, E., & Çalışkan, G. (2017). Utilizing digital storytelling method for effective Turkish language teaching. *Eğitim Teknolojisi Kuram ve Uygulama, 7*(2), 254-275. https://doi.org/10.17943/etku.322366

Yildiz Durak, H. (2018). Digital story design activities used for teaching programming effect on learning of programming concepts, programming self-efficacy, and participation and analysis of student experiences. *Journal of Computer Assisted Learning, 34*(6), 740-752. https://doi.org/10.1111/jcal.12281.

Yildiz Durak, H., & Avcı, Ü. (2022). Modeling the factors related to sensibility in cyberbullying of university students. *Current Psychology*, 1-12.

Yildiz Durak, H., & Saritepeci, M. (2020). Examination of the relationship between cyberbullying and cyber victimization. *Journal of Child and Family Studies*, 29, 2905-2915.

Yurdakul, I. K., Dönmez, O., Yaman, F., & Odabaşı, H.F., (2013), Dijital ebeveynlik ve değişen roller, *Gaziantep Üniversitesi Sosyal Bilimler Dergisi*, 12.