

USING DIGITAL STORYTELLING IN EARLY CHILDHOOD EDUCATION:
A PHENOMENOLOGICAL STUDY OF TEACHERS' EXPERIENCES

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PHENOMENOLOGICAL STUDY OF TEACHERS' EXPERIENCES**

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ABSTRACT

USING DIGITAL STORYTELLING IN EARLY CHILDHOOD EDUCATION: A PHENOMENOLOGICAL STUDY OF TEACHERS' EXPERIENCES

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It has become a great concern about how children may be affected and how teachers should use computers in their classroom activities effectively with the increased role of computers in early childhood's learning. It is important to consider how it can be used more effectively integrated into early childhood curriculum since technological devices are widely used to maximize learning activity. This study aimed to show how digital storytelling can be used as an effective teaching and learning tool in kindergarten classrooms. In the phenomenological framework, the study investigates the experiences of early childhood teachers who attended the digital storytelling workshop. In addition, the study investigated how the early childhood teachers incorporated digital storytelling in their classroom and what the challenges and successes the early childhood teachers faced during the implementation of digital storytelling. After the teachers attended the digital storytelling workshop, in-depth phenomenological interviews, observations, and focus group interview methods were conducted to collect data. Phenomenal data were collected from five kindergarten classrooms including approximately 20 students and a

teacher in each classroom. This study presents examples to illustrate how early childhood teachers integrate digital storytelling as an instructional tool into curriculum to enhance young children learning. The results show that there is an emphasis on certain essential points so as to assist early childhood teachers to exploit technological tools in their learning environments. The findings have implications on early childhood teachers, curriculum and for future research.

Keywords: Digital Storytelling, Early Childhood Education, Phenomenological Research

ÖZ

OKUL ÖNCESİ EĞİTİMİNDE DİJİTAL ÖYKÜ ANLATIMININ KULLANILMASI: BİR OLGU BİLİM ÇALIŞMASI

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Doktora, Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü

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Günümüzde okul öncesi çağdaki çocukların eğitiminde bilgisayarın önemli bir rol alması ile birlikte, okul öncesi eğitimde teknolojinin öğretmenler tarafından nasıl kullanılacağı, ve okul öncesi çağda çocukların teknolojiden ne şekilde fayda sağlayacağı önemli bir sorun haline gelmiştir. Öğrenme aktivitelerinin verimini arttırmak amacıyla teknoloji kullanımının yaygınlaşmasından dolayı okul öncesi eğitimde teknolojinin nasıl entegre edileceği konusu önem kazanmıştır. Bu çalışma dijital öykü hazırlama tekniğinin okul öncesi eğitim kurumlarında etkili bir öğrenme ve öğretme yöntemi olarak nasıl kullanıldığını göstermeyi amaçlamaktadır. Olgu bilim araştırma desenine uygun olarak, dijital öykü hazırlama seminerine katılan okul öncesi öğretmenlerinin deneyimleri araştırılmaktadır. Buna ek olarak, bu çalışmada okul öncesi öğretmenlerinin dijital öykü hazırlama tekniğinin sınıflarında nasıl kullandıkları ve uygulama esnasında karşılaştıkları güçlükleri ve başarıları araştırılmaktadır. Öğretmenler dijital öykü hazırlama seminerine katıldıktan sonra, araştırma verileri, ayrıntılı görüşme, gözlem ve odak grup görüşme metodları kullanılarak toplanmıştır.

Olgusal veri beş okul öncesi öğretmeninden görüşme yöntemiyle ve her bir öğretmenin ortalama 20 öğrencisi sınıf ortamında gözlemlenerek elde edilmiştir. Bu çalışma okul öncesi öğrencilerin öğrenmelerini geliştirmek amacıyla öğretmenlerin sınıflarında dijital öyküyü nasıl kullandıklarına yönelik örnekler sunmaktadır. Araştırma sonuçları öğretmenlerin öğrenme ortamlarındaki teknoloji kullanımına yönelik önemli temel noktalara vurgu yapmaktadır. Sonuçlar okul öncesi öğretmenleri, müfredatı ve ileriye dönük çalışmalar açısından uygulamalar önermektedir.

Keywords: Dijital Öykü, Okul Öncesi Eğitimi, Olgu Bilim Araştırma Deseni

“This dissertation is dedicated to my young nieces, Gülce and Azra”

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CHAPTER 1

INTRODUCTION

This chapter provides an overview of a phenomenological research study which examines early childhood teachers' digital storytelling experiences after attending a digital storytelling workshop. Firstly, I begin with the background section covering my autobiographic ground and experience about the study from which the research problem emerged. Then, I present some examples about the phenomena I am investigating, the educational uses of digital storytelling. Next, the research procedure, including the purpose and participants of the study, is presented. Finally, I discuss the research procedure and my research role, as well as a definition of key concepts.

1.1 Educational Uses of Digital Storytelling

Digital stories are new media age stories which are created by combining technological devices and personal tales. The digital storytelling movement started with Dana Atchley and Joe Lambert in San Francisco, California in the 1980's. There are wide varieties of definition to describe the digital storytelling. According to the Digital Storytelling Association (2002), "Digital storytelling is the modern expression of the ancient art of storytelling by using digital media to create media-rich stories to tell, to share, and to preserve." Daniel Meadows describes digital stories as "Short, personal multimedia tales told from the heart" (2003).

Traditional forms of storytelling incorporate a storyteller, a story and an audience. Digital storytelling shares many of the same components. The Digital Storytelling Association (2002) defined it as, "the modern expression of the ancient art of

storytelling...using digital media to create media-rich stories to tell, to share, and to preserve. Digital stories derive their power through weaving together images, music, narrative and voice, thereby giving deep dimension and vivid color to characters, situations and insights.” According to Daniels (2010) and Sessoms (2008) the process of composing a story in a digital format is like a traditional story where the process of learning is interweaved meaning-making opportunities. Digital storytelling allows people to tell a story to reflect and examine their thoughts in a cyclical process and eventually record their development.

Digital storytelling is a relatively new phenomena increasingly being used in a wide variety of areas including education, from kindergarten to higher education, community development, and health care. Digital storytelling in an educational setting involves a process of creating short stories that allows students and educators to enhance their information gathering skills, problem solving, and the ability to work on a collaborative team. Many educators use digital storytelling as a motivational tool to gain the attention of students and improve their interest in exploring new opinions (Robin, 2008). Robin categorizes digital stories in three types, including (1) personal stories telling about one's own experiences, memories, or events, (2) informative or instructive stories, that teach specific subjects to an audience, and (3) stories that examine historical events. Digital storytelling has become a very powerful communication tool, as new digital technologies have become less expensive and more widely available to larger numbers of people (McLellan, 2006).

One research study shows that digital story projects implemented by Egyptian teachers support students' understanding of specific content in an academic course. Accordingly, teachers are willing to use digital storytelling to provide more effective instruction (Sadik, 2008). Valkanova and Watts (2007) studied digital storytelling with eight year old children in an integrative science classroom environment and suggested that using digital storytelling affects the self-reflection and the construction of science knowledge in primary school children. Banaszewski used a digital storytelling approach to extend the writing experiences of fourth and fifth grade students' and he concluded "by using multimedia to develop and share those stories, we strengthen our understanding of our communities." (p. 2). Bull and Kajder

(2004) also used digital storytelling in the language arts classroom based on the concept of "everyone has a story to tell" and they aimed to "allow a writer to experience the power of personal expression" (p. 3).

Educational uses of digital storytelling allow students to use the gift of their own voice and the expression of their personal ideas to facilitate their understanding. Using their own unique voice gives students a sense of ownership since the story they tell includes their own feelings, told in a personal and meaningful way (Lambert, 2003). Storytelling can serve as an essential component of young children's education in order to capture and expand their imaginations.

1.2 Purpose of the Study and Research Questions

Creswell has stated that "the basic phenomenology is to reduce individual experiences with a phenomenon to a description of the universal essence" (Creswell, 2007, p. 58). This qualitative research describes the essence and meaning of early childhood teachers' experiences of using digital storytelling in the classroom from their perspectives. My aim is to reduce participants' experiences with educational uses of digital storytelling in their classroom to a description of the *essence* of the phenomenon. Thus, basically this study aims to explicate early childhood teachers' beliefs about using digital storytelling in their classroom.

The research question posed in this study is:

- How do early childhood teachers perceive and describe the phenomenon of educational uses of digital storytelling in early childhood education after they attend a two-day digital storytelling workshop?

The following sub-questions guided the study and were derived from the main question.

1. How do the early childhood teachers use digital storytelling as an instructional tool in their classroom after attending the digital storytelling workshop?

2. What are the purposes of early childhood teachers' for using digital storytelling in their classrooms?
3. What do early childhood teachers feel are the benefits of developing digital stories by preschoolers?
 - a. How do digital stories provide evidence of preschoolers' learning?
4. What are the barriers to teachers using digital storytelling as an instructional tool in kindergarten?

1.3 Digital Storytelling Workshop

In order to introduce the participants to the phenomenon of the study, a two-day digital storytelling workshop was organized at the Middle East Technical University, Faculty of Education. The major goals of the workshops were to introduce early childhood education teachers to digital storytelling and explore how they could use it as an effective learning tool in their classroom. During the two-day digital storytelling workshop, all participants created a digital story for the students in their classroom and gained the ability to create additional digital stories on their own (See Appendix A for brochure of digital storytelling workshop). The specific objectives of the workshop for the participants were

- Introduce digital storytelling concepts. For this objective, examples digital stories were shown to the participants.
- Examine the seven elements of a digital story. These are point of view, a dramatic question, emotional content, the gift of your voice, the power of the soundtrack, economy and pace (Center for Digital Storytelling, 2009).
- Talk about their ideas for stories and write their story scripts. For this objective, participants created a story circle to discuss their stories.
- Acquire hands-on experience using computer-based software (MS Movie Maker) to create their own digital stories.

- Brain storm potential digital story topics. For this objective, the teachers discussed their students' learning problems in the classroom.

1.4 The Procedure of the Study

This study was undertaken in the city of Ankara, Turkey. The potential participants were in-service teachers in public or private kindergarten classrooms in Ankara. Almost 200 teachers were recruited to participate in the study. Five teachers agreed to participate and complete the study. Of the five participating teachers, four were female and one male. The average age of the participants was 39 years old.

Participants had basic levels of computer skills. All participants had the ability to use e-mail and the Internet to communicate and locate information, as well as word processing. For example, three of them use e-mail once a week, the other two teachers use it once a day. While one of the participants had no computer in her classroom, the others did. Three participants rarely used a computer in their classroom for activities to engage student through the use of technology.

The teachers knew little to nothing about digital storytelling before the workshop. Therefore, in this phenomenological study, the participants were not familiar with the phenomena. They were introduced to the phenomena in the workshop. Teachers' requirements to participate in the study included creating three digital stories in order to gain a Digital Storytelling certificate (See Appendix B), after they completed the workshop.

Seidman's (2006) phenomenological interview model was used to collect data by four serial in-depth interviews. According to Seidman, a phenomenological interview includes three serial in-depth interviews with each participant. However, in this study, four serial interviews were conducted with each participant. The first interview was conducted with each participant after the workshop; it focused on their first experience of using digital storytelling in the workshop. Following the workshop each participant created three digital stories, one per week for three weeks, which were required to earn the digital storytelling certificate. The other three interviews were conducted after the each participant created their stories in each week in their classroom. Therefore, the data collection took four weeks after the

participants attended the workshop. In the third chapter, the data collection procedure is described in detail.

The other data collection method used in this study, was observation. During the presentation phase of the final digital story, I observed the classroom environments and used a voice recorder in order to capture the students' responses. The focus group interview method was used for another data collection technique. At the end of the workshop, participants talked together and discussed their feelings about the first digital storytelling experience. In addition, at the end of the research project, a certificate meeting was organized. The aims of the meeting were to distribute the 'Digital Storytelling Certificate' (see Appendix B for the certificate) and to thank the participants for their participation in the research project. During the ceremony, the participants watched all of the digital stories created for this study and they discussed the entire process and talked about their feelings and experiences. These discussions sessions were video recorded to acquire more detailed data to use for triangulation.

1.5 Significance of the Study

The integration of technology into society is now an important issue in educational settings as technology continues to evolve. Finding developmentally appropriate and meaningful instructional technology tools, especially in kindergarten classrooms, is often a big problem for many early childhood teachers (Trotter & Zehr, 1999). According to Judge, Puckett, and Cabuk (2004), teacher control is important in order to select a developmentally appropriate computer-based environment for young children. Teachers need training and time in choosing appropriate software for children and integrating technology into classroom. The International Society for Technology in Education stated that integrating technology into the curriculum brings many challenges for teachers (ISTE, 2000). For example, in a study conducted by Haugland (1992, 1999), using developmentally inappropriate software for young children may cause aggressive behavior and discourage creativity. For that reason, this study provides a guideline for early childhood educators on how technology can be integrated into children's learning activities by using digital storytelling as a means of providing an effective alternative teaching method for teachers.

Digital Storytelling is a relatively new approach that uses digital devices and storytelling methods. There is some research about how digital storytelling is incorporated as a learning and teaching tool in the classroom (Dogan, 2007). These studies are especially focused on K-12 (Banaszewski, 2005), higher education (Butler, 2007, Dogan, 2007) and adult learning (Brzoska, 2009). However, there are very few studies about using digital storytelling in early childhood educational settings. The present study provides basic ideas for future studies to investigate the incorporation of digital storytelling in kindergarten classrooms by attempting to present new teaching and learning strategies using digital devices.

Historically, there has always been both criticism and support of technology in early childhood educational settings. Some researchers claim that computers are too abstract and difficult to use or understand in regard to young children (Goodwin, Goodwin, Nansel, & Helm, 1986; Simon, 1985). However, other researchers argue that instead of abstract computer activities, young children should be involved in concrete learning that contains real activities in a naturalistic classroom environment (Lee & Houston, 1986, Fein, Campbell, & Schwartz, 1987, McCarrick, K., & Xiaoming, 2007). While the ongoing debates between the critics and supporters of using computers with young children, there are limitations in the existing literature about appropriate and useful implementation of computer use for young children. In this study implementing digital storytelling in early childhood settings is accepted as appropriate and useful for young children's development and learning.

1.6 My Motivation for the Study

I studied in a private children's theater playhouse as a volunteer during my undergraduate years. The founder of the theater Haluk Yuce is a *Meddah*, meddah, the name given to a Turkish traditional storyteller. Yuce has been doing this job for over 20 years. He creates performances for young children with his team. Three years ago, we met again in a kindergarten where his team was performing. At that time, I was investigating the use of technology in the kindergarten classroom. I watched the storytelling performance of Haluk Yuce and his team. After the performance, we talked about my research regarding kindergarteners and technology, and we discussed the storytelling performance for young children. This inspired a

research idea for my dissertation about incorporating two concepts which are young children's use of technology and storytelling, which may be an especially powerful way to teach young children.

I mentioned my idea to Yuce but he seemed reluctant about children's use of technology. Initially, I also felt similar to Yuce in that using technology with very young children may have negative effects on behavior and learning. One of the main questions about early childhood in my mind is 'Should young children use technology or not?' And 'how can they use technology appropriately for their development and learning?' Use of technology among young children is unavoidable, because they interact with technological devices almost everywhere and every day. I searched on the Internet for the keywords 'storytelling', 'using technology', and 'early childhood education'. On the first list of search results, I encountered the term "digital storytelling" which is about creating a story in a multimedia environment. It is a way of telling a story using technology including personal voice, personal pictures or videos, and music. I noticed that there was a huge social network about using digital storytelling where people share their stories in different cultures. And finally, I felt I had found an interesting topic for my dissertation; digital storytelling with early childhood education. I thought that digital storytelling may be a way to use technology appropriately with young children and aid in their development and learning.

I attended a digital storytelling workshop, organized by the Center for Digital Storytelling in Berkeley, California. I met Joe Lambert who is one of the founders of the digital storytelling movement. I attended a series of digital storytelling workshops and then I created my first digital stories with my 3-year-old niece, Gulce. I observed the positive effects of the story on Gulce and my other little niece, after they watched the digital story again and again. This story was my inspiration and the beginning of my research study.

1.7 Definitions

The following specific terms will be explained for the purpose of this study.

Digital Storytelling: It is the practice of using computer based tools to tell stories (Robin, 2008). It is also described as the digital storytelling as a multimedia tales created personally in short which are coming from heart (Meadows, 2005)

Phenomenon: The phenomenon is what appears in the consciousness. Any phenomenon represents a suitable starting point for an investigation (Moustakas, 2004). Moustakas made an analogy when describing the phenomenon as building blocks of human science and the basis for all knowledge. Perception of the reality of an object is dependent on a subject. Thus, a phenomenon is the perception of objects in a subject's consciousness. Phenomenon means to bring to light, to place in brightness, to show itself in itself, the totality of what lies before us in the light of day (Heidegger, 1977, p. 74, cited in Moustakas, 2004, p. 26)

Phenomenological Research: Phenomenological research is a research method which "...describes the meaning of several individuals of their lived experience of a concept or a phenomenon." Phenomenological researchers focus on "...describing what all participants have in common as they experience a phenomenon" (Creswell, 2007, p. 57-58). After collecting data from the individuals who have experienced the phenomenon, the researcher developed a "composite description" of the essence of the all individuals' experience. The composite description includes "what" the individual experienced and "how" they experience the experiences (Moustakas, 2004). Therefore, the fundamental purpose of the phenomenological research is to expose the meaning of the phenomenon from the individuals' experiences.

Phenomenological Analysis: Phenomenological analysis is one of the qualitative data analysis approaches which need a systemic examination of narrative data to generate categories of meaning. Phenomenological analysis is an approach to analyzing narrative data. The interview data for phenomenological research created via three serial in-depth phenomenological interviews (Seidman, 1998) which focus on the understanding of the phenomenon. The researchers should set aside their own meaning and interpretation while they are analyzing the data. The meaning of the

phenomenon comes from the narrative data not from the perspective of researchers (Hyncner, 1985; McGee-Brown 1995). Phenomenological analysis has three main steps which are epoche, phenomenological reduction, and imaginative variation (Moustakas, 2004).

Bracketing: The term of bracketing means “Suspending as much as possible the researcher’s meaning and interpretation and entering into the world of the unique individual who was interviewed.” (Hycner, 1985).

Epoche: The meaning of the term, Epoche is to stay away from or abstain. It is the first step of phenomenological analysis. According to Moustakas’ (1994) during the phenomenological reduction step, researchers firstly set aside all preconceived experience of the phenomena in order to understand the co-researchers’ experience of the study.

1.8 Overview of the Study

This study is a phenomenological investigation of teachers’ experiences of educational uses of digital storytelling in early childhood education. The following chapters will include a review of literature, description of research methodology and methods, presentation of results and discussion.

CHAPTER 2

A REVIEW OF LITERATURE

In this chapter, I reviewed the research relevant to this study in the areas of technology in early childhood education, the theoretical basis for using technology in early childhood education, young children and storytelling, and the educational uses of digital storytelling. This review points out the importance of the research questions pursued with this dissertation study. This literature also informed the design of this study and the interpretation of its findings.

2.1 Technology in Early Childhood Education

Over the last few decades, as technology has advanced, the usage of computers for educational purposes has increased dramatically. . Many research studies have investigated whether and how technology affects early childhood education. This research is essentially related to debates in the field of early childhood education and educational technology including the broad topic of whether it is valuable and beneficial for young children to use computers. The debate generally focuses on when young children should start using computers, how much time they should spend using them, and how early childhood teachers should decide sets of activities engaged with technology (National Association for the Education of Young Children [NAEYC], 1996). Many supporters believe that there are harmful effects of technology tools in terms of physical and cognitive development of young children (Alliance for Children, 2004). A number of studies found that there is no significant effect of using computer on children's knowledge of pre-reading concepts, discourse skills and cognitive development (Li, 2004). Clements and Samara (2002) discussed the question, *“Can we use technology to teach the same old stuff in the same way or can we capitalize on the benefits of technology by using integrated computer*

activities to increase achievement?” (pp. 340–343). The question shows the multi-faceted aspects of using technology effectively in early childhood education. Vernadakis, Avgerinos, Tsitskari, and Zachopoulou (2005) suggested that computer-aided instruction (CAI) can be effectively used in early childhood education if it is combined with traditional methods to facilitate an individualized learning environment.

Vernadakis, et al. (2005), has argued that computers are too symbolic for the developmental stage of young children and Li (2004) claimed that computers or digital media are too discrete for young children’s developmental level and have a negative effect on the physical, psychological and social development of young children. The research study by Tiene and Luft, 2001 about the effectiveness of collaborative learning in a technology-rich classroom, shows that there is no relationship between children’s basic computer proficiency and collaborative learning dynamics within the technology-rich classroom. Effectiveness of peer-to-peer instructions and collaborative learning on media within a computer-based environment are also discussed for early childhood development in education (Hyun, 2005). Weiss (2006) investigated the effects of multimedia environments on kindergarten children’s mathematical achievements and style of learning including cooperative learning and individual learning. The research results showed that cooperative learning and individual learning students significantly did better in mathematics. In an experimental study, Chera and Wood (2003) studied the effects of a compute-aided instruction program using animated multimedia talking books on the phonological awareness of children beginning to read. They found a significant increase in phonological awareness on the intervention group, however, they found no significant increase in children’s reading ability.

In his study, Turbill (2001) was concerned with the relationship between early literacy classroom activities and perception of technology. The study showed a strong resistance to technology in most early literacy classrooms. At the beginning of the study, the researcher set up the research question as, *“How are teachers of young children incorporating technology into their early literacy programs?”* During the study, the researcher modified the question as follows, *“Why do teachers of early literacy find it difficult to implement technology into their literacy curriculum?”*

based on the the lack of evidence of technology integration (p. 255). The study results show that the reasons for resistance to technology use are lack of time and lack of awareness of available software. In addition, many teachers define literacy only in terms of paper-based text and they have a lack of confidence in the potential uses of technology in the early years.

Laffey (2003) stated that *“field experiences, especially those that structure first-hand experience with children successfully using technology, are critical to appropriating and overcoming resistance to using technology in teaching”* (p. 378). For effective integration of technology into early childhood education, teachers need training and participation in workshops which are organized for specific technology implementation for teachers (Thouvenelle & Bewick, 2003). Haugland (1995) stated that computers can be effectively used in early childhood education, only if teachers think that using a computer is a need for them. Therefore, there is a need to assess the teachers’ beliefs and perception for using technology in early childhood education. Specht, Wood and Willoughby (1999) stated that preschool teachers support computer-aided instruction for young children, however, there is need for information being reliable, systematic, and useful for teachers in order for them to use computers in their classrooms.

When teachers use technology for young children’s education, they should consider the age appropriateness, individual differences, and cultural adaptation (NAEYC, 1996). Haugland (1999, 2000) suggests some steps in order to integrate computers into early childhood education including selecting developmentally appropriate software and websites, integrating these sources into the curriculum, and selecting computers to support learning experiences. Judge, Puckett, and Cabuk (2004) suggest that teachers need training to be able to achieve those steps.

The National Association for the Education of Young Children (NAEYC) stated that young children’s technology uses have benefits if used in developmentally appropriate ways. They state some cautions for reducing developmental and educational risks for young children’s technology uses. According to these cautions, effective early learning standards should:

(1) emphasize significant, developmentally appropriate content and outcomes, (2) be developed and reviewed through informed, inclusive processes, (3) be implemented and assessed in ways that support all young children's development, (4) require a foundation of support for early childhood programs, professionals, and families. (NAEYC, 2009, p. 1-2).

Finegan and Austin (2002) suggest that developmentally appropriate technology for early childhood educators should consider the social, cognitive, and linguistic development within the environment conducive to successful integration of technology. Young children construct their knowledge through interaction with materials and activities within the social context. Finegan et al. accepted computers as social tools in early childhood communities.

Most of the computer education courses for preservice teachers do not include practical application for learning techniques in the classroom (Harris & Pina, 1993). Similarly, computer instruction for the use of learning in the preschool classroom often lacks content about integrating technology into the curriculum (Littrell, Zagumny, & Zagumny, 2005; Landerholm, Gehrie, Hao, 2004; Kabadayi, 2006).

With developing digital technologies, writing experience is changed by computers. Lemke (1998) described authoring with technological devices as 'multimedia authoring'. In the current study, digital storytelling is an implementation of multimedia authoring. Lemke stated this position: "*Today our technologies are moving us from the age of 'writing' to an age of 'multimedia authoring' ... in which voice-annotated documents and images, and written text itself, are now merely components of larger meaning objects*" (Lemke, 1998, p. 283). Although early childhood children have a lack of reading and writing ability, use of digital storytelling with young children presents an advantage of multimedia authoring ability for young children. Today's widespread availability of technology provides a way for young children to become authors by telling their stories with computer-based images, narration and music rather than simply handwriting or typing their stories. According to Kramsch, A'Ness, and Lam (2000), computers give rise to radical changes in people using language and other semiotic systems in order to express themselves.

When using and integrating technology in the kindergarten classroom, it is important to consider the theoretical basis for using technology in early childhood education. The next section emphasizes the theoretical basis including theories on children's development.

2.2 Theoretical Basis for Using Technology in Early Childhood Education

The potential use of digital storytelling in kindergarten settings is supported by the theoretical perspective of Piaget's and Vygotsky's theories of development. Although they have different perspectives on children's development and learning, in this study some basic components of children's learning, such as interaction, social context, and language, are presented in both Piagetian and Vygotskian perspectives.

Constructivism is a learning theory that states that the individual develops one's own conceptual understanding about the world by being an active learner. According to the constructivist perspective, knowledge is accepted as an individual makes constructions of the world. In this perspective, learning is seen as an individual's creation based on observation and the existing concepts rather than a transfer of knowledge from instructor to learner. According to Fosnot (1996), "constructivism, as a psychological construct, stems from the burgeoning field of cognitive science, particularly the later work of Jean Piaget, the sociohistorical work of Lev Vygotsky...(p. 11)."

Whereas Vygotsky (1978) viewed the child through social interactions, Piaget (1977) studied development from the perspective of environmental interactions. Vygotsky (1978, 1986) examined the relation between human beings and their environments, both physical and social. The environment implied for learning occurrence by Vygotsky includes people, objects, and the events in social context. One of the basic theories is Vygotsky's (1978) theory of development of psychological processes which shows the importance of the role of social interaction in young children's literacy learning. According to the Vygotskian perspective, the social world motivates children's learning. In order to understand how learning occurs, examining the process is more important than the final product. According to Vygotsky, learning is a developmental process rather than a constructing perspective of a series of steps in a developmental stage as described by Piaget.

Vygotsky believed that the best way to investigate learning as a development process was through a historical examination of the progression in cognitive progress. As part of the sociocultural-learning theory, the historical process represented not a determinant of the theory itself, but also a methodological framework for investigating the developmental process using a natural setting rather than a laboratory focused experiment (Piecka, 2008, p. 32-33).

In the current study, the methodological framework is a phenomenological study, which is process oriented, and examines the process of the participants' experiences about the phenomena throughout the study in the naturalistic environment.

According to Vygotsky's social-development theory, collaboration and interaction with teachers, adults, and other well-informed peers, assists learners in performing at higher levels with their support. Vygotsky (1978) described this situation as a Zone of Proximal Development (ZPD), which is the "...distance between the actual developmental level as determined by individual problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

Piaget has dissonant views in contrast with Vygotsky. He affirmed that children learn more effectively through collaboration with same age children rather than older. Peer to peer interactions provide more even-handed communication when contrasting adults to peer interactions. However, there is limited perception of how young children actually react to peers in a collaborative activity. In addition, there is still a question of whether young children can express disagreement and still continue positive expression and useful interactions (Lomangino, Nicholson, & Sulzby, 1999). Creating digital stories with young children in a kindergarten setting requires peer-to-peer interaction and collaborative activities where young children need to share their ideas in a theme.

In Piaget's constructivist theory, "what we see, hear, and feel - that is, our sensory world - is the result of our own perceptual activities and therefore specific to our ways of perceiving and conceiving" (von Glaserfeld, 1996, p. 4). According to Piaget, knowledge acquisition is a process constructed by the learner and is not a body of information which can be transferred to the learner. Piaget described

cognitive development as an overall reorganization of the individual intellectually (Carey, 1985). This overall restructuring is a psychological process of natural intellectual development. The individual's development process forms a series of stages from concrete to abstract thinking.

Piaget categorized developmental stages, namely sensory motor, preoperational, concrete operation, and formal operation stages and each stage has different psychological structures. According to the theory, young children participating in this study are between the pre-operation and the concrete operation stages. In the pre-operation stage, Piaget's developmental theory provides a guide for this study in order to understand the students' developmental processes during their digital storytelling experiences, including the story creation process and the reactions of the students to their own digital stories.

2.3 Young Children and Storytelling

Once upon a time, there was no technology, no computers, and no cameras, but there were children and stories. Everybody tells stories in order to communicate with each other. To be able to express themselves, children connect their first words to transform a story. In the 21st century, the science and technology age, stories can be created by using technological devices such as computers, cameras, etc. In this study, young children tell their stories with their teachers using technological devices. The present study presents five early childhood teachers' and their students' digital storytelling experiences in their classroom. In this study, digital storytelling as a learning activity in early childhood education is demonstrated as an alternative way of using technology in education without harmful effects for young children. I refer to early childhood children who are three to six-years-old in defining young children as a subgroup of children.

Storytelling reflects the constructivist philosophy by emphasizing the importance of learners' experience. Constructivism rests on assumptions that knowledge is constructed by learners through their experiences and learners participate actively in the learning process (Driscoll, 2000). Parallel to this, Connelly and Clandinin (1990) state that "education is the construction and reconstruction of personal and social stories; teachers and learners are storytellers" (p. 2). For that reason, Connelly and

Clandinin (1990) state that students and teachers should tell their own stories during the lessons. Bell (2002) points out that learners explain their experiences and support their interpretation through the stories. Perhaps for that reason, Koenig and Zorn (2002) describe storytelling as an approach to teaching and learning that develops from real life experiences of teachers, clinicians, and students.

Although, storytelling has been very popular in early childhood education (Brostrom, 2002), the strategies used to engage kindergarten children in storytelling activities should be different from strategies used for primary and elementary school children. Mages (2006) emphasizes that the focus should be on oral and aural comprehension, not on reading and writing because the reading and writing skills of children between ages 2-7 are not sufficient to create their own stories. Moreover, Brostrom (2002) states that adults should help small children with storytelling and verbal expressions. According to Mages (2006) *“to support the academic achievement of all children, it is critical to find ways to foster children’s acquisition of the narrative skills necessary for academic success”* (329). Mages (2008) claims that children’s ability to tell a story is related to their academic literacy. She cites storytelling and story comprehension as examples of narrative comprehension (Mages 2006). According to Davies (2007), storytelling can improve children’s listening and speaking skills and strengthen their language and imagination development.

Storytelling is an important activity for young children’s intellectual development (Kim, 1999). Children’s development of oral language increases at an impressive pace in their early years (Genishi, 1988). Fillmore (1976) stated that *“language and discourse become the most critical tool for the child’s construction of the social world, because it is through language that social action is generated”* (p. 55). Stories take place in the everyday existence of children and are created from making sense of children’s worlds (Hall, 2001). Many projects that focus on storytelling as a teaching method emphasize the importance of the teacher’s responsibility to engage children in the activity. Slavin et al. (1989) state that under the “Success for All” program, students retell stories read by teachers. Brostrom (1998) described the “Storyride” project, in which students write their own stories after having collected stories from adults. However, although the teachers’ role is mentioned in the

research, there was no prescription presented to the teachers about how they can use storytelling effectively.

Collins (1999) stated that stories allow children to construct a mental map and see pictures in their heads. Therefore, children can imitate a model of language and thought with traditional storytelling. Storytelling increases children's vocabulary acquisition, remembering words, and speaking fluently (Farrell & Nessel, 1982). Based on Maguire's (1985) study results, storytelling helps with young children's ability to think symbolically and metaphorically in addition to supporting their vocabulary acquisition and concentration. The study conducted by Myers (1990) shows that children enjoyed and interacted in a storytelling activity more than a story reading activity. During the reading activity they have less of an attention span than during the storytelling activity.

Hall considered three ways young children experience telling their own stories in preschool settings. The first way is self-recorded stories. In this type, children have self-recorded what they want to say in a story. The teacher can tape record the children telling their stories. Although young children have difficulties creating precise tales, they have the advantage of hearing their own voices when creating stories. In this technique, Hall suggests some rules for teachers. "The major rule is that children must not listen to their story immediately, after they have recorded it (p. 87)". The violation of this rule may cause some aggressive effects or undesired results on children's behavior, because the children may perceive their own voice differently when it comes from the digital devices. The second way to tell the story is through adult recorded stories. In this type of storytelling, the adults type young children's words and frequently repeat the words to them. Hall (2001) stated "The process of typing the stories was itself revealing about children's ability to control their language" (p. 90). In this study, the adult recorded story is a procedure teachers may follow for creating their digital stories. The third way is symbolic play as storytelling. In this type, children create their stories during their sociodramatic play. This is a collaborative storytelling experience. Hall (2001) described this way of telling story as "...a complex phenomenon, and the fact that it often happens relatively spontaneously and seamlessly is a compliment to children's intellectual

and narrative abilities” (p. 96). In the current study, the collaborative storytelling is one way participants followed for using digital storytelling with young children.

2.4 Digital Storytelling

As technologies continue to evolve, digital devices are increasingly being used in education to facilitate learning. A growing number of people now have low cost digital devices such as digital cameras, multi-functional cell phones, and personal computers. Digital storytelling (also referred to as "DS") is one method for using these digital devices to support the educational process. There are many definitions of digital storytelling, but in general terms, digital storytelling is defined as telling stories and sharing information with multimedia tools and resources. Digital storytelling is shown as a deep reflective learning device and a self-representation of its creators (Nguyen, 2011; Kulla-Abbott & Polman, 2008; Nelson & Hull, 2008). In Ohler' (2008) book, *Digital Storytelling in the Classroom*, the author describes digital storytelling as a creative process in which a traditional story is combined with personal digital technology, such as a computer, video camera, and sound recorder. The Digital Storytelling Association (2002) elaborates on digital storytelling as "... the modern expression of the ancient art of storytelling... using digital media to create media-rich stories to tell, to share, and to preserve. Digital stories derive their power through weaving images, music, narrative, and voice together, thereby giving deep dimension and vivid color to characters, situations, and insights." According to Robin (2008), digital storytelling in an educational setting is a process of creating short stories that allows students and educators to enhance their information gathering and problem-solving skills, and to facilitate the ability to work in a collaborative team. Digital storytelling is commonly used by people to tell their own stories and it also provides users a chance to create a social community around these stories. This use has grown because of the relatively low cost of technological devices, the ease of learning to create stories, and the availability of many sites on the web where stories may be displayed and shared (Meadows, 2003).

One of the earliest uses of the term, "digital storytelling" was in the 1980's by filmmaker, performer and storyteller, Dana Atchley. In 1993, the nonprofit Center for Digital Storytelling (CDS) was founded by Atchely's colleague, Joe Lambert,

who continues to serve as the Center's executive director (<http://www.storycenter.org/history.html>). The CDS provides training and assistance to people who are interested in learning to create and share their own digital stories. Digital storytelling has gained even more popularity through the use of web-based tools and blogs amongst almost every age group in numerous countries around the world. Although many research studies about educational uses of digital storytelling have been conducted in many areas such as pre-service teachers education, health education, adult learning, there is limited information about using digital storytelling in early childhood education. A major focus of this research study is to determine how teachers perceive and describe the phenomenon of educational uses of digital storytelling in early childhood education to support young children's learning. In addition, the study aims to develop a general framework about the educational uses of digital storytelling in early childhood education, to show how teachers describe and use digital storytelling, how they may benefit by using it in their classroom, and what are the challenges they face in implementing digital storytelling in their classroom.

Meadows (2003) believes that digital storytelling necessitates a personal story which makes use of digital cameras, computers, and non-linear authoring tools to form short, multimedia narratives. Robin (2008) further classifies digital stories in three categories, which are digital stories as personal narratives, those that examine historical events, and stories that are primarily used to inform or instruct. In addition, Garrety (2009) classifies digital stories in five categories including traditional stories, learning stories, project-based stories, social justice and cultural stories, and stories as reflective practice.

The Center for Digital Storytelling (Center for Digital Storytelling, 2010) has been very influential in identifying the major components of a digital story by breaking the creative process into seven steps. This process, known as "The Seven Elements of Digital Storytelling" includes the following components: (1) Point of View shows the purpose and author's perspective of the story, (2) A Dramatic Question arouses the audience's curiosity and will be given an explanation by the end of the story, (3) Emotional Content involves the audience in the story, (4) The Gift of Voice helps the audience understand the story through personalization of the narration, (5) The

Power of Soundtrack supports the story with appropriate music, (6) Economy avoids overloading the viewer with excessive use of visuals and/or audio, and (7) Pacing provides a rhythm to the story and deals with how slowly or quickly the story is told.

Robin and Pierson (2005) describe multiple ways of using digital storytelling in the classroom and present an expanded and modified version of the Seven Elements of Digital Storytelling. The expanded elements, combined with the traditional seven elements are shown below.

1. The Overall Purpose of the Story
2. The Narrator's Point of View
3. A Dramatic Question or Questions
4. The Choice of Content
5. Clarity of Voice
6. Pacing of the Narrative
7. Use of a Meaningful Audio Soundtrack
8. Quality of the Images, Video & other Multimedia Elements
9. Economy of the Story Detail
10. Good Grammar and Language Usage

Sadik (2008) describes a research study on digital storytelling as an integrated approach for engaged student learning. The results of the study show that digital story projects implemented by Egyptian teachers support students' understanding of specific content in an academic course. In addition, the results show that teachers are willing to use digital storytelling for teaching content and to provide more effective instruction.

Heo (2009) conducted an experimental study to show the effects of digital storytelling on pre-service teachers' self-efficacy and professional dispositions. According to the study, 'Knowledge and skills of personal technology can be transferred to educational technology settings with the help of digital storytelling' (p. 423). Li (2007) investigated the use of digital storytelling to integrate multimedia technologies into higher education. In that study, participants were pre-service and in-service teachers in higher education. The results contributed to the understanding

of the advantages of technology-based experiences, showing that these experiences can improve students' learning skills during the incorporating phase of technology implementation in education.

Rudnicki (2008) investigated graduate students' digital storytelling experiences in story circles. Narrative inquiry was selected for the data analysis method in order to identify more about the process students go through in developing the scripts for their digital stories. In the results of the study, the researcher proposed a "Story Circle Guide" for teachers and students on how to properly conduct the story circle process in their classroom.

Dogan (2007) investigated how teachers practice and integrate digital storytelling in their classroom and what kind of challenges they faced during the implementation phase. After the participants attended a digital storytelling workshop at the University of Houston during the summer of 2005, half of them did not go on to use digital storytelling in their classroom, although they thought that digital storytelling was an efficient and powerful tool to convey desired messages around a topic or a subject area. In the study, the researcher discussed the reasons behind why participants did not use digital storytelling in their classroom and identified several barriers including time issues, limited access to hardware and software and a lack of continuing technical support.

2.5 Educational Uses of Digital Storytelling Around the World

A survey concerning the education uses of digital storytelling conducted by Yuksel, Robin, and McNeil (2011) included participants from 26 different countries. In 14 of these countries, survey respondents stated that they are actively engaged in digital storytelling for educational purposes. These countries are USA, Canada, United Kingdom, Australia, New Zealand, Norway, Sweden, Ireland, Turkey, Egypt, Korea, the Netherlands, South Africa, and Austria. The survey results demonstrate that those using digital storytelling in different countries have many different occupations. Most of the participants identified themselves as working in some type of educational endeavor, including college instructors, college students, school teachers, researchers, and instructional technologists, while a few respondents state that they were involved in the area of health, community development, media arts or video.

Findings from this study suggest that digital storytelling supports student understanding of subject area knowledge, overall academic performance, as well as writing, technical, presentation, and research skills. In addition to these skills, the results confirm that students' higher order thinking, social, language, reflection and artistic skills are positively affected when their teachers use digital storytelling in their classroom. The findings also suggest that digital storytelling can be used in multiple subject areas including language arts, social studies, the arts, and science. In addition, some respondents use digital storytelling in teaching for technology literacy (in Austria), healthcare education (in the United Kingdom), and communication (in Norway).

Most survey respondents agreed that digital storytelling allows students to construct their own understanding or experience in a content area, that it facilitates collaborative activities in which students work together in a small group, and promotes in-class discussion. In addition, the teachers indicated that digital storytelling can help their students learn problem-solving and critical thinking skills, understand complex ideas, and introduce their students to new content. Moreover, survey respondents in Canada, the USA, New Zealand, the United Kingdom, Australia, and Austria stated that they use DS for a variety of other reasons, including to engage members of the community, for therapy, to share past experiences, and to inject fun into a lesson.

The results further indicate that although the some people need additional computer, software, and technical support, most people have enough support in order to use digital storytelling in the classroom. However, a number of respondents stated that they need training in how to create and use digital storytelling more than technical support. A few respondents also need funding support for community development and professional support for integrating digital storytelling into their curriculum.

Telling stories is an old-age practice of mankind and telling stories in a digital format is the perfect combination of the ancient art of oral storytelling and modern technology (Nguyen, 2011). Digital storytelling allows stories to be narrated simultaneously with verbal language, music, and still images or video clips, allowing it to become a novel learning tool. Digital storytelling is a powerful and emerging

educational tool, which is actively being used in many countries, both in and out of classrooms. However, those using digital storytelling need more training about how they can use this technology tool more efficiently. Therefore, there is a special need to continue to investigate digital storytelling training for teachers and students especially in early childhood education so that they will be able to obtain maximum benefits from digital storytelling as learning and teaching tool.

CHAPTER 3

METHODOLOGY

This chapter has two parts including present the philosophical approach of phenomenological inquiry and phenomenological research methodology. The first part of the chapter explains the underpinnings of the research methodology consisting of methodological framework, key concepts of phenomenology, context of study, and subjectivity statement. The second part consists of phenomenological data collection and phenomenological data analysis methods.

3.1 Part I

3.1.1 Conceptual Framework of Research Methodology

In this study, phenomenological framework and methodology (Husserl, 1970; Moustakas, 1994) was used for studying early childhood teachers' lived experiences of educational uses of digital storytelling after they attended a digital storytelling workshop. The phenomenon of the present study is using digital storytelling as a learning activity by early childhood teachers in their classrooms. The main purposes of phenomenological research are to seek reality from individuals' narratives of their experiences and feelings, and to produce in-depth descriptions about the phenomenon. The purpose of the current study is to understand and describe the phenomenon in-depth, and to arrive at the essence of the early childhood teachers' experience with the phenomenon. The study embodies lived experience, perception, and the feelings of participants about the phenomenon. The main research question and sub questions, which derived from the main question to guide the study, are restated below:

- How do early childhood teachers perceive and describe the phenomenon of educational uses of digital storytelling in early childhood education after they attend a two-day digital storytelling workshop?
 1. How do early childhood teachers use digital storytelling as an instructional tool in their classroom after attending the digital storytelling workshop?
 2. For what purposes do early childhood teachers use digital storytelling in their classrooms?
 3. What do early childhood teachers feel are the benefits of developing digital stories by preschoolers?
 - a. How do digital stories provide evidence of preschoolers' learning?
 4. What are the barriers to teachers using digital storytelling as an instructional tool in kindergarten?

3.1.2 Methodological Framework

The term of phenomenology is derived from the Greek 'phainein' which means 'to appear' and was first used by Immanuel Kant in 1764. Phenomenology as a methodological framework has evolved into a process for seeking reality in individuals' narratives of their lived experiences of phenomena (Husserl, 1970, Moustakas, 1994, Cilesiz, 2009). Phenomenology includes different philosophies consisting of transcendental, existential, and hermeneutic theories (Cilesiz, 2010). In this study, transcendental phenomenology described by Moustakas (2004) was used as a methodological philosophy. While transcendental philosophy is often regarded as being able to go outside of the experience, as if standing outside of ourselves to view the world from above, existential philosophy is regarded as a need to focus on existence, which is our lived experience (Ihde, 1986, Langdrige, 2007). On the other hand, hermeneutic phenomenology emphasizes interpretation, as opposed to just description. The transcendental phenomenological framework developed by Edmund Husserl who provided the basis for phenomenology was used for this study (Moustakas, 1994). Hegel described the phenomenology as conscious knowledge that appears to individuals, which is the science of saying what is perceived, sensed,

and known from the person's experience (Moustakas, 1994). Like Hegel's description of the phenomenology, Lourer (1967) implied that the unique source of absolute existence is what the person thinks, feels, and perceives. Moustakas explained the phenomenon as "*what appears in the consciousness*" (p. 26). (Moustakas, 1994). Husserl was influenced by Descartes' belief that the "*perception of the reality of an object is dependent on a subject*" (stated in Moustakas 1994, p. 27). In this study, the object of the phenomena is educational uses of digital storytelling in early childhood education. The subject is early childhood teachers who were selected as participants for this study. Therefore, this study investigates how the perception of educational uses of digital storytelling in kindergarten is dependent on the early childhood teachers' experience. The aims of phenomenological research are to reach the *essence* of the individuals' lived experience of the phenomenon while ascertaining and defining the phenomenon (Cilesiz, 2010). Max van Manen (1990) states that "*The essence of a phenomenon is a universal which can be described through a study of the structure that governs the instances or particular manifestation of the essence of that phenomenon... A universal or essence may only be intuited or grasped through a study of the particulars or instances as they are encountered in lived experiences.*" (p. 10). The purpose of the phenomenological study is to understand and describe the educational uses of digital storytelling phenomenon in- depth and reach and arrive at the essence of early childhood teachers' lived experience of the phenomenon. After describing the phenomenology and its place in this dissertation, the four key concepts of phenomenological philosophy including lived experience, co-researchers, epoche, intentionality, and noema-noesis will be presented.

Cilesiz (2010) explains the concept of experience in phenomenology in the following diagram (see figure 1). According to her diagram, "*The concept of reality in phenomenology is based on the ideal-material duality; every experience has a material and ideal component.*" (p. 496). Although ideas and material are separate, they are interrelated and meaning is obtained from their interrelation. In the figure, the concepts of experiences in phenomenology are illustrated. The rectangles show the elements and ovals show the concepts. The explanations are adapted to the original figures.

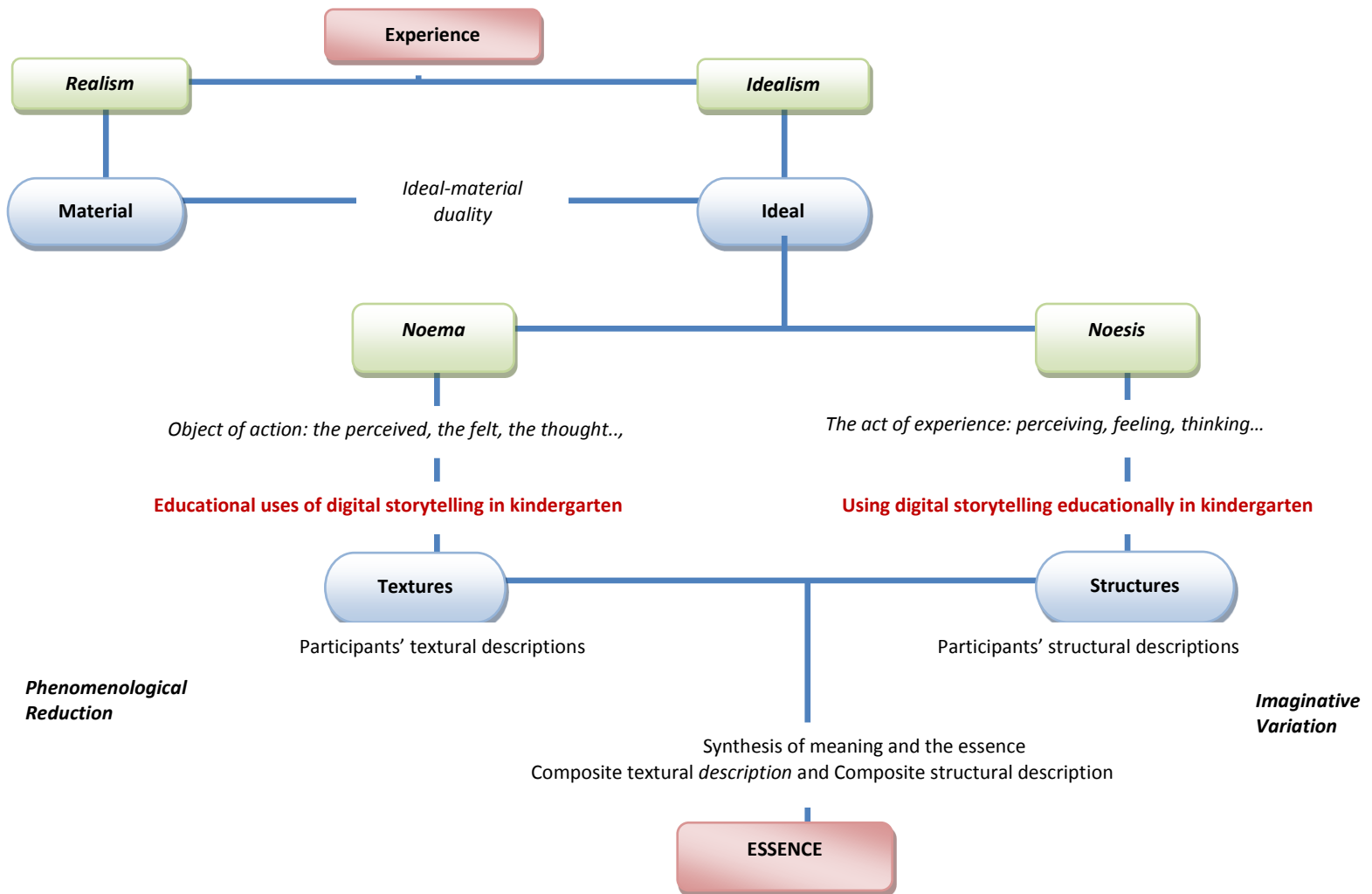


Figure 1. The phenomenological concept of experience (adapted from Cilesiz, 2010).

3.1.3 Lived Experience

Phenomenological research investigates the lived experience of participants about a phenomenon. Explaining the term 'lived experience' is important to make clear the scope of this study. Van Manen explains the nature of the lived experience in a phenomenological study as giving an analogy (1990). Based on van Manen's analogy, lecturing at the same time are teacher A, who on the first day of her job, has different experiences than teacher B, who is a teacher with ten years of experience. The expert teacher forgets the presence of the students during the lecturing, while the novice teacher feels the glance of the students. According to van Manen, the novice teacher is constantly aware of her own experience on the first day of school. However, the expert teacher is unaware of her acts during the lecture, because the teacher is used to lecturing and behaves more spontaneously. This analogy presents a lived experience showing differences in the same event for different people. The lived experience can be a starting point in a phenomenological study to show the meanings of first day teachers' feelings.

Phenomenological studies start and stop with lived experience (van Manen, 1990). In the phenomenological study, lived experience should be meaningful and significant experiences of the phenomenon (Moustakas, 2004, Creswell 2007). In this research, the participants' digital storytelling experiences after attending the workshop are accepted as meaningful and significant experiences for the study.

3.1.4 Intentionality

Intentionality is one of the fundamental characteristics of phenomenology for Husserl, and is directly related to the consciousness (Husserl, 1931). Intentionality refers to doing something deliberate, such as going to the library for some purpose. It does not refer to doing something without thinking, such as reading billboards while crossing the road. According to Aristotelian philosophy, "the term 'intention' indicates the orientation of the mind to its object." That means "the object exists in the mind in an intentional way" (Kolkelman, 1967; Moustakas, 1994 p.28). Therefore, intentionality is the relationship between the object, and the appearance of the object to one's consciousness. This study examines the participants' experiences

of creating digital story that are intentional experiences not mental activities. Participants' digital storytelling experiences in their classroom are intentional acts and the acts are dependent on their consciousness. The act of experience is related to the meaning of a phenomenon. The essence of the phenomenon derives from the act of experience how the participants perceived educational uses of digital storytelling in their classroom. This study is concerned with understanding early childhood teachers' digital storytelling experience and the way in which the teachers perceive the phenomena.

In the transcendental phenomenon, the intentionality has two dimensions, noema and noesis. Noema is the object of experience or action such as what is the perceived, what is the felt, what is the thought, what is remembered, or what is the judgment. Noesis is the act of experience such as perceiving, feeling, thinking, remembering, or judging. The act of experience is related to the meaning of a phenomenon. In this study, educational uses of digital storytelling in kindergarten is the noema of the experience, and using digital storytelling for educational purposes in kindergarten is the noesis of the experiences. Noema and noesis are interrelated, and cannot exist independently or be studied without the other (Cilesiz, 2010).

3.1.5 Epoché

Epoché is a Greek word used by Husserl meaning to stay away or abstain from presupposition or judgments about the phenomena which are being investigated (Moustakas, 1994, Langdrige, 2007). Epoché requires a new point of view in order to avoid prejudgments when we face a familiar object. That is the reason why phenomenological research has no assumption or hypothesis, as is often found in quantitative research. *“The aim of the epoché is to enable the researcher to describe the ‘things themselves’ and (attempt to) set aside our natural attitude or all those assumptions we have about the world around us”* (Langdrige, 2007, p. 17). *“The phenomenological Epoché does not eliminate everything, does not deny the reality of everything, does not doubt everything- only the natural attitude, the biases of everyday knowledge, as a basis for truth and reality. What is doubted are the scientific ‘facts’, the knowing of things in advance, from an external base rather than internal reflection and meaning”* (Moustakas, 1994, p. 85). Basically, Epoché allows

the researcher to be bias-free in order to describe the reality from an objective perspective. I engaged the Epoché process during this phenomenological analysis process. For example, from my previous digital storytelling experiences, I would bracket my own experience and knowledge, such as my challenges of creating the script and finding the initial points, so as to be able to understand the participant's experiences entirely by staying away from prejudgment results.

3.1.6 Phenomenological Reduction

In phenomenological reduction, the task is to describe in textual language what is seen in the individual experiences. When describing what one sees, the researcher should consider the external object related to their perception (Moustakas, 2004). At the same time, the researcher should consider the internal act of consciousness, which refers to the rhythm and relationship between phenomenon and self (Langdrige, 2007, Moustakas, 1994). In order to describe the general features of the phenomenon, the researcher must eliminate all elements that are not directly within conscious experience. The elimination process requires reduction of data of experiences to the invariant constituents which are also named as the meaning units or horizons. In phenomenological reduction, the researcher eliminates overlapping, repetitive, and vague expressions.

3.1.7 Imaginative Variation

Imagination variation is a phenomenological analysis process after comes to phenomenological reduction that is purely based on researcher imagination not empirical. Through the imagination variation process, the researcher drives structural themes. Moustakas explains imagination variation process “The task of imaginative variation is to seek possible meaning through the utilization of imagination, varying the frames of reference, employing polarities and reversals’ and approaching the phenomenon from divergent perspectives, different positions, roles, or functions. The aim is to arrive at structural descriptions of an experience, the underlying and precipitating factors that account for what is being experienced; in other words the “how” that speaks to conditions that illuminate the “what” of experience” (p. 85).

The imaginative variation process aims to remove unnecessary features by finding the possible meaning of the phenomenon and asking question of the phenomenon (Beech, 1999). The process continues until finding the shared meaning of the phenomenon of interest (Streubert and Carpenter, 1995).

3.1.8 Co-researchers

Moustakas (2004) defines all research participants as co-researchers because the essence of the phenomena is derived from participants' perceptions and experiences without the interpretation of the researcher. In this study, the participants' narratives of experiences provide the meaning of the phenomena. It is the role of the researchers to create the textural, structural, and textural-structural narratives without including their subjectivity. This means the transcendental analysis requires no interpretation by the researchers. The co-researchers are not involved in the study in terms of investigations, which the researcher conducts. However, the researcher informs the co-researchers about their positions in the study that answers the research questions based on the co-researchers experience and their narratives.

3.1.9 The Research Setting: Early Childhood Education in Turkey

Early childhood education in Turkey involves 3- to 5-year-old children. Early childhood education institutions are kindergartens and preschool classes within an elementary school. The early childhood education setting includes both public and private schools in Turkey. In the current study, the participants were selected from public early childhood institutions, including independent kindergartens and nursery classes in the elementary schools.

According to Ministry of National Education (MONE) reports in 2010, the basic objectives of early childhood education are to support children's physical, mental and emotional development, and to prepare them for primary education, to develop good habits such as being respectful, and keeping themselves and their environment clean in order to live better. One of the most important objectives of early childhood education is to create an equal environment for student diversity where the children have different backgrounds and unequal living conditions. Speaking the Turkish

language properly and correctly as a mother language is another objective in early the childhood curriculum.

Early childhood education is not compulsory, but an optional decision for parents. Therefore, pre-primary education is not mandatory in Turkey shows the diminished importance of early childhood education. The most of the young children are enrolled to primary education school at the age of seven without attending early childhood education. However, in the recent years, early childhood education has gained the attention of the government. According to the MONE (2010) report schooling ratio by educational year and level of education, enrollment statistics for 3 to 5 year-olds is just 27%, whereas enrollment statistics for elementary schools is almost 100% in 2010. This statistic shows that 73% of young children enroll in elementary schools without prior education. This situation causes an inequality of education for Turkish students.

In order to improve early childhood education in Turkey, the Turkish government over the last ten years has increased the availability of early childhood education. While the number of kindergarten and nursery schools was 5,169 in 1994, this number has increased to 26,681 in 2010. The other method for improvement of early childhood education is the number of in-service teachers. While in 1994 this number was 9,098, in 2010 the number of in-service teachers shows a dramatic increase to 42,716.

3.1.10 Subjectivity Statement

I have a large family of three sisters and a brother. I have loved children from my childhood. I have two nieces who are 3 and 4 years old. I have created stories for them since their baby years. After they began to speak, we created digital stories together with them. This is one of the reasons I decided on this topic for my dissertation. I believe that telling stories is one of the most important activities for young children's creativity and their mental development. As I remember from my own childhood, my mother always told stories when she had to explain hard topics to us.

After I decided on my dissertation topic, I attended a digital storytelling workshop, in Berkeley, California in the summer of 2009. To me, digital storytelling is a story creation process that comes from the inspiration of using advances in technology. I adopted Joe Lambert's view about digital storytelling that "*everybody has a story to tell*" and I have a million stories to tell myself; this study is just one of them.

I was a drama club member for three years during college. The club was one of the student communities of Ankara University. In the drama club, we had many activities in order to express ourselves with inner motivation and without interruption. Creating stories and using body and verbal language spontaneously was included in our activities in the drama club in every week.

It is with this background and beliefs that I looked at the phenomenon of educational uses of digital storytelling in early childhood education. My research aim was to bracket these beliefs throughout the study, although I caution the readers to evaluate the findings with this subjectivity statement in mind.

3. 2 Part II

The second part of the chapter presents the methods and procedures developed in preparing to conduct the current study including collection, organization, analyzing and synthesizing the data.

3.2.1. Selecting Participants

A phenomenological framework requires a relatively homogenous group of participants (Creswell, 2007). Individuals' selection to participate in the phenomenological study should have significant and meaningful experiences of the phenomenon being investigated (Moustakas, 2004, Creswell, 2007). For this study, the participants created their first digital story while attending a digital storytelling workshop. After the workshop, they created other digital stories in their classroom with students. These digital story activities, were held in Turkey, and provided the meaningful, significant, and unique experiences of the phenomenon for this study.

The participant pool was comprised of in-service teachers from kindergartens located in the capital city of Ankara, Turkey. The vast majority of early childhood teachers consist of females in Turkey. Because the professional properties of early childhood teachers include such attributes as taking care of and nurturing children, most of the teachers who select this profession are female. Therefore, in Turkey, the number of female early childhood teachers is more than the number of male teachers. In the current study, the participants include one male and five female, which is representative of the population.

One of the main criteria for selecting the participants was their willingness to participate in the study, their openness to education and educational innovations, and willingness to using technology in their classroom. In this study, the sampling method is purposeful sampling and criterion-based selection. The sample for this study consists of five teachers. Many different strategies were used to invite the participants to take part in the study. I visited many kindergartens, informed the teachers about the study, and invited them to the digital storytelling workshop. The strategies include face-to-face interviews with teachers and administrators, informing the teachers about the study with e-mails, phone calls, and distributing a brochure (see Appendix A for the brochure and see Appendix C for the poster). Another strategy used was snowball-sampling, which is a method of extending the sample by asking one participant to recommend the study to other participants (Miles & Huberman, 1994, Marshall & Rossman 2006). Approximately 200 teachers were informed of the study and were invited to participate.

The potential participants were invited to the digital storytelling workshop. For this study, two workshops were organized. In order to accept the teachers for participation in the study, they had to agree to complete three digital stories after the workshop in their classroom. In the first workshop, nine teachers attended and seven of them completed the two day workshop. Only two of the teachers were willing to continue the study and create three digital stories after the workshop. Other teachers dropped out of the study because of their workload in their schools, as they stated in the interviews. Because of the low number of participants, a new workshop was organized and announced to teachers. In the second workshop, some criteria were added for attending the workshop and announced to teachers in advance. Firstly, I

asked the participants to attend the workshop if they were willing to create three other digital stories in the five week period after completing the workshop. Secondly, in order to increase the participation, it was announced that a Digital Storytelling Certificate (see Appendix B for the certificate sample) would be given if the participants completed the study and created three other stories within the five week period following the workshop.

Consequently, nine teachers completed the Digital Storytelling workshop in two groups. Of the nine teachers, five were on the staff of Ministry of Turkish Education and four were teachers' assistants hired by the school administration. In order to have a small and rather homogenous participant group that serves the purposes of phenomenology best and to describe the experience of a particular group, five teachers were accepted as participants in this study.

3.2.2 Participants of the Study

The descriptions of the participants below were obtained from informal interviews during the process in which the participants were invited to participate in the study. In general, the purpose of the initial informal interviews was to try to obtain from their responses, an assessment of their willingness to participate in the study, their openness to self-education and educational innovations, and their willingness to using technology in their classroom.

Eren was 32-year old male teacher with six years experience in a public preschool at the time of the study. He had a class consisting of 6-year-old children. His preschool placed in low socio economic status neighborhood. As he stated in the interviews, he had low computer skills and does not like using technology. He does not like new technological developments, and he infrequently turns on and uses the computer by himself when he is not forced to use it. He has bachelor degree in early childhood education.

Nil was a 33-year old female teacher with seven years experience as a teacher in a preschool at a public university. She had a classroom consisting of 6-year old children during the study. She thinks she has average skills as a computer user. She

uses computer to search the Internet, to e-mail and to use educational software in the classroom. She has a master's degree on early childhood education.

Sevgi was 50-year old female teacher with more than twenty years experience as a early childhood teacher. She had a class with 6-year old students in a public preschool. During the study, she was promoted as administrator in another public kindergarten. She published many books on early childhood education, which are useful for early childhood teachers to use as activity book in the classroom and for young students to use in their home with help from their parents. As he stated in the interviews, she had high computer skills. She uses computer to search the Internet, to e-mail and to use educational software and word processors. She has bachelor degree in early childhood education.

Nur was 40 years old female teacher with more than 20 years experience in a a public preschool at the time of the study. She had a class consisting of 6-year-old children. She has 15 students in her classroom with very limited space. His preschool placed the area with high socio economic status neighborhood. As she stated in the interviews, she had low computer skills, however, she had very high inner motivation to learn how to use technology in her classroom. She has bachelor degree in early childhood education.

Ayla was 37 years old female teacher with 15 years experience in a public preschool at the time of the study. She had a class consisting of 6-year-old children. She has 25 students in her classroom with very limited space. Her preschool placed urban area with low socio economic status neighborhood. As he stated in the interviews, she had low computer skills, however, she had very high inner motivation to learn how to use technology in her classroom. She has bachelor degree in early childhood education.

Table 1 *Details of participants*

Participants	Age	Gender	Students Age	School	Having a computer in the classroom	Number of students in the classroom
Nur	40	Female	6 year-old	Public	No	16
Nil	33	Female	6 year-old	Public	Yes	18
Eren	32	Male	6 year-old	Public	Yes	19
Sevgi	55	Female	6 year-old	Public	Yes	20
Ayla	38	Female	6 year-old	Public	Yes	25

3.2.3 Data Collection Methods

The data collection methods include phenomenological interview and focus group interviews with the co-researchers. In addition to interviews, an observation method was used to observe the classroom environment during the implementation phase of the digital stories. The purpose of collecting data from three different kinds of informants is a form of triangulation. Table 2 shows the time schedule of data collection methods, which are phenomenological interview, ethnographic observation and focus group interviews.

The major data gathering methods involve primarily in-depth interviews with participants for this phenomenological study (Creswell 2007). The purpose of a phenomenological interview is to describe the meaning of a phenomenon that several individuals share (Marshall & Rossman, 2006). Frequently, for phenomenological studies, multiple interviews are conducted with each of the research participants (Creswell, 2007). For this study, three serial in-depth phenomenological interviews were conducted with each of the research participants after they attended the workshops (Seidman, 1998), (See Appendix D for Interview Schedule). As developed by Seidman, the past experience with the phenomenon of interest is mentioned in the first interview. Seidman's next interview is based on present

experience. In the third interview, these two interviews combined in order to describe the individual essential experience with the phenomenon. For this study, the first interview focused on the participants' first digital storytelling experience in their classroom. As a general framework, the questions focused on 1) the participants' digital storytelling experience and feelings in their classroom with the children, and 2) the children's reactions to the digital storytelling activities. The second interview had almost same questions; however, they specifically focused on the experience of creating the second digital story and the meaning of the digital stories and how they could be used. The final interview focused on the participant's third digital storytelling experiences including their feelings, and students' reactions, and included a general discussion of the three experiences and the overall usefulness of digital storytelling in early childhood education.

Before the interviews were conducted, the consent letters were presented to the participants and the family of the students (See Appendix E for the Consent Letter). Interviews were conducted at the shared rooms of the kindergartens where space was available. These rooms included administrative or teachers' rooms. Some of the interviews were conducted outside of the schools because of lack of available public space in the school area. For example, after the co-researchers conducted the final digital stories, we went to restaurants or cafes with some of the teachers to conduct the interviews. The interviews were conducted in Turkish which is the native language of the researchers and the co-researchers.

Observation was the other data collection method used in this study. The presentation phase of the stories was observed with ethnographic observation techniques in the teachers' classrooms. After the each digital story's creation process was completed, the co-researchers showed the digital story to their students. The students and the teacher discussed the creation process, story topics, and the parts of the story which they liked. During this implementation phase of the digital story in classroom, I observed the students and teachers in the background and did not participate in the discussion. I used the voice recorder during the observation in order to record students' responses to the story.

In addition to observation, the two focus group interviews were used to collect data during the workshop. The first focus group interview included the story circle section. In this section, teachers talked about the student development and learning problems which might be addressed in further digital storytelling activities. The second focus group interview was conducted during the ‘Digital Storytelling Certificate’ ceremony. In this section, the participants watched all of the digital stories created for this study and they discussed the entire process and talked about their feelings and experiences. The focus group interview session was video recorded to acquire more detailed data to use for triangulation.

Table 2 *Time schedule of data collection*

Time schedule	Data collection	Data collection for triangulation
12-13 Dec 2009 <i>1. Workshop</i>	Focus group interview	Video recording
27-28 Feb 2010 <i>2. Workshop</i>	Focus group interview	Video recording
1 st week of March 2010	Pre-interview about the workshop	
2 th week of March 2010	1. interview: Participants created the first digital story	Observation of the presentation phase of 1. digital stories
3 th week of March 2010	2. interview: Participants created the second digital story	Observation of the presentation phase of 2. digital stories
4 th week of March 2010	3. interview Participants created the third digital story	Observation of the presentation phase of 3. digital stories
8 th May 2010 Certificate ceremony	Focus group interview about the whole process	Video recording

3.2.4 Digital Storytelling Workshops

The workshop was held for two days in the Middle East Technical University, Faculty of Education, and Administrative Convention Hall. After the workshop, all participants had created a digital story to show their students in their classroom and had gained ability of the creating their own digital story. The objectives of the workshop were

- Learning about digital storytelling concepts. For this objective, participants were introduced to the concept of digital storytelling and example digital stories were shown.
- Examining the “seven elements of a digital story” which are point of view, dramatic question, emotional content, the gift of your voice, the power of soundtrack, economy and pace (Center for digital storytelling, 2009).
- Creating the story circle: Co-researchers discussed the potential young children’s learning problems. They told their stories within the context of their profession as early childhood educators.
- Considering topics and writing their scripts based on the discussions in the story circle and the third of seven elements of elements of a digital story including a point of view, dramatic question, and emotional content.
- Collecting the visual and audio materials for the digital story.
- Acquiring hands-on experience using computer-based software (MS Movie Maker) to create their own digital stories.
- Presenting the digital stories and expressing the feelings of the co-researchers in the group.

3.2.5 Data Analysis

As designated by Moustakas (1994), the procedure of the research study started with identifying the phenomenon of this study which is educational uses of digital

storytelling in early childhood education. Next, the data was collected through phenomenological interviews with co-researchers who had experienced the phenomenon, digital storytelling in their classroom. The data was analyzed by following Moustakas' Phenomenological data analyzing procedure. This section describes the procedure of analyzing the data as well as preparation of the data. The general procedures include preparation of the data to be analyzed, phenomenological reduction, imaginative variation, and uncovering the essence of the experience.

Bracketing: The steps of phenomenological analysis started with bracketing the researcher's subjectivity throughout the study. This process described Epoche process as discussed in the first part of the current chapter. The Epoche process refer to setting aside of the researcher's prejudgments and predispositions towards the phenomenon. This process begins with the researchers writing a complete description of the phenomenon. Before starting the data analyzing I read my subjectivity statement including the description of my own experience.

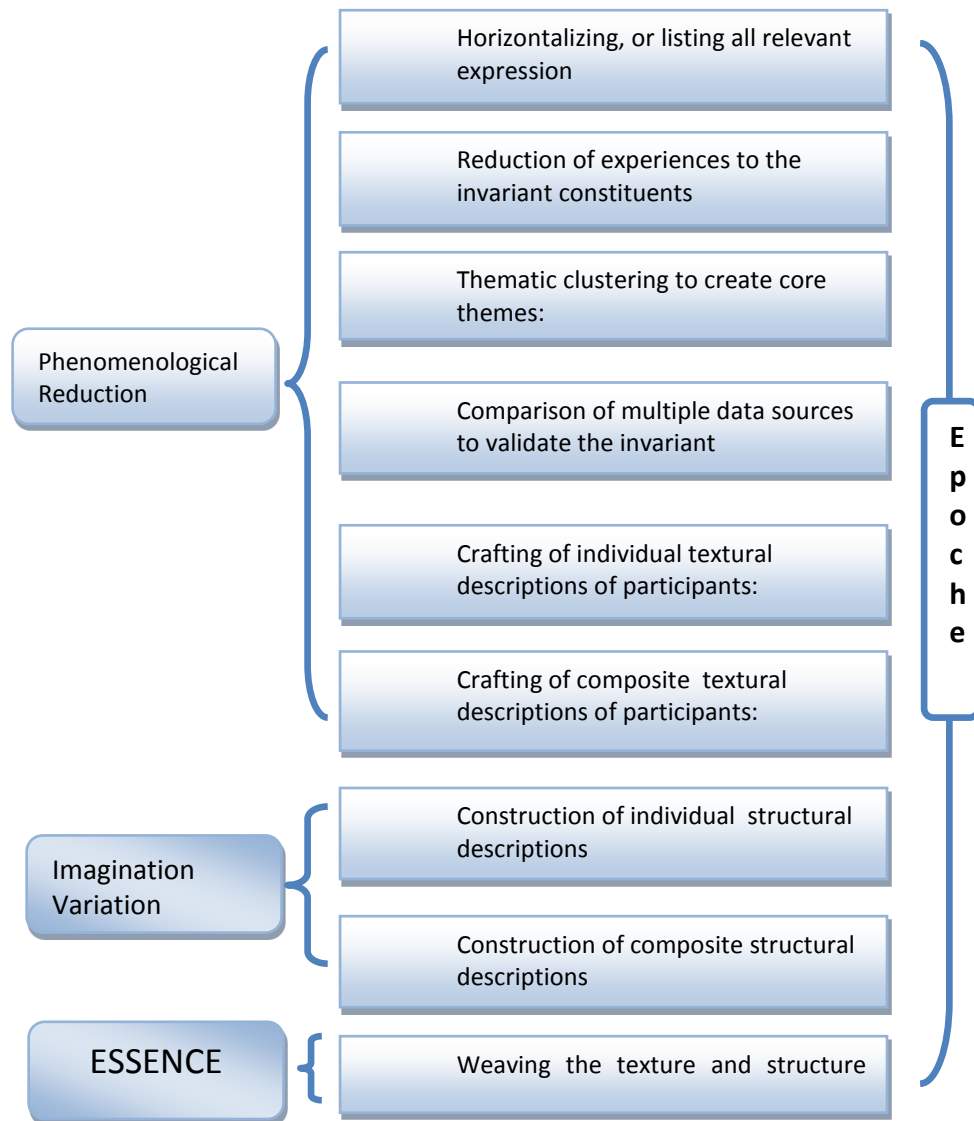


Figure 2 The steps of data analysis

Horizontalizing, or listing all relevant expression: In this part of the data analysis, I looked the data as every statement has equal value. If some statements are irrelevant with my research phenomena, and repetitive or overlapping, I ignored these statements. In other words, I created a list from the verbatim transcript of co-researchers experience including the statements which are related my phenomena, and I deleted all irrelevant expression. For example, the co-researcher explained using digital storytelling in term of administrative collaboration and she explained some problems faced with the administrative status. I erased most of this part because it is another research study interest. After I cleaned the data, the remaining parts of the data are the *horizons*. Horizons are the textural meaning or constituent parts of the phenomenon. Moustakas (2004) said that horizons are unlimited and

horizontalization is a never-ending process. After determining the horizons, they were translated to English, because the research conducted in Turkey, and the verbatim was in Turkish language.

Reduction of experiences to the invariant constituents: In this step, the horizons were clustered into themes. The translated data were split into meaning units in order to be each of them has only one meaning. In this step, the phenomenological reduction which is the task of describing of the phenomena in “textural language”.

Thematic clustering to create core themes: In this step, I clustered and thematizing the invariant constituents which are the horizons and defined the “core themes of the experience” of participants using digital storytelling in their classroom (Moustakas, 1994, p. 121).

Comparison of multiple data sources to validate the invariant constituents: The themes derived from participants’ experiences reported in the interview compared to researcher observation field notes, focus group interviews, and literature to verify accuracy and clear representation across the data sources.

Crafting of individual textural descriptions of participants: The textural description is a narrative explaining what the participants perceived of the phenomena. For this step, I described what the co-researchers experienced using excerpt from their interview verbatim. In this step, I explained the meaning units in a narrative format and this process help me to understand “what” the teachers experienced.

Construction of individual structural descriptions. This step based on the textural descriptions and imaginative variation. By using imaginative variation, I imagined how experience occurred and created the structures. After I wrote the textural description, for each co-researcher I incorporated the textural description into a structure explaining how the experience occurred. I added the structures at the end of the each paragraph in order to create structural description. This process helped me understanding how co-researchers experienced the educational uses of phenomena.

Synthesis the texture and structure into an expression: For each co-researchers, I created two narratives including textural “what” occurred and structural “how” occurred. I create the meaning units for each participant in a list. I decided the common meaning units of all participants. There were seven meaning units shared by five of the co-researchers (See the Table 13 in Chapter 5 for the shared meaning units and see the Appendix F for the list of meaning units). I created a composite textural and structural descriptions based on seven shared meaning units. In the composite textural and structural descriptions, I eliminate the individual meaning units in order to create the essence of the phenomena. I wrote compositenarratives from the third person perspectives representing the group as a whole. This step is the synthesis of the two narratives for the group as a whole. The composite structural description was combined into the composite textural description to create a universal description of the phenomenon of “educational uses of digital storytelling in kindergarten classrooms.” The purpose of the step was to reach the essence of the experience of the phenomenon.

3.2.6 Researcher’s Role

In this qualitative research study, my role included more duties than just obtaining sufficient data from the participants. My first role included serving as the facilitator of the digital storytelling workshop. In this process I believe that my role was crucial in facilitating training to the participants about the phenomenon. In the two-day workshop, I introduced the participants, whom I am calling 'co-researchers' to the new concept of digital storytelling phenomenon and how this concept relates to this study. I facilitated the process for them to create digital stories in their classroom for educational purposes after the four week following the workshop.

Moustakas (2004) uses the term ‘co-researcher’ for participants because participants are included in the meaning of the essence of the phenomenon, along with the researcher of the study. In this study, the term, co-researchers was used instead of ‘participants’ for this purpose. As the major researcher, my goal was to make the co-researchers aware of their status and role. Therefore, at the beginning of the study, I informed the co-researchers about how they fit into the research purposes and the

questions I would be investigating. After that, I asked the co-researchers' about their experience to seek answers to the research questions.

My other role as a researcher included encouraging the co-researchers to be open and share rich data about their own experiences. Poggenpoel and Myburgh, (2003) imply that the researcher "facilitates the flow of communication, identifies cues and the participant sets respondents at ease" (p. 419) in qualitative research. Seidman (2006) suggest that building a rapport with the participant is necessary during the study. I developed an appropriate amity with each of the participants. I shared my own experience about the phenomena during the workshop. In the interviewed sections, I also discussed my experience about the phenomena when I saw it was necessary in order to allow the participants to feel more comfortable in sharing more details about their experiences.

In phenomenological analysis procedures, researchers keep their subjectivity in reserve throughout the study. This act, named 'Epoche process' by Moustakas (2004, was explained in detail in the third chapter. My other role was setting aside my prejudgment experience of the phenomena to gain answers to the research questions from the viewpoint of the co-researchers.

3.2.7 Validity Considerations

Validity of qualitative research refers to trustworthiness of the interpretation of the data. Validity of research ensures that the findings are valuable information obtained from the appropriate implementation of the research method. Generalisability is the extension of the research findings to the other situation which is being able to transfer the findings to the other situations or contexts. External validity addresses the ability of generalization of research finding to the other situation or people (Merriam, 1995). Qualitative research has generally weak property for the ability of generalization in terms of population, context, and time (Johnson, 1997). However, phenomenological research aimed and in-depth description of the experience of specific group. The findings may be extent for the obtaining reasons including providing detail information, selecting sample strategies, providing objectivity of researcher, and researchers avoiding presupposition (Cilesiz, 2008). Therefore, this study may

inform educational uses of digital storytelling in early childhood education in other similar context.

In this study, I took several measures to address validity. Firstly, I engaged the bracketing process (epoche) to avoid making personal judgments throughout the study (Ashworth, 1999). According to Kvale (1996) there is no absolute nonappearance of presupposition in bracketing process. There is an awareness and criticism of researchers's own presuppositions.

Secondly, I used member checks (Merriam, 1995) in which I asked the participants about their interview transcription to verify my understanding. After I transcribe the interviews, I sent the verbatim files as MS Word documents to the participants. They checked for the correction or deletion for the information which they gave during the interview. During the horizontalization step of data analyzing, I sent the horizons again to the participants as co-researchers after I cleaned the data which include the process of removing the irrelevant statement of the phenomenon. Co-researchers answered my e-mails as there is no need to change in what they said about the phenomenon during the interview. In this step the principle was every statement has equal value. I also sent the documents of horizons to my colleague who is PhD student at the same department. She checked the irrelevant horizons to ignore for the analyzing process. There were a few points she suggested to me and I add two more statements into horizons as relevant statement.

Thirdly, I added my subjectivity statement. In my subjectivity statement, I described my prejudgements and beliefs about digital storytelling in early childhood education. I wrote my subjectivity statement before data analyzing so that my judgement may change after analyzing process with deeply engaging the data of participants experiences. In addition, I present my subjectivity statement for the readers who can make sense of the findings with my background. Merriam (1995) claimed that subjectivity statement allows readers to find a position the findings into the context, and to understand how the data were construed. Therefore, this attempt gives the reader an opportunity to evaluate the study and reach his/her own conclusions. Fourthly, I presented the participants' background and detail description of the study to enable readers to understand how the data was interpreted.

Finally, I used an additional measure as triangulation to ensure validity. Two data collection methods including focus group interview and observation were used to verify the data. "Collecting data from two sources from the same participants enables the researcher to compare the information from both data sources and to eliminate any inconsistencies, which would indicate untruthful data" (Cilesiz, 2006, p. 60) I used observation records to verify participants' explanation about children's reaction. During the interview, participants retell of students' reaction to the activity. I gave quotations for what students reacted. In this part I checked the observation records in order to verify what exactly they said.

3.2.8 Limitations

One of the major limitations of this study involved selecting participants. Although I hoped to find participants who had experiences related to the phenomenon being researched (Kruger, 1988) and a connection to the purpose of the research (Schwandt, 1997). The participants consisted of teachers who attended the workshop and volunteered to continue in the study. Most of the teachers did not prefer attending the workshop because it took place over two weekend days, and there was a limited amount of time to master the digital storytelling process. Therefore, the participants for this study were selected among a limited number of teachers who agreed to complete the workshop.

The willingness of the participants to complete the digital storytelling workshop was the main limitation of this study. Most of the potential participants whom I reached were reluctant to learn to use new technology for professional development. Therefore, I had difficulties in reaching participants for this study. In this phenomenological study, in order to introduce participants to the phenomenon, I organized two separate workshops, because most of the participants did not continue the study after the first workshop. The teachers were unwilling to create the three digital stories which was the requirement of being a participant in this study. According to Creswell (2007), the sample of phenomenological research studies should be homogenous. In this study, the homogenous criterion is attending the digital storytelling workshop and volunteering to continue the study. There are no other criteria for providing homogeneity of the sample in the study.

CHAPTER 4

RESULTS

This chapter presents the results of the study. How to analyze the data is described in Chapter 3. The analysis process includes textural and structural descriptions for each of the five participants. After the creation of five textural and structural descriptions, a composite textural description and a composite structural description which represents the group as a whole created for synthesis describing the essence of the experience of educational uses of digital storytelling in kindergartens from the perspective of early childhood teachers. Finally, the elements of the essence are explained for conclusion.

4.1 Textural Description of Eren's Experiences

Eren's experience of the phenomenon of educational uses of digital storytelling in kindergarten classrooms started after attending the workshop with the other four co-researchers. He created four digital stories; one of them was created during the workshop, and the other three digital stories were created every week in the three weeks following the workshop. In Eren's individual textural descriptions, the creating of the digital story had four basic parts: creating a script, creating visual materials, creating soundtracks, and then combining the process of all three components as a digital story.

4.1.1 Students' Reactions of the Digital Story Created in the Workshop

Eren created a digital story in the workshop which is about a puppy. The main character of the story, Eren's 2 year-old son, had a problem going to bed by himself. In the digital story, he was telling a tale as a storyteller to his son about a puppy who

survived a whole day without his parents. Eren used his and his son's own pictures in the digital story. When the students watched the digital story in the classroom, the first reaction of students to it was being surprising because it was the first time they had seen pictures of their teacher's personal digital story (See Table 3 for Eren's first digital story "Beren's Bed" created in the workshop).

Table 3 The digital story of "Beren's Bed"



	
<p>Berenin Yatağı</p>	<p>Beren o gece yine uyumak istemiyordu. Odasında tek başına kalmak çok zor geliyordu. "Annemle babamla yatmak neden kötü anlamıyorum" diye düşünüyordu.</p>
<p>Beren's Bed</p>	<p><i>Again, Beren did not want to go to sleep by himself. It was difficult to be alone in his room. He thought that "I cannot understand why it is bad going to bed with my parents."</i></p>

Table 3 (Continued)

	
<p>Babasının yanına gitti ve sizinle uyumak istiyorum dedi. Babası peki gel o zaman sana bir öykü okuyayım dedi.</p>	<p>Kitabın parlak güzel resimleri vardı, sanki gerçek gibiydi. Babası okumaya başladı.</p>
<p><i>He went to his father and said that I wanna go to bed with you. OK lets read a tale said his father.</i></p>	<p><i>The book had bright and beautiful pictures like real. His father started to read.</i></p>
	
<p>Yavru köpek Bobi sabah gözlerini açtığında babasının yanında olmadığını görmüş ne yapacağını bilmeden dolaşmaya başlamış.</p>	<p>Bir yandan da baba baba diye bağırmış. Karnının acıktığını farketmiş o anda.</p>
<p><i>In the morning, when the little puppy, Bobi, open his eyes, he realized that his father was not with him. He started to walked around...</i></p>	<p><i>...and he screamed as "daddy!, daddy!" Then he realized that he was hungry.</i></p>

Table 3 (Continued)

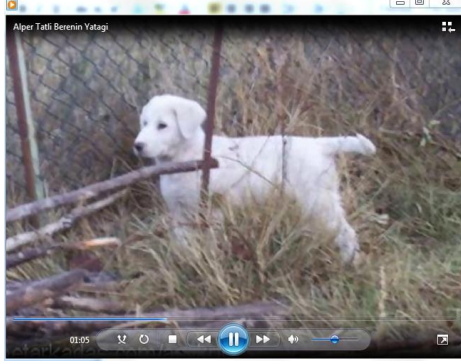
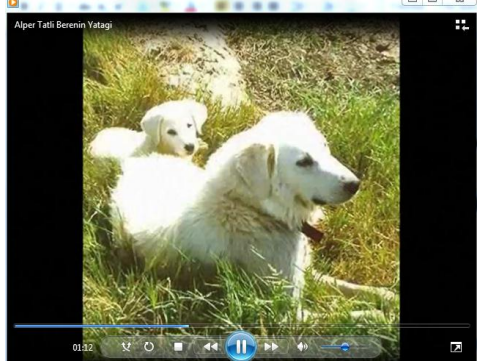
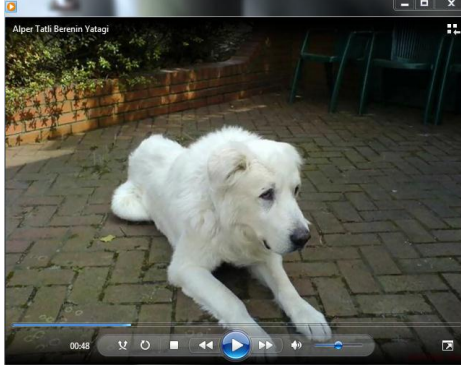
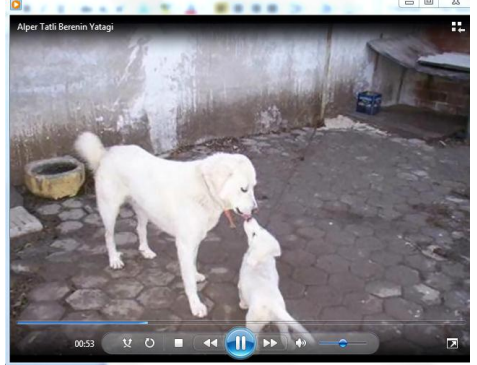
	
<p>Karnı doyduktan sonra biraz oyun oynamış, kirlenen patilerini kendisi temizlemek zorunda kalmış.</p>	<p>Hava kararmaya başlayınca babası çıkmış. Bobi kızgın kızgın bakarak “Nerdedin baba, sensiz ne yapacağımı hiç düşündün mü?” demiş.</p>
<p><i>Then he played by himself and had to have cleaned his patties by own.</i></p>	<p><i>When the day started to become dark, the father came. Bobi was angry and said: “where were you daddy? Have you ever thought what I did without you all day?”</i></p>
	
<p>Babasını aramayı bırakıp yiyecek bulması gerektiğini düşünmüş ama nasıl yapacağını bilmiyormuş.</p>	<p>Bu güne kadar yemeğini hep babası vermiş. Babam olsa peynir yememi söylerdi demiş ve bulduğu bir kaç parça peyniri yemiş.</p>
<p><i>He thought that he should have found some food and have stopped to search his father.</i></p>	<p><i>Up to now, his father has provided his food. If my dad was here, he said that I should have eaten cheese. Then he found some piece of cheese and ate it.</i></p>

Table 3 (Continued)

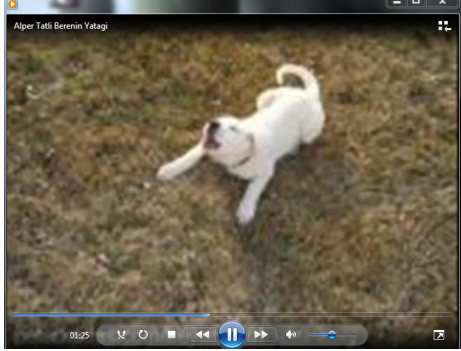

	
<p>Babası Bobi'yi öpmüş ve “Seni uzaktan izliyordum, seninle gurur duydum” demiş.</p>	<p>Bobi anlayamamış. Babası devam etmiş. Ben yanından kalktım ve sen uyumaya devam ettin. Daha sonra karnını doyurdun, oyun oynadın ve temizlendin. Bunları kendin yaptığında neler hissettin?</p>
<p><i>Then the father kissed Bobi and said: “I was followed you and proud of you”</i></p>	<p><i>Bobi did not understand. The father kept explaining. When I woke up, you were sleeping. After you woke up, you ate something, played and cleaned yourself. What did you feel when you did all of the things by yourself?</i></p>

Table 3 (Continued)

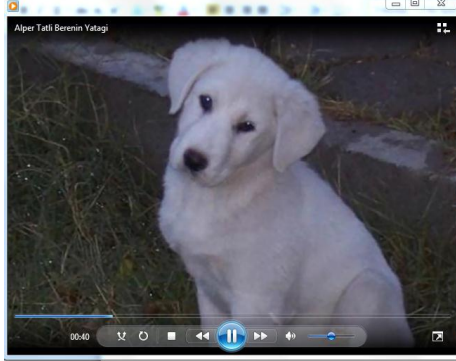
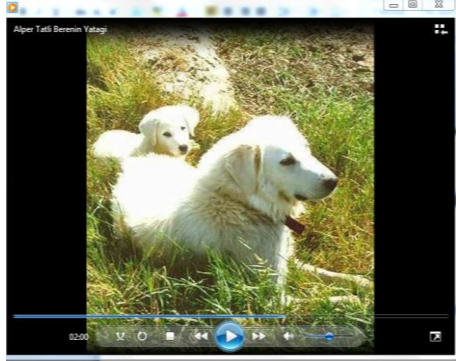


	
<p>Bobi, “Büyümüş gibi” diye yanıtlamış babasını. İşte o anda anlamış Bobi babasının neden bütün gün uzakta durduğunu. “Evet baba herşeyi seninle yapmak çok güzel ama yalnız kalabildiğimi görmek de çok güzel.”</p>	<p>Artık kendi işlerimi kendim yapacağım, senin her zaman yanımda olduğumu biliyorum. Babası da Bobi’ye: “Anneler çocuklarının her ihtiyacı olduğunda onların yakınında olur, babalar da öyle” demiş.</p>
<p><i>Bobi answered “like an adult!” Then he understood why his father was going away all day. “Yes daddy, it is good to do everything with you, but it is also good to see be able to be alone.</i></p>	<p><i>Up to now, I will do my workd by myself. I know you are always with me. Than the father said that the mothers are always near to theirchildren when they need something, the fathers are too.</i></p>
	
<p>Ve böylece öykü sona ermiş. ... Babası kitabı kapattı, Beren’e sarıldı ve kitabı beğendin mi dedi. Beren evet babacığım, sanırım ben de artık büyüyorum dedi...</p>	<p>Ve uyumak için yatağına gitti. Hâlâ kendi başına yatmaktan biraz korkuyordu.</p>
<p><i>And the tale was over. The father closed the book, gave a hug to Beren, and asked “Did you like the tale?” Beren said “Yes dady, I guess I am grooving up too!”...</i></p>	<p><i>And he went to bed. He was still a little bit scared to go to bed by himself.</i></p>

Table 3 (Continued)

	
<p>Sonra kendi kendine şöyle düşündü: Anneler ve babalar çocukların ihtiyacı olduğunda hep yakınlarında olurlar. Göreceği güzel rüyaları düşünerek uykuya daldı.</p>	
<p><i>Then, he thought that parents are always near to their children. He felt a sleep as thinking his fine dreams which he would have.</i></p>	

Eren created the first story based on a problem-based approach. Eren had a student having a special problem that the student wanted to go to bed with his mother instead of going to bed by himself. The teacher tried to solve his problem by collaborating with his parents and a school psychologist. They have many consultations with him about his problem. However, they did not solve that problem before the digital storytelling activity. Eren stated that he had not been talking about the student's problem with him and his parents for a few months before and after viewing the digital story. After they watched the digital story the student's parents came to inform Eren that the student wanted to go to bed by himself at night in the week. The mother said, "Did you have any different activity these days?" This is evidence showing that teachers may improve using with digital storytelling students' learning in *affective domain*.

After watching the story, the teacher asked the students if they wanted to create their story with their own picture. Afterwards students were being excited and created some artwork about the teacher's given task. The teacher gave the students the task

to draw pictures about occupations. Before the activity, they already mentioned the concept of occupation in the curriculum. The teacher complemented the students' handicraft, and he implied that they created their best pictures that they had ever had. After the teacher took the artwork, students wanted to more so they could draw again (*high motivation for attending the activity*). The students saw the product which they made by themselves. They watched themselves on the screen and enjoyed the whole process. The teacher thought that these activities helped to improve *students' self-confidence*. The teacher stated that in order to use this method in his classroom, he needs more experience and practice. This activity will push him for improving his professional development (*Contribution to the teacher's professional development*).

4.1.2 The Digital Story of “Our Story”, the Students Created the Script in the Classroom

After his initial experiences of the phenomenon started with the workshop, he created a digital story A with his students in the classroom. In the first storytelling activity, students had engaged in the digital storytelling activity as storytellers. When he started to create their first students scripted digital story, he did not have a preliminary preparation and informed the students about the activity. He started giving tasks to students to draw pictures of whatever they wanted. He explained the creating process of the first digital storytelling experience, creating the script, voice recording, creating visual materials, and combining these in a digital story. (See the Table 4 for the digital story ‘*Our Story*’)

Table 4 The digital story of ‘Our Story’





	
<p>Bizim Hikayemiz</p>	<p>Eylül, mor renkli elbiseler giymeyi çok seviyordu. Bütün gün çalışmıştı ve yorulmuştu. Tatile gitmek istiyordu. Ama yanında en sevdiği arkadaşları Yağmur ve Burak olmadan gitmek istemiyordu.</p>
<p>Our Story</p>	<p><i>Eylul likes to wear clothes which have purple colors. She worked all day and was tired. She would like to go to vacation but she does not liked to go without her best friends Yagmur and Burak.</i></p>
	
<p>Çünkü Yağmur ve Burak en iyi arkadaşlarıydı. Hepsi tatile gitmek istiyorlardı ama paraları yoktu.</p>	<p>Anneları ve babalarından para istemeyi düşündüler. Gittiler, annelerinden ve babalarından para istediler, onlar da verdi.</p>
<p><i>Because Yagmur and Burak were her best friends. They liked to go to vacation together but they did not have money.</i></p>	<p><i>They thought that they can ask money to their parents. They asked money from their moms and dads and got the money from them.</i></p>

Table 4 (Continued)



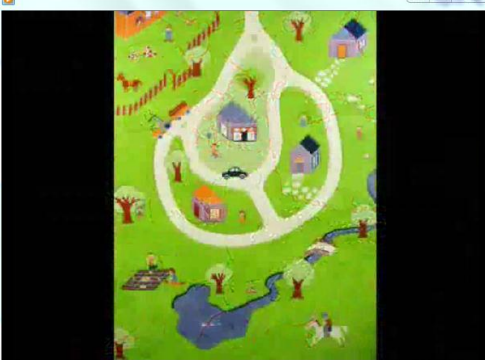

	
<p>Ama Eylül'ün anne ve babası para veremedi. Çünkü onların parası yoktu. Eylül para istemek için köydeki akrabası Efe'ye gitti. Efe'nin köyde çok büyük bir çiftliği vardı.</p>	<p>Çiftlikte karınca ordusu besliyordu. Kuş, kartal ve dinazor da besliyordu. Paraya ihtiyacı olduğu zaman beslediği hayvanlardan bir kaçını satıyordu. Bu hayvanlardan kuş, domuz ve jaguarı sattı.</p>
<p><i>But Eylül's parents could not give the money. Because they did not have any money. Eylül visited Efe who was her uncle and living in the farm. Efe had a big ranch.</i></p>	<p><i>He was feeding a plenty of ant in the farm. He was also feeding bird, eagle and dinosaur. When he needs money, he was selling some of them. He sold bird, pig and jaguar.</i></p>
	
<p>Domuzu 66'ya sattı. Kuşu 7, dinazoru 77, karıncanın 4 tanesini 1'e sattı.</p>	<p>Eylül amcasının yanına gitti ve ona dedi ki: "Efe amca tatile gitmek istiyorum para verir misin? Param olunca sana borcumu öderim."</p>
<p><i>He sold the pig for 66\$, the bird for 2\$, the dinosaur for 77\$, and four ants for 1\$.</i></p>	<p><i>Eylül went to his uncle and said that "Uncle Efe, could you give me some money? I will give it back when I have "</i></p>

Table 4 (Continued)


	
<p>Demek tatile gitmek istiyorsun, sana borç veririm ama bir şartım var...</p>	<p>“...Bana tatile gittiğin yerden köpek balığı getireceksin. Köpekbalığı istiyorum.” Gerçekten de tatile gittikleri yerde çok köpek balığı vardı.</p>
<p><i>Efe said that “So, you would like to go to vocation. I can give you money, but I have a condition...”</i></p>	<p><i>“...you will bring a shark to me from the vacation. I liked to a shark.” Honestly, there were many sharks at the place where they would go.</i></p>
	
<p>Eylül parayı aldı, bu güzel haberi hemen arkadaşlarına vermek istiyordu.</p>	<p>Uçağa bindi ve arkadaşlarının yanına gitti. Yağmur ve Burak onu heyecanla karşıladılar.</p>
<p><i>Eylul took the money. She liked to give that good news to her friends.</i></p>	<p><i>She took the plane and went to her friends. Yagmur and Burak met her excitedly.</i></p>

Table 4 (Continued)

	
<p>“Bilin bakalım ne oldu?” dedi Eylül. “Efe bana borç verdi” dedi gülümseyerek. “Yuhuu tatile gidiyorum, çok sevindim, borç para buldum.”</p>	<p>Arkadaşları Berfin “Ben sizi götürürüm arabamla limana kadar” dedi. “Ben sizi götürürüm limana kadar arkadaşlar, arabam var, ben sizi götürürüm arkadaşlar.”</p>
<p><i>“Guess what happened.” said Eylül as smiling. “Efe gave me some money. Yuhuuu I am going to vacation, I am happy that I found money.”</i></p>	<p><i>Their friends Berfin said “I can ride you to harbor.” “Hey my friends, I have car and I can ride you to harbor.”</i></p>
	
<p>Bu birbirini çok seven arkadaşlar Berfin’in arabasına bindiler yol boyunca çobanlarla çeşitli hayvanlarla karşılaştılar.</p>	<p>Yolda, jaguarlar saldırdı. Onlardan kaçarak kurtuldular.</p>
<p><i>These friends who love each other much ride on Berfin’s car and they saw many sheperds and different animals throughout the way.</i></p>	<p><i>Jaguars attacked them on the way. They survived them by runaway.</i></p>

Table 4 (Continued)





	
<p>Nehrin kıyısında bir gemi buldular. Gemiye bindiler ve tatil yerine gittiler.</p>	<p>Bol bol film izlediler. Gemide sıkıldıkları için film izlediler. Filmde bir erkek vardı, roket kostümü giymişti bir de kız vardı. Sarışındı. Kız erkeği takip ediyordu, çünkü ona aşık olmuştu.</p> <p>Sonra adam eldiven giymişti, adam çok güzeldi ama kız çok çirkindi. Onun için kaçıyordu adam eski nişanlısından. Sonra film bitmeden uyuyakaldılar.</p>
<p><i>They found a ship near the river. They got the ship on and went to the vacation place.</i></p>	<p><i>They watch movie during the travel because they bored. There were a boy who had rocket costume and a girl who was blonde in the movie. The girl was chasing the man because she was fall in love.</i></p> <p><i>Then the boy had gloves and beautiful, but the girl was ugly so that the boy was run of the girl who was his ex-fiancee. Then they felt to sleep before the movie ended.</i></p>

Table 4 (Continued)

	
<p>Gözlerini açtıklarında tatil yerine gelmişlerdi çok güzel bir tatil yeriydi. Kaydıraklar vardı otelde, havuz vardı.</p>	<p>Burada herşey çok güzeldi ve burada çok eğlendiler. Hikayemiz de burada bitti.</p>
<p><i>When they woke up, they were at the hotel. There were swimming pool and water park at the hotel.</i></p>	<p><i>Everything was perfect and they had to much fun. Our story is over.</i></p>
	

The process began with the students drawing a picture from their own imaginations. After they created the pictures, Eren exhibited all of them on the desk. The students reviewed all of the pictures, and he chose one of them. (*Initial point of the story*) He asked students questions about the chosen picture, such as ‘Who is the girl in the picture? What is her name? What is she doing? What is she like?’ (*Asking students to question and guiding the questions with their own picture*) They named the girl in the picture Eylül because the picture belonged to the student named Eylül. The students

replied “Eylul is tired, because she studied too much.” This picture was in the first part of the story. After that they selected the second pictures and continued the story with different questions. He asked the students again, “What does Eylul want to do?” Students replied “She wants to go on a vacation but she has no money.” (*Teachers Guiding*). Then, they passed the other pictures until they completed the story. Students gave answers in the form of expressing their own thoughts and imagination. Eren concluded “We created our first story with my students in a spontaneous way.”

During the activity, he recorded all of the students’ discussion, then the teacher revised and finished the script. They passed the second process, which is sound recording. The teachers identified the roles in the story. Each role was vocalized by one child. He stated “I select the most willing students to make a soundtrack.” (*Students selecting strategies*) The five children and the teachers created the soundtrack of the story in the classroom, while the other students played in the garden with the classroom assistant (*Students inequality in the activity*). Eren took digital pictures of students’ artwork in order to create the visual materials for creating digital story process. Finally, he created the digital story by using the soundtracks of story and students’ artworks in digital format. He used the software MS Movie Maker to create the digital story.

4.1.3 Students’ Reaction to the Digital Story “Our Story”

The students selected several artworks from the total number created in the classroom; and the teacher used these selected works to create the first digital story. The students whose artworks were not included in the story felt sad about that situation. He relaxed them by saying “I will use your pictures for the other stories” Therefore, students had *unequal opportunity* in the activity. During the watching the story section, some of the students whose artworks were including in the story told “I created it, it is my picture, I did it.” When the teacher warned student for being quiet, they told themselves in a whisper. This is evidence showing that students improved their self-confidence by using digital storytelling in the classroom.

Students enjoyed working in the independents studies, such as drawing free pictures, playing around independently. They did not like authority. They enjoyed too much in

this activity since it was discipline free. In this activity, he did not inform the children about the story when they were drawing pictures. Some students had a very slapdash piece of artwork. While some students worked very well. He thought that it might be different if they knew why they were drawing pictures.

Students had more attention watching movie on the screen than the reading a book.

4.1.4 The Digital Story “*The Forest Midgets and the Ground Midgets*”, the Teacher Created the Script in the Classroom

He wrote the script of the next digital story by himself. His initial point of the story was the carrot (*The first idea for the story*). He said “I thought what we can do is a classroom activity with the materials we already have in the classroom.” Then, he decided that they can make a big carrot model from carton paper as a classroom activity in the classroom (*integrating the digital storytelling activity to the handcraft activity in the curriculum*). He wrote the script from his own imagination at his home. The day after, he read the story to the children in the classroom (See Table 5 for the table of the digital story of “The Forest Midgets and the Ground Midgets”). “*Firstly they made a huge carrot model from paper carton as a handcraft activity in the classroom.*” (*Hand craft activity- engaging the story in the classroom activity*) Then, they dramatized the story. During the dramatization, he took digital pictures by camera in order to create the visual materials for the second story. He stated that “all materials which are used in the dramatization of the story were real and we used different part of the school such as garden, performance hall, and fitting room.” (*using real material for realistic approach*) During the sound recording, children changed the script, they expressed in their own words. In that way, students contributed to the story (*Students engagement*). In the final process he created the digital format of the story using MS Movie Maker.

Table 5 The digital story of “*The Forest Midgets and the Ground Midgets*”

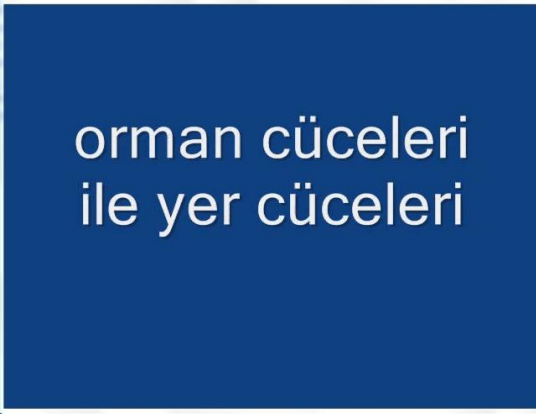

	
<p>Orman Cüceleri ile Yer Cüceleri</p>	<p>Orman cüceleri çok güzel bir ormanda yaşardı. Bütün gün koşar, eğlenir ve oyunlar oynarlardı. Orman cüceleri, gene bir gün oynamak için ormanda gezintiye çıktılar. Kelebeklerle oynadılar, tavşanlarla koştular, sincapların peşinden ağaçlara tırmandılar.</p>
<p><i>The Forest Midgets and the Ground Midgets</i></p>	<p><i>Forest midgets were living in a beautiful forest. During the day, they run, had fun and played together. One day like the other days, the forest midgets went for plating in the forest. They played with butterflies, run with rabbits, and climbed on the trees with chipmunks.</i></p>

Table 5 (Continued)

	
<p>Neşe içinde oyun oynarlarken Kemal'in bağırdığını duydular.</p> <ul style="list-style-type: none">- Heey arkadaşlar, gelin bakın ne buldum.	<p>Hepsi koşarak Kemal'in yanına geldi. Kemal ormanda dev bir havuç bulmuştu. Hiç bu kadar büyük bir havuç görmemişlerdi. Hep beraber havucu çıkarmaya çalıştılar.</p>
<p><i>When they were playing with having fun, they heard Kemal</i></p> <ul style="list-style-type: none">- <i>Yeah! Come here! What I found!</i>	<p><i>All of the midget came near to Kemal . Kemal had found a huge carrot. They had never seen such a huge carrot. They tried to dig and take out the carrot together.</i></p>

Table 5 (Continued)


	
<p>Uzun süre bu dev gibi havucu çıkarmak için uğraştılar ve sonunda havucu çıkarmayı başardılar. Havucun çıktığı yerde kocaman bir çukur oluşmuştu. Çukura çok yaklaşan Sude ve Kayra biraz dikkatli bakınca çukurda bir merdiven olduğunu gördüler.</p> <ul style="list-style-type: none">- Arkadaşlar burada bir merdiven var. Haydi inelim çok merak ettik.- Ne var acaba aşağıda?	<p>Onlar merak etti ama Yağmur, Deniz ve Fırat biraz korkmuştu.</p> <ul style="list-style-type: none">- Hayır inmeyelim, orda yırtıcı hayvanlar olabilir.
<p><i>They tried a long time for digging the carrot and finally they had achieved. A huge hole was formed on the place where the carrot was taken out. Sude and Kayra who were very closed to the hole saw stairs.</i></p> <ul style="list-style-type: none">- <i>Heey, there are stairs in the hole! Let's go inside, we wonder what there are.</i>	<p><i>The midgets were curious but Yagmur, Deniz, and Fırat a little bit scared.</i></p> <ul style="list-style-type: none">- <i>Noo! Do not go inside of the hole, there might be dangerous animals.</i>

Table 5 (Continued)

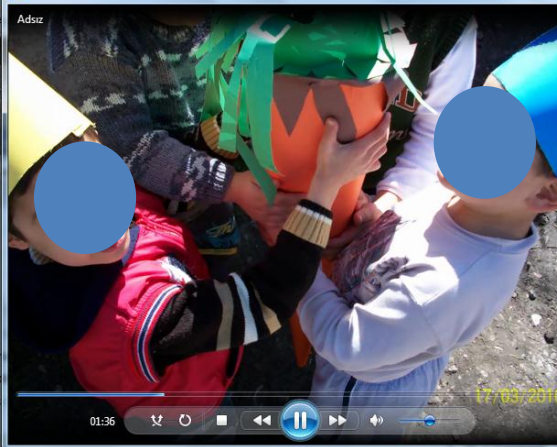

	
<p>Merdivenlerden aşağıya baktılar, karanlıktı. Mert de bu durumun tehlikeli olabileceğini düşünüyordu.</p>	<p>Diğerleri inelim inelim çok merak ettik deyince önce Simge inmeye başladı merdivenlerden ve sonra diğerleri.</p> <p>Yavaş yavaş karanlık tünelden ilerlemeye başladılar.</p>
<p><i>They looked at the stairs and it was dark. Mert also thought that it would be dangerous.</i></p>	<p><i>When they are saying that please please, let us go down stair, we really wonder, Simge first started to go down stairs. They they started to go dark tunnel together.</i></p>

Table 5 (Continued)

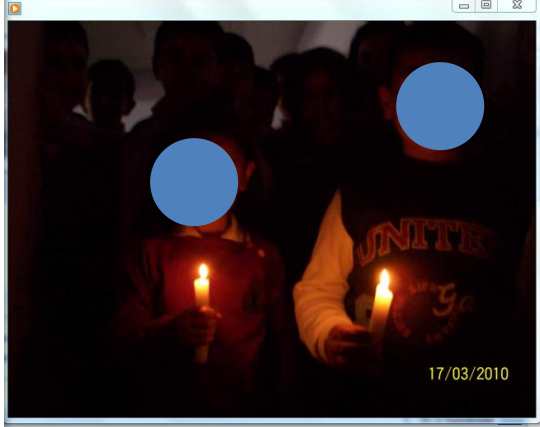


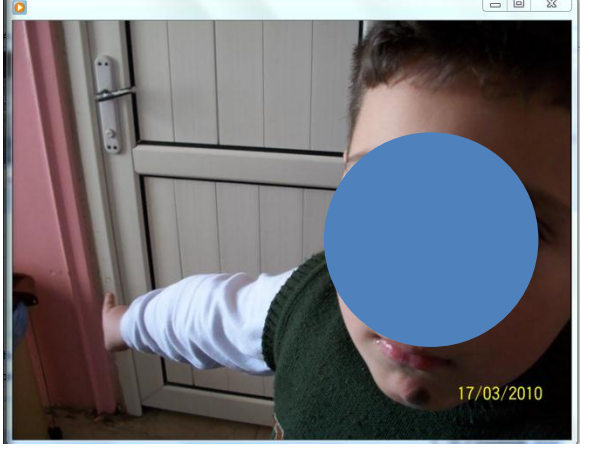
	
<p>Mumları yaktılar ve ilerlemeye devam ettiler. Duvarda mumlar vardı.</p>	<p>Biraz daha gidince bazı sesler duydular. Özgün arkadaşlarını uyardı. “Sessiz olun, galiba burada birileri var.”</p>
<p><i>They fired the candle and kept going. There were candles on the wall.</i></p>	<p><i>After that, they heard some noises. Ozgun warned her friends. “Please keep silent, there might be somebody.”</i></p>
	
<p>Boran ve Burak fazlaca gürültü yaptıklarını farkettiler. “Tamam tamam sessiz oluyoruz.”</p>	<p>Boran ve Burak henüz sözünü bitirmişti ki, Efe'nin telaşlı sesini duydular. “Aa bakın, burada bir kapı var.”</p>
<p><i>Boran and Burak realized that they make too much noise. “Ok, ok. We will be silent!”</i></p>	<p><i>Then Burak and Boran heard Efe who was excited. “Look! There is a door”.</i></p>

Table 5 (Continued)



	
<p>Gerçektende tüneli kapatan kocaman bir kapıydı, bu kapıyı hafifçe araladılar.</p>	<p>Küçük odada 6 yer cücesi vardı ve çok korkmuş gibiydiler. Yer cücelerinden Cihan, arkadaşları ile konuşuyordu, çok heyecanlıydı.</p>
<p><i>Indeed, that was a big door which closed the tunnel.</i></p>	<p><i>There were 6 ground midgets who look like very scared. One on them, Cihan were talking his friends.</i></p>
	
<p>Hey arkadaşlar bizim gizli yerimizi bulmuşlar ve sihirli havucumuzu çıkartmaya çalışıyorlar. Ben de gizli kapıdan geldim. Bizi bulurlarsa mahvoluruz.</p>	<p>Meğer orman cüceleri yukarıda havucu çıkartmaya çalışırken, yer cücelerinden Cihan onları görmüş ve başka bir gizli tünelden arkadaşlarının yanına gelmişti.</p>
<p><i>Hey! They found our secret place and try to take out our magic carrot. I came from the secret door. If they found us, we will be perished.</i></p>	<p><i>When the forest midget were trying to dig the carrot out, Cihan who is one of the ground midget saw them and went to his friends from a secret tunnel.</i></p>

Table 5 (Continued)


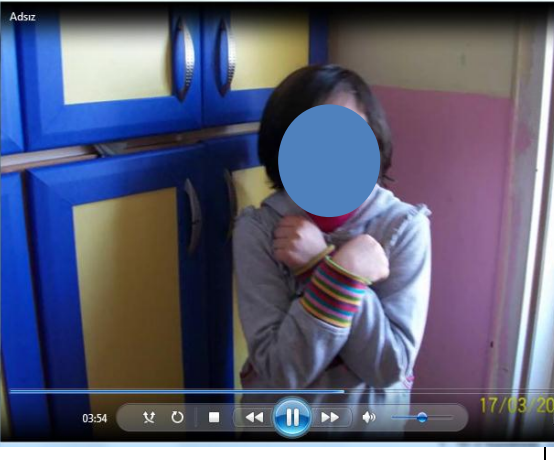


	
<p>Yer cüceleri de bu davetsiz misafirlerden korkmuşlardı.</p>	<p>Berfin, kendilerine zarar vermelerinden korkuyordu. “Ben çok korkuyorum, ya bizim gizli yerimizi bulurlarsa, ya bize zarar verirlerse.”</p>
<p><i>And the ground midgets were scared from those unexpected guests.</i></p>	<p><i>Berfin was also scared that they might be hurt them “I am scared of them as if they find our secret place and hurt us.”</i></p>
	
<p>- Merak etme sihirli havucu kimse yerinden çıkaramaz. Sihirli havuç çok güçlü ve sağlam, onu sökemezler.</p>	<p>Aralarında tartışmaya başladılar. “Ya bizi bulurlarsa,” “Ya buraya gelirlerse,” “Ya bize zarar verirlerse.”</p>
<p>- <i>Do not be scared. Nobody can dig the magic carrot out. It is very strong and hardy.</i></p>	<p><i>Then they started to discuss. “What if they find us..!” “What if they come here...!” “What if they hurt us...!”</i></p>




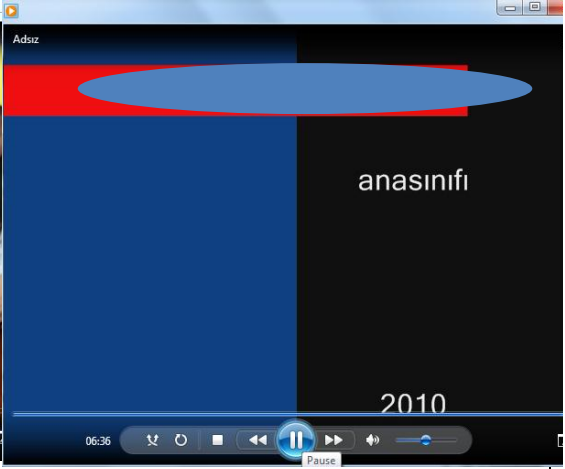
Table 5 (Continued)

	
<p>“Ya gizli sığınağımızı bulurlarsa!” “Ya bizi yerlerse!” “Gelemezler gelemezler!” “Ya gelirlerse!”</p>	<p>Efe birden kapıyı sonuna kadar açmış ve “Heey biz kimseye saldırmayız. Özür dileriz, burasının sizin eviniz olduğunu bilmiyorduk.”</p>
<p><i>“What if they find our secret place!” “What if they eat us!” “They can never come!” “What if they come!”</i></p>	<p><i>Efe opened the door and...”Heey! We never attack to somebody. We are sorry. We did not know that here is your home.”</i></p>
	
<p>“Biz havucu sökünce bir merdiven çıktı ve biz de merak ettik, indik. Burasının sizin eviniz olduğunu bilmiyorduk.”</p>	<p>Gökçe, Yağmur ve Eylül korkudan donup kalmıştı.“Hayır yalan söylüyor bize saldırarak kaçalım.”</p>
<p><i>When we digged the carrot out, we find stairs. We wonder and went down.</i></p>	<p><i>Gokce and Eylul had chilled of fear...”No he is a liar. He will attack us.”</i></p>

Table 5 (Continued)

 <p>17/03/2010</p>	 <p>17/03/2010</p>
<p>“Biz size zarar vermeyiz, lütfen kaçmayın! Demiş orman cüceleri.”</p>	<p>Orman cücelerinin onlara zarar vermeyeceğini anlayınca birer birer çıkmışlar saklandıkları yerden yer cüceleri ve tekrar özür dilemiş orman cüceleri.</p>
<p><i>The forest midgests said that “We never hurt you, please do not run off!”</i></p>	<p><i>When the ground midgest understood that they do not do anything bad, they start to come out of the place where they were hiding. Forest midgests were again said sorry.</i></p>
 <p>17/03/2010</p>	 <p>17/03/2010</p>
<p>Gökçe cesaretini toplamış ve orman cücelerine dönmüş: “Biz ormandan çok korkuyoruz o yüzden yer altında yaşıyoruz.”</p> <p><i>Gökçe saild to forest midgest bravely: “Because we are very afraid of the forest, we are living under the ground.”</i></p>	<p>“Gerçekten bize zarar vermeyecek misiniz?”</p> <p><i>“Will not you really hurt us?”</i></p>

Table 5 (Continued)

	
<p>Orman cüceleri de korkacak birşey yok, bizim ormanımız çok güzeldir demişler.</p>	<p>Orman cüceleri ve yer cüceleri birbirlerine sarılmışlar kucaklaşmışlar.</p>
<p><i>Forest midgets said that "There is nothing for fear. Our forest is beautiful and lovely place."</i></p>	<p><i>Forest midgets and ground midgets hugged each other.</i></p>
	
<p>Birbirlerini çok sevmişler, o günden sonra hep beraberce oyunlar oynamışlar. Bazen tünele inmişler, bazen de ormanda oynamışlar. Cüceler ormanda çok mutlu olmuşlar.</p> <p><i>After that day, they loved each other and played together forever. Sometimes, they went down for tunnel, and sometimes they went up for the forest.</i></p>	

4.1.5 Students' Reactions to the Digital Story "The Forest Midgets and the Ground Midgets"

He used the creative process in his lesson plan in order to achieve objectives about express feelings appropriately, such as mad, scared, and sad (*Multi objectives*). In the digital story B, he explained to students that they will dramatize the story. While they expressed their feeling about the event, he took their digital images in order to create visual material for the digital story. They expressed appropriately their feelings and reached the objectives which were set by the teacher.

After the storytelling activity, the students went their home happily, and the next day they were more excited when they came back to school. Students are usually tired of doing the same activity every day, such as cutting and pasting papers, and listening a storybook. In this activity they did something different than usual. They acted out different characters in the story, such as a clown, and a midget. They played around the entire school and not just the classroom. Although they enjoyed the activity, they made too much noise while playing. The students reflected on their own situation when they were acting out the story, and became aware of the fact that they were being too noisy. One of the students after realizing the situation wrote into the script the following message: "then they [characters] realized that they made too much noise," and one of them said "shush! Do not make noise!" (*Message created by students' self-reflection*)

4.1.6 The Digital Story "Puppet Forest", the Students Created the Script and Performed in the Classroom

In Eren's final digital story, the students actively engaged to the digital storytelling activity both as the storytellers and the performers. He stated that "I did not give any direction to the students I just asked them what they want to do for this storytelling activity" (*Students gain experience*). While one of the students selected the topic as nature, the other one wanted to use the puppets. The teacher advised that "Let's do it together" (*the importance of students' thoughts*). Before starting the storytelling

activity, Eren tried to take all of the students' opinion. He allowed the students to express themselves without any interruption.

After he discussed with the students about the topic of the story, he exhibited all of the hand-puppets on the desk. There were enough hand-puppets for each student to take one and each students took one (*Enough equipment*). The teacher then gave the task to the students "think about your puppet, if they can speak what would they want to say?" After each student selected one of the puppets, he started with the question "Who is your puppet? What is your puppet's job?" Students subsequently used the hand-puppets when they were speaking. While students were discussing their ideas and playing with the puppets, the teacher spontaneously recorded the script about the story. The story theme created simultaneously by the students was about the feeding healthy. The scripts belonged to the students except for the teacher's little interruption. He stated he interrupted as "*children gave the deductive message in the story by themselves, but they decided that the characters should be died in the story because they preferred the unhealthy foods rather than healthy and that they deserve to die as a punishment for that.*" He interfered the story and said "*maybe it is better if they would be sick instead of pass away.*" He implied that this situation can be explained by children's developmental level of sense of justice in that age (See Table 6 for the digital story of "Puppet Forest").

After the students completed the story by using the puppets, the teacher then read them the final version of the script. The students re-acted out the story in order to create the visual materials. In that process, Eren selected five most willing students to dramatize the first part of the story. When they were dramatizing, he recorded all of the play on his video camera. The other students were outside with my classroom assistant to play. When the first part was finished, the students called the other five students for keeping the video recording." In this story, the teachers gave equal participation to each student, meaning that each student had a role in the digital story.

Table 6 The digital story of “*Puppet Forest*”


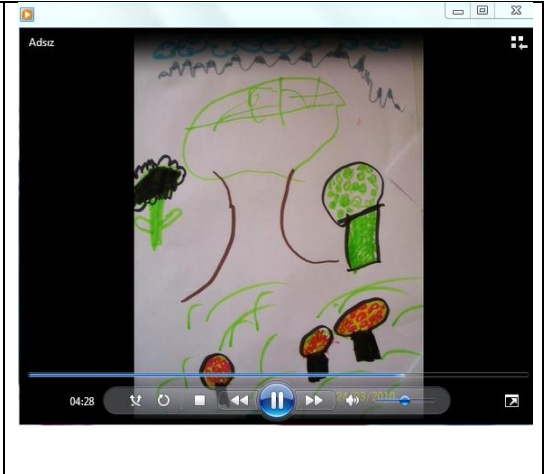
	
<p>Kukla Ormanı</p>	<p>Bu güzel ormanın adı kukla ormanı. Kukla ormanında bütün kuklalar beraberce mutluluk içinde yaşıyormuş. Aşçıbaşının güzel sebze yemeklerini, onları hastalıklardan koruyan çorbalarını afiyetle içiyorlarmış.</p>
<p>Puppet Forest</p>	<p><i>The name of this beautiful forest is puppet forest. All puppets live happily in this forest. They eat healthy foods which are cooked by the chef.</i></p>

Table 6 (Continued)


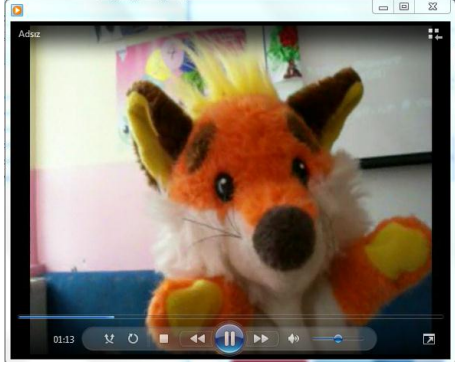
	
<p>Ama birgün kirpi ve tilki açıcıbaşının sebze yemeğini beğenmemiş. Bakalım kukla ormanında neler yaşanmış.</p>	<p>Bugün ne güzel bir gün, ben bu ormanın açıcısıyım çok güzel yemekler yaptım ho ho hooo! Çorba yaptım, domates corbası yaptım, ıspanak yaptım, brokoli yaptım.</p>
<p><i>However, one day hedgehog and fox did not like the vegetable meal that was cooked by the chef. Let's look what happened in the puppet forest.</i></p>	<p><i>Today is what a beautiful day. I am a chef of this forest and I cooked delicious food. Ha ha haaa! I cooked tomatoes soup, spinach and broccoli.</i></p>
	
<p>“Aşçıbaşı, bu yemekleri sevmem, yemem ben bu yemekleri.”</p>	<p>“Bende sevmem bu yemekleri.” “Gidelim o zaman, ormanda yiyecek bulalım.”</p>
<p><i>“Hey Chef! I do not like these foods, and I do not eat them.”</i></p>	<p><i>“I do not like these foods either.” “Let's go and find good foods in the forest.”</i></p>

Table 6 (Continued)





	
<p>Ormanda çok güzel renkleri olan kocaman ve lezzetli mantarlar yetişmiş. Ama bunların bazıları zehirliymiş. Mantarların zehirli olup olmadığını sadece aşçıbaşı bilirmiş. Tilki ile kirpi ormanda bu mantarları görmüşler ve</p>	<p>- Ooo ormanda çok güzel mantarlar var. AA bak, çok güzel renkliler yiyelim hadi. Ham ham ham haamm.</p>
<p><i>There were mushrooms which were big, delicious and had beautiful colors. But some of them had poison and only chef knew which of ones. Hedgehog and fox saw those mushrooms and...</i></p>	<p>- <i>Look at the mushrooms, they look yummy and have beautiful color!</i> - <i>Let's eat! Yumm yum yummm.</i></p>
	
<p>Tilki ile kirpi mantarları tıkabasa yemişler. O kadar çok yemişler ki ikisininde karnı şişmiş. Biraz dinlendikten sonra eve gitmek için yola koyulmuşlar.</p>	<p>- Uff! Çok yedik karnımız şiştii!</p>
<p><i>Hedgehog and fox ate too much mushrooms. They had stomach ache because they were very full. After they had some rest, they left to go home back.</i></p>	<p><i>Uff! We ate a lot, we are very full.</i></p>

Table 6 (Continued)




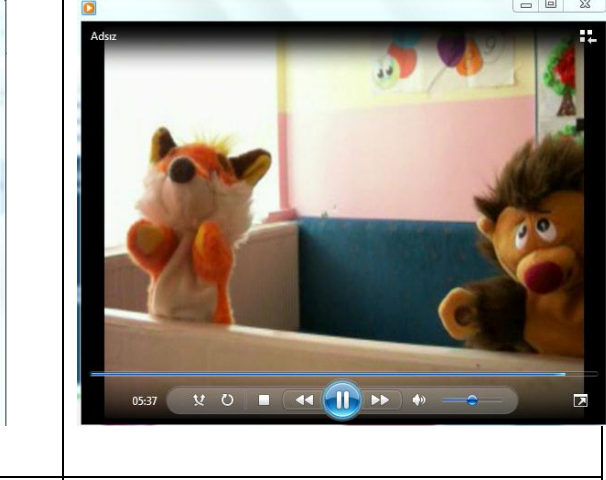

	
<p>Ormanda yürürlerken gri tavşan, tilki ile kirpiyi görmüş ve aniden önlerine çıkmış. Tavşan: Ne oldu size? Kirpi: Mantar yedik. Tilki: Çok mantar yedik. Karnım çok ağrıdı.</p>	<p>Tavşan: Hemen sizi ben hastaneye götürüyüm. Kimse yok mu? Koşun koşun, bizim kirpi ile tilki mantar yemişler.</p>
<p><i>While they were walking in the forest, the grey rabbit run them across.</i> <i>The rabbit: What happened to you?</i> <i>The hedgehog: We ate mushroom.</i> <i>The fox: We ate a lot! I have a terrible stomach ache.</i></p>	<p><i>The rabbit: I should take you hospital. Is nobody near here? Run run, our hedgehog and fox ate mushrooms.</i></p>

Table 6 (Continued)

	
<p>Ne olmuş duydunuz mu? Tilki ile kirpi zehirli mantar yemişler.</p> <p>Ne olmuş, ne olmuuuş?</p> <p>Tilki ile kirpi ormanda zehirli mantal yemiş, hasta olmuşlar.</p> <p>Aaa çok üzüldüm!</p> <p>Ama onlarda yememiş aşçıbaşının yemeklerinden beğenmemişler.</p>	<p>Tilki ile kirpi hastanede biraz yattıktan sonra iyileşmiş ve kukla ormanına geri dönmüşler.</p> <p>Aşçıbaşı karşılamış onları...</p>
<p><i>Did you hear that the hedgehog and the fox ate poisoned mushroom?</i></p> <p><i>What happened, what happened?</i></p> <p><i>The hedgehog and the fox ate poisoned mushroom and became sick.</i></p> <p><i>Aaa, I am sorry, but they did not eat and like the chef's food.</i></p>	<p><i>After the hedgehog and the fox stayed a couple days in the hospital, they recovered and went back to forest.</i></p> <p><i>The chef met them...</i></p>

Table 6 (Continued)

	
<p>Aşçıbaşı: Geçmiş olsun tilki kardeş.</p> <p>Tilki: Teşekkür ederim aşçıbaşı.</p> <p>Aşçıbaşı: Benim sağlıklı yemeklerimi yemezseniz işte böyle olur. Benim yemeklerim çok sağlıklıdır.</p>	<p>Tilki: Bir daha hiç yemek seçmeyeceğiz, ikimiz de bütün yemekleri yiyeceğiz.</p>
<p><i>The chef: I am sorry to be happened.</i></p> <p><i>The fox: Thank you chef.</i></p> <p><i>The chef: If you don' eat my healthy foods, this may happen. My foods are very healthy.</i></p>	<p><i>The fox: We will eat all foods without choosing.</i></p>
	<p>Tilki ile kirpi, o günden sonra hiç yemek seçmemişler, kukla ormanında hep beraber mutlu yaşamışlar.</p> <p><i>After that day, the hedgehog and the fox never select a food and live together happily in the puppet forest.</i></p>

4.1.7 Students' Reactions to the Digital Story "Puppet Forest"

Eren asked the students which part of the story they enjoyed, and students responded that they liked more the part they performed. (*Student's egocentrism*) In this story, the didactic message was created by the students without any interruption from the teacher. The teacher thought that using this method was better than repeating the messages again and again to children because they were already aware.

The teacher had two students in his classroom who showed more leadership traits than the others. He normally have had problem with these students in terms of classroom management and engaging them in the classroom activities. However, he had no problem with these students during the digital storytelling activities. On the contrary, the students had more fun during the storytelling activities than the usual activities that they already have.

Eren asked the students if they had any opinion about the story. Some of the students had no response and did not engage in the activity. He did not have any special interest for those students because of the little time and excessive number of students, which are main barriers of using digital storytelling in the classroom.

Students had more fun playing with puppets than the other daily activities. Bringing the camera in the classroom provided a new way of gaining children's interest, however, it also created a distraction. Generally, when the teacher brought a new material in the classroom, students showed increased motivation to the activity (*innovation effects*). The student had more focus with the activity where there was something new.

4.1.8 Voice Recording

Eren's classroom had 21 students in a small sized classroom. He thought that his classroom had enough size for just eight to ten students. Accordingly, when they created the soundtrack for all of the three stories, it was impossible to voice record since all of the students were in the classroom. While he worked with a few students for the sound recording, the other students were in the other location of the school for playing, because the classroom size was not appropriate for all children. Classroom

environment was one of the most important barriers for educational uses of digital storytelling classroom (*Classroom environment as barrier*). The teacher observed the students' *self improvement* during the voice recording. After they created the soundtracks, students listened to their own voice. Some students spoke in a low voice and they wanted to record again, when they did not like. This process continued until they liked their own voice record (*self reflection*).

4.1.9 Contribution to the Students' Learning

Using by this method, students had chance to use and to observe their own creativities by themselves (*giving students a chance to improve their creativity*). The teacher explain the whole process: "I think that the process is the exact meaning of the learning by doing."

The students use their native language with different accents because they are living in a large family including many member of the family such as grandmother, grandfather, aunts, and uncle. (*teachers' communication with parents*) That cause students speak with different accents. However, during to voice recording, they spoke Turkish fluently and without accent with appropriately. The teachers thought that using digital storytelling regularly may improve students' language development.

4.1.10 Students' Perception of Digital Storytelling

The teacher implied that students perceive the computer screen like a television and a different world. When children saw themselves on the screen, they paid more attention and became more focus of the story. The students impressed their own digital stories more than the regular stories. In a usual activity, the teacher divided a piece of paper in four parts. The children draw some pictures on each part and talked about their pictures what is going on. Afterwards, one of the family members wrote the script under the pictures. In the other activity, the teachers showed some slides of pictures on the screen and students gave commends about the pictures. However, based on his experience students affected more from the digital storytelling activities than these activities. The teacher had problem for reading activity in the classroom.

Students they do not like reading a story from storybooks and get bored quickly. If they had no motivation for listening, there is no affects on children's learning. According to him, the reason should be literacy of family. The school settled around low socioeconomic status, and families had low literacy level.

4.1.11 Teacher Technology Capabilities

He was low technology skills and normally he did not like to spend time using technology. However, in this study, he spent four to five hour for creating each digital story. He also spent much time for a very little task. He had technology using practice with digital storytelling experiences. After he had spent enough time with technology, he believes that he may create the digital stories based on children's special problems. He had gain technology experience for the whole process, then the creating process his last digital storytelling experience took less time than the other two.

4.1.12 Purposes of Educational Uses of Digital Storytelling

His main purpose as an early childhood educator is changing students' behavior permanently. He wants to teach children when they are enjoying. He had no concern about 'giving deductive message'. His main aim for educational uses of digital storytelling in his classroom were producing educational tool when they were enjoying to the activity. He wanted to children being active in the activity, and observing themselves. The students enjoyed during the creating and implementation process of digital storytelling. They created the stories by themselves and they observed and criticized their development process by watching the final product.

His other aim was to improve students express their opinion and feeling without any interruption. He amazed students' improvements of expressing themselves as much as they did (*Students self-expression*).

4.1.13 Parent's Cooperation

The students of Eren's classroom came from low socio economic and low-literate parents. The parents did not read a book to their children. Parents are curious about

what their children in the classroom. He thought that digital storytelling is an appropriate method for parents learn what they do and how their children behave in the classroom. Children talked about the digital storytelling activities to their parents. When they came to pick their children up after the class, the teacher prepared a session for them and watched the digital stories together in the classroom. Other parents watch the digital in their home with their children. They were happy because of the activity and its positive effects on their children. Some of the students told their parents cried during watching their children's product.

4.1.14 Barriers

According to Eren, the main barriers for educational uses of digital storytelling in kindergarten are teacher's technology abilities, time, technical equipments, need assistance, classroom size, excessive amount of students in the classroom, communication with parents, students' unequal participation to the activity. For the time barrier, being experienced in terms of using technology, being experienced teacher in the classroom is important in this activity. He stated that "if I do not have experience about the activity, it takes too long time." He had some struggle with video recording by using his camera. He thought that he had never learned using his camera. He tried and asked somebody to learn using technologies (*teachers inner-motivation using with technology*).

4.2 Structural Descriptions of Eren's Experiences

Eren's structural elements of creating digital story process include four main steps, namely, composing the script, creating the visuals and audio materials, combining the materials as a form of digital story, and implementing the digital story in the classroom. The first step is started with finding the initial point of the story. After the teacher decided the initial point of the story discussion in order to engage all students in the activity, composing the script process maintain asking students questions about the initial point and guiding students with questions in order to create a discussion. The second step is creating the visual and audio materials for the digital story. The teacher read the final version of script to the students, and they acted out the script. During the acting out, the teacher take picture or video recording in order to get the

visual materials of the digital story. After the visual materials were ready, the teacher selected students to create the sound tracks in the classroom. The selection criteria of the teacher is being willingness in order to engage students without hesitations. The third step includes the teacher creating the final version of the digital story combining with visual and audible materials. The final step is the implementation of the digital story in the classroom including the exhibition of the final version of the digital story on the screen, and then teacher asking questions to the students in order to reach story's objectives. During the implementation phase, the teacher observed the students' reactions.

The structural elements of Eren's experience of the phenomenon are his belief that using digital storytelling in early childhood education are based on students-centered approach. Based on Eren's experience of the phenomenon, digital storytelling helps students' self-confidence. Eren thought that seeing their own products and images on the screen improve students' trust to themselves. He believes that the digital story activities should be connected with parents. Eren engaged the parents to the digital story telling activities of implementation section. The parents are curious about what the students do in the classroom. Therefore, they watched the products in the classroom together. The parents impressed much from their children's product, and some of them even cried during the watching session. According to Eren's experience of the phenomena, digital storytelling activities can affect the students' affective learning domain, help building students' self-confidence, and increase students' creativeness.

During the digital storytelling activity, the students have high level of motivation and self-reflection, and he observed students egocentrism. According to Eren, the teacher should consider the students having equal opportunity in the activity for the students' satisfaction. He used real material in realistic environment in the activities. He believed the importance of students thought and students gaining experience, edutainment. Thought the study, Eren showed high level of inner- motivation. According to him, using digital storytelling in the classroom may increase students' self-expression.

Students have high motivation for attending digital storytelling activity than the regular activity they are doing every day in the classroom. He created their two digital stories spontaneously. He thought that this is a good way to improve students' creative thinking skills, because they can express themselves without any interruption during the creating script. Eren thought that creating digital story with children helps to improve their self-confidence since they can observe their product which is evident of their development on the television (students perceives the computer like a television).

Using digital storytelling in Eren's classroom contribute his professional development. In order to use this approach in his classroom, he needs more practice with technology tools since he thought that he had low technology ability. He has high level of inner-motivation to push himself to use and make advantage from this approach to enhance students' learning. The teacher recommended that this method may also be useful for introducing students themselves to the teachers and to each other if they start at the beginning of the semester.

4.3 Textural Description of Nil's Experiences

For Nil, digital storytelling is an efficient educational tool for young children. Nil created four digital stories for this study's requirements and many personal digital stories during the research study timeline. According to her, the digital storytelling workshop was very useful and effective in terms of learning new technological skills, and gaining new opinions from other teachers' works. She thought that she could never have learned about such an activity by herself. Her textural description focuses on four digital storytelling experiences including the first digital story created in the workshop and the other three created in the classroom.

4.3.1 Students' Reactions to the Digital Story Created in the Workshop

Nil considered topics for her digital story with early childhood curriculum in mind, including national holidays and memorial special days (*Finding a place in the curriculum*). She created the first digital story about "New Year's Eve" in the workshop (See Table 7 for the digital story of "New Year Week.") She used pictures of her family and talked about their New Year experiences. She used this digital

story as an initial point for the subject in the curriculum. After presentation of the story, the students and the teacher discussed the digital story with mutual questions. For example, the teacher asked, “*What did you see in the story? Which of these activities do you do in your house for new years?*” and the students asked: “*Is this your picture? Is this your house?*” According to the teacher, student reactions to the first digital story were “*unbelievable.*” They asked many questions about the story and the pictures. Her purpose for using digital storytelling in the classroom was to gain the student’s interest and motivate the students to engage with the new context “New Year Week.” (See the table of digital story “*New Year Week*”)

Table 7 The digital story of “*New Year Week.*”



	
İşte sonunda yeni yıl geldi	Yaşasın sonunda geldi diye heyecanla babasına sarıldı Doğa.
Finally, Happy New Year	<i>She hugged her father as she said that Oleey Happy new year!</i>

Table 7 (Continued)

	
<p>Babası Doğa'ya yeni yılın geldiğini, ertesi gün yılbaşı için süsler alacağını uzun uzun anlattı.</p>	<p>Doğa çok heyecanlanmıştı. Öyle heyecanlanmıştı ki uyku saati gelmesine rağmen bir türlü uyuyamıyordu.</p>
<p><i>The father explained that the new year is coming and they will buy decoration for the new year celebration.</i></p>	<p><i>Doğa was excited and because of that she could not sleep.</i></p>
	
<p>Uzun bir uğraştan sonra nihayet uyuyabilmişti artık... Ve büyük gün gelmişti.</p>	<p>Alışveriş için marketin yolunu tuttular.</p>
<p><i>Finally she slept... and the big day had come.</i></p>	<p><i>They went to grocery for the decoration.</i></p>

Table 7 (Continued)

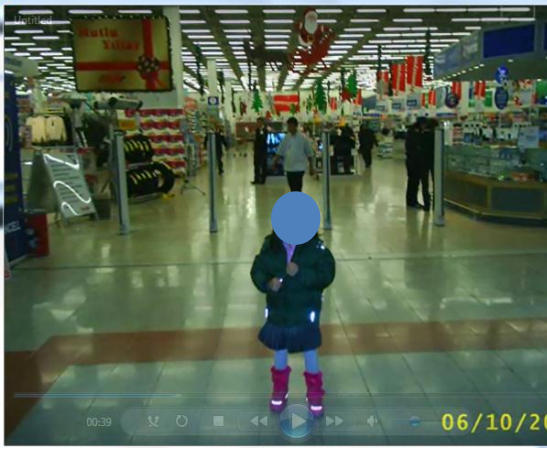

	
<p>Doğa markete girince, şöyle bir baktı önce, acaba süsler neredeydi. Yılbaşı ağaçları nereye konulmuştu.</p>	<p>Sonra markette dolaşmaya başladılar babasıyla. İşte buldum diye babasına gösterdi Doğa, parıl parıl parlayan muhteşem yılbaşı süslerini.</p>
<p><i>When Doga entered the grocery, she looked around carefully. She wonders where the decorations are.</i></p>	<p><i>Then they start to walk around the departments. She pointed the beautiful decorations to her father as saying “Yeey I found it”</i></p>

Table 7 (Continued)

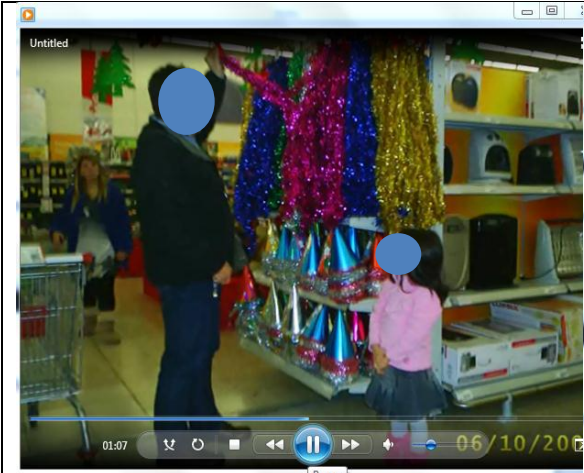
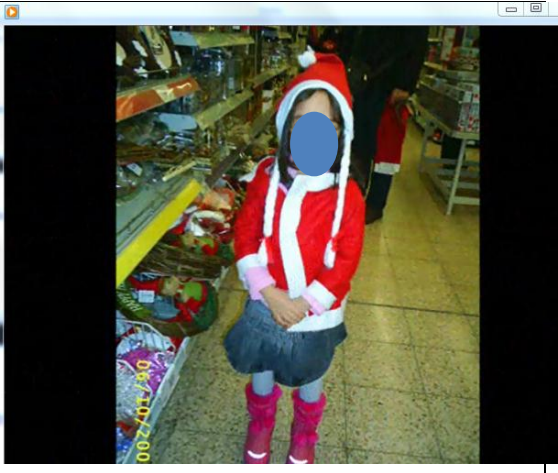
	
<p>Rengarenk süsleri seçmek öyle zordu ki. Babası ile aralarından en güzellerini seçmişlerdi ve sepete tek tek doldurmuşlardı.</p>	<p>Ama birşey eksikti. Noelbaba kıyafeti olmadan olmazdı. Nerde benim Noelbaba kıyafetim dedi. Ve hemen Noelbaba kıyafetini ve şapkasını da aldı.</p>
<p><i>It was very difficult to decide the decorations which had beautiful colors. They selected the best ones with her father and put them in the cart.</i></p>	<p><i>But one thing was missing. She said where my Santa cloths are. Then immediately she took her clothes and hood.</i></p>

Table 7 (Continued)

	
<p>Evet, artık herşey tamamdı, eve gitme vakti gelmişti. Eve gelince, önce ağacı kurdular.</p>	<p>Ve hemen süslemeye başladılar. Öyle eğlenceliydi ki bu tek tek bütün süsleri ağaca yerleştirdi. Doğa biraz yorulmuştu. Ama olsun harika görünüyordu, buna değmişti.</p>
<p><i>Yes, everything was okay and it was time to go home. When they arrived at home, firstly they set up the tree.</i></p>	<p><i>Then they start the decoration of the tree. It was excited very much; she placed all decoration on the tree. Doga was tired. But is seems wonderful.</i></p>
	<p>Ve sonunda büyük an. Yaşasın bitti hoşgeldin yeni yıl diye bağırdı, yeni yılı karşılamaya artık hazırды.</p> <p><i>And finally, the great time! Oleey! It is done. She shouts as "Welcome happy new year". She was ready to meet new year.</i></p>

After the implementation of the first story created in the workshop, the teacher asked the students "Do you want to make a story together?" All of the students were

excited and agreed to make a new one. They asked the teacher “*Will we tell the story?*” The teacher answered that “*we will decide together in time, but firstly, I need to make more practice myself how to do this very well.*”(teacher’s gaining expertise)She implied that the students’ reaction to the first story was very positive and the students enjoyed it more than they enjoyed other activities.

4.3.2 The Digital Story “Little Red Riding Hood”as a Learning Material; the Teacher Created with Her Family in Their Home

Nil decided to create a digital story with her 5 year-old daughter as she did in her first digital story at the workshop. She used the digital storytelling activity as positive reinforcement for her daughter who had an eating disorder. She asked her daughter about the topic for the story. The girl wanted to create a digital story about her favorite tale “Little Red Riding Hood.”(See Table 8 for The Digital Story “The Red Riding Hood”) Nil gave a condition to her that “if she ate her meal, they will create a digital story together.” After lunch, they created the digital story with all family members including the father, mother, cousin, grandmother, and the child(*Digital storytelling as a positive reinforcement*). They shared the roles and changed their costumes appropriate for the tale. Then, when they dramatized the tale, Nil took some pictures in order to create the visual materials. Afterwards, Nil created the script in her own voice and the family decided on the music together. Nil composed all the digital materials as a digital story using MS Movie Maker. They had so much fun during the creation process. After that, they all watched the video together. Her daughter wanted to watch the movie many times. Thus, the digital story reached the first aim with her daughter as it proved to be a positive reinforcement for the child (*Promoting students’ motivation*), (See table 8 for the digital story “Red Riding Hood”)

Table 8 The digital story of “*The Red Riding Hood*”


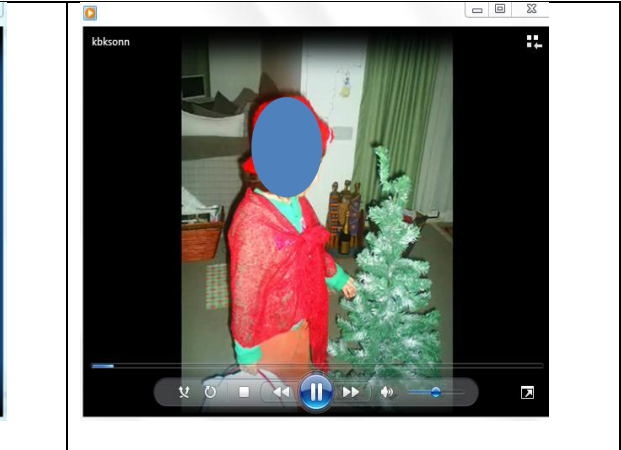

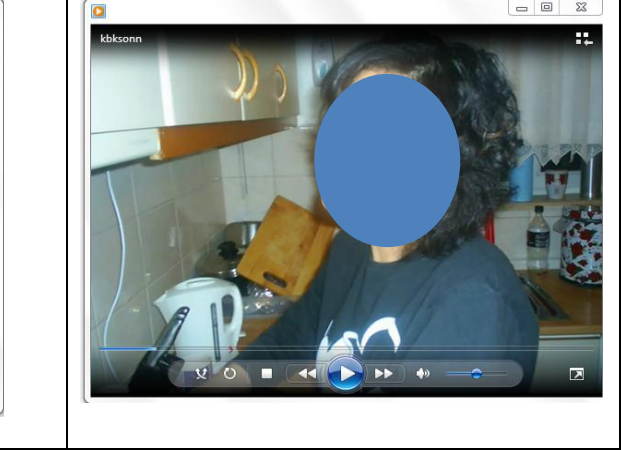
	
<p>Bir varmış bir yokmuş, bir tane kırmızı başlıklı kız varmış.</p>	<p>Bu kırmızı başlıklı kızın da bir tane büyükannesi varmış.</p>
<p><i>Once upon a time, there was a girl who had red riding hood.</i></p>	<p><i>The little red riding hood had a grandmother.</i></p>
	
<p>Ama bu büyükanne hasta ve yaşlı bir kadıymış. Birgün kırmızı başlıklı kızın annesi kırmızı başlıklı kıza demiş ki:</p>	<p>Büyükannen çok hasta, ona yiyecek birşeyler hazırlıyorum, götürmek ister misin? O da tabii ki demiş.</p>
<p><i>Her grandmother was sick and old. One day, her mother said to little red riding hood's that...</i></p>	<p><i>“Your grandma is very sick. I am cooking food for her. Would you like to take away the food to your grandma?” And she replied “Of course mom!”</i></p>

Table 8 (Continued)


	
<p>Sonra sepeti hazırlamış annesi eline vermiş. Ama sıkı sıkı da tembihlemiş. Yolda kötü kalpli kurtu görürsen sakın onla konuşma demiş. O da tamam demiş.</p>	<p>Sonra onu uğurlamış. Hoşçakal dedikten sonra kırmızı başlıklı kız yola çıkmış.</p>
<p><i>Then her mother packed a nice basket and gave her. But, her mother warned her strictly. She said that if you see the big bad wolf on the way, do not talk with him. The little red riding hood said! Okay mom!</i></p>	<p><i>Then, the mother sent off the girl. After saying good-bye, the little red riding hood left.</i></p>
	
<p>Az gitmiş uz gitmiş dere tepe düz gitmiş. Uzun bir yolu aştıktan sonra bir ormana gelmiş. Bir ağacın etrafında dolanırken...</p>	<p>Ağacın arkasında kötü kalpli kurdu görmüş.</p>
<p><i>She had a long way. After that she arrived to the forest. While she was passing around a tree...</i></p>	<p><i>She saw the big bad wolf behind the tree.</i></p>

Table 8 (Continued)

	
<p>Sonra onun kılığına gitmiş, tülbentini takmış gözlüğünü takmış, battaniyenin altına girmiş.</p>	<p>Ve kırmızı başlıklı kız gelmiş ve sormuş. Senin gözlerin neden bu kadar büyük? Seni daha iyi görebilmek için? Senin kulakların neden bu kadar büyük? Seni daha iyi duyabilmek için demiş?</p>
<p><i>Then, he replaced with her, wear her scarf and glasses, and hide under blanket.</i></p>	<p><i>And the little red riding hood arrived the grandmother's house and asked "Why are your eyes so great?", "to see you better". "Why is your ear so great?', 'to hear you better"</i></p>

Table 8 (Continued)

	
Avcı onları görmüş, hemen elinde sopayla kafasına vurmuş.	Midesini yarmış ve kırmızı başlıklı kıızı kurtarmış.
<i>The hunter saw them and hit his head with a stick.</i>	<i>...opened his stomach and saved the little red riding hood.</i>
	
Kırmızı başlıklı kız o kadar mutlu olmuş ki büyükannesine sarılmış ve bundan sonra hep mutlu yaşamışlar masalımız da burada bitmiş.	
<i>The little red riding hood became very happy. She hugged her grandmother and then they lived in peace and our story ended up here.</i>	

The second aim of this digital story was to promote her students' learning activity. After Nil's experience with her daughter, she tried to watch the digital story with students in the classroom. They could not watch the movie on the TV because of a technical problem (*technical difficulties as a barrier*). The next day, she started the movie on the computer. Students watched the digital story attentively. According to

her, gaining young children's attention is a very difficult task, and the teacher gained the students' attention with this digital storytelling activity (*the aim was to gain students, attention*). Students were highly motivated in this activity. She asked the students about the differences from the original story "Little Red Riding Hood." They said this story was different because her daughter was showing in this story. After the watching session they discussed and asked many questions about the movie, such as "I know this story!, Is this your house?, I liked the costumes!, This was so funny!" She was amazed that students were not so much interested the story itself, but the environment and the characters. The teacher realized that the digital story increased awareness among the children.

In her curriculum, the students have everyday storytelling activities aimed at developing the Turkish language. They were doing storytelling activities such as finding a title for a story and forming a story of their own. After these activities, they discussed the stories together. In this activity, the teacher switched the digital storytelling activity with the regular storytelling activity, and they discussed the digital story as they usually did for all other activities (*guiding students and follow up activities*).

4.3.3 Providing Evidence of Students' Learning Based on Nil's Experience

According to the teacher, the students increased their motivation and awareness and asked many interesting questions when the story was about the people who students had already known in their close environment. They had more curiosity about the digital story because they already knew the characters in the story and they wanted to learn more things about them. She was amazed that the students asked more questions about the characters than the story. They were interested in the environments and characters more than the story itself.

They made connections between the objects in the story with other objects. For example, a pair of headphones was used for the wolf's ears, and one of the students said that "we have the same ones at home!" After the digital storytelling activity, the students kept discussing the story with each other throughout the whole day. She observed that this activity impressed the students more than the other daily activities.

Generally, students did not discuss other activities and held no impression of the activity, if the teacher did not conduct a follow up activity as in the regular storytelling activities. However, in this digital storytelling activity, as the teacher stated, the childrens' reaction to the story continued after watching the digital stories. The students were greatly influenced by the story and they repeated some parts of the script and talked about the story with each other the following two days.

4.3.4 The Digital Story as a Learning Material, the Teacher Created with the Students in the Classroom

The next digital story's theme was "sound" which had already been included in their curriculum (*finding place in the curriculum*). The teacher implemented this theme in the classroom lasting two weeks with different activities, such as imitating different sounds, listening to natural sounds, and creating different sounds using many materials (plastic bucket, glass cup metal spoon etc.) After the students were familiarized with different voices, the teacher started an activity to create a classroom orchestra. She put the materials on the table made from wood, plastic, glass, stone, etc. Each student selected one material and sat on the rug in a circular shape. The teacher gave a task to students to create noise with the materials in their hands. The children created different noises and made their own orchestra using materials that they already had in the classroom. While students created different noises with their materials, the teacher took their pictures with a digital camera. The teacher wrote a script about how they created their orchestra and what the noises were (see Table 9 for The Digital Story of "There are Many Voices"). She vocalized the script for the digital story in her home using her own computer. She combined the visual materials (students pictures in the activity) and audio materials (voice recording of script and selected music) using MS Movie Maker. To sum up, in the digital story, the teacher summarized the two week process of implementation of the *sound* theme in the curriculum (*Digital storytelling as an evaluation learning material*).

Table 9 The digital story of “*There are Many Voices*”

	
Bir sürü ses var...	Bir ses mi duydum? Ne sesi acaba? Nereden geliyor. Anlayamadın mı?
There are many voices...	<i>Did I hear a voice? What is that? Where is that come from? Did not you understand?</i>
	
Belki biri çığlık atıyordu, onun sesi olabilir mi?	İyi dinle, belki rüzgar ağaçları bir o yana, bir bu yana sallıyordu.
May be somebody had scream. May be that voice belong to her?	Listen carefully. Maybe the wind wave the trees.

Table 9 (Continued)

	
Ya da kuru yaprakların sesi olabilir belki.	Peki ne olabilir? Belki kocaman bir uçağın kanadından geliyordur bu ses.
<i>Or maybe that is the voice of dry leaves...</i>	<i>Oh well, may be what? It may come from a huge plane.</i>
	
Ya da benim yere ayaklarımın vurduğu ses olabilir mi?	Çok dikkatli dinle, ellerimden de çok güzel ses çıkıyor biliyor musun?
<i>Or, maybe it is coming from my feet!</i>	<i>Listen carefully! Do you know I can create a voice with my hands?</i>

Table 9 (Continued)

	
<p>Tahta blokları birbirine vurduğumda çıkan ses olabilir mi?</p>	<p>Ya da cam bardağa vurduğum sesdir belki.</p>
<p><i>Is that a voice which comes from the wood blocks?</i></p>	<p><i>Or it is the voice coming from the glass cup.</i></p>
	
<p>Buldum buldum ellerimi şıklattığımda bir ses çıkıyor, belki de odur.</p>	<p>Hımm! Peki plastik bardaktan çıkan ses olabilir belki.</p>
<p><i>OK! I found it. When I cracked my finger, a voice occurs. It may be that.</i></p>	<p><i>Hımm. Alright it may be the voice coming from the plastic cup.</i></p>

Table 9 (Continued)

	
<p>Vücutumu kullanarak da ses çıkarabiliyorum, belki onu duymuşsundur.</p>	<p>Tamam, belki hep birlikte şarkı söylerken duyduğunuz sesdir.</p>
<p><i>I can make a voice using my body. Maybe you heard that.</i></p>	<p><i>Okay, maybe it is the voice of the sing a song together.</i></p>
	
<p>Biz bir orkestra kurduk biliyor musun? Belki ondadır. Tamam buldum bu bizim orkestramızdan çıkan ses, çok güzel değil mi? Beğendiğine sevindim.</p>	
<p><i>Do you know we create an orchestra? Maybe it comes from there. Okay, I found it. That is the voice from our orchestra. Is not it beautiful? I am glad to you like it.</i></p>	

4.3.5 Presentation Phase of the Digital Story in the Classroom

Nil suggested that a teacher should prepare the students mentally before an activity. The most appropriate time for implementation of the digital story should be selected.

In other words, if the students were still under the influence of the last activity, gaining the attention of the students would be a very hard task for the teacher (*Prepare students to the activity*). For example, before watching the digital stories, the teacher set up rules such as not asking questions, no speaking among themselves, and watching silently. She said that they could ask and discuss anything only after watching. Nil also used the digital storytelling activity as a novel and surprising teaching method in order to motivate the students in the classroom.

4.3.6 Nil's Feeling of the Experience of Digital Storytelling Phenomena

In this activity, the teacher felt professional satisfaction in her teaching career. She thought that the objectives of the story reached her aim. Therefore, she felt like she did some good for her students' learning and her profession, and this feeling made her happy and she decided to continue to use digital storytelling in her classroom for the future activities (*professional satisfaction*).

4.3.7 Using Children's Voice in the Digital Story, Children's Reaction to Their Own Voice

Nil's 5 year old daughter vocalized one of the digital stories that she created. At the beginning, the girl did not want to watch the movie, and she said that "*it is not my voice, this belongs to others.*" She preferred to watch the one that Nil vocalized. Nil talked with her, and then the girl was persuaded that it was her voice that was used in the story. After the girl watched the movie many times, she was happy with her voice and told the others "*Do you know I read this story?*"

4.3.8 Concerns of Using Digital Storytelling in the Classroom

Based on Nil's experiences, there seem to be some disadvantages of using digital storytelling in terms of students' creativity. Nil thought that digital storytelling is not an appropriate learning tool for developing children's artworks. In art education, students need to touch and cut paper materials, and use scissors, which help in the development of their motor skills, as well as their handcrafts. She thought that digital

storytelling had some disadvantages for students because it was a teacher-centered activity (*student creativeness*).

Nil's other criticism of digital storytelling was about the voice recording process involved. She said that the teacher needed to dictate the script during the voice recording. Her criticism was that this process was also teacher-centered. She gave an example that when a teacher provides study materials and gives the task to students, they can create their own products based on their own imagination. However, she thought that in this case, the teacher used the materials and said to the children "*we will read that story.*" But the students just repeated the story narrated by the teacher for the voice recording (*student centered versus teacher centered teaching material*).

Technical difficulties were also one of the problems Nil faced in her digital storytelling experience. The classroom had one TV and a DVD player. Nil could not start the digital story on that TV, because of the videos format being incompatible. After Nil failed to show the video on the TV, she decided to show it to the class on the computer. The other technical difficulty was with regards to the sound of the digital stories, as the volume was very low because of the technical problem. As a result, Nil faced some challenges in retaining the students' attention to the video, because students had trouble hearing it (*Technology as a barrier*). On the other hand, by attending the workshop, the teacher gained some experience about creating digital stories in relation to her own life before using it for her classroom experiment. Therefore, she did not face any problems in terms of using the software (MS Movie Maker).

Nil stated that her biggest challenge was deciding on the topic for the digital story. After deciding what she would do, Nil's other main challenge was time management. She spent most of her time organizing the story and creating the storyboard (see Appendix G for storyboard). According to Nil, that included setting the order of the story component and the connection of the visual elements with each other. During this phase, in order to organize her story, she asked questions of herself, such as "*Which picture should I use after that picture, in order to gain students' attention? How can I correlate this situation with any picture? How will I motivate the students?*" (*Organizing the digital story*).

The participants were not able to learn how to use video recording in the digital story workshop because of time restrictions. However, Nil thought that maybe the digital story created with video recording would be more effective than the picture-based digital story. She tried to learn how to create a digital story using video, and in her digital story production experience, she used the video recording of her students (*gaining expertise*).

Nil created one of her digital stories in an hour after she prepared the visual and audio materials. She thought that this was not a lot of time considering the functionality of the product (a digital story). She had fun with her 5 year-old daughter and her family during the creation of the digital story. She thought that spending quality time with children and their parents is important for children development. In this digital storytelling activity, Nil spent quality time with her daughter in the creation phase.

4.3.9 Nil's Purposes of Using Digital Storytelling in Her Classroom

Transforming abstract knowledge to concrete knowledge: Nil stated that using digital storytelling changed her classroom environment, in terms of learning opportunities for students. Sometimes, she had problems in explaining some concepts like abstract knowledge to her students. For example, the task of “*giving thanks*” was one of the concepts of abstract knowledge and Nil faced some challenges in explaining this behavior. She suggested that in these situations, the teacher could create a digital story that stressed the behavior of “*giving thanks.*” Therefore, she believed that digital storytelling can be useful in order to turn abstract knowledge into concrete knowledge in early childhood education.

Her plans for further digital storytelling activities: She was planning to use subject oriented digital storytelling. For example, she was thinking about creating a digital story that gave a specific task about a subject to the children. She also was planning to use digital storytelling for collaboration between parents and the schools. For example, at the family and school meeting, Nil decided to use digital storytelling to educate parents about specific problems faced by students.

Nil thought that the parents would be impressed, when they saw that the activities in the classroom were in a digital story format. Using digital storytelling, she would aim to understand the parents' thoughts about classroom activities and their children's education. Nil may also change the learning process if parents gave negative feedback and offered other suggestions for further improvement with digital storytelling.

Nil said that in addition to the parents' education, digital storytelling might also be used in the teachers' education. For example, she suggested that when teachers start an activity in the classroom, they can picture, document and explain the activity in a digital storytelling format to help parents' understanding of the activity and how their children act in the classroom.

4.3.10 Nil's Meaning of Digital Storytelling Phenomena

For Nil, digital storytelling meant "*well-prepared learning material ready to use.*" The teacher can create the digital story that will stimulate students' learning. Therefore, according to her, digital storytelling is a form of a teacher- controlled and multi-functional learning material aid that can be used for early childhood education.

Considering the developmental level of children: Nil suggested that while creating a digital story as a learning aid, the teachers should consider the students' current developmental level. Digital stories can attain the learning aims, if they are created for specific topics, take into account students' developmental level, and also address problems faced by students.

Differences between digital storytelling activity and daily learning activity: In regular classroom activities, the teacher implements the activity just one time, because students become bored when the activity is repeated. However, they watched the digital stories many times. The teacher stated that students were more patient in this activity because they were seeing themselves and there were many stimuli for their attention. According to her, the students were excited during the activity, because they were part of the digital story. Because of this, the learning with digital storytelling is permanent for young children.

4.4 Structural Description of Nil's Experiences

The structural elements of Nil's experience of the phenomenon are her beliefs including digital storytelling as an appropriate learning and teaching material for young children, change in students' motivational level with digital storytelling, time issues as a crucial aspect, selecting appropriate topics for digital storytelling, using digital storytelling for multiple purposes, and facilitating cooperation between teachers and parents.

According to her belief, digital storytelling is an absolutely appropriate learning tool for the kindergarten classroom. She had her first experiences with her 5 year-old daughter and observed the positive effects on her. The students in her classroom were also affected positively throughout the digital storytelling experiences. She thought that she had some problems regarding teaching abstract knowledge; however, digital storytelling as a teaching method helps transform abstract knowledge to concrete knowledge, which helps students learn more easily.

Based on Nil's experiences of the phenomenon, she believes that using digital storytelling increases students' motivational level in her classroom. She used digital storytelling with different purposes, such as an initial point to begin a new topic or start a lesson. Students asked many question in all of her activities. She thought that asking many questions are evidence that student had a high engagement level to the activity.

Nil did not spend too much time during her digital storytelling activities. According to her, regardless of how much time shewould spend during the activities, she spent quality time and produceda useful product for her daughter and her students. They enjoyed the activities more than other classroom activities and this feeling gave her self-satisfaction.

Nil thought that selecting the topics of the digital stories should stress choosing appropriate learning objectives for their curriculum. She considered that the digital stories topics should be a part of their curriculum. This decision was an advantage for her in terms of time, because she did not have to create another activity for the lesson.

Nil evaluated the digital storytelling as a learning tool for multiple purposes. She created one of the digital stories as an evaluation material. Based on her curriculum there are many themes for one or two week periods. At the end of the week for “Sound” theme, she created a digital story that included all two weeks' of learning content. Therefore, she valued the digital story as an “evaluation tool,” because students had able to see their final product for this specific theme. On the other hand, she used the first digital story for gaining the attention of the student to the new theme “New Year.” She appreciated that in this activity the digital story was used as an initiator tool for the theme. Thus, based on her experience, digital storytelling can be used for multiple purposes in early childhood education

4.5 Textural Description of Ayla’s Experiences

Ayla had some concerns about the concept of digital storytelling before deciding to come to the workshop. After attending the workshop, she had some negative feelings about the idea of educational uses of digital storytelling. She thought that her students would not be interested in digital stories and creating digital stories would be a waste of time. However, after she started to implement her first digital story in the classroom and observed the children’s positive reaction, her attitude became more positive. She thought that it may be a useful learning activity for her students.

Ayla was informed about the workshop by her colleague who had attended the first workshop. However, before attending the workshop, she had some concerns about her computer skills, and she had some problems during the workshop in terms of using technological tools. She had stated that she was not a technology-proficient person, even though she bought her very first digital camera to take children’s pictures two month ago. In addition, the word ‘digital’ was not familiar to her and even scared her. Ayla thought of digital storytelling concepts in two parts; digital and story, and she had more difficulty in the digital part because of her lack of technology skills. When she thinks about the story part, she is used to creating stories because of her everyday experience of having a story activity with the children.

4.5.1 Ayla's First Digital Story Created in the Workshop: "My Books"

The idea for the first story came from one of the activities in the classroom. The week before attending the digital storytelling workshop, the teacher taught the subject "the books" which was a part of their curriculum (See Table 10 for the digital story of "My Books"). In the activity, students drew a picture and explained their pictures as a story, and then one of their parents wrote the script in their home under the images, based on what the students said about the pictures. Later, in the classroom, they formed these artworks as books and the teacher kept these books in their classroom library. The teacher had previously observed that the students displayed some misbehavior on how to use the other books in their classroom, since students colored the pages of those books and threw them out. However, after this book activity, while the students saved their handmade books, they showed negative behavior patterns to the other books. When she came to the workshop, she decided to create a digital story about the books. She decided to describe her experience with the students on how they should use books. Therefore, her first digital story was about students' handmade books and their behavior pattern.

Table 10 The digital story of "My Books"


	
Kitaplarım	Benim sınıfımda, içinde çok güzel masal kitapları olan bir kitap köşem var.
<i>My Books</i>	<i>In my classroom, there is a beautiful library having wonderful tale books.</i>

Table 10 (Continued)

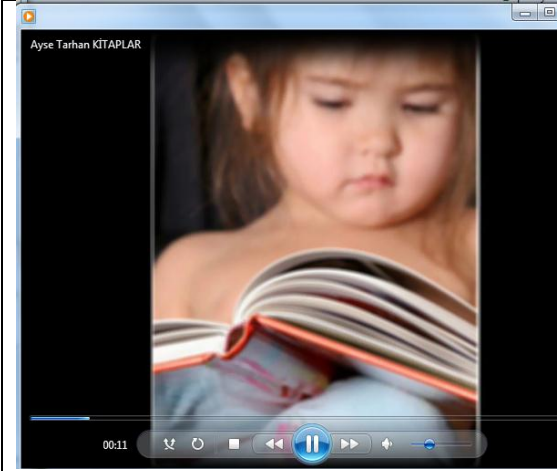
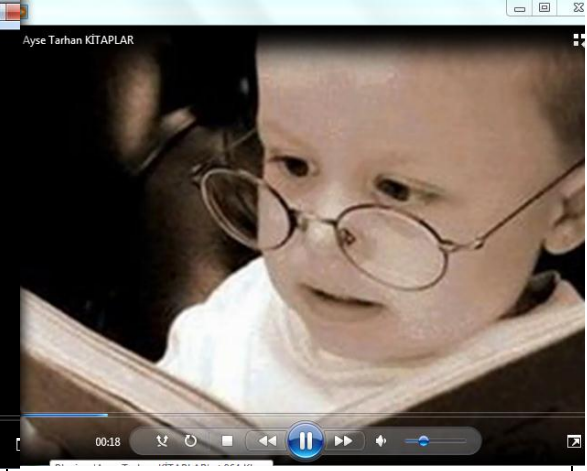

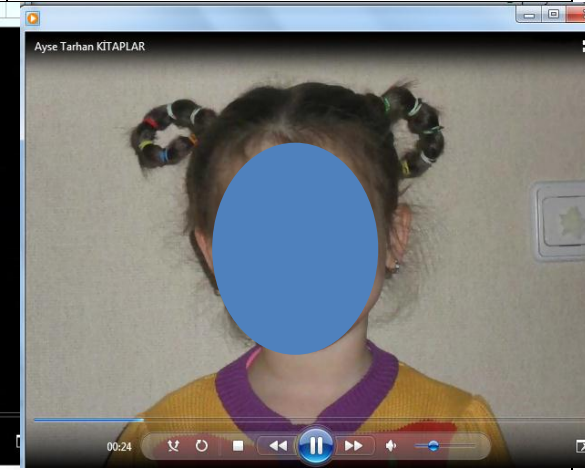
	
<p>Ancak öğrencilerim kitap köşemizdeki kitaplara hiç iyi davranmıyor. Sayfalarını koparıyor, katlıyor, yırtıyor ve yerlere atıyorlar.</p>	<p>Ben bu duruma çok üzülüyorum.</p>
<p><i>However, my students treat the books unfriendly. They torn a piece out of the book and throw them down.</i></p>	<p><i>I am very sad in this situation.</i></p>
	
<p>Birgün kitap köşesindeki bütün kitapları kaldırdım. Artık kitap köşemiz bomboştu.</p>	<p>Elif “öğretmenim bugün kitap köşesine kitap koymayı unutmuşsunuz” dedi. “Elifciğim bütün kitaplarımız yırtıldı, sayfaları koptu, ben de onları kaldırmak zorunda kaldım.”</p>
<p>One day, I removed all books from the library. Finally, it was empty.</p>	<p>Elif said that “My teacher, today you forgot to put books into the library” “Our all books were torn and had missed the pages, then I had to remove all of them.”</p>

Table 10 (Continued)


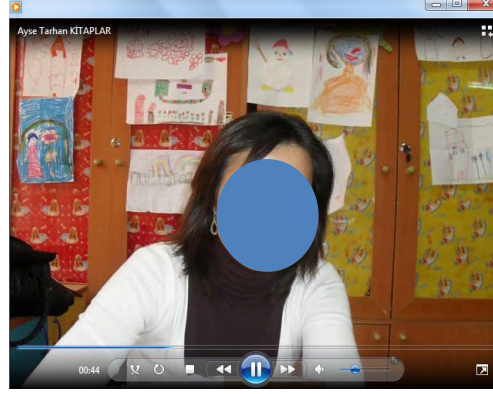
	
<p>“Öğretmenim, artık hiç kitap bakamayacak mıyız, bize hiç masal okumayacak mısınız?” dedi. “Tabi ki yine kitap köşemizde kitaplarımız olacak, ama bunlar biraz farklı olacak” dedim. Bugün sizlerle masal kitabı oluşturacağız, herkes kendi kitabını kendisi oluşturacak. Resimlerini kendisi yapacak.</p>	<p>Sonra herkes kitabını kitap köşesine koyacak, bir hafta kitaplarınız bu köşede duracak. Böylece kitap köşemiz boş kalmayacak. Sizlerde birbirinizin yaptığı kitaplara bakabileceksiniz. Öğrencilerim çok heyecanlanmışlardı. Biran önce kitaplarını yapıp, arkadaşlarına anlatmak istiyorlardı.</p>
<p>“My teacher, would not we look at a book any more and would not you read a tale to us” he said. I said ”Of course, we will have books in our library again, but these will be different than the others. Today, we will create tale books. Everybody will write own books and draw the pictures by themselves.”</p>	<p>“Then, we will put our books inti the library and they will stay there one week. Hence, our library will never be empty. Everybody will have a chance to look each other’s book.” My students became very excited to create their own books. They wanted to shown them to their friends.</p>

Table 10 (Continued)

	
Ahsen “Ne! Kendi kitabımız mı olacak?” dedi.	İkiye katladığım ve ortasından zımbaladığım kağıtları çocuklarıma dağıttım.
Ahsen said “What! Will we have our own books?”	I gave papers that I fold twice and stapled to my students.
	
Herkes büyük bir dikkatle kitabını oluşturmaya başladı.	Biraz sonra kitaplar çocukların elinde tamamlanmış ve kitap köşesinde yerlerini almıştı.
Everybody started to create their own books carefully.	After a while, the books were prepared and placed in the shelves of the library.

Table 10 (Continued)

	
<p>Artık birbirlerinin kitaplarına bakabileceklerini söyledim. Köşedeki kitaplar birden kapışıldı. Ama biraz sonra Aslı, “Ahmet kitabımı katlama yırtılacak” dedi. Gülendam, “Miraç benim kitabımı yere attı” dedi. Yasin Emre sen kitaplara bakmayı bilmiyorsun, öğretmenim kitapları kırıştırmayın dedi. Merve, Samet kitabımın zımbasını çıkarttın, ne olacak şimdi diyerek ağlamaya başlamıştı.</p>	<p>Sesler gittice yükselmeye başlamış, herkes kendi kitabını arkadaşının elinden almaya başlamıştı. Birbirlerini, kitapları kullanmayı bilmemekle suçlamışlardı. En önemlisi de, artık kitapları daha dikkatli kullanacaklarını anlamışlardı.</p>
<p>Then, I said that you can look at your books. The books on the shelves were finished immediately. But, after in a while Asli said “Ahmet you will tear my book.” Gulendam said “Mirac throw my book down.” “Emre! You don’t know how to behave books. My teacher said that do not crinkle the books” said Yasin. Merve started to cry because of Samet.</p>	<p>The voices were getting high and everybody tried to save their own books from the others. They blamed themselves as they don’t know how to use books. Finally, the most important thing is that they understood how to use the books.</p>

In the workshop, the students’ pictures were not accessible and could not be used as visual materials for the digital story. Therefore, she found some appropriate pictures for the script and composed them together into a digital story. However, she was not

satisfied with her first digital storytelling experience because of the picture quality and their inappropriateness to the script. She wished to use her students' own pictures since she felt that this digital story did not have enough meaning for the students. However, the students had much fun, showed a positive reaction to the digital story, and were highly motivated when she presented it in her classroom. After that experience, she decided that digital storytelling could be a good approach for early childhood education and she wanted to continue to use this approach.

4.5.2 Students' Reaction to the Digital Story "My Books" Created in the Workshop

The teacher showed the digital story to the students in the performance hall of the school. There was a projector and a computer in the performance hall. The teacher had never used this hall or the projector before this activity. She asked her colleagues about how to use the projector. She waited a week for somebody to show her and then she realized it was very easy. Ayla felt frustrated that she had not learned it before and used for the children's learning. When the teacher started the show, the students were excited and very amazed because it was the first time they saw a show on the wall via projection (*innovation effect*). They asked many questions about how the images were playing on the wall, and she explained it to them. A few of them realized their teacher's voice was playing in the digital story. The students became very happy after the activity. To sum up, in Ayla's first digital storytelling activity, the students were more interested in the new media than in the digital story itself.

Ayla stated that the students repeated the expressions in the script after they watched the digital stories. In the story, it was shown that the students complained about their friends who showed bad behavior toward the books. One student said to the teacher "*my teacher, Sena has torn a piece out of my book!*" After the digital story activity, students repeated these expressions themselves during the day. She suggested that if she used the appropriate expression for the specific learning objectives such as presenting a good behavior, students could learn easily because the script intensified the good behavior and the students repeated it. Therefore, she strongly suggested that in the digital story, the teacher should underline positive behavior in order to

strengthen the behavior because she thought that digital storytelling can be used as a positive reinforcement (*using positive message*).

After the first digital story, when the teacher took pictures of the children, they reacted differently than usual. She remarked, *“I have been taking their pictures since at the beginning of the semester and they always act naturally, and do not even care about what I am doing during the activity. However, after the first digital story, they saw their pictures on the screen and when I was taking their pictures they stated to say ‘oh my teacher please take pictures of us when I am hugging her [her friend].’ ‘Teacher, please take pictures when I am sitting in your lap!’ and the pictures are becoming very funny. They think I will use their pictures in the digital story.”*

4.5.3 Ayla’s Digital Story Created for a Classroom Activity: “Sibling jealousy”

For the next digital story topic, Ayla wanted to work on students’ specific problem which was observed by parents and the teacher before the activity. There were two students who had newborn siblings. Ayla observed the students who were showing more aggressive and unfriendly behavior after they had new siblings. The parents had also some concern about their children. They asked the teacher for advice about what they should do for their children. After the teacher specified the student problem she decided to create a digital story about *“Sibling jealousy”* (*using problem-based approach*). She created a story script that included a positive message related to having sibling. In the script, the six year old girl talked about her new born brother this way, *“I love my brother, he is very small now. When he is hungry, he is crying. I help my mother to feed him. He is so cute baby and my great sibling.”* Ayla asked her colleague who has a six year old and a one year old child for help in order to create this story. Her colleague was living in different city. She explained the digital storytelling project, what it should include and sent her the script. Her colleague took her children’ picture based on the script and the daughter narrated the script. After that, Ayla’s colleague e-mailed all of the documents including the voice recording and the children’s pictures. Ayla composed all of the materials into a digital story and she showed it in the classroom. After the viewing of the digital story, the teacher asked questions to the students such as *“Do you have a sibling? What are you doing with your sisters and brother in your homes?”* (*Guiding students in the activity*).

After watching the digital story, the teacher gave the students a task as a follow up activity: “*Lets draw a picture about one of the days you spend with your sibling or cousin, if you don't have any siblings.*” The students created their artworks with paper and crayons. After they created their artworks, each student narrated them to the teacher. The teacher took some notes about the students’ narratives behind the artworks. When the student narrated their pictures, Ayla stood near the student and listened to her because the classroom was crowded and other students were interested in their own work (*classroom environment*).

4.5.4 Students’ Reaction to the Digital Story “Sibling jealousy”

One week later, the parents who had sibling jealousy problems in their families visited the classroom and informed the teacher, positively, that the children wanted to bring their siblings and to show them to their friends in the classroom. The teacher accepted the idea of babies coming to the classroom and she thought that this was a positive effect of the last digital story activity. One week later, two babies were brought to the classroom, and the students wanted to take pictures with them in the friendly and warm classroom environment (*behavior modification*).

Ayla believed that if a teacher sends the digital stories to the parents and the students watch the movies with their family, the knowledge or the behavior can be reinforced because the children’s learning would continue after the school (*Learning outside of the classroom*).

4.5.5 Ayla’s Digital Story Created from the Students’ Book Activity

After the workshop, Ayla brainstormed several ideas about how to create a digital story based on the learning objectives pertaining to their curriculum, which would, at the same time, engage students in the activity. For the next digital storytelling activity topic, Ayla was inspired by the students’ artwork for the creating a book activity that they did in the first digital story. The students created many handmade books by drawing the pictures on paper and telling the narratives about the pictures. Ayla was impressed by one of the student's artwork, Berk, because the story stressed a problem and provided a solution, and had a meaningful message (See Table 11 for the digital

story of “The Little Birds”). The story was about Berk finding a little bird out of his nest, and he and his mother helping the bird to put up his nests. She stated, “*Berk understood what I wanted for that activity more than the other students, so I wanted to reward him by creating his digital story with his work and to show it to the other students.*” Ayla created a sound recording with Berk narrating his story. Ayla took the pictures of Berk's artworks and afterwards, combined the pictures and the narration into a digital story using MS Movie Maker software. The other reason Ayla selected Berk’s artwork to create the digital story was that he had some issues related to his self-confidence. During the voice recording, Ayla had some trouble in terms of voice quality and needed to redo the voice recording. The recording process took up to one hour, which is an excessive amount of time doing something with a six-year-old student. At the beginning, she thought that Berk was bored during the process and he might not come to the classroom the following day. However, Berk kept coming to school and the teacher realized that he enjoyed the project and was excited during the digital storytelling activity more than the other activities (*Selecting students who would benefit from digital storytelling*).

Table 11 The digital story of “*The Little Birds*”





	
Yavru kuş	Burak, evinden çıkmış oyun oynuyordu uçurtma uçuruyordu.
<i>The Little Bird</i>	<i>Burak was playing the outside.</i>

Table 11 (Continued)

	
<p>Birden bir kuş sesi duydu. Etrafına bakan Burak birden bir yerde yavru kuş gördü.</p>	<p>Yavru kuş yuvadan yere düşmüştü. Burak annesinin yardımını istedi.</p>
<p><i>Suddenly he heard a bird sound. Burak looked for his around, and then he saw a little bird.</i></p>	<p><i>The little bird fell down the tree. He asked for his mother's help.</i></p>
	
<p>Kuşu ellerine aldılar ve sevdiler.</p>	<p>Nasıl yuvaya koyacaklarını düşündüler ve bir merdiven getirdiler ve kuşu yuvaya koydular.</p>
<p><i>They hold the bird and fondled.</i></p>	<p><i>They try to figure it out how they put the little bird to his nest, brought a stair, and put the bird up the nest.</i></p>

Table 11 (Continued)

	
<p>Ve kuş sevinçle mutlulukla cik cik diye ötmeye başlar. Burak yavru kuşa yardım ettiği için çok mutluydu.</p>	<p>Merhaba arkadaşlar, ben Burak hayvanları çok severim ve onlara yardım ederim, sizin de yardım ettiğiniz hayvanlar oldu mu?</p>
<p><i>And the bird stated to coo as "tweet tweet." Burak was happy because of helping the little bird.</i></p>	<p><i>Hello my friends. I am Burak. I love the animals very much and I always help them. Are there any animals you helped before?</i></p>

Ayla felt very happy for this digital story, because she thought that this activity could be kept as a record of Berk's developmental process for future use. The student may be able to see the work in the future that his teacher documented for him. Ayla thought that these kinds of studies would be evidence of and support for their development, and the student can reflect on their development. She added to the students' growth very quickly and digital storytelling helps them to follow their developments (*documenting the developmental process*).

One of the purposes of the digital story was an objective already included in their curriculum. Ayla thought that in this activity they underlined the objective which is *the ability of finding a solution in case of a problem*. After watching the digital story, the teacher asked the students "if they were in the same situation like Berk, what would you do to rescue the little bird?" Students gave many different answers such as "I would climb my mother's back!, I would call the fireman!, I would climb the tree!, I would take care of the bird in my home and I would give the bird to his mother when she come... "

According to Ayla, the other purpose of the digital story was to underline the objective, “*animal love*” which was also included as a theme in their curriculum. Ayla had guided the students in the digital storytelling activity to reach the learning objectives. For this aim, she asked the students about the digital story “*Do you love animals? Do you have any pets? Have you ever rescued an animal?*” Then the students answered the questions and discussed the topic of “*animal love*” (*guiding students*).

Before watching the digital story, Ayla organized 30 minute outside activity where the students examined examples of nature, such as birds, ants and plants in the school garden. She thought if the students spend some time outside by running, walking and breathing fresh air, then they can easily engage in the digital storytelling activity. She thought that the appropriate time for digital storytelling was after they worked outside because students could not stay stable more than one hour and pay attention to one activity for a long time (*selecting the appropriate time for the digital storytelling activity with young children*).

4.5.6 Student Created Material

Ayla thought that student created learning material was more effective than adult created learning material because the digital story as a learning material was part of the students’ life and more realistic than the adult created materials. She felt that if the other students want to do the same project, most probably they would do it the same way. She gave an example that in one of the pictures a student created, the child was climbing the tree when looking at the wrong side; however, if an adult created the picture, the faces would be looking differently. According to her, although this was the wrong way, students feel more comfortable with such an activity because it was appropriate for their developmental level.

4.5.7 Ayla’s Digital Story Created for the Students’ Special Problem “Using Voice”

Ayla had a student, Ömer in her classroom who came from the area having low socioeconomic status . The family was an ancient traditional Turkish family and had

low economic status. The family was a large family including father mother, aunts, uncles, cousins, grandfather, and children, all living in a small apartment in difficult conditions. Ömer's mother talked about the situation to the teacher. The mother had some concerns about her child's education. The Ömer's grandfather did not like the noise children made during their play. Therefore, the children in his family always tried not to make noise. According to Ayla, Ömer was very shy and spoke very low sound because of his living conditions. When he was speaking in the classroom, the teacher could not hear his voice even when she stood near him. The teacher decided to create a digital story as a way to deal with his personal problem (*problem-based approach*).

According to the early childhood curriculum, there is an activity in which students dramatize puppets each week in the classroom. In the digital story, the students were having the puppets act out based on their own imaginations. The teacher decided to make a video recording when the students were playing. In the video recording, the teacher used two students; one of whom was highly sociable and spoke very well, and the other student was Ömer. The first student told his story with a hand puppet, and after that Ömer started to tell his story. In the digital story, during Ömer's presentation, nobody listened to him, and he stopped because of his low voice. The teacher edited the video, as cutting some parts out and adding some material to the script about Ömer's sadness. Afterwards, she inserted a conclusion for the digital story, "Ömer was upset because his friends did not listen to him. But now he learned how he should speak and he is speaking very well." And in the final part of the digital story all of Ömer friends praised him.

4.5.8 Students' Reactions to the Digital Story "Using Voice"

The duration of creating the final digital story took more than a week. Ayla had to record many video recordings with Ömer because of some technical barriers. During the video recording process she lost the video files and had to create them again. She said that she recorded at least four video recordings with Ömer. In addition, she took pictures of Ömer in different parts of the school building in order to create visual materials for the digital story. Ayla stated that, "*Actually, I do not really need to present the story in the classroom in order to observe the effects on the student.*"

During the creation process, I observed the positive effects on Ömer's behavior. We did not even wait for the presentation in the classroom. I think Ömer felt special himself because I paid much attention to him during the activity. In the final video recording he used his voice very well and everybody heard him."

There is also another positive effect which I observed as a researcher during my observation session in the classroom. The Omer came to me and I asked some questions and he expressed his feelings about the story. Omer said to me: "My teacher says that I am upset because nobody listens to me, but I am not upset I am so happy." When we discussed the student's reaction in the phenomenological interview session with Ayla, she stated that this reaction of Omer's attempt to talk with me was an important step for him, because I was the observer in the classroom and the student was not familiar to me. Therefore, talking with me is good evidence of Omer's behavior modification.

According Ayla's statement, the background of the student is different than the other children. Last semester Ömer felt very much like an outsider and not a member of the classroom, and he did not want to speak much with other students and the teacher. Ayla strongly agreed that during the digital storytelling activities Ömer seems more comfortable at being a member of the classroom.

The teacher stated that in the previous digital story activities, students had sometimes complained about having a place in the story. In the final story Ayla decided to use all of their visualizations and voices in the digital story. Therefore, the final story belonged to all classroom members (*equality of students in the classroom*).

4.5.9 Teacher's Self-evaluation of the Digital Storytelling Experiences

Ayla thought that she could use the digital stories throughout her teaching career because the topics used for the digital stories 'the books and sibling jealousy' refer to general problems experience by all student groups. Not only that, but also she expressed interest in using the digital storytelling technique for other possible topics to achieve success with the students. For future studies, she is developing lesson plans using digital storytelling tied to various follow up activities, such as discussions

about the digital story, creating a drama activity after the digital storytelling activity, and dramatizing the same digital story with the students' own words.

4.6 Structural Descriptions of Ayla's Experiences

The structural elements of Ayla's experiences include using digital storytelling in problem-based approach, innovation effects on the children, giving appropriate messages for the children's learning, guiding children, and effect of students' behavior.

Ayla created three digital stories based on students' real problems, such as their behavior using books, sibling jealousy, and effectively using personal voice. The teacher had some difficulty in solving all three problems before the digital storytelling activities. Ayla used different methods to solve students' misbehavior problems such as giving a consultation, speaking with students, however, according to her, these methods did not work with children and even became worse. For example, the two children who had the sibling jealousy problem affected students' consonance, because of their being uncomfortable in their new life. According to her, selecting the story topic in real life is important when using digital storytelling in kindergarten classrooms. The teacher should consider choosing appropriate objectives in the curriculum or students' real life problems as the subjects for digital storytelling (*finding the initial point of the digital storytelling activity*).

Ayla observed some innovation effects on children's learning when using digital storytelling in her classroom. Students perceived the first digital story as a new media. During the presentation, students paid more attention to the new media such as the projection or the scene on the wall than the digital story itself. Although they have available technology in their school for a long while, the teacher never used them before. After the first digital storytelling activity, she felt regretful when she saw the effect on students. Therefore, the students were surprised by the media in Ayla's first experience of digital storytelling.

Based on Ayla's experience of the phenomena, giving an appropriate message in the script is a very important component when using digital storytelling in the classroom. The children had more motivation and interest in the digital stories, and they liked to

repeat the messages which their friends narrated in the story. The children were influenced by the digital storytelling activities throughout the four weeks. After the digital story activities, they kept talking about or dramatizing the story in their spare time in the classroom. Therefore, Ayla strongly recommended that when creating the digital story, the teacher should consider choosing positive messages that support children's learning.

During the digital storytelling activity, Ayla guided the children to achieve the digital story objectives. The project continued with the follow-up activities such as, discussion of the story, giving a task related to the digital story, and creating artwork by the students. Therefore, according to her, the knowledge acquisition would be reinforced, if the teacher provides appropriate guidance to children.

One of Ayla's main purposes for using digital storytelling was to change students' misbehavior. She had a specific objective in the final digital story which is to overcome the student's timidity. Ayla stated that changing a student's misbehavior is a long process and needs time. She created her digital stories over a period of approximately two weeks and she observed the positive effects on the student, including feeling more comfortable and speaking more than in the past. On the other hand, digital storytelling activities also can affect the naturalness of students' behaviors. Therefore, according to Ayla's experience, using digital storytelling positively affects students' behavior and increases students' awareness of the subject if it is used with positive and appropriate messages, and underline the specific learning needs of students.

4.7 Composite Textural Description

The composite textural description is an integration of all five individual textural descriptions according to shared meaning units and reflected the experiences of the participants into a universal textural description.

4.7.1 Digital Storytelling as a Classroom Activity

All participants experienced three different digital storytelling activities in their classroom after they introduced the phenomena and experimented with the first

digital story in the workshop. They started to create their digital stories in different ways, such as searching students' existing problems [Eren, Ayla], or creating follow-up activities to what they had already done in the class [Nil, Nur, and Sevgi]. All of the co-researchers found an initial point for their digital stories. According to their experiences, finding the topic and initial point of digital stories is the most challenging part of using digital storytelling in their classroom, except for Eren who stated, *"My main barrier was myself, not the other things. We have a list for activities including a million of themes and we need to teach the themes to students."* Co-researchers created their script by taking notes of what students said in the activity, creating it themselves based on their imagination, and using the existing classroom activity. After co-researchers created the script, they collected the visual and audio materials. The last part of the process is presentation of the digital stories in the classroom. During the presentation phase the co-researchers guided the students by asking questions and transitioning them to the next activity.

4.7.2 Guiding Students

After co-researchers created their stories and presented in the classroom, all of them guided the students by asking questions about the story, giving tasks with related topics, and connecting with other topics. According to them the digital storytelling topic should be in connection with an existing topic in order to make sense for young children (*Equilibrium of knowledge*). Ayla, Nil, Sevgi, and Nur selected the topics of the digital stories in the themes existing in their weekly plans. Eren selected the digital story topics based on his and students' imaginations, and connected the learning objectives into the script.

4.7.3 Student Centered Learning Tool

Most of the co-researchers agreed that implementation of digital storytelling in the classroom is student centered while one participant felt that it is teacher centered. Nil thought that the activities were teacher centered and stated, *"When you are creating the digital story, students are not active, they are passive, even though you use the children's voice and pictures in the story, they are dictating what you said. The teacher is active for thinking"* Eren created the digital stories based on students'

imaginations. Eren guided the students with questions in order to reach their thoughts and he collected their sentences as a story. After they created the script, Eren dictated the sentences to students and they replied for voice recording. He made some interventions during the activities when students gave some wrong messages during the story because of their developmental levels. He stated, *“They killed the characters because they did not eat foods which the chef made for them, I intervened and changed that part of the story.”* Sevgi thinks of every activity as being student centered in the classroom. Ayla and Eren chose the some topics based on students’ behavioral problems.

4.7.4 Providing Equal Opportunity

All participants agreed that in the digital story telling activities, the teacher should provide equal opportunities to the students. In Nur’s second experience of the digital story, each student created artwork about the *“forests,”* which is the theme of the week. Afterwards, the students discussed life in the forest and Nur recorded the students’ natural discussions of topics. Afterwards, Nur combined the visual and audio materials as a digital story. One week later, during the presentation of this digital story, one of the students who could not attend the activities showed aggressive behaviors to the digital storytelling activity. He stated that, *“I did not like the story at all, because I am not in the story and I was sick that day.”* Likewise, Nil had the same kind of experience with children. Some of Nil’s students felt sad because they were not a part of the story. In addition to Nil and Nur, in one of the digital storytelling activities, Eren stated, *“There were enough puppet to use for each children, then we decided to use puppets in the story.”* Some students complained, such as, *“My teacher why did not use my pictures, but you used my friend’s picture!”* Ayla used video recording in her final story in order to give equal chances to speak in the story. Therefore, all participants created their last stories giving the same opportunity to the students in their activities.

4.7.5 Parents’ Cooperation

Co-researchers considered all the parents’ comments about their children during their digital storytelling experiences. Some of the co-researchers created their digital

stories considering information from parents regarding students' problems [Eren, Ayla]. Eren decided the digital story topic according to one parent's feedback about his/her child's problems. After parents were informed about the positive effects of digital storytelling on their child's behavior, Eren's motivation has increased for his further stories. According to Nil, if she was able to cooperate with parents about the digital stories, she could create more effective stories from parents' feedback. According to some co-researchers, the parents do not give attention for their children's education. Especially, in the area having low socioeconomic status, parents think that early childhood education is not important. Ayla stated that, *"Mothers think that if their children are going away home, they feel more comfortable."* The co-researchers agreed that these activities stress the importance of early childhood education to the parents.

4.7.6 Digital Storytelling as a Reflection Tool

In Eren's experience, after the students and teachers created the script, the students acted out the script. As they played around the school, Eren took their pictures. For the visual material of a digital story, students vocalized the script as a group. If they made too much noise; one of the students warned their friends that they were too loud. Ayla created a second digital story from Burak's book activity. Ayla used Burak's artworks as visual materials. She took Burak's pictures and added them in the last screen. When Burak saw his picture during the presentation of that digital story, he said, *"Ha ha, look at the posture (Tipe bak)."* In his picture, Burak has drooped his shoulders. Ayla had implied the student's lack of self-confidence, and he reflects about himself by pointing out his posture as seen in the digital story. After Nur's first digital story, she talked about the digital story experience: *"It was like making a pretty make up and seeing myself in the mirror."* All of the co-researchers implied that they enjoyed and felt differently when the students watched their digital stories and heard their voices. Nur said, *"At least, when the students said "please please teacher let us watch again," I feel more confident, and I had a perfect feeling of presenting myself in front of the class!"*

4.7.7 Progress of Self-confidence

Co-researchers observed in their digital storytelling activities increased student self-confidence. Eren's first digital story was created with children as storytellers with their artworks. Eren observed that some students whose artworks were placed in the digital story showed more reactions to the story. When they saw their pictures on the screen, they said, "*It is mine, I made it!*" and after the teacher warned them to be silent, they started to whisper, "*I did it, it is mine!*" The teacher supposed that watching their works in front of the classroom gave self-confidence to the children.

For her last digital storytelling, Ayla worked on a student's self-confidence problem. He was talking in a very low voice and her behavior had low self-confidence. She created the digital story entitled, "*How Does Omer Use His Voice?*" The teacher worked with Omer almost two weeks for that story. When the digital story was ready to watch, Ayla noted that she observed the promoting process of Omer's self-confidence during the activity. Nil stated that students feel a part of the activity when they see their images on the screen, and this promotes their developing self-confidence.

4.7.8 Behavior Modification

As stated in Eren's textual description, he created his first digital story based on a student's behavioral problem, which is being able to fall asleep without his parents next to him. Eren underscored that misbehavior in his digital story as if he was telling a story to his son using of him and his son as characters. After the students watched the digital story, his parents noted that the child went to bed by himself. According to Eren and the co-researcher, if the digital story is created by considering students' developmental levels, reflects real situations, and has a realistic objective to gain, they are sure that the digital stories will achieve their objectives.

4.7.9 Promoting Students' Motivation

According to the co-researchers, when they used the student's artwork, pictures, or own voices in the digital stories, the students showed more desire for the next

activity. Co-researchers thought that perhaps, *“They felt like I will use their artworks in the future”* [Ayla]. *“After [students] watched the digital story, they created some artworks that they never did something such beautiful pictures before”* [Eren]. Based on Nil’s first digital storytelling experience, the students were more curious when they saw people they already knew in the digital story. They asked many questions about the story, and according to Nil, this shows that students were highly motivated in the activity and they wanted to learn more because they are curious. Co-researchers used digital storytelling in the classroom as new learning material. Eren said, *“Whatever you bring new things in the classroom, the students become more engaged in the activity, because it is new.”*

4.8 Composite Structural Description and the Essence of the Experiences

“The composite structural description is a way of understanding how the co-researchers as a group of experience what they experience.” (Moustakas, 2004, p. 142). The composite structural description is a combination of five individual structural descriptions that underlined the shared meaning units and reflected the experience of co-researchers as a whole (see Table 12 for shared meaning units and elements of the essence). The structural elements of the experience are common features of the experience of educational uses of digital storytelling in kindergartens from the perspective of five early childhood teachers. The common features of the experience account for the essence of the experience of using digital storytelling in early childhood education. There are seven structural elements of the experience including: (1) digital storytelling as a classroom activity in a kindergarten classroom; (2) digital storytelling as a learning tool in early childhood education; (3) digital storytelling as a self-reflection tool; (4) parents’ cooperation; (5) progress of students’ self-confidence; (6) equity principles of young children, and (7) promoting technological advancement. These seven structural elements of the experience will be explaining in the following paragraphs.

Table 12 Participants' shared meaning units and elements of the essence

Elements of the Essence	Shared Meaning Units
(1) Digital storytelling as a classroom activity	<ul style="list-style-type: none">• The initial point of the story• Guiding the students during the activity• Engaging student to the next activity• Students' using their own voices and pictures• Using positive messages
(2) Digital storytelling as a learning tool	<ul style="list-style-type: none">• Promoting motivation of students to learn• Transferring abstract knowledge to the concrete knowledge• Behavior modification with digital storytelling• Evaluating the learning process with digital storytelling• Documenting the developmental process
(3) Digital storytelling as a self-reflection tool	<ul style="list-style-type: none">• Teachers' reflections on actions• Children's reflection in actions
(4) Parents' cooperation	<ul style="list-style-type: none">• Communication with parents• Parents' feedback
(5) Progress of students' self-confidence	<ul style="list-style-type: none">• Increasing self-confidence
(6) Equity principles for young children	<ul style="list-style-type: none">• Students' equal opportunities
(7) Promoting the technological advancement	<ul style="list-style-type: none">• Professional development of teachers

4.8.1 Digital Storytelling as a Classroom Activity in a Kindergarten Classroom

Based on co-researchers' experiences, they described digital storytelling as a classroom activity. Using digital storytelling in the classroom is a process including some steps. Finding the initial point is the first step of digital storytelling as a classroom activity. Next, the teacher creates the script based on students and his own imagination. Afterward, there is collecting the visual and audio materials which should be appropriate for the script. In that step, teachers consider the students actively participating. In this way, teachers can support the students being a part of the digital storytelling activity. Finally, teachers create the digital story composing visual and audio materials. When teachers use digital storytelling as a classroom activity, they should consider some important points: guiding students, considering children's developmental levels, considering positive messages, and creating digital stories with a problem based approach.

- *Considering children's developmental levels:* Co-researchers agree that when creating digital storytelling with children, teachers should consider children's developmental levels. If the digital story is appropriate for a child's developmental level, it can be more effective. On the other hand, students' creating digital storytelling is developmentally more appropriate than the adult creating digital stories for children because children reflect themselves and their ages in the digital storytelling activity.
- *Positive messages in the digital story:* Co-researchers used positive messages when they created the digital stories. After students watched the digital stories, they repeated the expression in the script which was narrated by the students. Teachers suggest that when using digital storytelling in the kindergarten classroom, a positive message should be used in the script in order for students to acquire an appropriate message.
- *Problem based approach:* Co-researchers complain that young children's learning materials do not reflect students' real world problems. If the teacher and parents identified the students' problems, such as an eating or sleeping disorder, it can be helpful for children using digital storytelling to see the

misbehavior if the purpose of digital storytelling is to use a problem based approach.

- *Guiding students:* Based on co-researchers' experiences, teachers need to guide their students through the activity in order to use digital storytelling as a classroom activity. The activities should be connected with the next and / or past activities. During the digital storytelling activity, teachers should create a relationship with the existing or past situations or to benefit students' learning acquisition.

4.8.2 Digital Storytelling as a Learning Tool in a Kindergarten Classroom

Using digital storytelling as a learning tool has many dimensions in terms of young children's education, namely, behavior modification, transferring abstract knowledge to concrete knowledge, documentation of children's development, and evaluating the learning process with digital storytelling.

- *Behavior Modification:* Co-researchers had experiences with changing children's undesired behaviors. They think that using digital stories in a kindergarten classroom can possibly change children's misbehaviors. Digital stories which are created through collaboration with children, parents, and teachers make more sense to children than other learning materials. Co-researchers have some difficulties finding learning materials underpinning students' special misbehaviors. Digital storytelling allows them to create learning tools to modify students' misbehavior.
- *Transferring abstract knowledge to concrete knowledge:* Co-researchers agree that explaining abstract knowledge is a hard task in early childhood education, such as, "*saying thank you.*" Using digital storytelling as a learning tool makes it possible to transform the abstract knowledge to concrete knowledge. Co-researchers think that this way is more effective than having to say it many times, because it provides appropriate concrete knowledge according to young children's developmental stages.

- *Documentation of children's development:* Co-researchers agree that digital storytelling is a documentation form of their existing classroom activities. They think that using digital storytelling is not an innovation in the classroom. They are doing the same activities; however, digital storytelling helps make an archive of children's learning activities. Therefore, digital stories allow students, parents, and teachers to follow their students' developments and to provide evidence about how students acted in the classroom.
- *Evaluating the learning process with digital storytelling:* Co-researchers agree that digital storytelling is also an evaluative form of their existing classroom activities. When they are creating the classroom activity, they also make documentation of the digital story product throughout the entire process. Co-researchers believe that the documentation helps evaluation of the activity for children, parents, and teachers.
- *Promoting Students' Motivation:* Students shows more motivation to the follow-up activity when co-researchers used students' pictures, voices, and artworks. Co-researchers agreed that if the learning materials are related to people the students already know in their close environment, the students become more motivated in the learning activities because they are curious and want to learn more about them.

4.8.3 Digital Storytelling as a Reflection Tool

Co-researchers think that digital storytelling is an efficient reflection tool. Based on co-researchers' textual descriptions, digital storytelling is a tool for *reflection in action* for students. During the activity, they see themselves and find the appropriate behaviors in the action according to their own reflections. On the other hand, for the teachers, digital storytelling is a tool for *reflection on action*. They see themselves in digital stories, and they are aware of their behaviors and how they acted in the classroom. Then, they can empathize how their students feel in the classroom. Based on their reflections, teachers have impetus in practice for their future activities. For

example, when co-researchers see themselves in the video recording, they can realize how they use their voices in the classroom.

4.8.4 Parents' Cooperation

Parents' cooperation is a part of early childhood education. Co-researchers agree that parent cooperation is also an important part of using digital storytelling in the classroom to support the children's education. The parents are curious about how their children act in the classroom. They want to learn more about their children's dispositions. In addition, teachers need to cooperate with parents in order to create effective digital stories. Co-researchers agree that digital storytelling is one of the most useful tools if created with a problem based approach. In early childhood education, there are some deficiencies in problem based learning tool. Students have a wide variety of diversity, and have many different problems. Therefore, teachers need to cooperate with parents in order to specify students' problems and solve them with digital storytelling. In order to use digital storytelling in the classroom as an effective learning tool, it is important that parents be a part of the activities. In this way, digital storytelling can be a useful learning tool for young children.

4.8.5 Progress of Self-confidence

Co-researchers agree that using digital storytelling promotes the student's self-confidence. When children see their products on the screen with their classmates, they feel more confident because they see their reflections and the activities, and feel a part of the study. The final product of the activity shows concrete evidence of the children's performances. Co-researchers agree that they can solve students' confidence problems using digital storytelling as a learning activity. Most co-researchers agreed that they should use digital storytelling with a problem based approach. Firstly, they should recognize the students' special problems. Afterwards, they can create a digital storytelling activity based on the problem which the student faced.

4.8.6 Equity Principles of Young Children

Co-researchers agree that during the digital storytelling activity, the teachers should provide equal opportunities for all children. If some children feel some differences from their classmates, it causes them to show aggressive behaviors and unwillingness to participate in the activity.

4.8.7 Promoting the Technological Advancement

Co-researchers agree that using digital storytelling promote using technology in kindergarten classrooms. They think that learning how to create digital storytelling contributes their professional development in terms of promoting technological advancement in their classrooms.

4.9 Summary

The results reveal that the process of using digital storytelling in early childhood education provides a guide for a new learning material for teachers and students in kindergarden classroom. Teachers can use digital storytelling in their classroom as a classroom activity and a learning tool. Using digital storytelling in early childhood education allows students to promote their motivation, to modify their behavior, to document their developmental process, to be able to reflect themselves, and to promote their self-confidence. When teachers use digital storytelling in their classroom, they need to cooperate with parents in order to make more benefits for students. Using digital storytelling in the classroom provide equal opportunities which young children should have in the collaborative activities. Digital stories provide an evidence for teachers' professional development.

CHAPTER 5

DISCUSSION & CONCLUSION

5.1 The Seven Elements of the Essence of the Phenomenon

This dissertation investigates the teachers' experiences of educational uses of digital storytelling in kindergarten classrooms. Based on the studied participants' experiences, the essence of educational uses of digital storytelling in early childhood education consists of seven elements. The seven elements of the essence of the phenomenon include: (1) digital storytelling as a classroom activity in a kindergarten classroom; (2) digital storytelling as a learning tool in early childhood education; (3) digital storytelling as a self-reflection tool; (4) parents' cooperation; (5) progress of students' self-confidence; (6) equity principles of young children; and (7) using technological advancement.

5.1.1 Digital Storytelling as a Classroom Activity

The first element of the essence is digital storytelling as a classroom activity in a kindergarten classroom. This element of the essence answers the first sub-research question of the study; "How do the early childhood teachers use digital storytelling as an instructional tool in their classroom after attending the digital storytelling workshop?" This element of the essence provides a structural lesson plan for early childhood teachers. There are several steps that can be used as a guide for teachers showing how they would use digital storytelling in their classroom. The first step is finding the initial point of the story. In this step, the teacher attempts to engage the students in the storytelling activity and to gain their attention by providing the initial points of the story. In the book "*Digital Storytelling Cookbook*" (Lambert, 2010), the

starting point of digital story is to begin with a small idea. The second step is to begin creating the script. When children are acting out the storytelling and are actively engaged, the teacher can create the visual and audio materials which are the components of a digital story. For example, teachers can collect the students' artwork and take their pictures. In addition, the teacher can create a video recording or take their pictures while students are acting out the activity. The teachers should provide a structural process when they create digital story with students. Shapiro and Hudson (1991) stated that *"preschoolers produced coherent and cohesive stories when provided with pictures that corresponded to a well-formed story structure."* (p. 960). The next step is combining the visual and audio material into a digital story format. There are many software programs that can be used to combine the components into a digital story format. The common ones are MS Photostory 3, MS Movie Maker, and imovie. In this study, the participants used MS Movie Maker because of its ease of access. The final step is presentation of the digital story in the classroom. In this step teachers should engage the students to the next activity by asking questions and giving examples. In this way the students can make connections between the last activity and next activity for knowledge acquisition.

Students' actively engagement throughout the digital storytelling activity

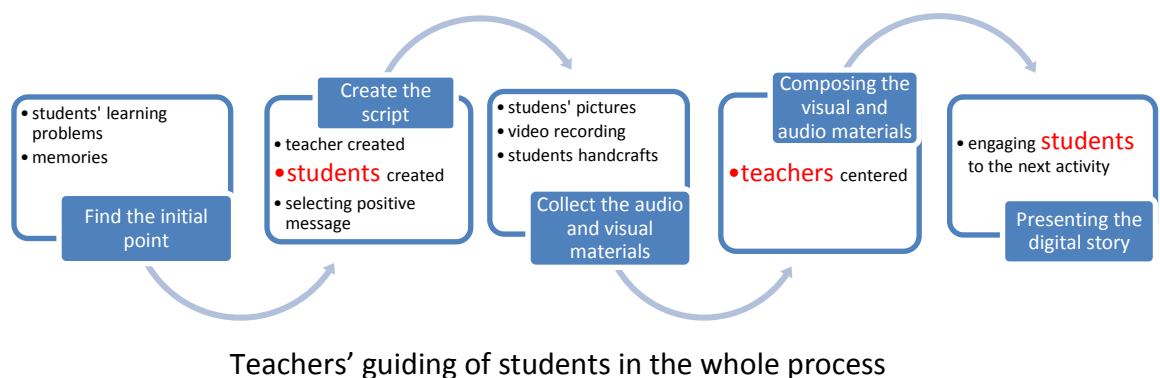


Figure 3 The process of digital storytelling as a classroom activity

According to the study results, the first element of essence, using digital storytelling as a classroom activity, includes some other components which teachers need to keep in mind when they implement digital storytelling in their classroom. These

components are guiding students, considering children's developmental levels, considering positive messages, and creating digital stories with a problem based approach. Teachers guide the students during the digital storytelling activity, especially in the presentation phase. Teachers can ask inferential questions about the story and make connections with past and future activities in order to motivate and gain the attention of students. Researchers suggest that preschoolers have benefit when their teachers and parents use inferential questions that deal with inferencing, estimation, thinking, or clarification (Snow, 1983; van Kleeck, 2003; Zucker, Justice, Piasta, Kaderavek, 2010). During the creation of the script, teachers should select the positive message because students like to repeat the expression which their friends or teachers used when narrating in the digital stories. The repetition helps with knowledge acquisition (Piaget 1952). Therefore, the teacher should select appropriate messages during the digital storytelling activities, as well as consider the children's developmental levels.

5.1.2 Digital Storytelling as a Learning Activity

The second element of the essence is digital storytelling as a learning activity. This element answers the second sub-question of this study; "For what purposes do early childhood teachers use digital storytelling in their classrooms?" According to study results, teachers use digital storytelling as a learning tool in their classroom for five main purposes. Firstly, teachers can increase students' engagement levels to the activity and promote motivation of students in learning activities by using digital storytelling. According to Vygotsky's social constructivist theory (1987), it is assumed that learning is a social phenomenon. The society or the classroom regulates the definition, instruction, and evaluation of literacy. Turner (1995) stated the culture of the classroom affects students' motivation to engage in learning activities. In the digital storytelling activities, students' willingness shows an increase because the atmosphere of the classroom changes. The other assumption of Vygotsky's social constructivist theory is that literacy is constructed in holistic activities. According to theory, the students must be involved in the whole activity rather than just a part of it. In the digital storytelling activities, students involved in the whole process, see the products at the end of the activity, and feel a part of the activity and production that

increases students' motivation. Secondly, teachers can transfer abstract knowledge to the concrete knowledge, which is a challenge for early childhood teachers based on the cognitive capacity of young children (Piaget, 1952). Thirdly, the teachers can modify students' misbehavior by using digital storytelling. Digital storytelling activities may affect the students' affective learning domain for changing behaviors. Fourthly, teachers use digital storytelling for evaluating the learning activities. Digital stories provide the possibility of evaluating the learning process of students for teachers. Finally, teachers document the developmental process of students by using digital storytelling.

5.1.3 Digital Storytelling as a Reflection Tool

The third element of the essence, digital storytelling as a reflection tool, means that teachers and students reflect on their practices. Collins claimed that "*the benefits of reflection are that students have a chance to see processes for the first time, much like their first exposure to a mirror, and to compare their ways of doing things to other people's ways*" (Collins, 1996, p. 14). While students reflect their practices in actions (Schön, 1991), teachers reflect their practices on actions. According to Schön, reflecting in action happens when an individual is able to consciously evaluate and make changes on the spot during an event. On the other hand, reflection of action happens when an individual is able to evaluate and make changes after the event. Students may attempt to change their behavior during the digital storytelling activities. For example, one of the students in Eren's class stated during the digital storytelling activity, "*Shush! Do not make noise!*" Teachers may change their behaviors after the digital storytelling activities by observing themselves in the digital stories.

5.1.4 Parents' Cooperation

The sixth element of the essence, parents' cooperation, means that teachers need to cooperate with parents for effective use of digital storytelling in their classroom. Teachers need to communicate with parents in order to specify students' learning needs. Students have different problems at school and in their home. Preschool teachers may not realize students' problems derived from the outside of the school.

Teachers should collaborate with parents to specify children's real problems. Therefore, teachers need the parents' cooperation when designing the digital storytelling activity. In addition, according to research results, teachers aim to gain feedback of students' learning processes from parents by using digital storytelling in their classrooms. After finalizing the digital storytelling activities in the classroom, the teachers shared the product with families. Parents watched the digital stories and shared their opinion, appreciation, or concerns with the teachers. This communication provides feedback to teachers from the parents and helps in guiding more effective instruction for the teachers.

5.1.5 Progress of Students' Self-confidence

The fourth element of the essence, progress of students' self-confidence, means that digital storytelling may help students' self confidence due to the feeling of being a part of the activity. When students watch themselves in the digital story, they feel ownership of the learning activity which helps young children's self-confidence. The third sub-question of the current study, "How do digital stories provide evidence of preschoolers' learning?" is answered through the essence of progress of student's self-confidence. The uses of digital stories in early childhood education may help promote students' self-confidence because of the sense of being a part of the activity as well as promoting motivation of their learning. According to Goodenow (1991), the sense of belonging which is the feeling people have that they are members of a group in society and that they share particular qualities with other members of that group is associated with being liked, being accepted. For the students, this feeling was associated with being respected by other students and teachers, and the student's intrinsic motivation of the learning activities (Edwards, Gfroerer, Flowers, & Whitaker, 2004). Crandall (1981) claimed that when the students feel a sense of belonging, their self-confidence and sense of worth have shown an increase.

5.1.6 Equity Principles

The fifth element of the essence, equity principles for young children, means that young children should have equal opportunities during the digital storytelling activities. Otherwise, students feel uncomfortable in the learning activities, and this

may negatively affect their learning. All of the co-researchers provided equal participation of students in their last digital storytelling activities. Judge, Puckett, & Cubuk (2004) investigated young people's access to computers in school and home and the differing circumstances that affect how children experience computers. They explain digital equity as "*...is a social justice goal of ensuring that all students have access to information and communications technologies for learning regardless of socioeconomic status, physical disability, language, race, gender, or any other characteristics that have been linked with unequal treatment*"(p.383). Educators should provide equity that all students are given equal opportunities to participate and learn in the classroom when they integrate technology into a learning environment (Judge, Puckett, & Cabuk, 2004). Based on the co-researcher's experience in this study, they indicated that some students felt uncomfortable and asked questions about why the teacher selected their friend instead of themselves during the digital storytelling activities. In their last digital storytelling activities, the teachers attempted to provide participation of all students in the same digital storytelling activity. The results show that students had equal participation and opportunity in the digital storytelling activities. Since the number of students in the classroom was inappropriate for traditional storytelling activities, the teachers had some difficulties to listen to the students during the traditional storytelling. However, digital storytelling helps provide equal participation and opportunities for young children in their learning.

5.1.7 Using Technological Advancement

The final element of the essence, using technological advancement, means that teachers' use of digital storytelling promotes using technology in early childhood education. Technology utilization and integration in the classroom necessitates time, training, and support for teachers (Kulla-Abbot, 2006). The single use of a video creation tool such as MS Movie Maker can serve as a motivating tool for students and teachers to learn by innovative effects (Polman, 2004). Although the co-researchers have many facilities in terms of technological tools in their classroom, some of them had never used them for any purpose before this study. Many teachers do not want to use any advancement in their classroom, if they think it is not

necessary for them (Haugland, 1995). Teachers often think that it will be take more effort and time than they already spend. However, the positive effects of using such tools for digital storytelling in early childhood education can increase teachers' inner motivation to explore technological advancement.

5.2 The Barriers of Using Digital Storytelling in Early Childhood Education

“The only barrier was myself in this study!”[Eren]

The last research question of the study is, “What are the barriers to teachers using digital storytelling as an instructional tool in kindergarten?” There are some difficulties that teachers face in their classroom when using digital storytelling, such as technology access, the number of students in a small classroom, administrative barriers, and time. However, according to the participants' final decisions of the study process from their focus group interview, none of the difficulties are barriers for using digital storytelling in the classroom. This study shows that there is no overriding barrier for using digital storytelling in kindergarten for educational purposes. Time, the lack of technical supports, classroom size, and the number of students were identified as difficulties for teachers when using digital storytelling in some of the kindergarten classroom. However in their last digital storytelling experience, there were no barriers for using this method and these are just some difficulties. For example, teachers need more time at the beginning of using digital storytelling in order to practice and gain experience. However, according to the participants, time is not the barrier and teachers already spent time a good deal of time for the regular classroom activities. And they thought that they could switch digital storytelling activities for the daily activities they were already performing. Teachers personally have at least one computer to use for create digital storytelling. Additionally, the participants thought that technical difficulties are not a significant barrier for using digital storytelling in their classroom. This is same for the environmental issues such as classroom size and the number of students in a small classroom. Teachers are already preparing an activity in their classroom with these difficulties and they felt that they could use digital storytelling under the same conditions with more benefit than the regular activities.

5.3 Implication

The implications of this study presented above include benefits of using digital storytelling in a kindergarten classroom, and suggestion for future studies. They are organized under the categories and discussed in further detail below (See Table 13 for the summary of the study including the elements of the essence, meaning units, and implications).

Table 13 *Meaning Units, the Essence and Implications*

Elements of the Essence	Shared Meaning Units	Implication
(1) Digital storytelling as a classroom activity	<ul style="list-style-type: none">• The initial point of the story• Guiding the students during the activity• Engaging student to the next activity• Students using their own voice and pictures	<ul style="list-style-type: none">• The lesson plan of using digital storytelling in the classroom
(2) Digital storytelling as a learning tool	<ul style="list-style-type: none">• Promoting motivation of students to learn• Transferring abstract knowledge to concrete knowledge• Behavior modification with digital storytelling,• Evaluating the learning process with digital storytelling,• Documenting the developmental process	<ul style="list-style-type: none">• Digital storytelling as an alternative problem-based learning tool in future kindergarten classrooms• Enhancing young children's motivation
(3) Digital storytelling as a self-reflection tool	<ul style="list-style-type: none">• Teachers' reflections on action• Children's reflection in action	<ul style="list-style-type: none">• Impetus for change in teacher practice
(4) Parents' cooperation	<ul style="list-style-type: none">• Communication with parents• Parents' feedback	<ul style="list-style-type: none">• Overcoming to parents resistance across early childhood education,
(5) Progress of students' self-confidence,	<ul style="list-style-type: none">• Increasing self-confidence• Being a part of the process	<ul style="list-style-type: none">• Selecting the students who would benefit from digital storytelling
(6) Equity principle for young children	<ul style="list-style-type: none">• Students' equal opportunity	<ul style="list-style-type: none">• Providing equal opportunity for all students
(7) Using the technological advancement	<ul style="list-style-type: none">• Professional development of teachers	<ul style="list-style-type: none">• Supporting use of technology in early childhood teaching

5.3.1 Benefits of Using Digital Storytelling in a Kindergarten Classroom

Based on the results of this study, early childhood teachers' experiences with educational uses of digital storytelling in the classroom included many dimensions that would be considered benefits. The benefits are enhancing young children's motivation, impetus for changing teachers practice, and providing equal opportunity for all children.

5.3.1.1 Enhancing Young Children's Motivation Using Digital Storytelling

Children are highly motivated in the digital storytelling activities and stay involved for a long period of time when compared to the other daily classroom activities. They show persistence and patience when they see themselves as a part of the final product of the digital story. According to Carlton (2003), when young children successfully complete a task, they gain a high level of satisfaction which causes a high level of motivation. The digital stories show evidence of their success in the challenging task. When students are bored by the routine classroom activities, teachers may create a digital story with students as a follow up activity to encourage the participation and increase the motivation.

5.3.1.2 Impetus for Change in Teachers' Practices

Research has shown that people can assimilate tacit knowledge and tackle future challenges in their reflective practice (Raelin, 2001; Hlubinka, 2003). This study suggests that digital storytelling may be used as a reflection tool in early childhood education. Teachers' experiences may lead to important reflection practices by using digital storytelling in their classrooms. Digital storytelling provides a reflection practice for teachers and students. As one participant indicated, for educational uses of digital storytelling in the kindergarten classroom as a reflection tool, "...it is like making a pretty make up and seeing myself in the mirror..." [Nur]. Students and teachers may reflect their practices, achievements, and developmental processes when using digital stories.

5.3.1.3 Providing Equal Opportunity for All Students

Inequality issues are an essential consideration when integrating technology into early childhood education. The National Association for the Education of Young Children states that “*a decade of research on the educational use of computers in schools reveals that computers maintain and exacerbate inequalities*” (NAEYC, 1996, p. 3). Teachers should consider equity access by all children for effective technology use in early childhood education (Scoter, Ellis, Railsback, 2001). Teachers should treat all students as capable and worthy of equal access to educational opportunities (Kleiman, 2000; Seng, 1998; Warren-Sams, 1997). Teachers can help provide an equal opportunity in terms of technology access for all students by using digital storytelling in the kindergarten classroom, even if they have limited access to technological tools. If teachers include all students in a digital story, all of the students have an equal learning opportunity.

5.3.1.4 Digital Storytelling as an Alternative Problem-based Learning Tool

Every person is unique and has a different identity. Although they have some common properties, their perceptions of life and feelings of the same situations are different. Likewise, young children have different identities and have different perception and feeling about the same situation. They have different reactions for the real problems they face. The learning materials are designed for all children considering most common themes such as, general informations including vocations, colors, and numbers. However, some children may need special interest for their learning needs. Digital storytelling provides to opportunity to design a problem-based learning material for teachers considering students’ special needs.

5.3.1.5 Overcoming Parents Resistance across Early Childhood Education

In Turkey, preschool education is optional and includes children 3-5 years of age. Although there has been improvement during the last two decades, according to 2004 reports, Turkey still has one of the lowest levels of preschool education in comparison to the other lower-middle income countries (Gurses, 2009). During the last decade, the Turkish government attempted to increase the quality of early childhood education and schooling rate among young children. The aims of

improving early childhood education brings some other needs for young childrens' education such as increasing the number of teachers, qualifications of the teachers and qualified education in preschool classrooms and public awareness about early childhood education (Turhan, Koc, Isiksal & Isiksal, 2009). Most Turkish parents believe that early childhood education is not necessary for their children because it is also not mandated by the Turkish government. For example, one of the co-researchers stated that some parents, especially those having low socioeconomic status, have completely negative feeling about preschool education. If teachers share their digital stories which are created in the classroom with parents, digital stories might give parents a way to see how students learn and teachers teach in the kindergarten classroom. In this way, we may overcome the parents' resistance about early childhood education.

5.3.1.6 Supporting Use of Technology in Early Childhood Teaching

This study provides a guideline for early childhood educators on how technology can be integrated into children's learning activities by using digital storytelling as a means of providing an effective alternative instructional method for teachers. This research results can help teachers to better understand the impact of using technologies in a specific way to enhance technology literacy development in early childhood education. Today, most preschool teachers have their own computer or digital camera. However, many are not using them effectively in their classroom. For that problem, the research results provide a method for how teachers can use technological tools such as computers, digital cameras, voice recorders, projectors in order to integrate technology into their curriculum.

5.3.2 A Lesson Plan for a Digital Storytelling Activity

According to the first element of the essence, digital storytelling as a classroom activity, this study suggests a lesson plan using digital storytelling for early childhood teachers. A sample lesson plan is shown below.

Subject Area: Decide which subject area will be outlined.

Grade Level: Kindergarten

Unit Title: Select the unit for the subject area based on early childhood curriculum

Lesson Title: Digital storytelling activity

Time: Time may be changed based on the types of the activities. This lesson plan is not for a one day period. It can be extended based on the teacher's decisions, objectives, and subjects of the activity.

Objectives: Write the objectives which students will reach in this digitalstorytelling activity. The objectives will be very common and not be specifically outlined because the digital storytelling activity stresses students' different developmental stages, such as motor development, when creating the visual materials of the story, as well as cognitive and language development when creating the script.

Materials/Resources Needed: a computer, a digital camera, and a microphone.

Finding the initial point: The teacher will decide the initial point of the digital storytelling activity. The initial idea of the story might come from an existing activity in which students are already involved. The teacher might select the initial point coming from the special days and weeks of the year. It should be remembered that each activity in kindergarten classrooms is a story of children's learning. In this step of the digital storytelling activity, the teacher might involve the parents in the process. The teacher might discuss a student's problem with parents' feedback and create the digital story using a problem-based approach.

Creating the script: Creating the script process is one of the main parts of digital storytelling activities. The teacher may create the script in different ways. The teacher might create the script inspired from students' existing or future activities. When creating the digital story, the teacher should consider choosing positive messages for the script. On the other hand, the teacher might involve the students in creating the script by initiating a discussion

about the subject or initial point of the story. When students are discussing the story, the teacher can take notes on students' narrations. Afterward, the teacher can edit notes as a script. This process is based on teachers' and students' imagination and creativity. Finally, the teacher reads the final version of the script to students after editing. (See Appendix G for the storyboard).

Implementing the script: After creating the script, the teacher organizes an activity around the script. This activity might be creating a handcraft activity, a dramatization of the script, or any organized activities based on the teacher's imagination. In this step, the teacher can create the visual materials for the digital story by taking pictures or video recordings of the activity in the classroom.

Creating the visual and audio elements of the digital story: The next step is preparing the visual and audio materials. For the audio material, the teacher should record the narration of the script. In this part of the lesson plan, the teacher might encourage students' active engagement in the activity through the voice recording of the students' narration. The other way to actively engage students in the activity is through the use of students' pictures or handcrafts which are related to the script.

Composing the elements as a digital story: The final step for creating a digital story is composing all elements including pictures and/or video recordings related to the script, the audio file of narrated script, and music related to the video. These elements are combined as digital stories using video editing software such as MS Movie Maker and PhotoStory 3.

Presentation of the digital story in the classroom: After finalizing the digital story, the teacher presents the digital story in the classroom. In this step, the teacher should consider selecting the most appropriate time for the presentation. In addition, the teacher should guide the students during the presentation of the digital story.

5.4 Suggestion for Future Study

The results of this study increased the questions for the potential further studies that might increase the understanding of the phenomenon of educational uses of digital storytelling in early childhood education. The further studies can be emphasized the topics including parents resistance across early childhood education. In Turkey, in general, many parents think that early childhood education is not crucial for their children. Most of the parents send their children to kindergarten for daycare service because they are working and they need to send their children to kindergarten for accommodation during the day. Therefore, further research is needed to develop a digital story project that is might help overcome parents' resistance for early childhood education. As teachers need training, parents also need training regarding new technological development for their children. Further research can continue to make a contribution to breaking parents' resistance.

In Turkey, digital storytelling is a relatively new concept for teachers in all grades. This study specifically explored its use in early childhood education. However, there is also a need for research about using digital storytelling in education at higher levels. It may also be beneficial to develop a project for Turkish elementary school teachers and students to participate in digital story development by creating their own stories and investigating the outcomes of such a project.

5.5 Conclusions and Significance of the Study

This study contributes to the literature on using technology on early childhood education by contributing to the discussion of benefits and challenges associated with educational uses of digital storytelling. It point to the possibility of using digital storytelling by preschool teachers leading to a new method of classroom activity. It supports to the literature in terms of suggesting a new teaching method by using technological tools in early childhood education. It introduced the concept of digital storytelling as a learning material in preschool classrooms regarding the students' real world problems, motivations, self- confidence and self-reflections. This study also contributes to teachers to better understand the impact of using technologies in a

specific way to enhance technology literacy development in early childhood education.

It introduced new concerns regarding deficiency of problem based learning materials for young children. It also supports the literature in terms of young children's modify undesired behaviors by parents and teachers owing to participating digital storytelling activities. The study also contributes the literature of parents' school relationships for children's learning and development. It shows the importance of parents and teachers communication to enhance children learning, motivation and self-confidence. While concerns about undesirable results of excessive using technology of young children such as obesity, violence and risky behaviors have already been raised in the literature, this study provide the level of experiences regarding a specific method for using technology for young children without any harmful effects.

The results of this study inform educational administrators of the benefits and challenges related to educational uses of digital storytelling in early childhood education. While this study is a first one on this topic in Turkey, it does give some information on how teachers use and integrate in early childhood curriculum. Administrators can benefit from the research results by taking them into consideration while making revision on early childhood curriculum regarding the concept of digital storytelling as a learning tool and classroom activities. Furthermore, teachers require more training support to use digital storytelling in their classroom. Administrators could help to organize more supports to preschool teachers regarding use this learning method by requiring teachers to give Digital storytelling workshops.

Finally, the study has implications for educational researchers, education policy makers, teachers and parents regarding a new method of using technology efficiently in early childhood education.

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APPENDIX A

THE BROCHURE OF DIGITAL STORYTELLING WORKSHOP

DİJİTAL ÖYKÜ HAZIRLAMA SEMİNERİ

Tarih: 11 - 12 Aralık 2009 Cmt - Pazar Saat : 11.00-17.00

27 - 28 Subat 2010 Cmt - Pazar Saat : 11.00-17.00

Yer: ODTÜ Eğitim Fakültesi, Dekanlık toplantı salonu

Eğitimci: Pelin Yüksel (İrtibat tel: 2107523)

Yardımcı Eğitimci: Ali Gök, Eray Arslan



AJANDA

1. Gün (Dijital öykü ile tanışma)

- Tanışma ve giriş
- Dijital öykü hazırlamanın 7 temel ögesi

(İlk üç öge içerikle ilgili, diğer üç öge ise öyküyü şekillendirmekle ilgilidir.)

1. Bakış açısı

- Öyküyü anlatan ile dinleyen arasındaki bağı oluşturur
- Dinleyiciye hangi mesajı vermek istiyorsun? Sorusuna cevap aranır.
- Bu öyküyü niçin anlatmak istiyorsun? (Bu eğitimde, katılımcılar okul öncesi eğitimcileri olduğundan dolayı dinleyiciler okul öncesi çocuklar olacaktır.)

2. Dramatik Soru

- Dinleyicinin aklında bir soru, bir merak oluşturmayı hedefler

3. Duygusal içerik

- Öyküdeki sözcükleri anlamlı kılan bir duygusal içerik oluşturmaya hedefler
- Dijital öykü anlatımında, öykülerin en önemli özelliği gerçek bir olayı veya gerçek bir duyguyu yansıtmasıdır.

4. Sesin katkısı

- Sesin katkısı, öyküyü okumanın değil anlatmanın önemini vurgular.
- Duygular sesimizle birlikte hissedilir.

5. Müzik

- Öyküyle uyumlu müzik seçebilme ve ekleme hedeflenir.

6. Ekonomi

- Daha az kelime ve resimle daha çok şey anlatmak hedeflenir.

7. Ritim

- Her öykünün bir ritmi vardır. Ritim duyguya göre de değişir. Örneğin hüzünlü bir öykü yavaş bir tempoya sahip, neşeli bir öykü ise hızlı bir tempoya sahip olabilir.

- Örnek uygulamaları tanıtmak.
- Öykü çemberi oluşturma
 - Bu etapta katılımcılar daire şeklinde oturup öykülerini paylaşırlar ve aralarında fikir alışverişi yaparlar.

ARA

- Elektronik dosya düzenleme
 - Öykülerinde kullanacakları resimleri elektronik ortamda bir dosyaya aktararak düzenlenir.
- MS MovieMaker yazılımının tanıtımı ve kullanımı.
- Resimler ve müzikten oluşan dijital öykü öğelerinin hazırlanması.
- Öykü yazım, öykü panosu oluşturma, ses kayıt işlemine başlama ve resimleri toplama
- Ses kayıtlarının tamamlanması

EV ÖDEVİ: Öykü yazma ve resimleri toplama işleminin sonlandırılması

2. Gün (Dijital Öykü oluşturma)

- Windows Movie Maker programının anlatılması ve uygulanması

- Ses kayıtları, gorsel ogeler ve muzikleri kullanarak filmin birleřtirilmesi ve filmin oluřturulması

ARA

- Ses kayıtlarıyla filmin birleřtirilmesi ve filmin oluřturulması
- Digital öykülerin tamamlanması ve izlenmesi
- Digital Öykülerin okul öncesinde uygulanmasına yönelik tartiřma.
- Katılımcıların kiřisel olarak eęitimden elde ettikleri kazanç ve dijital öyküleme yöntemini derslerinde uygulamaya yönelik planları, ve olası engellerin tartiřılması.

Not: Katılımcılar, atölye çalıřmasını tamamlayıp, eęitim kurumlarında uygulamaya yönelik üç farklı öykü hazırladıktan sonra sertifika almaya hak kazanacaklardır. Katılımcıların hazırladıęı öykülerin tüm hakkı kendilerine aittir, izinleri olmadan farklı bir yerde farklı bir amaçla kesinlikle kullanılmayacaktır.

APPENDIX B

THE “DIGITAL STORYTELLING CERTIFICATE”



Figure 4 A sample of digital storytelling certificate

APPENDIX C

THE POSTER OF DIGITAL STORYTELLING WORKSHOP



Figure 5 The poster of digital storytelling workshop

APPENDIX D

INTERVIEW SCHEDULE

Interviewer Name:

Date and Time:

Hello, my name is Pelin Yüksel, a research assistant in Computer Education and Instructional Technology department, at the Faculty of Education, METU. I am here to talk you about a new teaching strategy which is digital storytelling. This study aims to show how digital storytelling can be used as an effective teaching and learning tool in kindergartens. The study will investigate how the early childhood teachers incorporated digital storytelling in their classroom, and what the challenges and successes are the early childhood teachers faced in the implementation process of digital storytelling. I am interviewing people who are attended the Digital Storytelling workshop organized by supported METU. My hope is to understand “how” the Digital storytelling can be integrated in the early childhood curriculum. I hope my findings will help you and your schools. So, I am really interested in your personal reflection about digital storytelling and how you implement it in your classroom activities.

What you say to me is completely confidential. We don't pass on anything people tell us. And we don't use names of individuals or school sites in anything we write.

Any further question I can answer?

I would like to tape our conversation, if it is no problem.

Thank you.

1. Can you tell me about your digital storytelling experience?
2. How much time is devoted to integrate technology while creating a digital story?
3. How do you feel your role as a teacher to integrate digital storytelling in your classroom?
4. In what way did your students attend the creating digital story activity?
5. How do you feel that digital storytelling affects your teaching practice?
6. How are you using digital storytelling in your classroom?
7. What is your purpose while using digital storytelling with children in the classroom?
8. In what way do digital storytelling influence student learning? Please describe.
9. How did the children's reaction in the creating digital story activity?
10. In what ways have the changes on motivation and the engagement levels of the students seen during creating digital stories?

11. What obstacles did you face in using digital storytelling with your students and how can you overcome?
12. How did you deal with time issue while creating a digital story with your children?
13. What kinds of problems have you experience while creating a digital story with your children?

APPENDIX E

CONSENT LETTER

Veli Onay Mektubu

Tarih

Sayın Veli,

Bu çalışma, ODTÜ Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümünde Doç.Dr. İ. Soner YILDIRIM danışmanlığında, araştırma görevlisi Pelin YÜKSEL tarafından doktora tezi kapsamında yürütülen bir çalışmadır. Çalışmanın amacı, yeni bir öğretim stratejisi olarak kabul edilen 'Digital Storytelling'in okul öncesi eğitimde kullanımını ve bu yöntemin uygulanması esnasında ortaya çıkabilecek engelleri belirleyebilmektir. Araştırmacı tarafından, çalışmaya katılacak olan okul öncesi eğitimcilerine Digital Storytelling'i uygulayabilmek amacıyla atölye çalışmaları düzenlenecektir. Çalışmaya katılan öğretmenlerin Digital Storytelling'in okul öncesi eğitimde kullanmaya yönelik düşünceleri görüşme yöntemi ile ve sınıf içi gözlemlerle alınacaktır.

Yapılacak çalışma, ODTÜ Eğitim Fakültesi Dekanlık salonunda iki gün süreli atölye çalışmasını kapsayıp 2009-2010 öğretim yılı bahar dönemi süresince devam edecektir

Velisi bulunduğunuz öğrencinin sınıf içinde davranışları ve etkinliğe katılma yöntemi bu çalışma kapsamında araştırmacı tarafından gözlemlenecek ve not alma tekniğiyle veri toplanacaktır. Araştırmacı araştırma süresince öğrencilere hiçbir müdahalede bulunmayacak ve sınıf içi konumu itibariyle öğrencilerin dikkatini çekmeyecek davranışlarını engellemeyecek pozisyonda yer alacaktır.

Ayrıca çalışma kapsamında, uygulamayı daha etkili değerlendirmek amacıyla, öğrencinin ve velisi olarak sizin gönüllülüğünüz göz önünde bulundurularak video kameraya alınacaktır. Yapılacak olan çekimler hiçbir yerde sunulmayacaktır. Araştırmacının kişisel bilgisayarında veri alma amacıyla saklanacaktır. Sadece araştırmacının kullanımına açık olacak ve çalışma tamamlandığında kayıtlar silinecektir.

Çalışma süresince öğrencilerin etkinliğe katılımını belgeleyen fotoğraflar çekilecek, velisi olarak siz ve öğrenci uygun görürse bir kaç kare fotoğraf tezde yer alabilecektir.

Gizliliğin korunması amacıyla hiçbir öğrenciden kimlik bilgisi alınmayacak ve bilgiye ihtiyaç duyulduğunda öğrencilere takma isim verilerek tezde atıflarda bulunulacaktır.

Katılım sonunda, katılımcılarda herhangi bir maddi ya da manevi yarar sağlanmayacaktır. Çalışmaya katılım tamamen gönüllülük esasına dayanmaktadır. Çalışma süresince öğrenci öğretmen ve veli gönüllü olmadığı durumlarda, herhangi bir yaptırıma maruz kalmadan katılımdan vazgeçme hakkına sahiptirler.

Çalışmaya ya da çocuğunuzun katılımına yönelik daha fazla bilgi için, ODTÜ Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü, araştırma görevlisi Pelin YÜKSEL'e başvurabilirsiniz.

Teşekkür,
Pelin YÜKSEL
ypelin@metu.edu.tr, Tel:2107523
ODTÜ, Fen Bilimleri Enstitüsü
Eğitim Fakültesi, BÖTE

Yukarıda açıklamasını okuduğum çalışmaya, oğlum/kızım
_____ 'nin katılımına izin veriyorum. Ebeveynin:

Adı, soyadı: _____ İmzası: _____
Tarih: _____

İmzalanan bu formu lütfen aracılığı ilePelin Yüksel.....'e ulaştırın.

Çocuğunuzun katılımı ya da haklarının korunmasına yönelik sorularınız varsa ya da çocuğunuz herhangi bir şekilde risk altında olabileceğine, strese maruz kalacağına inanıyorsanız Orta Doğu Teknik Üniversitesi Etik Kuruluna (312) 210-37 29 telefon numarasından ulaşabilirsiniz.

APPENDIX F

THE LIST OF MEANING UNITS

Table 14 The list of meaning units

	Nil	Eren	Ayla	Nur	Sevgi
<i>Creating process of the digital storytelling</i>	X	X	X	X	X
Initial Point of the story					
<i>Student centered learning tool</i>		X	X	X	X
The importance of student thought		X			
Teacher centered teaching tool	X	X		X	
To gain attention	X		X	X	
To changing behavior		X	X		
<i>To make documentation of students learning activity</i>	X	X	X	X	X
<i>To change the abstract knowledge to concrete knowledge</i>	X	X	X	X	
Students equality	X	X	X	X	X
<i>Equal opportunity</i>	X	X	X	X	X
Equal equipment	X	X	X	X	X
<i>Students motivation</i>	X	X	X	X	X
Innovation effect			X		

Table 14 (Continued)

Digital storytelling New media		X			X
<i>Student's self-confidence</i>	X	X	X	X	X
<i>Student creativeness</i>	X	X	X		
Teachers professional development	X	X	X	X	
Teachers guiding	X	X	X	X	
Student selecting strategies		X	X		
<i>Students willingness</i>	X	X	X	X	X
Finding to students problem to solve with DS	X	X			
Integrating to the curriculum		X	X		
Finding a place in the curriculum					
Using real material		X			
<i>Students actively engagement</i>	X	X	X	X	X
Multi-objectivity in the digital story		X			
Students self-expression	X	X			X
<i>Self reflection</i>					
Students' self-reflection	X	X	X	X	
Teachers' self reflection	X		X	X	X
Student gaining experience		X			
Consideration of student developmental level	X	X	X	X	
Student egocentrism		X	X		
Classroom management (special students)		X			X
Classroom environment as barrier		X	X		X
Students creativity		X			

Table 14 (Continued)

<i>Parent cooperation</i>	X	X	X	X	X
<i>Developing teachers technology abilities</i>	X	X	X	X	X
Teachers inner-motivation		X			

APPENDIX G

STORYBOARD

STORYBOARD

Name Surname:

Name of the Story:

Date:

Picture 1	Picture 2	Picture 3
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Voice Record:

Voice Record:

Voice Record:

_____	_____	_____
_____	_____	_____
_____	_____	_____

Picture 4	Picture 5	Picture 6
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Voice Record :

Voice Record :

Voice Record :

_____	_____	_____
_____	_____	_____
_____	_____	_____

Figure 6 Storyboard

CURRICULUM VITAE

PERSONAL INFORMATION

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Instructional Technology Middle East Technical
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EDUCATION

- 2004 - Present PhD Student, Department of Computer Education and
Instructional Technology, Middle East Technical University
(METU), Ankara
- 2009 – 2010 Visiting Scholar, Curriculum and Instruction, University of
Houston'Host Professor Dr Bernard Ross ROBIN
- 1999 – 2003 BS, Faculty of Educational Sciences, Computer Education
and Instructional Technology Department, Ankara
University, Ankara

WORK EXPERIENCE

- 2004 - Present Research Assistant,
Department of Computer Education and Instructional
Technology, Middle East Technical University (METU),
Ankara
- Jun'10 – May'11 Visiting Scholar, Curriculum and Instruction, University of
Houston, Host Professor Dr Bernard Ross ROBIN
- Jan'11 – May'11 Teaching Assistant, the course of CUIN-Technology for
Young Children, University of Houston, Professor
Ruqqayya Maudoodi
- Feb'11 Invited speaker for the course of CUIN-Technology for
Young Children, University of Houston, Professor
Ruqqayya Maudoodi

FOREIGN LANGUAGES

Advance English

PUBLICATIONS

Journal Articles

Tokmak Sancar, H. & Yuksel, P. (2011). The First Step for Developing “Expertise Based Training” on Story-telling in Kindergarten Settings. *Selçuk Üniversitesi Ahmet Keleşoğlu Eğitim Fakültesi Dergisi*

Conferences

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Karaca, F., Yuksel, P. & Yildirim, S. (2008). Should Computers Be Used in Early Childhood Education?: A Case Study. In C. Crawford et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2008* (pp. 3479-3483). Chesapeake, VA: AACE.

Sancar, H., Karakus, T., Karaca, F. , Yuksel, P. (2008). Exploring the Effects of the Implementation of the Heuristic Professional Learning Modelling Principles on an In-Service Training. In C. Crawford et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2008* (pp. 3925-3936). Chesapeake, VA: AACE.

Yuksel, P., Karaca, F. & Yildirim, S. (2008). Integration of Computer Technology into Turkish Early Childhood Curriculum. In C. Crawford et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2008* (pp. 3524-3530). Chesapeake, VA: AACE.

Yuksel, P., Alim F., Yildirim, S. (2007). *Perceptions of Kindergarten Teachers regarding the use of Technology in early Childhood Education*. Paper presented at the Teacher Education for Responding to Student Diversity, Malta.

Workshops

June’09, *Participant* of Facilitator Intensive, Educator and Standard Workshops as unpaid visitor participator, Center for Digital Storytelling, Berkeley CA,

Nov’09, *Facilitator* for Educational Uses of Digital Storytelling for Early Childhood Teachers, Middle East Technical University

Feb’10, *Facilitator* for Educational Uses of Digital Storytelling for Early Childhood Teachers, Middle East Technical University

June’11, *Facilitator* for Educational Uses of Digital Storytelling for Early Childhood Teachers, Ministry of National Education