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"Game" Separation in Early Childhood Education: The State of Integration Technological Games Into Game Based Learning According to the English Foreign Language Teachers in Kindergarten

(Based on a case study in Sehir College in Turkey)

Sevinç BİÇER MA Thesis

Supervisor: Senior Researcher Emanuele BARDONE

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#### ABSTRACT

"Game" separation in early childhood education: The state of Technological games' integration into game based learning according to the EFL Kindergarten Teachers.

In this study, EFL Kindergarten Teacher's approaches towards integration of technological games into game based learning is researched. A qualitative case study with a private college's English Language kindergarten teachers in Eskisehir/Turkey and an ethnographic study with the researchers' own class in the same school were carried out in order to answer research question by examining game based learning, English Language Teaching and technology topics in early childhood education.

#### Key Words:

ECE: Early Childhood Education, EFL: English as a Foreign Language, ELT: English Language Teaching, GBL: Game Based Learning, Traditional Games: The games played without technology or the games that do not include any technological element in it, Technological games: Games include technology in them

#### **1.INTRODUCTION**

#### 1.1. Purpose of the Research

#### 1.1.1. Thesis Topic

Learning is a complex and active process that occurs throughout the life span (National Academies of Sciences, Engineering, and Medicine [NASEM], 2018). Children's learning process starts from their mothers' wombs. A study processed out by Partanen (2013) declares that babies brains can recall the word and its variations which they had listened in the womb after the birth. These can be called as the first steps of language learning according to the Patricia Kuhl (as cited in "*Babies Learn to Recognize Words in the Womb*," 2013).

Learning process continues with much more speed when a child becomes an infant. Even new born babies can show preferences for certain objects and images (Gopnik, Meltzoff, and Kuhl, 1999a). They begin to use all five senses (sight, hearing, taste, smell and touch) and learn about their surroundings. When they become toddlers, they use the advantage of their physically development and begin to move around a lot. They have a strong interest to manipulate or solve problems by using objects in this period (UC Davis Cancer Center, n.d.).

Every developmental stage has critical effects of a child development and learning process. However, Early childhood age is one of the most critical period in a child's learning process. Jacobs and Crowley (2007) declare early years of a life form as the foundation for all later learning and development. They confirm with their research that experiences children have got during the first years of life help them to form vital connections in the brain that establish the framework for future learning.

The arising in children's needs and their interaction with the environment can be seen as one of the factors that rise the importance of early childhood. Children increase their interaction with environment by attending kindergarten classes, meeting with peers and beginning to gain their independence from their parents. In this stage, every step they do, affect them physically, socially, cognitively and emotionally. Again Jacobs and Crowley(2007) mention this situation in their books by saying that "*As children play, investigate their world, and participate in language-rich environments with supportive adults, they build these connections and grow in all areas of development.*"

In addition, Ayvacı (2010) expresses in her study that "...preschool age children must be in the activities contain scientific skills such as observing, discovering, analyzing in order to provide

*development in physical, social, cognitive and emotional stages.* ". Also, the common point of these stages can be seen as a "*play*" according Hasting (2014).

When children's developmental stages, their needs, their characteristics are thought, early childhood is the perfect age for a student to learn another language. Also, English language teachers have an advantage of using games in their lessons and keep students focus while having fun by playing games according to Hang's (2017) study.

As it is mentioned above, children have got special needs as a fact of their developmental process. "Play" is the key factor in their all developmental periods including language learning process. On the other hand, when it is thought that children's own learning process, their developmental stages and their own needs and the role of play in their developmental periods, there are some needs which appear as a result of our age. We are living in a rapidly changing world. Technology is in the centre of this rapid changing. Children are born into a technological world. They begin to learn how to use smart phones even when they are infants. They meet with most of the technological devices when they are toddlers. So, it is a fact that children cannot stay away from technology in this area.

However, It is still controversial whether it is appropriate to expose a child to technology or not. According to Sayan (2016) "*it shouldn't be our concern.*", she says that "*How technology can be adapted to early childhood education should be the main concern.*".

On the other hand, preschool teachers who joined the research of Edwards, Nuttall, Wood & Grieshaber (2015) make a comparison between traditional games which is not included in any technology into them and digital games without taking into consideration whether the tasks are meaningful or not. Even, teachers have prejudice towards digital games by calling them as "game like activities" while the other games are the "real" ones.

In this research, based on the subjects which I have mentioned above, the main topic is the English Language Kindergarten Teachers' attitude towards technological games in Early Childhood Education. Within this framework, you are going to face with "Game Based Learning", "English Language Teaching" and "Technology" subjects about early childhood education in this study.

#### **1.1.2. Research Question**

"Game" separation in early childhood education: The state of Technological games' integration into game based learning according to the EFL Kindergarten Teachers

As it is seen in the title of the research, the questions that appear in this study are these:

- Can "game" concept be separated as "technological games" and "real games"? There are a lot of approaches in Early Childhood Education. However, the main point is to carry out an efficient learning process while supporting their developmental stages in every part. So, If the learning process appears in both circumstances, what are the reasons of separating "game" concept?
- What are the EFL kindergarten teachers' attitudes towards the integration of technological games with game based learning? Is it a necessity for teachers to integrate their games with technology? Or , Is using traditional game methods much more efficient for supporting children's learning process?
- What is the role of technology in early childhood ELT education associating with game based learning? Is it meaningful to use technology with young learners? How is the technology's state when its associated with games and language teaching in Early Childhood Education?

#### 1.1.3. Aim of the Research

Based on the research question, main focus of this study is to be aware of the ELT teachers' approaches about using technological games in Early Childhood Education. This research doesn't focus on the common controversial issue which is "should technology be used in early childhood education or not". This study concerns about "the meaningful usage of technology in the classroom" question based on the teachers because of the fact that, teachers are the ones who decide which is better for their students' needs. Also, it can be seen that how students' reactions to both of the traditional game tasks and technological game tasks. This gives an idea to us and teachers to compare both of the tasks. In addition, If it is needed to make the main purpose clear, a diagram like below can be created:



"Technological games vs. Traditional games" OR "Technological games + Traditional games"

Early Childhood Education covers all the subjects. Then, English Language Teaching appears. Finally, games form the core. But, as Kindergarten ELT teachers, should we separate the core apart or should technology stay in the core together with "real" games as a real game?

#### **1.2. Literature Review**

## 1.2.1. Characteristic of Kindergarten Age Children

"Most of what I really need to know about how to live, and what to do, and how to be, I learned in kindergarten...these are the things I learned: Share everything. Play fair.Don't hit people. Put things back where you found them. Clean up your own mess.Don't take things that aren't yours.Say you're sorry when you hurt somebody. Wash your hands before you eat. Flush. Warm cookies and cold milk are good for you.Live a balanced life.Learn some and think some and draw and paint and sing and dance and play and work some every day...When you go out into the world, watch for traffic, hold hands, and stick together." (Fulghum, 1998)

In this study, characteristic features of kindergarten age children whose ages are 3 - 5 have to be examined in order to reach objective results about ECE. Fulghum describes his own kindergarten period as the basis of his knowledge about life above. Even though this is a subjective comment to

kindergarten period, it can be a great example of how kindergarten period can affect whole life of an adult and what kindergarten children features in this period. There are some inferences which can be done about early childhood only by reading a passage of an adult about his own kindergarten age experiences:

*Share everything* : In this age, children are selfish as a nature of their ages. A study which was performed by Fehr (as cited in BBC News, 2008) shows that age 3 and 4 years old children are selfish and not likely to share until they have developed altruism and desire for things to be fair by the time they are 7 and 8, according to a Swiss case study. So, it is so expected for an adult to say that 'I learned sharing in kindergarten''. Because kindergarten teachers support children's social developments by helping children to gain sharing behavior.

*Play fair:* "Cheating" or accusing someone else with cheating can be commonly seen in kindergarten age because of the same reason above which is "being selfish". Dealing with winning and loosing is an another important issue for a kindergarten teacher. "*Kids who have trouble with impulse control and regulating their emotions may gloat about winning and make other kids feel bad about losing. Likewise, they may get really upset when they lose a game and then insist others cheated.*" (Morin, n.d.)

*Don't hit people:* Aggression is an another behavior that is common in kindergarten age children. According to the study performed by Reebye (2005) declares that there can be several factors which are based on individual characteristics, approaches of parents towards children, the impact of exposure to violence, medical issues etc.

The common point of the actions which Fulgham's mentioned is about social development of a child. While searching on the characteristics of kindergarten age children, developmental stages, not only social but also physical, emotional and cognitive, should be taken into consideration.

Mcdevitt and Omrod (2010) explain a child's developmental journey as guided by 3 factors which are nature, nurture and the child's own activity. Nature is the genetic inheritance affecting the child's own growth. Nurture is the environment's effect in which the child's live. Finally, Child's choices, mental processes, emotional responses and behaviors form the third factor according to Mcdevitt and Ormrod. In addition, they make a relation between these 3 factors and developmental stages. They clarify that physical development, cognitive development and social emotional development is organized with the 3 factors which is mentioned above.

Similarly to Mcdevitt and Ormrod's developmental stages clarification, Ayvaci (2010) focuses on kindergarten children's physical, cognitive, emotional and social development in her case study. She

also explains that activities should be developed to reinforce children's scientific skills such as observing, discovering, analyzing in addition to developmental stages.

Besides, the features of children based on developmental stages, it is a fact that children are curious. Their curiosity provides them to learn so rapidly. Nutbrown (2006) mentions how curiosity affects children learning process in her book like as: "*Children at this age are excited about learning. They want to be part of the community of learners who can read and write as they see family and friends doing. We can build on that excitement to help children learn and meet standards in joy-filled, developmentally appropriate ways.*". Likewise Nutbrown, In an edited publishing, children's characteristics and learning process are associated with each other by dependent on the principles, environmental clues, taking models, questions, experiences, preferences and decisions, curiosity and questioning, communication and speaking. Also, the resource explains that teachers' different roles are important factors of children's learning. Teachers should make plans considering these roles in terms of going through the stages of learning in the right order and in terms of using the appropriate methods and technologies suitable to children's developmental characteristics. (Sahhuseyinoglu&lliško, 2010).

#### 1.2.2. Impact of Technology on Kindergarten Age Children

As much as the importance of being aware of children's developmental stages and their characteristics, having knowledge of the technology's impact on kindergarten age children is essential for this study. According to previous studies, it is clear that technology has effects on children. However, these influences can be either positive or negative as like as long term affects and short term effects. Cathy Nutbrown (2006) expresses this controversial issue as "In parallel with the growth of new digital technologies has come a growth of research interest which seems to span a 'for and against' continuum. Some studies seek to identify good practice in incorporating digital technologies in early years settings and positively exploit their use in order to support children's learning and development, while the others raise awareness of the potential harm which overuse of technology can cause and even call for the elimination of digital technologies in the early years."

A study carried out by Rowan (n.d.) focuses on technology's negative effects on children's physical, psychological, behavioral health and their ability to learn and sustain personal and family. The author supports his ideas with statistical data by saying "*One in six children have a diagnosed developmental disability, one in six are obese , and 14.3% have a diagnosed psychiatric disorder.* ".

In addition, researcher defines technology as one of the reasons of disconnection in the society and express this idea with a citation "As little children develop and form their identity, they often are incapable of discerning whether they are the "killing machine" seen on TV and in video games, or just a shy and lonely little kid in need of a friend ". According to the Rowan, technology has overload effect on the visual and auditory sensory systems while the vestibular, proprioceptive, tactile and attachment systems are under stimulated. This situation can create unbreakable problems on child's neurological development. In addition, Rowan adds "Children who overuse technology report persistent body sensations of overall "shaking," increased breathing and heart rate, and a general state of "unease." This can best be described as a persistent hyper-vigilant sensory system, still "on alert" for the oncoming assault from video game characters." Author calls this situation as chronic state of stress in developing children and the long term effects of this chronicle state of stress are unknown.

In another research (Heredotou, 2017), the effects of technology are examined based on a case study. First, the growth in online applications which target preschool children is mentioned in the study. Then, it continues with statistical information and it shows great amount of children, age 2-4, use tablets at home. The author specifies the impact of technology especially mobile devices on young children as controversial field and he mentions 'screen time' term both as a positive and negative experience for children. Also she mentions the absence of high-quality educational applications for early years' learning and recommends that schools should make choices and use technology based on learners' needs. In the article, 19 study on mobile devices effects on young learners are being examined from different aspects like cognitive, generic skills development, stem development. In the conclusion part, it is said that determining how mobile interventions compare to existing approaches to teaching and learning in early years along with detailing the pedagogical conditions is still lacking. However, the author adds well planned integration of apps in the classroom, with clear learning objectives and appropriate feedback could motivate children and enhance their attention while supporting their earning and increasing their communication skills.

On the contrary to those resources above, in a collective study which is a quantitative research on touchscreen usage with very young children in UK researchers find no evidence to support negative association between touchscreen usage and developmental stages of children. Furthermore, researchers express that earlier touchscreen usage causes earlier fine motor achievement. (Bedford, Urabain, Cheung, Karmiloff-Smith and Smith, 2016).

#### 1.2.3. Role of Technology in Early Childhood Education

It is clear that technology has impact on children both negatively and positively. So, another subject comes out exactly right in this point to search: What is the role of technology in ECE? Is it used efficiently in order to decrease its' negative effects on children? Sayan's (2016) study which is included in the introduction part of this research is widely related with these questions. Researcher explains the need of technology using in education associating with our need of technology in our daily lives in the abstract part of the article. Also, she expresses that discussions about using or not using technology in education shouldn't be our concern. According to the author, researchers have to be focus on how technology can be used meaningfully in education. So, technology should be integrated with preschool curricula. The author mentions the usage of different technological devices in preschool classrooms and gives suggestions to use them effectively and appropriately to support children's development. In another study, researchers make a relation between the circumstances which learning occurs and technological environments. For instance, Researchers say learning appears when the learner is active and tablets encourage children for active engagement. They maximize these kind of examples in the article and add that apps which have learning goals could support efficient and effective educational experiences.(Phd.Zosh, Phd.Hirsh-Pasek, Phd.Golinkoff, Phd.Parish-Morris, 2016).

### 1.2.4. Game Based Learning

In this study, one of the main focus is "game" concept. However, there are some disagreements about terms in the field. Katrin Becker's (2017) study is quietly related with this topic. Chapter begins with trying to define 'game'. However, game and play terms cannot be separated easily. Also, the author categorizes games as predictive, formative, summative and confirmative. Author explains games and play as natural ways to learn especially for young learners. In part of 'Games in Education', historical background of game based learning can be read. Author also makes explanation of 'serious game' subject. Especially, "Digital Game- Based Learning(DGBL) vs. Digital Game Pedagogy(DGP) vs. Gamification" chapters are totally different subjects and Becker gives widely clear information to separate term from each other.Based on the result of literature revision, there is no mistake to use game based learning term in this study. In this study, game based tasks are used and these games have rules. In briefly, "games" are like bordered "plays" especially for this research.

#### 1.2.5. Role of Games and Play Concept in Early Childhood Education

Besides paying attention terminological controversies about "game" concept, it is more useful to see how is the state of games and play concept in ECE. There are a lot of written works on the importance of playing for children's developmental stages and learning process. Crowley and Gera (2007) share these works in their study as it below:

Piaget sees play as the most useful method for children's learning process. According Piaget, children learn best through play and their interactions with the environment. (Piaget, J., 1952).

Bruner(1972) defines play as a tool that teach students how to solve problem which they will encounter in their adulthoods.

Berk and Winsler (1995) define Vygotsky's play approach as "play is the preeminent educational activity of early childhood". Vygotsky (1978) also mentions play's Zone of Proximal development effect on children by saying "Play creates a zone of proximal development in the child. In play, the child always behaves beyond his average age, above his daily behavior; in play it is as though he was a head taller than himself".

Also, Shonkof and Philips (2000) confirms the importance of play and exploration to brain development in their brain research.

As it is seen above, play and games are defined as tool for children to learn easily, solve problems, improve their brain developments according to foremost researchers in education area.

In addition to these researchers' results, Gera and Crowley (2007) expresses their own opinions about games and play concept like that "*Enjoyable play experiences can help children develop pride, joy and mastery of skills. As children play, they learn appropriate ways to express their emotions, self-regulation, turn taking, sharing and negotiation. Play also helps children try on new roles and gain empathy for others' points of view*" and they bring different point of view towards the games and play concept by examining them on the effects of children's social and emotional skills.

In another collective research, studies define games as a natural need of preschool children. They show the games that contain role play and are dynamic, create good mood for children are the most enjoyable ones for preschool children. Also, studies mentions didactic games and mobile games. In addition, they compare national games with didactic games. Researchers perform a study with 2 kindergarten and they aim to see the views and opinions of nursery school teachers about the role of games for the development of children and their application in the educational activity in the kindergarten. (Petrovska,S.,Sivevska,D., & Cackov,O., 2013)

#### 1.2.6. Relation Between Technology and Game Based Learning in Early Childhood Education

In this point, there is not a lot of resources to show the integration of technology and GBL in ECE. Also, technology is only used as digital games in most of the research. So, the integration of game based learning and technology may not be stated clearly. However, the results of the studies which used technological games in kindergarten show that combining technology and games with each other does not bring negative results at all. Calao and Din's (2001) experimental study can be an example of this judgement. It is an experimental study about an educational video games for kindergarten students. 47 children joins to the study. Research is carried out for 11 weeks. Researchers want to investigate whether children who played video game learns better than the peers who don't play the game. As a result, researches declines that there is no so much difference between the groups on behalf of learning the subject. However, research shows that the experimental groups improved their verbal skills more than the control group.

#### 1.2.7. English Language Teaching In Early Childhood Education

Learning a language for young learners does not have the same steps as like as adults. Young learners especially preschool and kindergarten age children can learn a new language much more faster than an adult.

Shore (1997) explains language teaching in his study on brain like as "Brain research has shown that the early years are the best time to learn a foreign language. Children need to hear the sounds of a language early in order to speak like a native later on. Playing CDs or tapes of music in other languages and teaching simple words will help children form a foundation for the languages they hear."

Also, Elliot (1996) says on this topic that "A child learning language is developing on all fronts, not just the linguistic one, and is trying to make sense of his social environment and the world of objects around him as well as of his linguistic input. At the very least this creates considerable methodological difficulties for anyone trying to isolate his linguistic development from his immaturity in other directions. From a more extreme point of view, it becomes theoretically invalid to try to do so, as there is little justification for assuming that language has an independent existence for the young child."

# **1.2.8.** Relation Between English Language Teaching and Games in Early Childhood Education

On the contrary to other contexts, learning a new language is totally different for a child. It is like a puzzle and to solve it, you need to be work on it. If a child has bias on that language, it can be impossible for him or her to learn that language. A teacher has to find ways to feed their curiosity. Games come to help exactly right in this point. Language teachers can easily create the positive atmosphere that they need to take students' attention and feed their curiosity by using games in their lessons.

Hang (2017) explains in her thesis work about using games on young learners' ELT process that the main aim of ELT teachers' using games in their lessons with very young learners is to keep them focused and allow them to have fun while learning a new language. Hang's study bases on questionnaires completed from 27 teachers from 3 different campuses. In addition, Researcher relates game and 'Four Macro Skills' in English Language with each other.

### 1.2.9. Role of technology in English Language Teaching

Though it does not show so many differences with technology's role in ECE, technology plays an important role in order to make the language more visual. Language teachers can make the language which is an abstract subject for children much more tangible by using technology in their lessons. In addition, technology helps to create positive atmosphere which it is needed for motivate students to learn a new language.

Also, Language is a living thing which is always changing and renewing like technology. It can not be thought as staying totally away from technology in the age we live. So, technology finds itself a place in some part of language teaching inevitably.

Also, Mittal (2015) sees ICT as a necessity for 21st century in English Teaching.

## 1.2.10. Reactions of Very Young Learners Towards Technological games

After searched children's characteristics and the role technology and games in ECE, It is needed to be examined young learners' reactions towards technological games as the best way to make objective comments. Hristova's (2013) case study exactly on this topic can give certain results on children's reactions towards technological games. In the study, Game like activity tasks are prepared for preschool children. The tasks are the implementation of complex communication task games and games which aims to solve children's communication problems in situational context. 54 preschool children study English with these tasks in the research. The aim is to see the preferences of the children for certain games and game-like activities. As a result, children prefers technological games where a combination of activities for complex learning.

# **1.2.11.** Approaches of English Language Teachers Towards Technological Games in Early Childhood Education

In the literature, there is not a lot of study that shows Kindergarten teachers' point of views towards technological games in ECE. However, a collective study on digital games displays early childhood teachers' approaches directly. (Edwards,Nuttall,Mantilla,Wood and Grieshaber, 2015). In the study, researchers carry out a a case study to see the approaches of early childhood teachers towards digital games and non-digital games based on the same preschool curriculums. At the end of the study, teachers don't accept that there were learning process in digital games as like as the traditional ones and some of them calls digital games as 'play' like.

#### **2. METHODOLOGY**

#### 2.1. A Case Study with Qualitative Approach

#### 2.1.1. General Explanation of the Study

On the base of the research question that I have explained in the introduction part and topics that I have mentioned with resources in the literature review part, I aim to observe EFL preschool teachers' attitudes towards technological games. Within this context, I have decided to carry out a case study which gives a chance to directly observe the learners in their natural settings. Also, qualitative method such as participant observation is used to focus in detail.

Kindergarten students and EFL teachers in a private kindergarten school "Ozel Sehir Koleji Anaokulu" in Eskisehir/Turkey, which I work as a language teacher for and "Ozel Sehir Koleji Sumer Anaokulu" in Eskisehir/Turkey were chosen for this case study.

Different groups of students in different ages, from 3 to 5, joined the study. Students' parents were informed about the study beforehand as in black and white.4 EFL kindergarten teachers were in the study.

Two different game tasks were prepared by based on pedagocical,cognitive,social and physical developmental needs of children and according to their current English Language Curriculums. Tasks were separated as technological game tasks and traditional game tasks. In addition to the correlation between the tasks and curriculums, technological game tasks and traditional game tasks were associated with each other particularly. Lesson plans for the tasks were shared with the teachers before the lessons. Teachers were asked to prepare the materials of their lessons, obey all of the instructions in the lesson plans, take videos, photos and notes from the sessions, and fill feedback forms after each session.

Tasks were performed out in sequence. One week technological tasks and the other week traditional tasks were carried out for the teachers in Ozel Sehir Koleji Anaokulu. One week traditional tasks and the other week technological tasks were carried out for the teacher in Ozel Sehir Koleji Sumer Anaokulu. The study continued for 8 school days for each group.

All of the sessions wished to video recorded for the examination by the researcher. However, this wish could not become true because of the technical issues. This unexpected situation was compensated by taking sample videos from each session and asking teachers to take videos, photos and notes from sessions.

Before performing the study, a simple and small interview about teachers' current options on using technological games in their lessons were made. At the end of each sessions, teachers asked to take notes about the lesson in all contents briefly. Also, a questionnaire were given to teachers before the tasks in order to support and compare their ideas with the interviews. In addition, interviews were recorded and similar questions were given to teachers in order to take their ideas in written format. After the whole process, same process which is in the beginning was repeated with the teachers, a questionnaire were given to the teachers which they are not supposed to share their names. Also, an interview with each 3 teacher were done.

#### 2.1.2. Student Groups who Joined the Study

There were two different 3 years old young learner groups in the study. One group was from Ozel Sehir Koleji Anaokulu, the other group was from Ozel Sehir Koleji Sumer Anaokulu. There were two different 4 years old preschool students' groups in the study. Same as the age 3 groups, one 4 years old group was from Ozel Sehir Koleji Anaokulu, the other was from Ozel Sehir Koleji Sumer Anaokulu. However, 5 years old learners were only from Ozel Sehir Koleji Anaokulu. They were 2 different groups.

AGE	OZEL SEHIR KOLEJI ANAOKULU (Private Sehir College Kindergarten)	OZEL SEHIR KOLEJI SUMER ANAOKULU (Private Sehir College Kindergarten in SUMER)
3	1 group	1 group
4	1 group	1 group
5	2 groups	-

#### 2.1.3. Teachers who Joined the Study

In this study, there were 4 teachers. However, one teacher could enter different age groups. You can see the teachers and age group distribution in the table below. Teachers were volunteered for joining the study. They defined themselves as technologically literate. Also, they mentioned about themselves that they were open to learn new strategies about teaching. Except one of them, they have been all in their first years of teaching. They are familiar with the teaching approaches and

game based learning. Teachers shared these informations and their ideas about using technological games in their lessons in the interview before the beginning of the study. You can see these information in the 'Interviews' part.

Age Group	School	Teacher
3	Ozel Sehir Koleji Anaokulu	М.К.
3	Ozel Sehir Koleji Sumer Anaokulu	G.T.
4	Ozel Sehir Koleji Anaokulu	Sevinc Bicer
4	Ozel Sehir Koleji Sumer Anaokulu	G.T.
5	Ozel Sehir Koleji Anaokulu	M.Ç.
5	Ozel Sehir Koleji Anaokulu	M.Ç.

#### 2.1.4. Period of the Study

There were 4 game tasks for both technological and traditional tasks. Each teacher carried out the tasks in order. Therefore, tasks were planned to be implemented in 8 days 4 as 4 tasks in a week and the other 4 tasks in a week. So, study took 2 weeks period. Also, a day contained interviews and questionnaires with the teachers before the tasks and a day contained interviews and questionnaires with the teachers after the tasks.

Tasks were carried out at the same time in each groups.



### 2.1.5. Data Collection Methods During the Study

In this study, the main data collection method was observation. Video recorded samples of sessions from each teacher were taken. Also, Researcher analysed students' and teachers' reaction towards each tasks by basing the notes and feedback forms of the teachers about each session. In addition, researcher made interviews with teachers both at the beginning and at the end of the study. These interviews provided comparison chance between teachers' first opinions and their current opinions after the study. Besides, questionnaires gave teachers to share their ideas more specifically.

### 2.2. Etnographic Study

It is a case study which is employed Ethnographic Methods.

## 2.2.1. Student Group who Joined the Study

There was only a 4 years old group in this study which means that 16 students from Ozel Sehir Koleji Anaokulu.

Age	Number of the students	School	Teacher
4	16	Ozel Sehir Koleji Anaokulu	Sevinc Bicer

## 2.2.2. Teacher who Joined the Study

As a researcher, I carried out the tasks with my own young learner group in the classroom.

## 2.2.3. Period of the Study

Study took two weeks period as I have mentioned in the 'a case study with qualitative approach'.

## 2.2.4. Data Collection Methods During the Study

As only difference from "the case study with qualitative approach", researcher's herself as a teacher kept a diary after each session of the tasks. Because of the fact that researcher observed herself, she took photos and videos from her own sessions to provide reliability.

#### 2.3. Game Tasks in the Study

#### 2.3.1. Technological Game Tasks

There were 4 tasks which inquires technology. All of these tasks were prepared according to students' current curriculums. Learning outcomes and instructions of the tasks which was given to each teacher can be seen detailedly in the appendix.

#### 2.3.1.1. Age 3- Technological Game Tasks

For age 3 groups, the main theme was "I want to be Monkey" based on the curriculum they used which is Oxford University Press/ Mouse and Me series - Level 1.

Theme objectives taken from the Mouse and me 1 teacher's book are ;

-Consolidate the opening and closing routines and language

-Present and practise body words via Robin's new words

-Consolidate the Who do you want to be? routine, establish the costume for the unit (monkey) and share in Daisy and Robin's adventures

-Explore the value of being careful

-Body Smart: Teach the children the parts of the face and how monkeys and people both have these -Nursery School: Present and practise movement vocabulary and how we do these things at school. Also, the theme structure is ''Look at my.../Let's all,,, ".Besides, theme vocabulary which is needed to be mentioned is ''body,legs,head,arms,face,eyes,nose,ears,mouth,stand up,sit down,walk,monkey".

Based on these, the first technological game task of 3 years old group is called "Draw the Body Parts". In this activity teacher uses LINGOKIDS - English Learning For Kids By OXFORD from a tablet. Teacher opens games part of body parts unit in the LINGOKIDS application in the classroom. Students are asked to trace body parts by using their fingers. This activity covers only "head and foot" vocabulary. At the end of this activity, students are able to recognize "hand & foot" vocabulary in English Language by using a technological tool while they are playing. This learning objective totally covers their curriculums' needed by using technology and consisting play factor in it.

The second technological game task for 3 years old groups is called "Make A Face". In this activity, teachers are asked to use smart boards in the classrooms. Teachers open the "Make a face"

digital game (retrieved from <u>http://www.abcya.com/make\_a\_face.htm</u>). Students play the game one by one and make faces by clicking and dragging the face parts on the screen. With this activity, teachers cover ''eyes,nose,mouth,hair,head'' vocabulary. At the end of the activity, students recognize face parts vocabulary in English Language by using a technological tool while they are playing.

The third technological game task for 3 years old students is "Funny Faces" activity. In this game task "face,eyes,nose,ears,mouth" vocabulary is covered. As an objective of this activity ,students can recognize face parts vocabulary in English Language by using a technological tool while they are playing. Before the task, teachers remind necessary vocabulary by playing Simon says game. Teachers use a tablet and "Jigsaw puzzle maker application by Scott Adelman Apps Inc.". Teachers ask students to make funny faces and take photo of students by using app. Application creates simple jigsaw puzzles at the same time. Then, students play with tablet and try to solve their own funny face puzzles.

The forth and last game task of this age group contains story telling. Teacher reads mouse and me unit 3 big story book story (retrieved from <u>https://elt.oup.com/student/mouseandme/level01br/</u><u>videos/unit03?cc=tr&selLanguage=en</u>) but they also watch the video of the story on smartboard. While watching teacher stops the video and asks students to act out and guess the next part of the story by choosing two students as main characters of the story. Students can reinforce body parts by role playing with this activity.

#### 2.3.1.2. Age 4 - Technological Game Tasks

For age 4 groups, the theme is ''I want to be an explorer'' based on the curriculum they used which is Oxford University Press/ Mouse and Me series - Level 2.

Theme objectives taken from the Mouse and me 2 teacher's book are;

-Practise the routines language

-Via Robin's new words, introduce the children to animal words in English

-Establish the costume for the unit (explorer) and share in Daisy and Robin's adventures with the story

-Explore the value of being patient

-Nature Smart: Learn about some different animal habitats

-Nursery School: Draw comparisons between what animals can do and what children can do

The theme structure is "*I can see (a)* … *What's it doing*?" Words needed to be mentioned are "animal,snake,crocodile,monkey,parrot,lion,elephant,habitats,trees,grass,river,rocks,animal actions,eating,walking,sleeping,running,explorer"

Considering theme objectives, vocabulary and theme structure, the first technological game task for 4 age groups is called "Animal Race". Before this task, teachers read "Hare and Tortoise" classic story as an previous activity. Teacher uses remote control cars as technological tools for this game task. Teacher prepares a parkour on the floor and put animal figures in some parts of the parkour in the classroom beforehand. Also, she puts one rabbit figure and one turtle figure on remote control cars. Students are separated in two teams. Every time, one person from each team comes and play the game. Team members need to finish the parkour by collecting the animals in the parkour before the other team. With this activity teachers cover ''hare,tortoise,snake.crocodile,monkey,parrot,lion, elephant" vocabulary. Students are able to recognize animals by playing a group game.

The second technological game task of 4 years old students group is called "Guess the animal" game. Before this task, teachers reminds animal sounds with roleplaying as a warm up activity. This activities objective is making a connection between the animals and animal sounds. Teacher uses ANIMAL SOUNDS AND QUIZ- Kids Application by RopeHerzegovina. Young learners try to guess the animal from the sound in the application. Teacher uses smart board for this task and every child plays at least one more time.

The third technological game of this age group is "Where do they live". Here, teachers use a habitat video from WITHIN application by using VR head set and a smart phone. Teachers present habitats by using VR. Then, she asks them to play matching game which she prepared beforehand. With this game task students can recognize different animal habitats and categorize animals and their habitats.

The last technological game task belongs to story time. Teacher reads mouse and me unit 2 big story book story but they also watch the video of the story (retrieved from <u>https://elt.oup.com/student/</u> <u>mouseandme/level02br/videos/unit06?cc=tr&selLanguage=en</u>) on smart board. While watching the story, they play guessing the next animal game all together.

#### 2.3.1.3. Age 5 - Technological Game Tasks

For 5 years old groups of students, the theme is called "I want to be a builder" based on the curriculum they used which is Oxford University Press/ Mouse and Me series - Level 3.

Theme objectives taken from the Mouse and me 2 teacher's book are;

-Practise the routines language

-Via Robin's new words, introduce the children to parts of the house words in English

-Establish the costume for the unit and share in Daisy and Robin's adventures with the story

-Nature Smart: Learn about some different places

Theme structure is "Don't forget the ... Where are you?..." Theme vocabulary is "builder, house, door, loor, roof, walls, window, rooms, bathroom, bedroom, kitchen, living room, school places, Playground, cloakroom, classroom".

Basing on the needs of the curriculum, the first technological game task of 5 years old groups is called "Build a house". Teacher opens BUILD A HOUSE online digital game (retrieved from <u>http://www.abcya.com/build\_a\_house.htm</u>) on smartboard and they play the game with whole class. Students can reinforce their vocabulary knowledge on these words such as "house , door, floor, roof, walls, window, rooms, siding, chimney, fence" with this game.

The second technological game task is "Hot and cold" game. Teacher uses Rgb lights for this game. Teacher separates the classroom into different rooms as if it is a house beforehand. (For example reading area becomes living room, dramatic play area becomes kitchen etc.) Teacher chooses one object with students and hide it into one secret place in the class. Teacher also choose one student for each time. Student needs to find the object. As a clue to student except saying only hot or cold, teacher uses lights which are controllable with remote. Red mens cold, green mean hot. Students can recognize the part of the house with this game.

The third technological game task is called "Find the differences". Before this activity, teacher finishes the traditional one about same topic in the class. Teacher takes the photos of the dollhouse which they have decorated in the classroom. Then she uses simple software(even paint can be used) and make some differences on the photo like deleting some objects or changing the places of the objects. In the classroom, teacher opens EMKOTECH programme which is in the smart board and open two pictures at the same time. Students try to find differences in two dollhouses. At the end of this activity, students can recognize the parts of the house vocabulary.

The last technological game of 5 years old group is a story time activity. Teacher reads mouse and me unit 4 big story book story but they also watch the video of the story (retrieved from <u>https://</u>

**<u>elt.oup.com/student/mouseandme/level03br/videos/unit04?cc=tr&selLanguage=en</u>**) on smartboard. They play role playing activity with costumes after the video.

### 2.3.2. Traditional Game Tasks

Considering the same objectives, structure and vocabulary which curriculum covers, traditional game tasks which do not involve technology were prepared for every age group. Learning outcomes and instructions of the tasks which was given to each teacher can be seen detailedly in the appendix.

#### 2.3.2.1. Age 3- Traditional Game Tasks

The first game is called "My hand, my foot". At the end of this activity, student are able to recognize hand & foot vocabulary in English Language by using only a chalk and their own body parts as a tool while they are playing. Teacher pastes black cartoons on the floor before the task. Students work indidually. Teacher gives chalk to each students and ask them to draw their own hands and feet one by one.

The second game is called "Make a face". Students reinforce "eyes,nose,mouth,hair,head" words with this activity. As an outcome of this activity, students can recognize face parts vocabulary in English Language by playing with face part crafts. Teacher uses face parts which are prepared from colourful paper beforehand. Students make faces from these parts as they wish.

The third game is "Funny Faces". Teacher ask them to draw funny faces beforehand and she makes puzzles from their drawings. Students play with these puzzles by using the structure and vocabulary.

The last game is about story time. Teacher reads the Mouse and me 1- Big story book unit 3 story again but this time she only uses the story props.

#### 2.3.2.2. Age 4- Traditional Game Tasks

The first game is for 4 age groups is "Animal race". In this task, teacher makes students reinforce needed vocabulary like "hare,tortoise,snake,crocodile,monkey,parrot,lion,elephant". Teacher prepares a parkour on the floor and put animal figures in some parts of the parkour in the classroom beforehand. Also, teacher uses one rabbit mask and one turtle mask. Students play as teams. Every

time, one person from each group comes, puts on their masks and plays the game. Students need to finish the parkour by collecting the animals in the parkour before the other team.

The second game is 'Guess the animal". Teacher and students make a connection between animals and animal sounds at the end of this activity. Teacher uses the animal figures in the classroom. They play whole together. Every time, one student chooses an animal and makes that animal's sound an others try to guess.

The third game is called "Where do they live?". Students recognize animal habitats with this activity. Teacher presents habitats by using flashcards. Then, she asks them to play matching game which is prepared before the lesson.

The last activity is about story time. Teacher reads mouse and me unit 2 big story book story and students play with story props while teacher is reading.

#### 2.3.2.3. Age 5- Traditional Game Tasks

The 5 years old students' first traditional game task is called "Build a house". With this activity students reinforce parts of the house vocabulary. Teacher gives LEGOS to students and asks them to build a house by making them free.

The second game task is "hot and cold" game. Students recognize "living room, bathroom, bedroom,kitchen" vocabulary with this activity.Teacher separates the classroom into different rooms as if it is a house beforehand. (For example reading area becomes living room, dramatic play area becomes kitchen etc.) Teacher chooses one object with students and hide it into one secret place in the class. Teacher also choose one student for each time. Student needs to find the object by following their friends' guidance.

The third game is "My dollhouse". Teacher brings real doll house to class and asks students to decorate it.

The last game belongs to story time. Teacher reads mouse and me unit 4 big story book story by using story props. Students play with story props while teacher is reading.

#### 2.3.3. Preparation Stage of the Tasks

Tasks were all prepared by the researcher. Researcher took into consideration of students' needs coming from their ages. In addition, each tasks contained "game" elements. Also, the current English language curriculums of each age group were used for making a correlation between the study and their school period. Another important point was making a connection between the technological and traditional game tasks. Otherwise, making a comparison between two different things could not give reliable results for the study.

#### 2.3.4. The Significant Points while Tasks Were Performed

The environment effect were taken into consideration by researcher in case of any negative circumstances. Teachers were free to make changes which were suitable for the tasks in any negative situation according to control negative effects. However, they had to explain the changes in their notes after the sessions. Teachers were asked to obey the instructions in the lesson plans which had been given to them before the activities. Note taking and filling the feedbacks were the most significant parts of the study in order to analyze objectively.

#### 3. Results

In this part, you can see the analysis based on researchers' observations, teachers' notes, their feedback forms, interviews and questionnaires with the teachers after two weeks periods in the study. You will see the analysis of both case study and ethnographic case study in the same part. Analysis is categorized according to age groups. First, 3 years old teachers' session results will be given as one traditional and one technological task result according to provide comparison chance easily for readers. Then, 4 years old and 5 years old groups traditional and technological tasks will be analysed. Results of ethnographic study by researcher will be shared in the 4 years old age group.

#### 3.1. Game Tasks Results

#### 3.1.1. Age group 3

#### 3.1.1.1. Age 3 - Traditional Game Task 1

The first traditional task was requiring vocabulary teaching of "hand and foot" words. Students were asked to play a guessing game after a quick warm up and preparing the game by using their bodies. In this task, students expected to make a relation between the subject and their body parts while playing guessing game and that would provide learning process. According to both teachers comments in their feedback forms, students were able to achieve learning outcome of the tasks and they could recognize the target vocabulary in English easily. Teacher from College associates that result with repetition. She says "*They repeated the vocabulary so much and at the end of the task, they memorized them very well*". Also,Teacher from Sumer Kindergarten declared that most of her students achieved the learning outcome.

It is also seen that there were not any obstacles for the teachers while preparing the task. They both commented that the task was easy to prepare. Teachers sees the tracing their hands and feet part as the most enjoyable part of the task. The teacher from Sumer says that students were enjoyed as much as herself. And another one declares that her students love drawing something especially their hands by tracing each finger one by one.

When it comes to main play of the task, teachers are not giving so positive feedbacks. Teacher from SUMER says, "*When they were finding their own workings, they did not have difficulty but it was not as interesting as tracing their own foot and hand.*". However, the other teacher from college declares that students got bored while waiting and she had to use her own technique also while playing the game. When it is asked to the teachers if this task could meet students need of play or not, teachers give interesting answers. Teacher from college answers "This is not just enough by itself but it could some degree.". Teacher at Sumer simply accepts the task as game and she add "tracing and guessing are enjoyable for them".

At the end both teachers want to use the task with their students again. The college teacher wishes to adapt the same technique for another topic also. However, Sumer teacher wants to change guessing part which is the main game of the task.

#### 3.1.1.2. Age 3 - Technological Game Task 1

Technological game task 1 had the same objectives and learning outcome with the traditional task 1. Students were asked to trace hand and foot with their fingers again. However, this time they did this task with a tablet by playing a digital game. In this task, teachers' comments differ totally. Teacher in Sumer, finds the game effective to achieve learning outcomes. She says that most of the students loved the activity and they wanted to play it twice even though they were used to play with tablet. In addition, she found the game easy to prepare.

On the contrary, teacher in College had some troubles before the task. She declares that she downloaded the app. and charged the tablet before the lesson. However, she realized that there was no internet connection which was needed for app. Just after the warm up activity of the task. So, they had to change place for the activity. Teacher used activity room of the school in order to open the application from smart board. Luckily, when they went to activity room, teacher checked the internet connection of the tablet and they could manage to finish the task. Teacher found app good and easy to use but she made a comparison between the first traditional task by saying " *In traditional one we didn't have problem such as internet connection, waiting for our turn and that's much more effective even in repeating the target vocabulary.*". Also, she declared that task couldn't meet children's need of play by explaining like that " *They don't like to wait in line. They are 11 children. When their line pass, they have to wait 10 children and they get easily bored.*". She didn't satisfied from the task on behalf of repetition of the topic. She said that " They got full concentrate on the game and I couldn't talk about the topic with them sometimes."

#### 3.1.1.3. Age 3- Traditional Game Task 2

The second traditional tasks' aim was to make students recognize face parts in English by playing with a handmade craft. Both of the teachers found the task effective to manage the objectives of the lesson. They shared positive observations on children's approach towards the game. Teacher in Sumer says that students liked the activity so much and they wanted to take away to their houses. Teacher in College, expressed that students wanted to play with the material even in their free play time after the lesson. Also, she added that she would put the material among the toys in the classroom and they would play whenever they wanted.

However, there was only one obstacle of the task for the teacher. They expressed that the task was not easy to prepare. While preparing the tasks, they even made some changes from the instructions.

The teacher in Sumer found black and white printable version of the face parts and prepared one for each children while teacher in College prepared the material by using felt but she only could prepare one material for each child. She expressed that next time she would prepare one material for each child even though one material went well in the classroom.

#### 3.1.1.4. Age 3- Technological Game Task 2

The task had the same objectives and outcomes with the traditional one. However, this time students created faces by playing online digital game. While carrying out the activity, teachers had some technical problems. Teacher in Sumer clarified that because of the screen in their classroom just one of her students could make a face. Their game couldn't work properly in their classroom. So, instead of the game they opened a song from the screen and demonstrated it with actions. The teacher in College had to change place again for this activity because of the lack smart board in their classroom. They used activity room of the school for this task. On the contrary to the other teacher, she didn't face with any technical problem while carrying out the tasks. The problem was the height of the task. She said that she had to help students to reach towards screen while playing the game.

Learning outcomes were achieved after the lesson by students according to the teacher in SUMER even though she had to change the game.On the contrary, teacher in College said that students chose just to play and she couldn't repeat the target vocabulary.

Both of the teachers were clarified that the task was interesting for the children. Teacher in SUMER showed children's love of creating something as a reason to this while the teacher in COLLEGE said that her students wanted to play the game again and again.

#### 3.1.1.5. Age 3- Traditional Game Task 3

Students were asked to play with the puzzles which had been prepared from their own drawings in the traditional game task 3. Learning outcome of the game was recognizing face parts in English again. The task began with a warm up game. Students played mirror game by imitating their pairs. It seems that both of the teachers shared positive comments on warm up game. Teacher in Sumer said that students loved becoming mirror and imitating pictures. Likewise, Teacher in College shared her idea by saying that students enjoyed while miming the funny faces and their partners.

The main game of the activity took similar comments from teachers. They both clarify that this game can meet students' play need. The task was easy to prepare according to teachers. Teacher in College expressed that she would use the same game, especially turning students' pictures into puzzles. Also, teacher in Sumer would use the game but next time she would cut students' drawing by herself because in this task she let the students cut into pieces and that situation created negative issues in the classroom. In addition, teachers accepted that game could meet lesson's learning outcomes.

#### 3.1.1.6. Age 3 - Technological Game Task 3

This time teachers took photos of students in order them to solve their own photos puzzles by using an app. Learning outcome was recognizing face parts in English. Both of the teachers confirmed that the task was so easy to prepare. Also, students love the game so much according to teachers observations. Teacher in College expressed that they got excited when when they saw the tablet and she thought that this task was suitable for them to meet their play need because of the fact that her students love playing online games. However, teacher in the College didn't accepted the learning outcomes were achieved because of her own change in the activity. She could took only a photo of the students as whole class. Otherwise, students could achieve the outcomes.

### 3.1.1.7. Age 3- Traditional Game Task 4

Students asked to join the story by playing with their toy props. Learning outcome of the activity was reminding body parts to students. Both of the teacher sees that the best part of the task was making a banana craft. Teacher in College also declared that students played with their banana crafts in their free play time after the lesson. In addition they declared that task met students' play need. Also, teacher in College clarified that watching the story could make them understanding memorizing.

### 3.1.1.8. Age 3- Technological Game Task 4

The one difference from the traditional task 4 was watching and listening the same story from smart board in this task. Students asked to imitate sounds and actions of the story while teacher stopped the video and they needed to act out the story with their story props. It is understood that teachers couldn't find acting out enough for students' meeting of play need. However, they said that learning outcome was achieved after the task and the task was easy to prepare.

#### 3.1.2. Age Group 4

#### 3.1.2.1. Age 4 - Traditional Game Task 1

Traditional game tasks began with "Guess the animal" game. Students asked to play guessing game by using animal objects in the classroom and making sounds of the animals. Students expected to make relation between the animals and animal sounds by guessing them in English at the end of the task. According to the teacher in Sumer , the task was easy to prepare. Also, learning outcome was achieved by students. In addition, she declared that this task could meet students' need of play because covering the animals with a cotton created curiosity while playing the guessing game. However, The most challenging part was demonstrating the animal sounds without using any technological device according to teacher.

As an ethnographic study results of the research, researcher had experienced similar things with the teacher. The game was easy to prepare. There was a learning process. However, it cannot be said that learning outcome was achieved exactly. There were two reasons for this. The first one was the game was not charming enough to students. They had loose their attention after 2nd or 3rd turn. So, the activity had took only five - eight minutes. The other reason was trying to imitate the animal sounds without hearing them. It wasn't make any sense for students. Even, they offered researcher to open an elephant video to hear its' sound when they couldn't remember the sound of elephant. So, this situation appeared that this task should have been supported with a technology.

#### 3.1.2.2. Age 4- Technological Game Task 1

In this task same outcome with traditional game task 1 aimed to be given. As a technological element, an application was used. In the application there were a lot of animals which can be unknown for four years old students. That was the biggest obstacle of the task for the teacher in SUMER. However, she added that listening real animal sounds directed their attentions and she clarified that they had fun while playing the game. The preparation stage for the game was so easy for the teacher and she thought that this task could meet students' play need. However she explained that she would use simplified version of the game if she could find it.

In the ethnographic study part of this age group, researcher found the game easy to prepare. However, some problems were realized about the task while carrying out. For instance, there were 14 students in the classroom that day and they had to wait for their turn until every child finished the quiz. This situation caused them to get bored and they began to loose their attentions. Then, researcher changed the activity by letting students to play step by step for each children in the circle. Another obstacle was lack of attention while teacher mentioned the target vocabulary in English. However, students achieved to make relation between the animals and their sounds.

#### 3.1.2.3. Age 4- Traditional Game Task 2

The second traditional task called "Animal race". Students asked to collect animals as many as they could in the parkour by cheering their English meanings to be winner. The outcome of the tasks was recognizing the animals which encountered in the parkour game for children. Before the main game, "hare and Tortoise" were read to students as warm up activity.

The best part of the task was the connection between the story and game in the task for the teacher in Sumer. Also, she added that collecting animals was so attractive for students. However, students had difficulty while carrying out the animals. Teacher defined this game as competitive. So, she said that the task could meet students' need of play. Also, they achieved the learning outcome of the game according to her.

Researcher collected similar results from this task with her own age group in the ethnographic study part. The game was not easy to prepare for the researcher. However, children was interested with the game so much. They played the game in two groups. Students played the game opposite to each other at the parkour. At the end of every round, they counted the animals in English as a whole class loudly. At the end of the activity, every child achieved to learning outcome.

#### 3.1.2.4. Age 4 Technological Game Task 2

Remote control cars were used for technological game task 2. Students collected the animals with their remote control cars and they had to count them at the end in English. Same story in the traditional game task 2 listened digitally in this task as a warm up activity.

According to the notes of the teacher in Sumer, children liked the story and game so much. However, the children who lost the game became unhappy at the end of the game. She also confirmed that they could manage the outcome while playing the game. In ethnographic study part, researcher observed that learning outcomes were achieved. Students liked the story in warm up. But the best part of the task was main game. Even the most active child waited for her turn to play the game. All of the children could focus on the game until the end while they couldn't pay attention even 5 minutes to any other game. According to the researcher, this showed that this task could meet students' need of play.

#### 3.1.2.5. Age 4 - Traditional Game Task 3

The task's outcome was making students relation between animals and their habitats. Students asked to play matching game with animals and their habitats. The teacher in SUMER found the task simple and easy to prepare. Also, she said that students liked the activity because they like group games. Her students could easily managed to finish the activity. She also confirmed that her students achieved the learning outcome of the game.

On the other hand, researcher explained that she had to make some changes in the game. She didn't ask students to play the game as whole group. She separated children into pairs and gave each children sets of animal pictures and habitat pictures. Researcher made this change because of the keep students much more focused to the game. It was also worked. Students joined the game effectively. All the pairs played the game for twice times. Even more, some students continued to play the game by changing their pairs after our learning experience time. Researcher also expressed that students refused to use target language at first but then, they began to use English words with the guidance of the teacher. In addition, the task was not easy to prepare for researcher. She had to prepare 8 habitat and 8 animal sets. Students were able to achieve the tasks' objective by giving the correct answers to teachers' questions on pictures.

#### 3.1.2.6. Age 4- Technological Game Task 3

In the technological game task 3 new animals and habitats were added to target vocabulary. Here, it was expected to make students experience animal habitats by watching videos with vr glasses. They also asked to match the animals that they saw and habitats after watching the videos.

The teacher in Sumer commented on this game task like that "*children really liked watching videos using vr glasses. They could easily mach the animals and habitats.*". She also found the task as easy to prepare. She added that students was looking forward to their turns for using the device. She

explained that this task could meet students need of play in an enjoyable way. Also, she confirmed that students achieved lesson outcomes and she would try to use the same task in her lessons again. In the ethnographic study part, researcher had to add new target vocabulary and omit some vocabularies which was in the traditional game task 3. She showed searching suitable 360 degrees videos for children and the subject. She took the students one by one for the experience and gave 1.30 minutes for each child. After every child watched videos with VR glasses, researcher asked them to play matching game by matching animals they saw and the habitats. Teacher also added that she continuously talked with each children by asking questions about the habitat they were in. Researcher observed positive reactions of the students. She added that there were also embodied learning in this process for students. They associated with their bodies and language learning by using VR glasses. However, researcher experienced a negative situation in this task. In the middle of the task, phone's battery had finished which was in the VR set and researcher had to use another phone to continue to the activity. Researcher found the task easy to prepare even though searching VR videos which are suitable for the the subject and children took too much time. Also, she confirmed the task that it could meet students' need of play easily by showing the embodied learning elements as a reason. In addition, all of the students achieved the learning outcome of the lesson.

## 3.1.2.7. Age 4-Traditional Game Task 4

The last and 4th traditional game task for 4 years old group was a story time game. Students asked to join to the story by playing with their story props and they expected to act out the story with the guidance of teacher.

Teacher in Sumer, expressed that making the story props was the most enjoyable part of the task for the students. However, making the story props took more than 20 minutes. Even though there was not much time for playing the main game, teacher commented that this task could meet students' need of play because of their love of creating. Also, she added that students achieved learning outcomes of the task.

Researcher experienced the same obstacle with the teacher in Sumer in the ethnographic study of the tasks. The warm up stage took much more time that it was planned and there was not much time for playing the main game of the task. So, researcher found the task insufficient to meet students' play need. However, students achieved the learning outcome of the task even just making the craft.

#### 3.1.2.8. Age 4-Technological Game Task 4

The last technological task of 4 years old group has same objectives and outcomes with the traditional task 4. However, students watched the video of the story this time and played guessing game. They also used their story props. Students asked to draw and alternative end for the story by using a website.

Teacher in Sumer expressed that they couldn't use story props for the activity. However, she explained that students liked to draw something on the tablet even though they dragged Daisy and Robin instead of drawing an alternative end. She found the task easy to prepare and confirm that this task could meet students' need of play. Also, her students achieved the outcomes of the task. In the ethnographic study part, researcher couldn't play the main game because of the poor connection in the internet. So, this task couldn't meet students' play need properly for researcher. However, students could achieve the task only by watching the video.

#### 3.1.3. Age group 5 tasks

#### 3.1.3.1. Age 5 - Traditional Game Task 1

The first task of 5 years old groups was "Build a house". In this task students were asked to create their own houses by using legos and blocks. At the end of the lesson, students aimed to recognize the target vocabulary. Same teacher from college carried out the tasks for age group 5.

For the first group, the students liked the idea of building a house with blocks and legos. Teacher explained that students shared their ideas to build the houses by using the target language. The best part for the task for this group was to see students' effort in order to finish the the task exactly in the certain time. Teacher found the task necessary for meeting students' need of play by saying that " *there is not restriction to their imagination and they shared their ideas and created a peaceful play time for themselves.*"

For the second group, teacher expressed that they also like the idea of creating their houses same as first group. On the contrary to the first group, teacher clarified a problem while carrying out the task. Even if teacher did not say anything about racing with each other, students began to compete with each other in the classroom after they had finished the task. "*They took a race on their own*" according to the teacher's comment. This group carried the traditional task after the technological task 1. Teacher shared students' comment on the tasks by saying that "*The students reacted in a*"

great excitement to this task, even they mentioned they like this task more than the technological one.". Teacher explained that this task could meet students' need of play also for this group because it helped them to develop their social and cognitive skills.

Teacher found the task easy to prepare and she declared that each group had achieved the learning outcomes.

#### 3.1.3.2. Age group 5 - Technological Game Task 1

Similarly with the traditional one, students asked to build a house by playing an online digital game on smart board.

For the first group, teacher expressed that students found the digital game so exciting. Also, they wished to play individually not as a group. However, teacher explained that the game was not so easy to play for crowded groups. Teacher clarified the best part of the task as students' creating a story according to the style of the house that they had created.

For the second group, teacher explained that students found the visuals of the game limited even though they liked the game so much. Also, students discussed how to design the house as group.

Teacher found the task enough for meeting students' need of play for each group because of the students' attitudes towards task and their target language usage. In addition teacher expressed that learning outcomes of the lessons had been achieved and she would like to use the same task again in her lessons.

## 3.1.3.3. Age group 5 - Traditional Game Task 2

In this task students aimed to recognize house parts in English by decorating a paper dollhouse.

For the first group, teacher expressed that students focused on their works and enjoyed while creating their own dollhouses. She also explained that they were excited too much for the game and students helped each other. However, some students created negative behaviors. Teacher shared the situation like that "*Some of the students had a discussion to make "the best dollhouse" and they even tried to destruct the others dollhouses.*"

For the second group, teacher explained that students worked on their dollhouses detailedly by using the target language.

Teacher found the task easy to prepare apart from finding visual sources. Also, she confirmed that the task could meet students' need of play by expressing " *because they are free to reflect their minds and create their dollhouses on their own way.*".In addition, this task "*improved students not only cognitive and social, but also physical readiness.*" according to the teacher.

#### 3.1.3.4. Age group 5 - Technological Game Task 2

Students asked to create digital dollhouse in this game task. For the first group, teacher had some problems. She didn't find the tablet enough to be seen clearly. Even more, students lost their attention at some point because of this reason. Another problem that teacher's expressed was group working. Some students wanted to change previous movements in the game. In addition, teacher expressed her students' approach towards digital game by saying "*Some of the students thought that we would play games online like video games because of the fact that the parents let them play video games at home. Therefore, it took time to explain that it was a task to perform to see learning outcomes."* Teacher defined the process as " exciting" for her because of students' different reactions. Also, she expressed that some boys from this group found the game "very girlish". According to teacher, The task could only be enough for meeting the students' need of play if there would be used an post activity.

For the second group, warm up activity went so well according to the teacher's note on the contrary to the first group. Students were eager to decorate a digital dollhouse. However, teacher experienced "waiting" problem with this group, too. She explained that students didn't want to take their turn just because they waited too much for the game.Furthermore, two of the students cried and rejected to join the game. Another similarity with the first group was their losing the attention and eager which they had got at the beginning of the task. Likewise her comment for first group, students didn't find this game enough to meet students' need of play. The game should have been more complex for students' readiness according to the teacher.

However, Teacher confirmed that the task was easy to prepare and students achieved the learning outcome.

#### 3.1.3.5. Age group 5 - Technological Game Task 4

Because of the fact that **Traditional Game Task 3**, **Technological Game Task 3** and **Traditional Game Task 4** could not be carried out by the teacher, it cannot be seen any data about these tasks. So, the section continues with Technological game task 4.

In this task, it was aimed to make students recognize house parts by creating their own digital stories. For the first groups , teacher expressed that students were so eager to create their own stories. So, students criticized their friends which added an item to the story before themselves. Teacher said that most of the students were demotivated at the end of the task because of the same

reason. Teacher added "They didn't seem like they remember the purpose, creating our own story book on that website didn't work very well".

Teacher experienced "waiting turn" problem also in this task. She confirmed that this group could not achieve the learning outcome of the task exactly.

Teacher experienced similar obstacles with the second group. Second group completely went out of the context and they created a story book which was totally different from building a house subject. At first teacher seemed the website was not easy to use. However, she figured out how to use the websites easily with the second group's task. On the other hand, teacher didn't find the game enough for students' play need and learning outcomes could only be achieved in the second group according to the teacher. She expressed her thought about the game task as "This technological material just could be a "fun" activity apart from education."

#### 3.2. Questionnaires

#### **3.2.1.** Just before the beginning of the session

At the beginning of the study, a questionnaire was given to each teacher in order to be aware of their approaches game based learning, educational technology, early childhood education and language teaching. There are 14 statements in the beginning questionnaire:

- 1st, 2nd, 3rd and 4th statements give information about teachers' point of view towards early childhood education.
- 5th and 6th statements show clues on teachers' language teaching styles.
- 7th, 8th, 9th, 10th statements points teachers' knowledge about game based learning.
- 11th, 12th, 13th, 14th statements demonstrate teachers' approaches towards educational technology.

The questionnaire can be scaled in five points from 1 strongly disagree to 5 strongly agree.

When the 4 teachers' answers are examined, the results in the table below can be seen:

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
I know the characteristic of kindergarten age children.				Chosen by 2 teachers	Chosen by 2 teachers
I am aware of the pedagogical, cognitive,physical,social and emotional developmental stages of children.			Chosen by 1 teacher	Chosen by 3 teachers	
I am taking into consideration developmental stages of children while planning my lessons.				Chosen by 4 teachers	
I am taking into consideration developmental stages of children while approaching my students.			Chosen by 1 teacher	Chosen by 2 teachers	Chosen by 1 teacher
I am following new learning approaches, methods and techniques on language education.				Chosen by 4 teachers	
I am applying new learning approaches, methods and techniques into my lessons.				Chosen by 3 teachers	Chosen by 1 teacher
I heard about game based learning.				Chosen by 2 teachers	Chosen by 2 teachers
I am using games in my lesson.				Chosen by 1 teacher	Chosen by 3 teachers
I am using games in my lessons just for fun.	Chosen by 1 teacher	Chosen by 2 teachers			Chosen by 1 teacher
I am using games in my lessons as a tool to achieve learning outcomes.					Chosen by 4 teachers

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
I am interested with educational technology.			Chosen by 2 teacher	Chosen by 1 teacher	Chosen by 1 teacher
I am using technological devices or materials in my lessons.			Chosen by 2 teachers		Chosen by 2 teachers
I am using technological devices in my lessons just for fun.	Chosen by 1 teacher	Chosen by 2 teachers	Chosen by 1 teacher		
I am using technological devices or materials in my lessons as a tool to achieve learning outcomes.			Chosen by 1 teacher	Chosen by 1 teacher	Chosen by 2 teachers

Based on the table, those comment can be done:

- All of the teachers are aware of the children's characteristic features and develop their lesson plans according to their students' developmental stages.Except only 1 teacher, most of the teachers know the developmental stages of children and be careful about these developmental stages while approaching their students.
- All of the teachers are aware of the new methods, techniques, approaches in language teaching and they do not hesitate to try these new techniques, methods and approaches in their lessons.
- All of the teachers are aware of the game based learning and they are using games in their lessons. Every teacher is using games as a tool to support their learning outcomes. Only one of the teachers is using game for fun. However, this answer is open to questioning when it is examined the other answers.
- While half of the teachers are aware of the educational technology and using technological devices in their lessons, the other half of the teachers do not have a lot of knowledge on educational technology and they are not using technical devices in their lessons too much. On the other hand, all of the teachers ,except one of them, are using technology as a tool to support their learning outcomes, they are not using technology just for entertainment purpose.

## **3.2.2.** After the Session

At the end of the session, another questionnaire were given to teachers in order to compare the changes of the teachers' ideas from the beginning to the end, see teachers' point of view towards tasks in the session, compare the traditional tasks and technological tasks with each other and learn teachers' feelings while carrying out the tasks.

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
Traditional tasks can define as games.				1 teacher	2 teachers
Technological tasks can define as games.				1 teacher	2 teachers
There were learning process in traditional game tasks.					3 teachers
There were learning process in technological game tasks.					3 teachers
Students reached the objectives of the lesson with traditional game tasks.				2 teachers	1 teacher
Students reached the objectives of the lesson with technological game tasks.				2 teachers	1 teacher
Traditional game tasks were suitable to students' developmental stages.				2 teachers	1 teacher
Technological game tasks were suitable to students' developmental stages.				2 teachers	1 teacher
I am not going to use technological games in my lessons again.	3 teachers				
Technological games were not attractive for my students.	1 teacher	2 teachers			
Traditional games were not attractive for my students.	2 teachers	1 teacher			

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
Traditional game were easy to prepare.			1 teacher	2 teachers	
Technological games were easy to prepare.			1 teacher	1 teacher	1 teacher
Traditional games were easy to play in the lessons.			1 teacher		2 teachers
Technological games were easy to play in the lessons.			2 teachers		1 teacher
I felt confident while playing traditional games in the lessons.			1 teacher		2 teachers
I felt insecure while playing technological games in the lessons	1 teacher	1 teacher			1 teacher

Based on the table, those comment can be done:

- All of the teachers confirm that both traditional and technological tasks in this study can define as game.
- Learning can appear both in the traditional and technological game tasks. Also, learning objectives can be achieved in two type of game tasks.
- According to teachers, It can be seen that developmental stages were taken into consideration in two type of game tasks.
- Teachers express that they will use technological tasks in their lessons and technological tasks are attractive for their students likewise the traditional games.
- Except 1 teacher, traditional games and technological games were easy to prepare for the other 2 teachers.
- Except 1 teacher, the others play traditional games much more easier than the technological ones. So, it is expected for 2 teachers to feel confident while playing traditional and technological games in the lessons.

#### **3.3. Interviews**

Interviews were done with two of the teachers face to face by researcher and these interviews were video recorded. On the other hand, the other teacher's interview couldn't be done face to face and be recorded because of the teacher's private accuses. However, she answered the interview questions by filling the interview form in written. Also, researcher's itself as one of the teachers of the study filled the interview form in written in order to describe her thoughts about the tasks and the session much more clearly and objectively.

#### 3.3.1. Interview - Just before the beginning of the session

All the interviews began with the teachers' confirmation that they were voluntarily joining to the study and they were going to carry out the study process in their classes by performing the tasks, filling the feedback forms, taking notes and answering questionnaires.

Then, teachers asked to talk about themselves. It appeared that teachers had got too many common points. The eldest teacher is 25 while the youngest teacher is 23 years old in the study. All of the teachers graduated from Department of English Language Teaching Programmes of universities. Three of the teachers are in the second year of their teaching experiences while the other is in her first year of teaching.

Teachers define themselves in different ways. However, the common points are a friends motivator, a guide etc.

Also, it is cleared that all of the teachers are aware of different approaches and techniques in language teaching and they are using them in their lessons. Direct method, TPR, Communicative tasks, role plays, realia, visuals, games are just some examples of these techniques and methods.

The next question for the teachers was how do children learn best. One of the teachers says "A child learn best by experiencing the language, making connection between their background and new knowledge, playing real-life prototype games.". The other expresses as " they learn best when they are happy and when they are playing games." Also, the 3rd teacher shares her comment by saying "children learn with games, unconsciously.".

All of the teachers also put the games and play concept in an important place for early childhood education. One of the teachers defines "play" as the key point of early childhood education. The other sees games as "job" for children and adds by saying that " *their biggest fun*".

When it comes to role of technology in ECE, teachers' ideas differ mostly. One of the teacher defines it as a complex situation and she adds "*I don't prefer that the very young children use technology freely without any control.*". However, others sees technology as a tool for the students' learn new things.

All of the teachers agree that games should be integrated into ECE. One of them offers that technology should be integrated directly to the curriculums.

Teachers have got similar approaches towards English language teaching. Acquisition and preparing them to real life situations with an exposure to language are example of these.

In addition, repetitive, purposeful, enjoyable and meaningful tasks, feeding their curiosities, playing lots of games with them are the best ways of teaching language to kindergarten age children.

Finally, teachers expected to see their students' reactions towards different tasks, observe their own teaching aspects and learn by meeting with new lesson plans in this study.

#### 3.3.2. Interview - After the session

After the session interview had been carried out the same steps with the beginning interview. However, Age 5 group's teacher couldn't join the last interview.

Interviews began with the briefly talking about the sessions. The teacher in Sumer expressed that children liked technological tasks really much. Teacher in College explained the session with these words "*I planned my lessons thoroughly and then observe myself and my children.That was a good experience. I wasn't even nervous in front of the camera.*"

The best part of the session was observing herself for the teacher in college. However, the other teacher found the remote control cars game as the best part of the session. On the other hand, the worst part of the sessions for the teacher in Sumer was imitating animal sounds while the teacher in college couldn't see any bad part in the study.

In the final interview, their own definition of "games" were asked to teachers. "*Learning in unconscious and funny way*" and "games are enjoyment tools." were the definitions.

The teacher in college didn't define traditional tasks as "games" by saying that "*I call them 'crafts or learning materials' generally but they work as games, too.*" while she confirmed the technological tasks as games.

Both of the teachers found very easy to prepare of the technological game tasks.

Also, teacher in college explained that students got very excited even when they heard that they were going to play game on tablet and smart board. On the other hand, both of the teachers

mentioned obstacles of technological tasks by saying internet connection, electrical material can be problematic while opening the games on tablet and smart board.

Teachers explained their feelings while carrying out the technological game tasks, too. One of them said "*In my lessons I almost always use traditional tasks….I just had new ideas thanks to the tasks*.". The other teacher had also similar feelings. Even she expressed that she wanted to add technological elements into traditional tasks.

Besides their own feelings, teachers were asked to talk about their observations on their students. Teacher in college expressed her ideas for technological ones as "they love to play on computer, tablet, etc. So, they got excited and enjoyed" and for traditional tasks as "*They had curiosity about what were going to do because if I say we will play on the tablet or smart board they know what to do or what we are going to play. But, in traditional ones they were like a little surprised.*". The other teacher commented so clearly to these tasks by saying "they got bored easily in traditional game tasks" while they felt excited in the technological tasks.

Teachers also asked to compare the task on behalf of achieving learning outcomes and the whole learning process. Age 3 college teacher, said that she nearly achieved all of the learning outcomes but it could be much more in traditional tasks. She gave students' focusing on games so much as an example of the study. Also, she confirmed that there were learning process in both of the tasks. Likewise, Age 3-4 Sumer teacher had the same idea about this subject.

In another question, teachers asked to talk about what they would change in the tasks. Age 3 college teacher mentioned her wish for traditional game tasks "*If I had much more time,I would want to prepare the same materials for them. So that, they could take them home and play with their parents,too.*" while she was ordering her wishes for the technological game tasks "*Accessibility in terms of internet connection, and a way we sign up, open a game or a level in a game whenever I want and the price of course. They must be free.*" On the other hand, Age 3-4 Sumer teacher wanted balance in the activities by saying "*I would use technology more*" for traditional tasks and "*I would also use traditional techniques*" for technological tasks.

When it was asked to teachers, age 3 college teacher wanted to use technological games later because of the fact that she saw how her students' were happy when they play digital games. In addition, Sumer teacher declared that she would integrate her lessons with technology. She added "*I decided to use games more frequently*" when it was asked if she changed her mind about a topic from the beginning till the end. Both of the teachers expressed that they managed to reach their expectations during the study.

Finally, teacher were asked about separation between technological games and traditional games. The question was exactly like that " Can games be separated as 'real' games by meaning non - technological one and 'game like activities' by meaning the traditional ones. Age 3 teacher answered the question by saying " Yes, even my children recognizes the technological activities as games and the traditional ones as for a way of lesson much more.". On the contrary, Sumer's teacher said " *they both have goals and they are enjoyable*."

#### 4. Discussion

At the beginning, there were a main research question which is "'Game' separation in early childhood education: The state of Technological games' integration into game based learning according to the EFL Kindergarten Teachers "

and 3 minor questions which are:

- Can "game" concept be separated as "technological games" and "real games" ?
- What are the EFL kindergarten teachers' attitudes to integration of technological games with game based learning?
- What is the role of technology in early childhood ELT education associating with game based learning?

After examining the results of questionnaires, interviews and tasks, objective inferences can be done in order to answer the research questions.

In this regard, the first thing to do was comparing the results of technological tasks and traditional tasks with each other in order to answer the first minor question. Each task for every age group has got same learning outcomes and same elements. When it is looked at the results part, it can be seen that teachers have comment like "learning outcome was achieved by the students." for 17 times by meaning traditional games and 18 times by meaning technological games. It seems that both of the tasks brought similar results. Then, how can they called differently from each other if they have same results?

Also, results part have full of with the teachers's comments about how students' got excited and happy when they see the technological tasks.Students wants to try the technological games again and again. Even two of the students from age 5 group, cried while carrying out the technological task in order not to wait for their turns. Most of the obstacles in technological game task caused from waiting line in during the study. Besides there wasn't enough devices for every child, this

situation shows that how children are excited and they cannot wait just even seconds for playing technological games.

In addition, teachers answered a feedback question towards directly this topic as "*Do you think that this task could meet students' need of play?*". Most of the technological tasks have answers like that "Yes, because that was enjoyable, they had fun, they want to win etc.".

Furthermore, teachers share their ideas in the interviews by defining games according to them and answering directly to the question. While one of them say no to separate games, the other accepts the separation by defining technological games as "real games" on the contrary to the question.

The second minor question can be answered much more clearly when teachers' notes and interviews examined. Teachers want to integrate technology into traditional tasks when it is asked to how you would change in the task. Also, they are saying to use technology in their lessons again. In addition, teachers said that technological tasks were much more easier than the practice. So, does it make technological tasks' integration into lessons more advantageous for the teachers?

However, in this part teachers' negative comments should be taken into consideration. The problems of the teachers they have experienced with the technological tasks were basing on external effects mostly. For instance, poor internet connection, lack of enough device etc. Without a solution to these factors, can it be possible for teachers to integrate technology into their lessons efficiently?

The third minor question can cover all the topics that is examined and mentioned until this time in this study. Technology can create the lesson more charming for a kindergarten student when it is used suitable to the groups' needs and your curriculum's necessities. They could learn the language by doing, using their bodies just like in age 4 technological task. Or, they can exchange their ideas and create buildings as in age 5 technological task. However, the association between the curriculum and task cannot make detailed or if the students' needs and features won't be taken into consideration, negative situation appears like happened in one of the group of age 5 during the technological tasks.

#### 5. Conclusion

In this study, English language kindergarten teachers' approaches towards technology integration into early childhood education researched by based on game based learning. Technological and traditional game tasks were carried out by different teachers under a qualitative case study. Also, researchers' itself joined to the research under the name of ethnographic study. Results collected from observation of the teachers, teachers' notes, feedback forms, questionnaires and interviews. As a result of the study, advantages and disadvantages or obstacles and facilities of both of the tasks can be discussed. However, a separation that calls technological games as game -like activities while defines traditional games as real games cannot be made by a college of English Language Teachers in Turkey.

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I hereby declare that I have written this thesis independently and that all contributions of other authors and supporters have been referenced. The thesis has been written in accordance with the requirements for graduation theses of the Institute of Education of the University of Tartu and is in compliance with good academic practices.

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"Game" Separation in Early Childhood Education:

The State of Integration Technological Games Into Game Based Learning According to the English Foreign Language Teachers in Early Childhood Education

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#### References

Allison J. Elliot (1996). Child language. Language in Developing Child. Cambridge University Press.

Ayvacı, H.(2010). *A Pilot Survey to Improve the Use of Scientific Process Skills of Kindergarten Children*. Necatibey Faculty of Education Electronic Journal of Science & Mathematics Education. Becker, Katrin. (2017). Advances in Game-Based Learning. Springer International Publishing.

Bedford, Urabain, Cheung, Karmiloff-Smith and Smith, 2016.*Toddlers' Fine Motor Milestone* Achievement Is Associated with Early Touchscreen Scrolling. Retrieved from https:// www.frontiersin.org/articles/10.3389/fpsyg.2016.01108/full

Berk,L., & Winkler, A. (1995). Scaffolding children's learning: Vygotsky and early childhood education. Washington, DC: National Association for the Education of Young Children.

Bruner, J.S. (1972). The nature and uses of immaturity. American Psychologist, 27, 687-708.

Calao, J.&Din, F. (2001). Child study journal. Volume 31. No 2. The Effects of Playing Educational Video Games On Kindergarten Achievement.

Edwards S., Nuttall J., Mantilla A., Wood E., Grieshaber S. (2015) Digital Play: What Do Early Childhood Teachers See?. In: Bulfin S., Johnson N.F., Bigum C. (eds) Critical Perspectives on Technology and Education. Palgrave Macmillan's Digital Education and Learning.New York. Fulghum,R.(1998). *All I really needed to know I learned in kindergarten*.New York:Random House. Hang,S. (2017) .Using Games to Teach Young Children English Language.Retrieved from https:// www.researchgate.net/publication/320345809\_Using\_Games\_to\_teach\_Young\_Childr en\_English\_Language

Gopnik, A., Meltzoff, A., and Kuhl, P. (1999a). How babies think. London Weidenfeld & Nicholson.

Hasting, D.(2014).*Preschool Children: Know Their Needs and Characteristics*. Retrieved from: https://www.classroom20.com/profiles/blogs/preschool-children-know-their-needs-and-characteristics

Herodotou, C. (2017, November 12), Young children and tablets: A systematic review of effects on learning and development. Retrieved from https://onlinelibrary.wiley.com/doi/abs/10.1111/jcal. 12220

Hristova, S.V. (2013). Technology of Early Foreign Language Teaching to Preschool Children Aged 5 to 7: Games and Game like Activities. American Journal of Pedagogy and Education

Jacobs, G. & Crowley, K. (2007). *PLAY, PROJECTS, AND PRESCHOOL STANDARDS. Nurturing Children's Sense of Wonder and Joy in Learning.* Corwin Press A SAGE publications Company. Thousand Oaks.

Mcdevitt, M., & Ormrod, J.E. (2010). CHILD DEVELOPMENT AND EDUCATION. *Making a difference in the lives of children and adolescents: The field of child development*. Chapter 1. Pearson International edition 4th edition.

Mittal,R. (2015).Use of Technology in English Language Teaching: Is it helping students and teachers?. The Asian Conference on Arts&Humanities. Retrieved from http://papers.iafor.org/wp-content/uploads/papers/acah2015/ACAH2015\_06760.pdf

Morin, A. 8 Common Playground Problems and How to Help. Retrieved from: https:// www.understood.org/en/friends-feelings/child-social-situations/playgrounds-playdates/8common-playground-problems-and-how-to-help#slide-3

National Academies of Sciences, Engineering, and Medicine. 2018. *How People Learn II: Learners, Contexts, and Cultures*. Washington, DC: The National Academies Press. https://doi.org/ 10.17226/24783.

Nutbrown, C. (2006). Key Concepts in Early Childhood Education & Care 2011 SAGE publications ltd. First edition is 2006

Partanen, E., Kujala, T., Näätänen, R., Liitola, A., Sambeth, A., Huotilainen, M. (2013). *Learning-induced neural plasticity of speech processing before birth*. Retrieved from:

https://www.pnas.org/content/110/37/15145

Petrovska,S.,Sivevska,D., & Cackov,O., 2013) Role of the Game in the Development of Preschool Child. Lumen International Conference Logos Mentality Education Novelty.(LUMEN 2013). Retrieved from https://www.sciencedirect.com/science/article/pii/S1877042813029017

PhD. Sayan, H. (2016). *Okul Öncesi Eğitimde Teknoloji Kullanımı. Using Technology in Preschool Education*. Retrieved from http://dergipark.gov.tr/down

Phd.Zosh,Phd.Hirsh-Pasek,Phd.Golinkoff,Phd.Parish-Morris.(2016).Encyclopedia on Early Childhood Development.Technology in Early Childhood Education.Learning in the Digital Age: Putting Education Back in Educational Apps for Young Children. Retrieved from http://www.childencyclopedia.com/sites/default/files/textes-experts/en/4738/learning-in-the- digital-age-puttingeducation-back-in-educational-apps-for-young-children.pdf

Piaget, J., (1952). The origins of intelligence in children. New York: International University Press

Reebye, P. (2005). Aggression During Early Years - Infancy and Preschool. *Can Child Adolesc Psychiatr*, Rev. 2005 Feb, 14(1): 16–20. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2538723/

Rowan, Chris. "The impact of Technology on Child Sensory and Motor Development." The impact of Technology on Child Sensory and Motor Development by Cris Rowan,OTR (n.d.): n. Pag. Sensomotorische. OTR. Web. Retrieved from http://www.sensomotorische-integratie.nl/ CrisRowan.pdf

Sahhuseyinoglu, D. & Iliško, D. (2010). How do Children's Learn Best?. *Chapter 4 Learning and the teacher in early childhood*.Page 30-36.Children's Research Center Turkey Publications, Arasirmaci cocuk merkezi Ankara,Turkey

Shonkoff, J.P., & Phillips, D.A. (Eds.). (2000). From neurons to neighborhoods: The silence of early childhood development. Committee on Integrating the Science of Early Childhood Development, Washington, D.C: National Academy Press. Available at http://www.nap.edu

Shore, R. (1997). Rethinking the brain: New insights into early development. New York: families and Work Institute.

Skawarecki, B. (2013). Babies Learn to Recognize Words in the Womb. Retrieved from:

https://www.sciencemag.org/news/2013/08/babies-learn-recognize-words-womb

UC Davis Cancer Center. *Childhood, Adolescent and Young Adult Cancer Program. Children learn through play.* Retrieved from:

https://presidentscircle.childcare.utah.edu/\_documents/children-learn-thru-play.pdf

Wilbert, C. (2008). When do children stop being selfish? Retrieved from:

https://www.cbsnews.com/news/when-do-children-stop-being-selfish/

Vygotsky,L.S. (1978). Mind in society: The development of higher mental processes

# APPENDIX

# i.Tasks' Sample Format

This format were used and given to the teacher for each of the tasks.

# AGE 3

# TRADITIONAL GAME TASK 1

# Lesson Plan & Instructions for Teachers

Theme	I want to be a monkey
Theme Objectives	<ul> <li>Consolidate the opening and closing routines and language</li> <li>Present and practise body words via Robin's new words</li> <li>Consolidate the Who do you want to be? routine, establish the costume for the unit (monkey) and share in Daisy and Robin's adventures</li> <li>Explore the value of being careful</li> <li>Body Smart: Teach the children the parts of the face and how monkeys and people both have these</li> <li>Nursery School: Present and practise movement vocabulary and how we do these things at school</li> </ul>
Theme Structure	Look at my Let's all
Theme Vocabulary	body, legs, head, arms, face, eyes, nose, ears, mouth, stand up, sit down, walk, monkey
Traditional Game Task 1	My Hand, My Foot! Students play guessing game with their own feet and hands drawings.
Warm-up	Before the task, teacher presents new vocabulary by using flashcards.
Task Vocabulary	hand, foot
Learning Outcome of the Task	At the end of this task, students will be able to recognize "hand, foot" vocabulary in English language by using only a chalk and their own body parts as a tool while they are playing.
Materials for the Task	Chalk for each students,1/4 two cartoons for each students
Needed Time for the Task	40 minutes

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#### Instructions

· Put cartoons on the floor as a circle before the activity.

Begin to the lesson with vocabulary teaching in circle time.

• Use flashcards for presenting the new vocabulary.

(In this part, teacher can play a game like "Simon says..." or another warm-up game in order to prepare students to the main game if she sees as a necessity. However, teacher has to explain the warm up game clearly in the feedback form. Also, This warm-up game cannot include any technology or technological element in it. In addition, Warm-up activities should have the same elements with the Technological Game Task 1!)

(Warm-up should not pass 10. min)

· Give a chalk to each student and show cartoons on the floor.

- Put your hand on the cartoon and make a demonstration by tracing your own hand.
- Show your drawing to children by raising your cartoon up.
- Ask students to trace their own hands by using their chalks.
- Write students' names behind the cartoons.
- Take off your shoes and put your foot on the other cartoon.
- Make demonstration by tracing your own foot with chalk.
- Asks students to trace their own feet by using their chalks.
- Write students' names behind the cartoons.
- After each student finishes their drawings, tell them that you are going to play a guessing game.
- Choose one student as a "it" voluntarily.
- It closes her/his eyes.
- Help other students to paste out the cartoons and ask them to change the places of the cartoons.
- It opens her/his eyes when the class is ready.
- Teacher asks it to find her/his hands and eyes by cheering "Where is your hand? Where is your foot?"

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- It tries to find her/his hand and foot. He/she has got only 1 chance.
- Game continues until all of the students become "it".

#### P.S: Please, do not forget to ;

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- take photos and videos from the session
- take notes about the activity after performing the tasks
- fill the feedback form by basing your notes.

Thank you so much for your interest, attention and effort.

Sevinç Biçer

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# AGE 3 TECHNOLOGICAL GAME TASK 1

"Draw Body Parts"

Teacher's Notes (about the lesson, task etc.)

Teacher's Name: Menem Corforce School: Schir Collage

After circle time we played "simon says" gove and reviewed face and body parts. Then I turged the tablet an and some that there was no internet connection. So I took the children. to the activity com to use smart board Lucking we . could use the tablet there thanks to the internet connection. On the app, they traced a fast print they played They were very excited but this was because the .. Knew that we were going to play gave on taslat The opp. was good and easy to use but in traditional one we didn't have probled such as interpret connection watthe fac. eur. two. And that was such more effective even in repeating the vecatrianes during the a durity

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#### iii. Tasks' Feedback Form Sample Format

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#### AGE 3 TECHNOLOGICAL GAME TASK 1

"Draw Body Parts"

### Feedback Form

Teacher's name:

School:

Please, answer the questions below according to your observations and your notes after the game task that you performed in your class.

**1.** Please, explain the preparation stage for the activity. (It took to much time, it was easy to prepare etc.)

......I. downloaded ... the app. and has yed the tablet .....

2. Please, explain the activity process briefly. (What was the best part?How was the reaction of the students to the tasks? How did you feel? etc.)

that we were going to play gave on taslet

3. Do you think that this task could meet students need of play? Why/Why not?

Not exactly. They dont like to wait in line. They're 11 children when their line passes, they have to wait. 10 children and they get easily bared.

4. Could your students achieve the learning outcomes of the lesson after the task?

Not exactly. They got full concentrate on the gave and I couldn't tak about the topic with them sometimes

5. Would you use the same game task again with your students to achieve the same outcomes?



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#### 06.05.2019

## Questionnaire - Just before the beginning of the session

Teachers are free to fill the questionnaire anonymously.

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
I know the characteristic of kindergarten age children.				$\checkmark$	
I am aware of the pedagogical, cognitive,physical,social and emotional developmental stages of children.	Leite			1	
I am taking into consideration developmental stages of children while planning my lessons.					J
I am taking into consideration developmental stages of children while approaching my students.					1
I am following new learning approaches, methods and techniques on language education.				$\checkmark$	
I am applying new learning approaches, methods and techniques into my lessons.					1
I heard about game based learning.				1	12. 15
I am using games in my lesson.		1 Section	~		
I am using games in my lessons just for fun.		1			
I am using games in my lessons as a tool to achieve learning outcomes.					~
I am interested with educational technology.		180	1		19 18 1
I am using technological devices or materials in my lessons.					1
I am using technological devices in my lessons just for fun.		1			
I am using technological devices or materials in my lessons as a tool to achieve learning outcomes.					1

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# v. Interview Sample Format

	6 May 2019 Monday		
Interview - Just befor	re the beginning of the session		
Teacher's name: <b>Hellers H</b>	and the start		
School: Schir Collage			
Age groups: 3, 6-9			
Could you please confirm carry out the process in yo forms, taking notes and ar	that you are voluntarily join this study, open to our classes by performing tasks, filling feedback nswering questionnaires.		
Yes, I'm wolvest	tadly joining this study.		
Please, Could you talk abo your experiences etc.)	out yourself. ( <i>your age, your graduated degree,</i>		
I'm 23. I grad Longvage Teaching	lvated the department of English Thave been teaching from 2 year		
Could you define yourself	as a teacher What kind of a teacher are you?		
Eholah.			
J. J.			
Could you explain the tech	iniques or approaches you used in your lessons.		
Tor activities			
J wals			
Based on your teaching st	vle, how do a child learn best?		
	,,		
WAA gaves in	consciously		
	conscreisly.		
W.M.gaues,un	conscretsly_,		
ואסט פון איז איז איז איז איז איז איז איז איז איז	രറു.സെട്ടിച്ചം, ncept and games in early childhood?		
What is the role of play con H's very martinet. and gaues, they will will be mercing	conscientsly ncept and games in early childhood? thembecaserw.Phplayingcoscept learn, theywestgetSoned., they M. each the c		