

AN EVALUATION OF THE FOREST SCHOOL PROGRAM  
IN A STATE PRESCHOOL IN ISTANBUL

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2018

AN EVALUATION OF THE FOREST SCHOOL PROGRAM  
IN A STATE PRESCHOOL IN ISTANBUL

Thesis submitted to the  
Institute for Graduate Studies in Social Sciences  
in partial fulfillment of the requirements for the degree of

Master of Arts  
in  
Primary Education

by  
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Bođaziçi University

2018

## DECLARATION OF ORIGINALITY

I, Sümeyra Büşra Erođlu, certify that

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## ABSTRACT

### An Evaluation of the Forest School Program in a State Preschool in Istanbul

Using qualitative research techniques, this study was designed to explore the experiences of people who were involved in the implementation of the Forest School program in a state preschool in Istanbul. The preschool included in the study was purposefully selected because I, as a researcher was one of the few Forest school leaders both in Turkey and in that particular school and the school was the only state school in Istanbul with a Forest school program at the time the study was conducted. Throughout the implementation I reflected on my experiences, during the data collection I explored the experiences of the parents and the forest school leaders via interviews and the children's experiences via field notes and observations. The examination of the program activities with its goals provided a deep understanding of how the case preschool was able to use Forest School practices while still working within the context of a state school curriculum. The results indicated that the teachers' motivation played a key role in the implementation and maintenance of the Forest School program and that the children's interests and the parents' positive perceptions of the program allowed for the program to continue. Although the program lasted for twelve sessions mostly at the school garden, both the observations and the parent reports revealed that forest school program supported each child in different developmental areas. Finally, the study concluded that it is within possibility that the physical settings of state schools can be turned into a setting for outdoor learning.

## ÖZET

İstanbul'daki Bir Devlet Anaokulu'ndaki

Orman Okulu Programının İncelenmesi

Bu çalışma İstanbul'da bir devlet okulunda nitel araştırma teknikleri kullanılarak, Orman Okulu programının uygulanmasında yer alan kişilerin deneyimlerini keşfetmek için tasarlanmıştır. Araştırmaya dâhil edilen okul öncesi merkezi amaçlı seçilmiştir çünkü bir araştırmacı olarak hem Türkiye'de hem de o okulda bulunan az sayıdaki Orman okul liderlerinden biriydim ve okul, araştırmanın yapıldığı dönemde Orman Okulu programı uygulayan İstanbul'daki tek devlet okuluydu. Uygulama boyunca kendi deneyimlerimi yansıttım, veri toplama sırasında mülakatlar yoluyla ebeveynler ve orman okulu liderlerinin deneyimlerini, alan notları ve gözlemler ile çocuk deneyimlerini keşfettim. Program etkinliklerinin amaçlarıyla incelenmesi, bu okul öncesi merkezinin, bir devlet okulu müfredatı kapsamında çalışırken, Orman Okulu uygulamalarını nasıl kullanabileceğinin derinlemesine anlaşılmasını sağlamıştır. Araştırma sonuçları, öğretmenlerin motivasyonunun Orman Okulu programının uygulanması ve sürdürülmesinde önemli rol oynadığını ve ayrıca programın çocuklarının ilgilerinin ve velilerin program ile ilgili olumlu görüşlerinin programın devam etmesine olanak sağladığını göstermiştir. Program, çoğunlukla okul bahçesinde sadece on iki seans sürmüş olmasına rağmen, hem gözlemler hem de ebeveyn raporları, orman okulu programının her çocuğu farklı gelişim alanlarında desteklediğini ortaya koymuştur. Son olarak, çalışma, devlet okullarının fiziksel ortamlarının dış mekânda öğrenim için uygun bir ortam haline getirilebileceği ihtimalinin olduğu sonucuna varmıştır.

## ACKNOWLEDGEMENTS

I would first like to thank my thesis advisor, Assist. Prof. Ayşegül Metindoğan, for guiding me through the researching the right direction whenever I needed help.

Thank you for your endless tolerance. I would like to thank committee members; Assist. Mine Göl Güven and Assist. Şenil Ünlü Çetin for your valuable feedback, comments and contribution. This accomplishment would not have been possible without you. I would also like to thank my colleagues and the parents who graciously agreed to take part in this research. I am grateful for your willingness to share your time and work with me.

I would like to express my deep gratitude to my sister, Ebru Turhan, in particular. Throughout my education, I have always felt your support behind me. Without your continued support, I could never have accomplished so much. Thank you for always being there.

Finally, I must express my very profound gratitude to my parents, Zeliha and Mehmet Sadık Sözbilir, and to my spouse, Ali Eroğlu, for providing me unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. My special thanks go to my son, Ahmet Selim, for his great patience while I was writing my thesis. Thank you.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Narrative

I had been implementing a nature education program in my classes at the case preschool since 2012, even before we started to implement the Forest School in 2015 at the same school. In that nature education program, one activity or a lesson focusing on an environmental issue was covered once a week and most activities were completed inside the classroom. We had a large garden outside the school building, but we went outside just for free playtime and that was only when the weather was not cold, rainy or snowy. I understood the benefits of playing outside; however, as a preschool teacher who held more conventional approaches to young children's learning, I believed there were many activities to do inside; workbooks to complete, concepts to teach, books to read, circle time and other routine activities to complete. I knew nature was important in children's lives, but I had very little awareness of the importance of nature in children's early learning experiences in school and in their curriculum back then.

As it is in our culture, also in our school, not only did the parents but also the teachers had some concerns about children going outside the classroom, even when going out to play in the garden, or going on a school trip. Some parents did not allow their children to go to a museum, the theater or a picnic. They feared that their children would get lost. Also, some parents had worries about their children going to our schoolyard, especially in autumn and winter. They did not want their children to get cold. Although, in the school, I was one of the teachers who used the schoolyard very often, I did not take the children outdoors on rainy, windy or snowy days. I thought that children could get wet or cold. I had never thought of finding a way such

as having them put proper clothes on to be able to make going out part of a daily routine regardless of the weather condition. In my school, late spring and the summer days, right before the semester ended, especially the last weeks of school, were the most crowded days of the schoolyard, because the weather was nice and sunny, all the work mandated by the curriculum were completed and, the administrative requirements were finished.

In 2014 in Istanbul, I participated in a seminar held by Gaye Amus who was an environmental educator in Finland. This seminar, which was about Finland Forest Schools, was quite an eye-opening experience for me and gave me the idea about getting Forest School training from Scandinavia. In the training, many videos were shown and the videos depicted children playing, working using natural materials, eating outside, even in the snow for the entire school day. I was impressed with these scenes. I questioned my teaching methods; why we expect learning can only occur within the school walls and why we do not let children learn outside.

There is a significant difference between indoor and outdoor learning environments. I did not know where to begin. Our school administration wanted us to write a project proposal to be funded by European Union (Erasmus+) in which all, the costs of teacher education were met. I shared my ideas about Forest School with one of my colleagues and we wrote an Erasmus+ KA1 Project together. After searching for courses, we realized that there was not any standardized delivery of Forest School training in Scandinavia. We learned that the standardized Forest School training was provided for educators only in the UK and we began our journey there.

My Forest School story began with an interest in learning outside. I got Forest School training with my three colleagues in my school. One of the trainees was the

one who wrote the Erasmus+ project with me, another was the director of the school and the other one was another teacher at the school who wanted to join the project.

In 2015 January and March, we went UK to observe Forest Schools and get theoretical and practical courses. Our Forest School educator suggested that we set our sessions in our schoolyard after arranging them according to Forest School criteria. In the spring of 2015, we started to implement the Forest School program by setting pilot sessions with four groups.

As we did not know parents' reactions before the application of the pilot program, we had some worries about the pilot sessions. We had chosen two classes as pilots one being mine and the other one being the class of the teacher who received Forest School training with me. Surprisingly, the number of children who were allowed to participate in Forest School sessions surpassed our expectation. The parents who hesitated to give permission initially, changed their minds two or three weeks after the program began and wanted their children to participate in the Forest School program. As a candidate to be a Forest School leader who set the sessions, I felt very happy and satisfied with my profession.

## 1.2 Research purpose

The site of this study was the first and the only state school that attempted to implement Forest School program in Istanbul, so it was an innovation in Turkish Education. I wanted to examine the adaptation and application of the Forest School program in my preschool systematically, to show its consequences and to encourage other state/public preschools to apply Forest Schooling.

Forest Schooling is a type of outdoor education in which children (and adults) gain personal, social and technical skills by engaging different activities in forests/woodlands (Murray & O'Brien, 2007). Murray and O'Brien (2005) defined

Forest School as "an inspirational process" that provides children, young people and adults with regular opportunities to achieve and develop confidence with the help of hands-on learning in a woodland environments. Forest School has some main components that differentiate it from any other outdoor activities. These key features of Forest Schools are (1) woodland settings, (2) increased adult/child ratio, (3) freedom to explore using multiple senses, (4) linked to national curriculum objectives, (5) regular visit in all weathers, (6) running the sessions by trained leader, (7) providing appropriate risk taking, (8) child centered program and (9) promoting holistic development (Murray & O'Brien, 2005; Forest School Community, 2011).

First, there should be woodland setting; meaning that using natural environment in children's local area; local bush land or natural parkland settings (Knight, 2009 cited in Cumming & Nash, 2015). Second, increased adult: child ratio that enables relationship building between children and leaders, and it protects the risk of harm. Third, freedom to explore multiple senses is needed for encouraging creative, diverse and imaginative play. Just academic ability is not stressed, the importance is given to "whole child". The children can have fun being in woodland with the first hand experiences and using all the senses, and this can be a major factor in motivation. Fourth, in the Forest School program learning, there should be a link to national curriculum objectives, but the leader sets these objectives in different contexts. Forest School provides freedom to explore using multiple senses. The fifth feature of Forest School is regular visits in all weathers including all year around (Murray & O'Brien, 2005). Sixth key feature of Forest School is that qualified Forest School practitioners, who are required to hold a minimum of an accredited Level 3 Forest School qualification in UK, lead Forest School. Seventh, Forest School provides children with the opportunity to take appropriate risks. Eighth, Forest School uses a range of child-centered processes to create a community for development and

learning. Ninth, one of the Forest School aims is to promote the holistic development of all those involved. Goal of the Forest School is to develop children in all areas of development; physical, cognitive, linguistic, emotional, social and spiritual (Forest School Community, 2011).

Using qualitative research techniques, this study was designed to investigate the experiences and reflections of people who were part of a Forest School as teachers, parents and children. This investigation of the Forest School program in case preschool included several goals. One of the objectives of this study was to examine whether the Forest School program implemented fit the key features of Forest School, whether this Forest School program met the standards of Turkish Early Childhood Education Curriculum (2013) and how the Forest School program was initiated, developed and launched. Moreover, my intention was to examine scientifically how the case preschool was able to use Forest School practices while still working within the context of a state school curriculum. The second aim of the study was to explore the experiences of the young children who participated in the Forest School program. The third objective of this study was to explore and demonstrate the factors that motivated the teachers to implement and continue the program, and the factors that motivated the parents to support the program by allowing their children to participate in the Forest School program.

The Forest School program that was implemented at this case study preschool was an adaptation from abroad. This case study aimed to examine scientifically how the program was adopted, how it was implemented, how it worked in a state school, how much the program was successful according to key features of Forest School. My intention was to provide information for other schools and educational stakeholders that might be interested in Forest Schooling approach within the realm of preschool education, especially for state schools.

To reach these aims, my study has one main research question;

To what extent the Forest School program is applied in a state preschool in Istanbul, Turkey. What are the experiences of teachers, parents, and children related to Forest School Program in a state school?

## CHAPTER 2

### INVESTIGATING THE ISSUE

#### 2.1 Today's issue; disconnection from nature

Play is a basic right of children. Article 31- of the United Nations Convention on the Rights of the Child has direct implications for children's play- and states; "That every child has the right to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts" (UNICEF, 1990). Children gain lots of experience when they engage in play. Playing is fun for children and during play; they develop life skills without even noticing. The criteria that Hughes (2003) suggests to define play are freedom of choice, personal enjoyment and focus on the process rather than its outcome. These three criteria are at the core of the play processes in connecting children's development with their learning. Today, there are still misunderstandings regarding the value of play, and, often it is regarded as a misuse of children's time that could be better spent teaching academic skills (Dowdell, Gray & Malone, 2011).

Children today are growing up in a society where they have much less freedom to play out of doors and they are becoming increasingly separated from the nature. In their everyday lives, they go outside; however, their experiences are just doing organized sports and playing on playground equipment that are constructed (such as swings, seesaws, and stairs) and allow only for pre-defined activities using them (Charles, 2009; Dowdell et al., 2011; Louv, 2008). They have fewer opportunities to socialize and play with other children out of doors. Many factors contributed to children's disconnection from nature, fear and safety issues, particularly parental fears about traffic and stranger danger. In addition, the increasing reliance on technology leads to this disconnection from nature, as many

children choose electronic games over time spent outside (Louv, 2008). Children today have more visual input from television, computers and videos, together with fewer opportunities to listen, create mental images and explore their natural environments.

Louv (2008) described children's disconnection from nature as "nature deficit disorder", and stated that “*nature-deficit disorder is not a medical diagnosis, but a description of the human costs of alienation from nature.*” Charles (2009) pointed out that consequences associated with children’s disconnection from nature include diminished health; higher obesity rates; reduced cognitive, creative and problem solving capacities; lower school achievement; lower self-esteem; less self-discipline; and, attention deficit hyperactivity disorder (ADHD). These issues are all ills of today’s developed and developing societies worldwide and often require high-cost measures to fight back, often with unsatisfying outcomes (Charles, 2009).

Natural environments, however, have many positive impacts on well-being of children. To begin with, Herrington and Studmann (1998) noted that children’s social interactions and imaginative play lasts for longer durations in natural environments allowing for a naturally occurring peer tutoring and learning context. Moreover, natural environments strengthen children’s imaginative play, the development of positive relationships and lead the environment to become a learning place (Dowdell et al., 2011). Fjørtoft (2001) reports research from Scandinavia, showing that children who play in flexible, natural landscapes appear to be healthier, have improved motor fitness, balance and coordination. Moreover, spending time in nature has been shown to reduce stress and benefit treatment of numerous health conditions (Kahn, 1999 cited in Warden, 2010).

## 2.2 Outdoor learning environment in today's schools

Although there are many positive impacts of natural environments and many risks of disconnection from nature, schools do not use outdoor learning environments effectively. In today's schools children spend more time inside, and their play environments shifted from outside to inside. In childhood and primary school education, teachers are under pressure to cover subject material, working within a discourse of achievement and standards (Maynard, 2007b).

Çelik (2012) revealed that in Turkey in most preschool education centers, either natural environments or backyard of schools are not used effectively, they are not appropriate for play; physical designs of these places are neglected. A research study that examined the quality of public and private preschools in Istanbul revealed that in both private and public preschools, children experienced paper-pencil activities more frequently than activities using concrete materials (Göl-Güven, 2009). In addition, Göl-Güven's (2009) study reports the following:

"Even when the preschool had a playground and the weather was good, teachers preferred that children stay inside. The reason given by teachers was that parents did not want their children to go outside and catch cold or get dirty" (p. 445). Outdoor activities are not perceived as activities practiced out-of-doors by the teachers, they are seen as the reason to go out to the school garden in good weathers (Alat, Akgümüş, & Cavali, 2012).

The factors leading to ineffective usage of school backyards/ natural environments lie in teachers' limited perceptions of the outdoor environment for children's learning (Malone & Tranter, 2003). Maynard and Waters (2007a) reported that teachers did not see outdoor environments as an opportunity for teaching and learning, and teachers saw their "primary role of teachers" as teaching curriculum content. Furthermore, Natural England Commissioned Report indicated that

challenges to embedding outdoor education in schools exist not only at personal levels; teachers' confidence, self-efficacy and their access to training in using natural environments close to the school and further afield but also there are challenges that exist at institutional levels; the risk of accidents, cost and curriculum pressures (Dillon & Dickie, 2012).

In Turkey, Yılmaz, Olgan and Yılmaztekin (2016b) investigated Turkish pre-service preschool teachers' perceptions of different kinds of landscapes. The results showed that the participants' educational preferences were generally in the categories of park and maintained settings. According to Yılmaz et al. (2016b), the preferences of the pre-service teachers could be linked to the shortage of compulsory environmental education courses in early childhood teacher education programs in Turkey. They perceived outdoor and natural settings as the least conducive to attaining educational goals. Most of the pre-service teachers did not see outdoor settings as appropriate for activities. Findings of the studies examining environmental education in Turkey suggest that the environmental issues described in pre-school education programs in our country are not sufficient in providing environmental awareness development (Yurt, Kandır, & Kalburan, 2012).

One of the papers to understand the current use of the outdoor environment by a group of early years teachers working in South Wales revealed that there are four reasons other than teacher oriented factors, leading to ineffective usage of outdoor environments in Wales. These are not having easy access to outdoor environment in schools, cultural differences related with weather conditions in a country (not every child have water-proof wearing, not every school have drying rooms as in Scandinavian culture), issue of risk in urban areas, and early years education policy in Wales (Maynard & Waters, 2007a). This study is a way to better understand whether the case preschool faced with these obstacles leading to

ineffective usage of outdoor learning environments and if yes, which of these could be overcome and how.

### 2.3 Forest School as an approach

In the light of the work of early year's pioneers; Froebel and Pestalozzi, and social theorist and reform pedagogue Rousseau, learning in the natural environment for children's well-being had emerged in the nineteenth and early twentieth century, and was firmly established within Scandinavian nations through the idea of 'friluftsliv' (or open-air living), and in Germany through the Kindergarten movement (DfES, 2006; Gilchrist et al., 2016). Friluftsliv meaning "free air life" in Scandinavian philosophy expresses freedom in nature, spiritual connectedness to the land, wish of connect with environment in many different ways and as often as possible (Knight, 2013, p.2).

In late twentieth century, neoliberalism over the world brought changes in the structure of educational systems in ways that include privatization, competition and new forms of accountability to national and local government (Gilchrist et al., 2016). These standard based education systems reduced the time spending outside as to focus more on subjects that were measured in standardized tests (Taylor, Power, & Rees, 2010). Today, because there has been growing concern over children's well-being and health, over educational process and national environment, there has been rising international attention to Scandinavian concepts such as forest kindergartens and "udeskole" meaning in Danish outdoor schools (Gilchrist et al., 2016).

The original source of the Forest School concept was developed in Sweden in 1950's through its program "Learn with the Forest" (Jensen, 1995). In Sweden Goesta Frohm created the idea of "Skogsmulle" (in Swedish *skog* means forest and *Mulle* is the name of a character who lives in a forest). The Skogsmulle School was set to

make children from five to six years of age closer to nature (History of Forest Schooling, 2017). In Denmark in 1960s, it had emerged when a woman named Ella Flatau formed a “Walking Kindergarten,” where a daily hike in the woods was part of the curriculum (Kane & Kane, 2011; MacQuarrie, Nugent, & Warden, 2015, Joyce, 2012 cited in History of Forest Schooling, 2017).

In the UK, Forest School training program has been adapted from a Scandinavian philosophy to learning (Gelter, 2000) and has been going on since 1990s. The interest of Forest Schooling in the UK can be evidenced by the growing number of reports relating to the Forest School approach (Waite, Bølling, & Bentsen, 2006). In 1995, a group of nursery nurse students and lecturers from Bridgewater College, Somerset visited Denmark and witnessed the benefits of the Danish Forest Kindertartens firsthand. They were so inspired by the open-air culture (*friluftsliv*) as a way of life in Scandinavia and largely outdoor, child-centered/ play based pedagogues. They brought the concept back to the UK and started what is now recognized as ‘Forest School’. Since the 90’s interest in the Forest School concept in the UK has been growing exponentially.

In Denmark from which the UK adapted their training program, there is not one type of “Forest School”; each setting changed according to its local area (rural, semi-rural or urban area) and depending on the people using it (pedagogues, children and parents). Some settings that are referred as Forest/ Nature Kindertartens are situated in woodland. In these settings, the natural environment gives a clue for the subject of the activity inside and outside, for either the whole or a significant part of the day. Sometimes things discovered and investigated by the pedagogues and children in the natural surroundings may be carried inside for further exploration and discussion. The number of children in these kindertartens is between twenty and thirty, and they have four or five practitioners. A few kindertartens are much larger

with over one hundred children. Some kindergartens in Denmark are not situated in woodland and they have forest groups, they go to woodland area often by bus for either part or the whole of the week. Such groups usually have a permanent or semi-permanent shelter in the woodland. In urban areas where woodland is too far away, the kindergartens rent allotments in the town and develop these as their outdoor environment. It is a known fact that all kindergartens in Denmark are not specific forest or nature kindergartens or not all kindergartens have forest groups. Many kindergartens use only their available outdoor area. However, the common point for all kindergartens in Denmark is that outside will be used for part of each day all year round (Williams-Sieghedsen, n.d.).

In the UK after the study trip, a 'Forest School' was started for Bridgewater College Center of Children. The concept spread and now there are Forest Schools in many parts of the UK. The term of Forest School itself was a made-up English name for what it had been seen in Denmark forest kindergartens (skovbørnehaver), forest or wood groups (skovegrupper), and nature kindergartens (naturbørnehaver). Ordinary early year's settings started to use the outdoor area they have available. In UK, not all schools all over the country take Forest School approach. Participating schools usually send specific classes or children with special needs to Forest School for a morning or an afternoon session, where they become involved in a range of activities for example; using tools to create art work, listening and responding to stories, learning about plants and habitats, tree climbing and different types of teamwork. (Davis & Waite 2005 cited in O'Brien, 2009). In United Kingdom, the delivery of Forest School sessions can occur every week, fortnight and can set from two to twelve months depending on the school. Group of children can go either on foot or by bus to garden or woodland area that can be used for Forest School (Ridgers, Knowles, & Sayers, 2012).

The cultural differences affect the approaches to Forest School and outdoor play. In England, policy states that childcare providers for young children up to the age of five must provide access to an outdoor play area or, if that is not possible, ensure that outdoor activities are planned and taken on a daily basis (unless circumstances make this inappropriate, for example unsafe weather conditions) (DfE, 2017, p.30). UK policy is more cautious, however in Scandinavian countries the natural woodlands are part of the children's everyday experiences. There is a strong cultural bond between Scandinavians and nature. In Norway, there are broad outdoor play areas for children. These places consist of different areas such as; a sand pit, a slope or a climbing area. Children play outside in these different natural environments for several hours every day, in all weathers (Gilchrist et al., 2016). In summary, Forest School experiences are constructed related with ways of behaving, including cultural influences that shape early childhood settings.

#### 2.4 The pedagogy of Forest School

Forest Schools use free play, exploration, engagement with the natural world to inspire an unstructured curriculum. In order to experience nature in a meaningful way, free and unplanned time is needed. The reason behind the lack of free time (at home/schools) is that time consumed by an invisible power and in many culture it is given little value to the natural play (Louv, 2008). For example, children choose "screen time" rather than playing even if they are at home and parents are competing with the advancement in technologies (Louv, 2008; Taylor & Kuo, 2006). In schools outdoor learning and free play time are seen as misuse of children's time, it is believed that time is used in a better way if the children are engaged in formal learning/academic activities (Dowdell et al., 2011). Forest School provides a means by which children, particularly the ones who lack opportunities to play in the natural

environment (Murray & O'Brien, 2007), can gain regular access to the natural environment (Slade, Lowery, and Bland 2013). If we think that children spend less time playing in the natural environment, providing access to the environment through the education system is the only way to enrich children's contact with nature and provide for children with the opportunity to learn about and engage with it (Harris, 2015).

Forest Schools started with an inspiration from Swedish Forest Kindergartens and Forest School in the UK is an interpretation of practice that originates from Denmark. Moreover, the case preschool adapted the Forest School Program from the UK. Nature has a different meaning when different social and cultural practices are taken into account, so local, social and cultural contexts have an influence on pedagogical practice and implications for practice (MacQuarrie, Nugent, & Warden, 2015). While considering the pedagogy of the Forest School, it is important to take into account social and cultural context of the settings where it is practiced. Review of pedagogy of Forest School in the UK will provide with comparison of pedagogies from different Scandinavian countries, especially Denmark where this practice originated. According to MacQuarrie, Nugent, and Warden (2015), as transferring different educational approaches includes issues of different cultural and situated context of learning, practitioners can face some difficulties in translating observed examples to their settings. Also, children's experiences are not equivalent to other children's experiences in different settings, so it is not possible to copy exactly the same activities directly. They need to be adapted to the needs of the children in each setting. Moreover, in Scandinavian countries and the UK there are some similarities and differences in terms of pedagogy.

One crucial factor that relates to the pervasive belief amongst of all countries (Denmark, Finland and the UK) is that nature is the educator. Using nature as a

setting and resource sustains flexibility in pedagogical practice and provides various possibilities for children's learning and development (MacQuarrie et al., 2015).

Examining pedagogical principles of Forest Schools in the UK with the participation of many Forest School leaders also revealed that using natural environments and materials as a resource and, engaging activities with all senses are the most ranked principles of Forest School (Waite et al., 2016).

Forest School in the UK occurring in school hours, on a regular basis both focuses on learning about nature and is linked to the national curriculum objectives such as language, math and science (O'Brien, 2009). However, some studies in the UK revealed that even though there are potential links with national curriculum and within a context of strong drivers encouraging outdoor learning like Udeskole in Denmark, Forest School practitioners in the UK do not appear to see Forest School as an opportunity for delivery of the national curriculum. Personal, social, and emotional development emerges as a key focus of Forest School leaders (Harris, 2017; Murray & O'Brien, 2007). Forest School sessions are often seen as quite separate from classroom teaching, often being led by different people. However, studies suggest that informal learning at Forest School can support and contribute to classroom teaching (Harris, 2017; Waite et al., 2016), not more focused on development of skills (e.g. tool use), employing kinesthetic and sensory learning (Murray & O'Brien, 2007).

Another difference between Scandinavian Forest School and the UK Forest School in terms of pedagogy is the requirement of documented evidence of learning. In the UK, there is reporting mechanism between early childhood settings and home (DfE, 2017). This may be in the form of a pastoral episode such as helping with changing boots, or in the form of verbal feedback and written evidence. In Denmark,

seeing the sun on the children's face or dirty knees is enough evidence for parents (MacQuarrie et al., 2015).

While having a foundation that is guided by principles, another important element of implementing a successful Forest School program is the competent practitioners and a trained leader. Constructivist theories that are based on Piaget and Vygotsky's ideas have been offering important insights into the roles of teachers. In the constructivist learning approach, teachers' role is to adopt the view that each learner will construct knowledge differently and that these differences derive from the various ways that individuals acquire, select, interpret and organize information (Adams, 2006). Constructivist theorists state that children construct meaning from their direct experiences, there is no knowledge independent of the meaning attributed to experience constructed by the children/learners (Hein, 1991). Adams (2006) suggests, for social constructivist pedagogy, teachers focus on learning rather than performance, so learning orientation prevents children losing locus of control from pupils. As Adams (2006) defined constructivist teachers, Forest School leaders see learners as active constructors of meaning and knowledge. In 2002, OCN defined Forest School as "An inspirational process that offers children, young people and adults regular opportunities to achieve, develop confidence and self-esteem through hands-on learning experiences in a local woodland environment". In the Forest School, children are encouraged to direct their own learning and offered with hands-on learning experiences. Through observing a child's play and their interests, a Forest School leader shapes teaching methods and plan sessions.

Constructivist teachers build a teacher-pupil relationship upon the idea of guidance and not instruction. The nature of social constructivist learning environments provides children with enough time to talk while the teacher plays the role of a listener, and observer (Adams, 2006). Harris (2017) investigated how

Forest School practitioners were facilitating learning at Forest School. Harris (2017) stated that Forest School leaders in the UK saw their role as facilitators of child-led learning, and as children gained confidence in Forest School settings, the leaders helped them to negotiate their learning.

Unstructured, free playtime in the outdoors encourages children to use their imagination, making contact with themselves and others, exploring and trying things out, and expressing feelings and thoughts in inhibited ways (Waite & Davis, 2007). Therefore, unstructured time provides children with constructing their own learning. In Forest Schools, children are given freedom to explore the natural environment (Murray & O'Brien, 2007). Waite and Davis (2007) examined Forest School programs in the UK in terms of the balance between structured and unstructured time spared. In the studies of Forest School there seemed to be two principal types of learning context. Waite and Davis (2007) explained 'structured activities' as the activities delivering in the context of boundaries and learning objectives with the aim to teach something about working together, the environment or achieving small goals to support self-esteem. On the other hand, 'free play' activities that are not adult-led, are child-initiated activities, which may or may not been supported by adults. Learning can occur in free play activities, but in advance, there are not learning objectives.

Although rhetoric and literature on Forest School refer to the benefits of free play in woodland, Waite and Davis (2007) found that Forest School programs in the UK (as designed by three different Forest School leaders of Schools in the UK) tended to be highly structured. In reality, free choice and free play are always controlled within educational settings (Sherwood & Reifel, 2010). In Denmark, it is more possible that teachers have greater freedom to interpret and operationalise the curriculum and national cultural values of *friluftsliv* (Waite & Pleasants, 2012).

However; in the UK as the site safety is prioritized and high structured activities are set, the emphasis is on child rather than environment. It is contradictory to the aim of which to support children's freedom to explore without excessive adult intervention, their learning to take measured risks and to interact with safely, learn from, and respect the natural environment over time (Waite et al., 2016).

Culture, media and educational policies may contribute to variations in risk-rich practice. Although principles of Forest School in the UK include offering children opportunities to take risks, in England children's engagement with outdoors has lessened in recent years with the effect of risk aversion (Rea & Waite, 2009). However, in Denmark recent governmental educational policy has supported teachers' use of the natural and cultural environments to support learning (Early Childhood Education and Care Policy in Denmark, 2000). In the UK, practitioners avert the risky situation to make it safe (MacQuarrie et al., 2015). While the practitioners in Scandinavian countries see climbing up trees, use of knives or fire as an opportunities for learning and let children feed the fire themselves or allow children to climb up the top of trees, in the UK practitioners do not allow children to feed the fire and adults stay close by the tree when children are climbing. There is consensus that risk-taking is a central feature of practice, so behavior of the practitioners in the UK implies a form of erosion where opportunities are diluted and such interference have an effect on subsequent learning (Stan, 2010).

Some researchers stated that meaning of free choice and free play are shaped by teacher's beliefs and values because teachers in different cultures attributed different meanings to play (Leather, 2018; Sherwood & Reifel 2010). Although understanding and acceptance of some cultures' "educational play" is slowly changing, the educational significance of open air (friluftsliv) may create dissonance for UK educators (Leather, 2018). So, Leather (2018) highlighted that the translation

required in the move from Scandinavian cultures to the other cultures is something that is critical for educators working in Forest Schools in the other countries to understand, yet it poses cultural challenges.

There are different practices also in the issue of place-based practice. Practitioners in UK and Finland give importance to visiting and re-visiting a single location so that a continued relationship can be established. However, in Denmark there is variation in nature-based early childhood settings. While one of the groups stays all the time in the day-care centre, another group has one specific place they visit every day by bus, every day, no matter the weather conditions, all year long and a third group goes also by bus, but to different locations every day (MacQuarrie et al., 2015).

In this case study, examining the Forest School plans, interviews with teachers and parents, and observations of children gives broader understanding of the experiences of all parties in terms of the cultural implications of the Forest School program, which was adopted from UK. Moreover, interviews with teachers about the Forest School Training provide an understanding of the perceptions of teachers about the translation of the program.

## 2.5 What Forest School brings to children

Forest School takes place outdoors in wild areas; as such, nature is the context for learning and it provides access to fresh air and exercise. It may thus offer opportunities to tap into different intelligences especially for kinesthetic learners (Gardner, 1993). In the UK it is led by trained Forest School leaders, rather than the regular class teacher, with high adult: child ratios. This may permit a 'clean slate' for children experiencing difficulties in class, finer tuning of learning opportunities to individual needs (Fumoto, Hargreaves, & Maxwell, 2004) and more support for their

learning. It usually focuses on relationships, which may facilitate an improved social context for learning. It offers experiential learning through and about nature in a risk-assessed situation, which balances challenge with assured success. There is some evidence to support a belief that Forest School is congruent with a more holistic view of children's learning. In these schools, children are provided with opportunities to improve their social, physical, intellectual, emotional and spiritual development and communication skills.

In a case study from the UK (Ridgers et al., 2012) children's perceptions, knowledge and experiences of play in natural environment were examined. Seventeen children participated in a twelve-week Forest School program that took place in a school woodland area. They found that Forest School had a positive influence on children's natural play and their knowledge of natural world around them.

Forest School provides an opportunity for children to benefit from long-term regular contact with a woodland environment (Murray & O'Brien, 2007). Regular visits to woodland environment support one of the aims of Forest School, which is to foster a relationship with nature in order to develop long-term, environmentally sustainable attitudes and practices in children (O'Brien & Murray, 2006). As Forest School offers opportunities to learn in practical ways, and to demonstrate new and existing skills which is different from a normal classroom setting, children rediscover their self-confidence as they see increased respect from their peers and begin to rebuild their self-esteem (Swarbrick, Eastwood and Tutton, 2004).

Forest School uses small achievable steps to enable children succeed quickly and thereby improve self-confidence (Murray & O'Brien, 2007). The tasks start from easy to complex according to each learner's stage. Therefore, there is a sequence of

instruction specified in the leaders' planning. For example, before building shelter, children practice tying knots before tying sticks with ropes.

At Forest Schools in the UK the ratio of adults to children is high (maximum 1:8) this ensures that children are well supervised and safe. Murray and O'Brien (2007) stated that increased adult-child ratio allows practitioners to get to know the individual learning styles, abilities and characteristics of the children in their charge. Therefore, more trained leader with smaller group of children is better for children's learning and provides individualized learning program for each child (Waite & Davis, 2007).

Young children make sense of their world by hearing, touching, seeing, tasting and smelling. Forest School offers children the opportunities of using all of their senses, natural resources for inspiration, to take risks, make choices and initiate learning for themselves so, it develops an individual's innate motivation and positive attitude to learning (Murray & O'Brien, 2007; O'Brien & Murray, 2006; Waite & Davis, 2007).

By conducting three research phases at seven schools in Wales and England, the results of phases highlighted that children can benefit in a range of ways. Six themes emerged from the data of the positive impacts on children. Murray (2003) shows that there is a correlation in between Forest School activities carried out in a specific environment and six specific, positive outcomes that relate to their self-esteem, an ability to work with others, learning about the outdoors, developing a sense of ownership of the environment, providing motivation to learn and increasing knowledge and skills (Murray, 2003).

Murray and O'Brien (2005) ran a large-scale study examining the effects of a Forest School with primary school age children. This was the Phase 2 of the work, which was built on the lessons from Phase 1. The aim was to explore whether and to

what extent the benefits and impacts established in the Welsh Forest Schools could be observed in other settings. Their findings identified eight key themes. Six were linked to the effects on children in terms of confidence, social skills, language and communication, motivation and concentration, physical skills, and knowledge and understanding. In this study, children's experiences were examined through these six key themes. Two further themes highlighted the wider impacts of Forest School on teachers, parents, and the extended family. The other two themes were related to wider impacts; practitioners gaining a new perspective on the children as they observed them in a different setting, and a ripple effect as children told their family and friends about their experiences. Murray and O'Brien (2007) stated that because children have enthusiasm for Forest School, they bring the experiences home. This can bring changes in out of school routines and behavior with parents taking their children "outdoors" more. According to O'Brien (2009) one important discussion element is that the practitioners saw a keen sense of inspiration in the children after having new experiences in nature. This study examined the new perspectives of teachers and ripple effects beyond Forest School through interviews with teachers and parents.

Above-mentioned criteria set by Murray and O'Brien in 2005 will be used to evaluate the woodland environment and its usage in the preschool that the current study is conducted. The large-scale study of Murray and O'Brien (2005) showed that children who did not have many experiences with natural environment needed time to become familiar and comfortable with the woodland setting (Murray & O'Brien, 2005). In some Forest Schools, outdoor experiences begin from the school grounds and then progress to local bush land or natural parkland settings (Knight, 2009 cited in Cumming & Nash, 2015). Therefore, according to Malone and Tranter (2003) while children are getting used to Forest School program by using the school

ground, at the same time they are getting familiar with playing in natural spaces. Over time as children develop self-confidence, they become more independent in the free atmosphere of Forest School (Murray & O'Brien, 2005). Forest School Association declared that although woodland is the ideal environment for Forest School, many other sites, some with only a few trees, are able to support good Forest School practice. Moreover, it has been suggested that to improve variety of skills just access to outdoor space is not enough utilize and management of the outdoor space by Forest School leaders is as important as access itself (Malone & Tranter, 2003). The woodland sustainable site management plan should be set with the agreement of landowner/manager, Forest School leader and learners so that ecological effect of the program can be monitored (Forest School Community, 2011). Forest Schools support intrinsic motivation by providing children with using natural recourses and all of their senses (O'Brien & Murray, 2006), providing biological diversity, enriching the children's experience of the outdoor play environment (Herrington & Studmann, 1998).

## 2.6 Forest School program at state preschool

### 2.6.1 The setting

In 1994, the case preschool was founded by Bank of Emlak and then it was donated to Ministry of Turkish Education. This state preschool is the only public school that has a large garden and its own independent building in the district of A. This school is located in the center of the district where there are high-rise buildings and many new housing developments. The preschool center was built in a garden that is about 1400m<sup>2</sup> as a single two-story building.

There are a total of 197 children, 8 teachers and 4 classrooms at school, so classroom sessions are split into two, where each session involves half-day attendance. Half of the students and teachers come to school in the mornings and the other half come in the afternoons. Thus, the children spend five hours a day in the school. If parents are working or they demand, children can study at school for a full day, from 08:00 am to 5:00 pm by extra money to school. In the half day, children have one classroom teacher. If they study in the school for one full day, either before or after their regular classroom hours, they attend one of the extra classes, which have their own teacher rather than their classroom teacher. During their regular school hours, the teachers follow the Turkish Ministry of Education Curriculum. However, in the extra classes children can attend dance, chess, and English courses if they want to.

The children who were participants of this study had attended one of the extra classes afternoon. They came to school early in the mornings and stay at the preschool till 03.00 pm at the end of extra class.

#### 2.6.2. The process of the project "Learning in nature through Forest School"

"Learning in nature through Forest School" was an Erasmus+ Project that was written by teachers of the case preschool. I am one of the teachers who wrote this project. Via this project, in 2015 January and March as four teachers of this preschool center, we attended Forest School training course in Wales, the UK. Theoretical and practical education training about Forest Schools and outdoor education programs were provided for us.

This project includes two trips to Wales, UK. All the training courses were given to the teachers by Cambium Sustainable Landscapes and Training institution in the UK. Training courses' education plan and contents were presented to us by this

institution in Wales. In the first mobility, introduction to forest school courses including how Forest school promotes learning by using materials in outdoor activities were presented. Besides these theoretical courses, practical courses, which include experiencing range of activities typical of forest school, observation of one forest school session, meeting with forest school teachers took place. The second mobility to Wales consisted of 5 days of tutor- led training with further tasks to complete over the next 9 months. With this training, four teachers aimed to develop and deliver Forest School programs, and gain knowledge about teaching in outdoor environments, using and developing outdoor education materials through the guidance Cambium Sustainable Landscapes and Training.

As teachers, who attended this training program, we started to implement Forest School program in the preschool with two classes in 2015. To announce the program, the letter that gave information about Forest School was sent home and a meeting was set for two pilot classes. At that meeting a video about the Forest Schools in the UK was watched by parents, a presentation was made to explain the rules, procedures, history and benefits of Forest School. The consent forms were given to the parents of the two classes. There were forty-eight children in these classes and four Forest School leaders had at least ten children in their group, except a few, almost all parents allowed their children to participate in the pilot program. This pilot program lasted 6 weeks with the supervision of Forest School expert educator from the UK. At the end of the program, the Forest School expert educator came to Turkey for one week, observed sessions and monitored the program. The educator approved the program implemented at the school and made some practical suggestions for all of us one by one. To improve the natural environment, with Forest School educator, we went to Şamlar Woodland that was nearest woodland area to our school, and she suggested that we needed while making woodland management plan.

At the end, we completed a portfolio including sessions, plans, learning and development in Forest School, woodland management and practical skills, health and safety procedure, review about Forest School researches, history of Forest School and relevant learning theories. After the approval of the Forest School Commission of UK (Agored Cymru), we got Forest School Practitioners Award. Since 2015-2016 the ten- week Forest School program has been implemented by Forest School leaders of the case study preschool. This is the third time of the implementation of the Forest School program by me as the Forest School leader and the researcher of this study.

All financial costs of the project including training, transportation and accommodation of four teachers to the UK and the Forest School expert educator to Turkey; and ten sets of spare waterproof tracksuits and boots for the six pilot sessions were met by staying within the project budget. Parents who allowed their children to participate in the pilot program did not need to buy any waterproof stuff.

### 2.6.3 How do children attend Forest School at the case study school?

Because there were fewer children in the extra classes, the administration of the case study preschool decided to implement the Forest School for the children in the extra classes. Those children whose parents give permission could attend the Forest School.

Although there were four Forest School leaders in the school, two of them were managers and the two of them were classroom teachers. In the case school, there were ninety-two children in six (6) extra classes. Almost all parents of the children from extra classes wanted their children to attend the Forest School. To meet the demand, two Forest School leaders (who are also managers) planned ten Forest School sessions for each group so that the children could observe some

seasonal changes. Ten sessions meant regular meetings in the large garden of the preschool or in the woodland area near school for ten weeks, these meetings occurred once a week. This is the general Forest School attending process of the school.

In this case study, the administration gave me one extra class in which none of the children had attended Forest School before. There were ten children in that class and all of them attended the Forest School with their parents' permission.

#### 2.6.4 Site of the Forest School

The woodland that is close to our preschool is the second biggest woodland of Istanbul; Şamlar Woodland. It is 20 km near the preschool area. Because of the long distance, (going to the forest by bus three days a week is too expensive for a public school) using this site was not feasible, so in the Forest School program children went to the woodland area at the end of each month, throughout the total ten sessions they went to the woodland area twice. Besides, school has a play equipment area in the school garden, and there is a wooded area, which is about 700m<sup>2</sup>. This area has biological diversity including kinds of trees; poplar, spruce, pine, cypress, lime, mongoliaceae trees and three kinds of fruit trees. After the approval of Forest School educator in Wales for using this site, the wooded area was arranged based on the requirements of Forest School. A wooden circle time area was constructed (see Figure 1) and seasonal flowers were planted. The Forest School area was separated from play equipment area (see Figure 2). Municipality was asked to help with wooden circles and planting flowers and trees. To improve the area, a three-year woodland management plan was made at the beginning of the 2016. According to this woodland management plan, a tunnel from the vines, separating the Forest School area from the play equipment was added to the area, and to increase biological diversity we planted new flowers and herbs in the garden.

outdoor play, this study examined how successful the program was when compared with key features of Forest School; the experiences of the children and the teachers; and the factors that motivated the parents and the teachers to continue and support the program.

## CHAPTER 3

### METHODOLOGY

#### 3.1 Case study design

In this study, a qualitative method was used to provide an in-depth and a detailed understanding of the meanings and parameters under investigation. I chose qualitative research model because I wanted to better understand Forest School implementation within my school and examine experiences from the view point of all parties who were involved this program. The qualitative research uses an inductive approach, seeking to understand and illuminate a topic or subject of the study (Miles & Huberman, 1994).

My research questions are consistent with the case study methodology because the focus of the study is to answer “how” and “why” questions and I did not manipulate the behavior of the participants in my study. A case study was chosen because the case was the Forest School program, but the case could not be considered without the context, the preschool (Yin, 2003).

This research more specifically matches with the framework of an intrinsic case study. Stake (1995) explains that in the intrinsic case studies, the purpose is not to understand abstract construct or generic phenomenon, the intrinsic case study approach is one that is used because the case itself is of interest. I had a genuine interest in the case of the Forest School program; my intent was to understand that case better so the content of this program was analyzed.

In the study, I did not have the intention of verifying existing theories or generalizing the results. On the contrary, the subject of the research study is unique, requiring meanings and understanding rather than proof.

Lincoln and Guba (1985) clarified the concept of trustworthiness by introducing criteria of credibility, transferability, dependability and conformability. Credibility (comparable to internal validity) addresses the issue that respondents' view corresponds to researchers' representations (Schwandt, 2001). In this research, credibility was achieved through member checks and peer debriefing (Lincoln & Guba, 1985). Assistant teacher and I collected the data simultaneously. The data were compared and discussed.

Dependability (comparable with reliability) is demonstrated through a process of auditing. Inquirers are subject to ensure that the process of research is logical and clearly documented (Schwandt, 2001). Dependability can then be achieved through an audit trail, where others can investigate the inquirer's documentation of data, methods, decisions and product. Dependability was demonstrated through verbatim transcription of the data and pen profiles that anybody can examine the data in the future.

Case-to-case transfer including the use of findings from an inquiry to a completely different group of people or setting is more widely assigned as transferability (Lincoln & Guba, 1985). In qualitative inquiry that is different from "external validity," that there is no single correct or 'true' interpretation in the naturalistic paradigm.

Method triangulation is supported to "circumvent the personal biases of investigators and to overcome the deficiencies intrinsic to a single-investigator, single-theory, or single method study, thus increasing the validity of the findings" (Kimchi et al., 1991, p. 365 cited in Tobin & Begley, 2004). Triangulation was initially regarded as an instrument of validation (Flick, 2004); however, currently researchers saw triangulation as an approach to generalization of discoveries and as to provide completeness of findings by supplying 'a more inclusive view of world' ,

increasing scope, depth and consistency in methodological proceedings' and offering a deeper and more comprehensive picture (Denzin & Lincoln, 2000; Flick, 2004). This study was triangulated using multiple methods and sources of data collection. To understand the program I conducted interviews with parents and teachers. Also, the observation and reflective diaries gave readers more comprehensive picture about implementation of the Forest Program at the case study school. To get a deeper understanding of the children's Forest School program experiences at the case study school both observations and interviews were conducted. Observations and interviews enabled me to utilize many perceptions.

### 3.2 Procedure

To understand the Forest School program implemented by the case school, information about the case school setting and the site where the program was applied were collected by observations in the school and interviews with teachers. I took notes and wrote session diaries at the end of each session. The diaries included weather conditions, the situation of the site on that day, reaction of the children to that session, my feelings after each session, the things that went well or wrong, so the detailed description of the sessions provides meaningful information about the program. Moreover, the Forest School program implemented in this case school was examined session by session considering its objectives and indicators that were related to Turkish Early Childhood Education Curriculum (TECEC). The aim of this examination was to get information, whether this Forest School program met the standards of Turkish Early Childhood Education Curriculum (TECEC).

To explore the experiences of young children who participated in a Forest School program, children's experiences were explored using detailed observations of each of the 10 children throughout sessions. With these observations, children's

reactions to a Forest School program, change in their social interactions and emotional reactions throughout the sessions and their awareness, knowledge and understanding about nature, physical skills, their level of motivation to school and the program, and their level of concentration to the activities would be explored. To understand the children's experiences deeply I implemented twelve sessions and observed ten children in each session with another teacher who attended sessions with me to assist. The other data used to understand children's experiences were interviews with the parents whose children participated in the program. I interviewed with the parents and tried to understand their perceptions of how their children benefitted from the program.

The third objective of this study was to explore and demonstrate the factors that motivated the teachers to implement and continue the program, and the factors that motivated parents to support the program by allowing their children to participate the Forest School program. I tried to reveal detailed information on teachers' perceptions of how and why a Forest School curriculum was implemented in their preschool. For this purpose, I conducted interviews with the director, the vice principal, and a teacher who were all Forest School leaders at the same preschool. I conducted interviews to ask the parents about the reasons for participating in the program, their evaluation of the program. In this way my intention was to examine the program the case preschool implemented. I considered which factors inspired its beginning and which resources were needed to launch and sustain its presence in the school.

Before the twelve-session Forest School program, I interviewed three Forest School leaders (see Appendix A) and set a meeting with the substitute teacher who assisted me throughout the sessions. They were informed about the process of the research. The substitute teachers were also the teachers of the extra classes in which

children participated to do extracurricular activities in case preschool so they knew children well. The substitute teacher assisted me throughout all the sessions, so in this study she was named as the assistant teacher. I participated in the meeting with parents and parents were informed about the Forest School program and the research process during the meeting. After the meeting, all parents from the extra classes gave consents regarding participation of their children in the program and in this research. They gave also consent regarding their photographs to be taken through sessions (see Appendix B). I trained the assistant teacher to fill out the Forest School Leader Reporting Template (Murray & O'Brien, 2007) which was an observation record for each session (see Appendix C). To teach the assistant teacher how to fill out the form while one child was playing in the garden, the assistant teacher and I observed the children and took observation notes separately, after the observation, we filled out the observational records together. The assistant teacher was given sheets about coding according to six themes provided by Murray and O'Brien (2005) to study. These sheets were one example of filled Reporting Template and the other was Program Baseline Assessment Form, which was developed according to six themes (Pentre Forest School, 2006; see Appendix D). The assistant teacher had one week to study about coding. After each session, we met and discussed the session and our notes. These discussion meetings took one and a half hour. We filled out observation records according to the categories for each child one by one.

I was both the researcher and the Forest School leader of this group and I wrote Reflective Session Diaries after each session (see Appendix F). The diaries included information on weather conditions, the situation of the site on that day, reaction of the children to that session, my feelings about the session, the things that went well or wrong, and the suggestions for the next sessions. To inform the leader's

practice, one of the other Forest School leaders in the school observed the sessions and completed other Forest School leader reflective session form (see Appendix G).

At the end of the program, parents were invited to a Forest School session just for parents. The aim of the session with parents was to give an understanding of the Forest School. The main activities (risk analysis, meet a tree, woodland perfume, scavenger hunt, interview with a tree) that we did with the children were done with the parents (n=6). Four parents could not participate in this session because it was on a weekday. The interviews with ten parents (see Appendix H) were completed and audio taped with the permission of the parents. Interviews were done at the school director's room. Two parents could not come to the school for interview so I held interviews by phone. All the recordings of the interviews were transcribed after the interviews were completed. The observations and the field notes were collected together with the permission of the school administration.

### 3.3 My role as a researcher

I had been a classroom teacher for five years at this preschool. At the time of that study, I was on maternity leave. I wanted to examine the Forest School program and observe the first group of children who participated in the program. The administration gave me an extra class in which there were ten children and none of them had attended Forest School before. Those ten children had one classroom teacher, one extra class teacher. I was their Forest School leader.

I was going to preschool one day in a week for three hours. The sessions started at 12:30 pm and I was present at school while the children were in the dining room. After lunch, they prepared for Forest School and my observation started at that moment. The assistant teacher and I guided the children while they were getting dressed. We went out to the garden all together. Children helped me carry the stuff

that we used in the garden. In the garden as a Forest School leader I set the sessions and the assistant teacher did not intervene unless necessary.

Being a participant observer had some difficulties. It was challenging me to observe the children while I was running the sessions. I kept written records. I had a small notepad in my jacket pocket. I took my notes when possible, for example, while children were engaged in activities. I focused on interactions among children and their reactions in the sessions. The assistant teacher and I shared the missing moments with each other in the meetings after each session. Both running the sessions and observing children's behaviors and reactions to Forest School activities gave me a broad understanding of events and context.

### 3.4 Participants

The participants of this study comprised four Forest School leaders, ten children attending the Forest School program at the case preschool from March to May in 2017 and the parents of those children (nine mothers and one father). In the school, only four teachers participated in the training program. I am one of those four teachers. My colleagues are Deniz, Fidan and Yaprak. All the four Forest School leaders had Forest School groups. At the time of the study in 2017, because I was on maternity leave, there were only three forest leaders who carried out the program All Forest School leaders had a bachelor's degree in early childhood education. One of them had a master's degree in early childhood education and one of them had a master's degree in school administration. Yaprak and I were classroom teachers in the school; and Deniz and Fidan were the managers of the school.

Only one group (ten children from the same extra class) participated in this study. Their ages are between five and six. One child attended all twelve sessions, seven of them attended ten sessions and two of them attended nine sessions. Days of

absence ranged between 1 and 3. The children's parents (mother or father) were included in the study. Sixty percent of mothers and fathers (5 mothers and 1 father) had a university diploma. Forty percent of the fathers had a self-employed job, the rest worked as a banker, printer, engineer, producer or manager. Sixty percent of the mothers were housewives and the rest worked as a banker, economist, teacher, or film director.

All of the parents agreed to participate and I gave them informed consent forms (Appendix B). As Belmont Report (1979) indicated that all research including human subjects must defend ethical principles involving justice, beneficence and respect for others, participants' names were kept confidential with the use of pseudonyms throughout the research process and dissemination of research findings. Each adult participant signed consent forms before the beginning of the Forest School sessions. Children gave oral consent one week before the first session. I met with them as a Forest School leader and I explained that I would be their Forest School leader for twelve sessions and I informed them about the Forest School.

### 3.5 Description of the sessions

Before starting this research, I wanted to observe one group from the beginning, a group that did not have any Forest School experience. Because all groups had started and had experienced Forest School, the managers of the school asked me to run my own sessions and gave me a new group to observe. This was a good chance for me as I would be involved in the whole process of Forest School and deal with the children and their parents one by one. The program started in the spring of 2017 and took twelve sessions, one session per week. As I did not know the children, I had two more sessions at the beginning. In all groups, the schedule of Forest School program included warm-up games, circle time, structured activities, meal and play. Plans of

the structured activities went parallel with those of the other groups in the school. All groups started with the same activities. They all learned the Forest School rules and continued with activities to focus sensory development. After these, according to children's interest and seasonal changes, the leader planned each week's session.

Before each Forest School session, the Forest School leaders did session plans depending on the needs and interests of the children. The first weeks the plans were almost the same with the other groups' plans in the case school because in the first week, the priority was security. The case Forest School Program started with risk analysis, health and safety issues then continued with the activities that promoted sensory development. On the first day our focus was on Forest School health and safety rules. However, on the other sessions, the leader began the day with a theme. The themes varied from soil to weather, from water to senses etc.

Forest School sessions aimed to provide children with chances to take developmentally appropriate risks, such as tree climbing or tool use. Risk assessments for Forest School activities actively took into account the advantages of any high-risk activity in order to let children to experience controlled risk taking. Forest Schools are places where children can develop self-confidence and self-esteem and a Forest School leader aim at providing deep level learning experiences for children. Before students' self-actualization needs are met, they must first fulfill their basic physiological needs and safety needs. Safety needs are met by leaders who know the Forest School area well, who do risk assessment. If the leaders feel themselves comfortable and safe in the area, the children put their confidence in the leader and feel themselves safe. Also, as their leaders we did risk assessment with children, so the children also knew the risks of area and how they could prevent themselves from any damage.

I planned the activities; “ making risk analysis”, “health and safety talk”, “eyes to eyes”, “1,2,3 Where are you?”. All these games and activities enabled children to understand the rules and provided them to have safe time outdoors. See the explanation of the concepts used in session plans (see Appendix I); see the session plan of the first week (see Table 1, Appendix J).

After analyzing the sessions according to Turkish Early Childhood Education Curriculum (TECEC, 2013), I gathered the objectives and indicators of TECEC, linked to the objectives of the Forest School sessions, in the session plans (see Appendix J). This will make the issue more clear for the reader. More explanation will be given later in data analyzing part.

Table 1. Plan of the First Session

|                    |  |  |   |
|--------------------|--|--|---|
| Age Group          | 6 Years old  | Adult : children ratio   | 1: 5  |
| Session Objectives | <ul style="list-style-type: none"> <li>• Develop problem-solving skills</li> <li>• Be aware about environmental issues</li> <li>• Work in a group cooperatively</li> <li>• Identifying the hazards that may cause harm at the school garden, making risk assessment with children</li> <li>• Identifying the rules of Forest School Sessions at the school garden with children</li> </ul>                     |  |   |
| Time               | Sessions content   | Method of delivery   | Resources required  |
| 12:30 – 15:00      | <ul style="list-style-type: none"> <li>• Playing warm-up games "my name is", "throwing ball"</li> <li>• Making risk analysis with children by walking around the school garden all together.</li> <li>• "Health and Safety Talk"; Discussing and talking about rules with children at circle time. Setting the rules altogether.</li> <li>• Playing "eyes to eyes" and 1,2,3 Where are you?" games.</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <ul style="list-style-type: none"> <li>✓ For identifying risk areas just sign of attention required.</li> <li>✓ A Ball</li> </ul> |

Before the 12 sessions

I met with my Forest School group one week before the first session. As the assistant teacher said, all children were excited to attend the Forest School program. I started with a group of ten children who came to school in the morning and had extra classes in the afternoon. They had lunch between these classes. After lunch, they came to the extra classes and wore their Forest School clothes, which were appropriate for the weather conditions on that day. Parents were informed about the program two days prior to the sessions (see Table 2).

Table 2. Information for Parents

| Time /Place                               | What we will do   | Method of Delivery  | Important   |
|---|---|---|---|
| 12:30 – 15:00<br><br>Garden of the School | <p>Playing warm-up games "my name is", "throwing ball"<br/>Making risk analysis with children by walking around the school garden all together.</p> <p>"Health and Safety Talk";</p> <p>Discussing and talking about rules with children at circle time.<br/>Setting the rules altogether.</p> <p>Playing "eyes to eyes" and 1,2,<br/>Where are you</p> | <p>Learning Through Experience<br/>Discovery<br/>Asking and Answering Questions</p> | <p>Estimated Weather Conditions: 14C and partly cloudy.</p> <p>Students need weatherproof clothing, waterproof boots, and waterproof coach suitcases.</p> |

First and second sessions; establishing rules health and safety rules

On the first day after the lunch, the assistant teacher and I helped the students with snaps and laces. On the day the Forest School program started, the weather was sunny; however, the ground was wet. Although the parents were informed, and I focused on the importance of appropriate clothing at the parent meeting, three

children did not have appropriate clothes (waterproof pants) on them. Because it was the first day, I planned to talk about clothing in the “health and safety talk”

One of the girls refused to wear pants or coats both inside and outside. She also had anxiety of cleanliness and her therapist suggested that we did not bother her about dressing. As long as the weather permitted, I allowed her to join the Forest School in her own clothes. I thought she would accept the dresses over time, as she did not want to miss the sessions because she felt herself accepted. In Forest School, leaders accept children's all feelings, differences in each children and value children's behavior to create supportive environment and to meet the children's belongingness need.

All children took their snacks and water bottles with them, went out the door, which opens to the garden with concrete floor. We walked to the garden near the preschool. While we were walking, the children asked such questions as “When will we go to a real forest?”, “What will we do in the Forest School?”

The surface of the garden was muddy from place to place. Except two girls, they did not notice it. After we arrived at the wooden log, all children put their belongings on a wooden surface area and we started to play warm up games. After the games students were asked to sit around the circle wooden area where the class meets to discuss the theme for the day, do a warm up activity and regroup after the games. Because it was the first day, I talked about “health and safety”. I asked the students why we needed to wear waterproof clothes. They told me not to be wet or not to be cold. I asked, “What are your classroom rules?” “Are they the same as Forest School rules, what do you think?” They started to list their rules in the classroom, like “Don't be noisy in the classroom”, “Don't run in the classroom”. I explained that rules are different in the Forest School, children can be noisy outdoors or they can run outdoors. Children seemed to be happy. Then I started a discussion

about the risks while they were playing and exploring in the garden. All groups together walked around the school garden and talked about the dangerous areas and the risks of that area; the risks of rugged areas, slippery grounds, barbed plants, and the risks of plants that we did not know were discussed.

After making risk analysis, students sat on a log circle and I mentioned one of the most important health and safety rules, which was “not to pass across the circle”. Because in the sessions there was a fire in the middle of the circle, to get used to not to cross the circle, we played “eyes to eyes” game.

At the end of each session, the discussions about the session were held by the other Forest School leader who observed my session. After the discussion about the first session, I realized that in some areas in the garden we had not discussed the ways that children could reduce the risks.

In the second session (see Appendix K), we discussed the methods for reducing risks. When children remembered the risk areas, as a Forest School leader I asked “what can we do to control and reduce risk of determined risk area?” After reminding rules by talking about health and safety, two sensory activities were done; “meet a tree” and “smelly cocktails”. In this case Forest School program, for all leaders the first sessions were similar to each other, as these activities in the first sessions were favorites of children. We wanted children to enjoy being outdoors. Third and fourth sessions; Interest-Led curriculum and risk taking

Forest School leaders’ observations about the first two sessions gave a clue about the themes of the following sessions. Forest schooling provided interest-led curriculum and an adaptable schedule. For instance, in the first two sessions when a student found a worm, all the children gathered around it and all talked about worms. As the key characteristic of Forest schooling is flexible approach to instruction, on that day they just collected worms, observed them and drew what they had observed

until the end of session. As they observed that the worms did not have eyes, some students started to act like a worm by closing their eyes. Thus, the interest led curriculum required the following sessions to be continued with the themes of worms and soil (see Appendix L, M).

Appropriate risk taking in Forest schooling aims at developing self-esteem and independence in the students. For instance, while searching for worms in the soil, the children used hoes. To reduce risks, they were informed about how to use them safely.

Fifth session; experiencing forest

In the Forest School program at the end of each month, students went to the forest, which was twenty kilometers away from the school-by-school bus. The first time we went there, we walked together in the forest holding a thick rope, and then we decided where we would sit. The weather was 18 degrees and it was a sunny day. We sat in a shaded area. At first, I had a rope circle and everyone sat where they were. Nobody moved from where they were sitting and we talked about the health and safety issues in the forest. As it was the first time in the forest, children did risk analysis, discussed and talked about the health and safety rules in the forest. After doing risk analysis, they started to run around. To make the children aware of the new environment we had them play the “sound map” game that promotes sensory development (see Appendix N). We asked them to draw the sounds they heard around them by using their senses. They all participated in the activities of the sound map and collecting natural materials.

The sixth session; balance between group and individual activities

Forest School schedule included a balance between group and individual activities. In session six “shades of woodland in our palette” activity provided children enough time for their own exploration individually (see Appendix O). A child collects

natural items of all different shades of green, discerns the difference between light green and dark green objects, and creates a sequence. In addition, “Ground Picture” activity requires a group work and a lot of discussion in the group. Children needed to work cooperatively to make a ground picture with natural materials. They needed to negotiate the theme of the picture, materials and the place where they would exhibit them and to decide who would be the spokesperson to present the picture they made to the other groups. Respect for each other is a key principle in Forest School sessions. Many group works in Forest School enable children to work with those they may not instinctively choose to. The balance between group and individual work in the sessions gives chance to Forest School leader to observe children in both group and individual activities, so it gives meaningful data.

The Seventh Session; in Forest School no lose or win games, free exploration

In session seven (see Appendix P), children had high interest on the game “hungry bird and woolly worms. In the game, I divided the class into two groups and assigned each group a half area of the garden. Then I asked each group to place thirty woolly worms around their area, trying to put them in places where they would be hidden e.g. a green worm on a green leaf. Once all the worms have been placed, I asked the groups to swap areas and to pretend to be hungry birds, looking for worms to eat. I gave them a minute to find as many worms as they could. When they came back together, we discussed how many different colors were found and which were the first ones to be found (the red and blue ones should be found more easily than the green and brown ones) and which were easier to find and why. Some children in the group started to argue and one boy cried. They had counted the worms they found and the boy had cried because the students from the other group had said they won with a loud laughter. As a leader, I asked them to talk together. I said that our focus was on colors and camouflage of the worms, not on the numbers. In Forest Schools

there is no win or lose in the games as children feel themselves comfortable to learn. The focus was just on exploring and experiencing the natural environment with all senses. After the discussion with the group, I gave the children another minute to find the rest of the worms; each group searched their own area where they hid the worms.

While reading the “In the Nest” book, children asked questions and answered the ones I asked. One of the boys asked, “Do birds eat leaves? One girl said, “Worms” and other boy said, “Fruits, they drop seeds, so tree grows there”. One of the boys asked, “Is there a seed under the tree?” After that question, I asked, “What is under the tree?” and nobody could answer it. I decided to plan the theme of “tree” for the next two sessions.

After reading the book, I had planned to do “a giant bird nest” activity. I knew that from the other group’s sessions, students loved doing giant bird nest and dramatizing the flying baby birds from the nest. After the giant bird nest they would have free time to explore, the students who wanted to continue could continue to play with the nest. However, because students spent more time in “hungry birds and woolly worms” game while trying to find real worms and bugs in the garden, there was not enough time for free exploration. Because one of the key features of Forest Schooling is providing students with freedom to explore using multiple senses, I said to children “I planned a giant bird nest, who wants to join, or if you want you can play?” All of them joined to do a nest. After we dramatized birds, some parents came early and took their children. The rest of the children continued playing with the nest and enlarged it with big stones.

As a classroom teacher and a new Forest School leader sometimes I feel time constraint and then remind myself to be flexible. After the session, we discussed this

issue with other Forest School leaders and for the next sessions, I decided to plan less structured activities and devoted more time to explore.

#### Eighth Session; increased collaboration and independence

The main aim of session eight (see Appendix Q) was to develop children's vocabulary about parts of a tree. They followed the rule of collecting cards without talking or moving. They negotiated and chose the group leader and the spokesperson in the group without need of adult supervision. While searching huge sticks to make a ground picture of a tree, they explored the area with huge sticks near our school garden. One boy asked me to go to this place where I could see students behind the iron wire. As a classroom teacher normally I do not let them go far away from me. However, in the Forest School to support the independence of children, children are allowed to be able to work and play far away from leaders. While the children were moving the huge sticks, one of the parents came to the area and asked whether it was safe.

At the end of the session all groups had done their ground picture "tree" working with high concentration, but there was no time to perfect the ground picture by putting additional pieces (like a birdhouse, more leaves). I would spend more time on this activity if they would do it again.

#### The ninth session; clothing problem

Session 9 started with clothing problem. One of the students was out of school, and five of the remaining ten students came to school with waterproof clothing. Two of them did not have boots, I gave them two back up boots in the school. The clothes of the other five students did not fit the weather conditions. It was 8 °C, and rainy. I had difficulty making decisions because a student had already refused to wear appropriate clothes but I did not cancel the session because five students were ready. The other Forest School leader and I went out with five students. The assistant

Consecutively two planned activities in the same session were complementary (see Appendix S). I gave children the picture of forest cycle to fill it in. I asked them to check if they saw the same in the forest. They went far away from staff to explore the area. After they filled in the paper, they had snacks. While they were eating, it started to rain; however, the students ignored it and after eating their snacks, they started to play. I had planned to make woodland perfume but I thought that the children seemed to be happy to play free and they needed it. We had a shelter with us but as it was time to turn to school, we did not set up the shelter.

The eleventh session; increased involvement to group discussions and continuing clothing problem

In session 11, all of the students were actively involved. Even those students who did not participate in group discussions gave ideas that guided the group discussion.

Especially, 'the interview' is an activity that can be played anytime with different objects. It leads children to know the living beings well and think about the natural objects/ living things empathically (see Appendix T).

The temperature was 8 °C. It was a windy and rainy day. My plans did not involve activities that needed more movements. When we realized the students were cold, we played a moving game. However, the clothing continued to be a big problem in this group. Five out of nine students did not have a hat. We did story sorting in the one part of garden with sunshade, we also had our hot drinks in between two activities, but the students were still cold.

Due to the extra moving games we played, we did not have enough time for all the activities I planned for the session. When the last half hour was over, the assistant teacher became uncomfortable because of the increased rainfall. She said that the students would be cold and the parents could have trouble. I finished the

session half an hour early because the students did not have hats and told me they were cold.

The last session; closing party

At the beginning of the last session, some of the students were very sad because it was the last session. The last session was a farewell session, so I planned fun activities (see Appendix U). I fed the fire in the middle of the log. The students were especially excited about the fire. Making cupcake attracted all children's attention; they worked for a long time. In the treasure finding game we had two groups and we identified the blackboard in the garden as the map drawing area.

Before the certificate ceremony, we discussed the Forest School sessions, one boy said that he never wanted the Forest School to end and another boy said he would never forget the Forest School. The answers about the thing they loved most in the Forest School differed; finding worms, all activities, magic perfume, fire, ground picture.

## 3.6 Instruments

### 3.6.1 Interview with Forest School leaders

The data from the teachers are collected using interviews developed by the researcher by adapting Bekman and Koçak's in-depth interviews with mothers who participated in the Mother-Child Education Program (2009). In their study, the experiences of the mothers who participated in the Mother- Child Education Program were examined in detail, i.e., the experiences of the mothers before, during, and after the program. The aim of the interview in my study was to focus on opinions, perspectives and experiences of the teachers regarding the process of Forest School training and implementing the program. This interview includes questions about the

expectations before Forest School program, experiences while getting courses abroad, experiences and feelings after implementing the program (See Appendix A).

### 3.6.2 Evaluations of leader's teaching

As a Forest School leader, I completed reflective session diaries to note the context of sessions (weather, activities etc.) and to assess the delivery and relevance of activities, evaluating whether or not they contributed to changes in behavior (see Appendix F). To give information about the leader's practice, rather than me one of the other Forest School leaders in the school observed the sessions and completed another Forest School leader reflective session form (see Appendix G). Besides the written evaluations after each session, we discussed the sessions. This form included the thoughts of other Forest School leader about the content and quality of sessions in terms of the delivery and achievement of the learning objectives.

### 3.6.3 Interview with parents

After the twelve sessions, I interviewed with parents about their expectations and evaluations of the case Forest School Program and their observations about their children (see Appendix H). I developed the interview questions according to my research interest and research questions. There were five questions and each interview lasted fifteen-twenty minutes.

### 3.6.4 Program baseline assessment form

This assessment form was generated by the researchers Jenner and Hughes and used in Pentre Forest School (Jenner and Hughes, 2006; see Appendix D). This form was generated to assess children's abilities throughout the Forest School Program according to six prepositions in the study of Pentre Forest School (Jenner & Hughes,

2006). In the baseline assessment form, there are subheadings of each theme; these are the indicators of these themes. In this study, the Program Baseline Assessment Form was used to assess children. It was translated into Turkish (see Appendix E) from the original in order so that the assistant teacher could observe the children according to six themes. To provide validity of the translation, back-translation of the form was utilized by a translator who has a four- year B. A. degree in Translation Studies and is a twenty-year experienced English teacher. As a researcher, I also used this form to categorize parents' statements and observations of the children.

#### 3.6.5. Observations and field notes

The data from children were collected through participant observations. Participant Observations were used in each Forest School sessions. All children were observed in each session by using "Forest School Leader Reporting Template (Murray & O'Brien, 2007; see Appendix C).

As the Forest School leader of the group and the researcher of this study, I met with the children who would participate into Forest School program one week before the first session, so as a researcher and a leader I had not known the children yet. Murray and O'Brien (2007) argued that observations made by the person who knew the children well could lead to bias because of the familiarity of the recording practitioners; however, it is argued that practitioners who know the child well have better understanding of the effects of Forest School on the observed child. To avoid observer bias, in each session the observation sheet was filled by both the leader who did not know the children well and the assistant teacher who had classes with them all the week.

The assistant teacher and I observed the children in each session and after the session we recorded their activities by using the six prepositions, which had been

developed, in the workshop of O'Brien and Murray's study (2005). To ensure interrater agreement discussions were held at the end of each session, each child was discussed, and observation notes were compared. Because the school garden was large, children would be scattered around and this would lead to two teachers observing different behavior of the same child being engaged in various activities during the day. Thus, differences in observations stemming from observing children in different contexts were noted. The written observations were coded together after both teachers discussed and reached an agreement about the children's behavior. In addition, the assistant teacher gave information about the children's experiences in that school week apart from their experiences in the Forest School.

### 3.7 Themes of the impacts of the Forest School

The Forest School Reporting Template (Murray & O'Brien, 2007) used in this study, is comprised of "Themes of the Impacts of Forest School" developed in New Economics Foundation (NEF) Forest Research Project (Murray & O'Brien, 2005). Murray & O'Brien (2005) developed a methodology to explore the impacts of Forest School on children and then this methodology was used to track changes in twenty four children in three case study areas over an 8-month period. That research examined practitioners' (teachers and Forest School leaders) perspectives of children's experiences of Forest School (O'Brien, 2009). The methodology for this included three-stage process, involving practitioners; Teachers and Forest School leaders and community members. First, practitioners discussed and established the link between Forest School activities and the effects on the children who participated to Forest School Program. They considered short, medium and longer-term effects on children and developed a set of possible positive prepositions. To establish a common understanding of the benefits of the Forest School the process of this

discussion in this exercise is crucial. O'Brien (2009) explained the second stage of the process is data collection. Data collection was done by the practitioners who observe the children and record their activities, through the use of self-appraisal templates based on the propositions developed in the workshop. O'Brien (2009) suggested questionnaires could also hold with teachers, parents and children to explore the impacts of Forest School. At the third stage, there is a reflection workshop in which all practitioners explore the results from Stage 2 and identify any unexpected impacts or key learning points that can be incorporated into best practice. According to O'Brien (2009) this third stage, reflection workshop is very beneficial to check back over the work and to detect the unexpected outcomes of Forest School.

In this case study, "The themes impacts of Forest School" was used. Six themes; confidence, social skills, language and communication, motivation and concentration, physical skills, knowledge and understanding related positive impacts on children were used for observing children in each session by me as the Forest School leader and the assistant teacher, and also for analyzing the data of parents' interviews about the development of children.

### 3. 8 Data analysis

Thematic analysis, which is a method for identifying, analyzing and reporting patterns (themes) within data, was used. This analysis is essentially independent of theory and epistemology. The feature of theoretical freedom offers a flexible and useful research tool, which can potentially provide rich, detailed, and complex data (Braun & Clarke, 2006).

Themes or patterns within data can be established in one of two primary ways in thematic analysis: in an inductive way or theoretical way. An inductive approach means the themes identified are strongly associated with the data themselves (Patton,

1990). Therefore, this form of thematic analysis is data driven. It is a process of coding the data without trying to fit it into a preexisting coding frame. In contrast, a ‘theoretical’ thematic analysis is explicitly analyst driven because the researcher’s theoretical or analytic interest in the area may tend to drive the analysis. Moreover, while analyzing the data, the researcher can choose between inductive and theoretical maps depending on how and why the researcher is coding the data.

In this case study, categories and a coding scheme were generated inductively from interviews with parents and teachers, and from evaluations while implementing the program. After the interviews, I printed transcripts, read, and reread each one. This was the first stage of the thematic analysis process (Flick, 2004; Miles & Huberman, 1994). In the second stage the data was divided into small texts (codes). In the final phase, I took notes that I viewed as key passages and I began to make a list of initial codes. It focused on extensive theme titles and identified extensive themes frequently mentioned in the study in terms of number and depth (Braun & Clarke, 2006). For example, I highlighted each place where the teachers talked about changes in their classroom management techniques after the Forest School program as one code and each instance where teachers mentioned the balance between free play activities and structured activities as another. Then with the other related codes, extensive themes were identified as the factors that motivated teachers and examining the curriculum of Forest School, respectively.

Self-evaluation forms were transcribed and coded. Then I began to compare the codes to determine how they might be related for deepening the understanding of the Forest School Program. I collapsed some codes based on connections in data and formed categories, which were related to my research questions.

To analyze the Forest School program and child observations at this case school, I used theoretical thematic analysis. To analyze the program, after

implementing the program, I analyzed my planning according to holistic developmental learning grid that is one of the key features of Forest School and Turkish Early Childhood Education Curriculum (TECEC (2013)). All twelve sessions were analyzed according to the Holistic Developmental Grid (Clarke, K., 2011) to examine whether the program saw the child as a “whole”. First, all the goals of the session were listed. Then, by looking at this list, the activities were categorized according to the relevant developmental areas. In the same way, the Forest School program implemented in this case school was analyzed session by session considering its objectives and indicators that are related to Turkish Early Childhood Education Curriculum (TECEC (2013)). To analyze, I listed the goals of the sessions, then I matched these goals with the objectives and indicators of TECEC (2013).

The child observations of the forest school leader and assistant teacher had been coded according to themes of the impacts of Forest School including the six prepositions (See Table 3, Murray & O’Brien, 2005). To analyze these observations and parent’s statements about their children’s experiences the themes of the impacts of Forest School were also used. To categorize the observations and parents’ statements according to six themes, Program Baseline Assessment Form, which was generated based on six themes, was used (see Appendix D). In the baseline assessment form each of the six themes had indicators. To categorize the observations and parents’ statements, the statements were matched with these indicators of the themes. For example, the statement of a parent “my daughter started to come to school willingly, especially on Forest School days” was matched with the indicator “keen on and excited about Forest School”, which is under the “motivation and concentration” theme.

To understand each child’s experiences better, pen profiles (Ridgers, et al., 2012) were constructed from the transcripts of the parents. Pen profiles, which are

descriptions of a person or a group of people, give an efficient representation of key themes from data analysis demonstrating examples of verbatim data and frequency data. Pen profiles were expanded by verbatim quotations of children from the observation records of the FS Leader and assistant teacher. These profiles provide a composite of key themes from the data. The themes were categorized and categorized data were compared and matched with themes of impact of Forest School (Murray & O'Brien, 2005).

In this study, after analyzing all data, three main themes were formed; examining the curriculum of Forest School at the case school, unique outcomes for unique children and motivation factors for teachers and parents.

Table 3. Themes of the Impacts of Forest School (Murray & O'Brien, 2005)

|   |   |   |
|---|---|---|
| 1. Confidence   | 2. Social Skills  | 3. Language and Communication   |
| Characterized by the willingness to try something new, feeling pleased and showing pride with personal achievement. Characterized by self-belief that comes from children having the freedom, the time and space to learn grow and demonstrate independence.  | Characterized by an increased awareness of the consequences of actions on other people, the acquired ability to undertake activities with others either by sharing tools and tasks, or by taking part in co-operative play.   | Characterized by the development of more sophisticated uses of both written and spoken language that is prompted by the visual and other sensory experiences of a child taking part in Forest School.   |
| 4. Motivation and Concentration   | 5. Physical Skills  | 6. Knowledge and Understanding  |
| Characterized by keenness to participate in exploratory, learning and play activities, as well as an ability to focus on specific tasks and to concentrate for extended periods of time. In conversation at school or at home they display a positive attitude towards Forest School in particular and towards learning in general. | Characterized by the development of physical stamina and the development of gross motor skills – the physical skills and co-ordination allowing the free and easy movement around the Forest School site, as well as the development of fine motor skills – the effective use of tools and the ability to make structures and objects (e.g. shelters, dens or creative art projects). | Characterized by a respect for the environment and an interest in their natural surroundings; making observations and insights into natural phenomena such as seasonal change and the ability to identify different species of flora and fauna. |

## CHAPTER 4

### FINDINGS

As this study investigated the case from the multiple perspectives, perspectives of the Forest School leaders, parents and children, the findings provided a comprehensive look at the way the state preschool center used the Forest School approach. One of the main findings of this research was the examination of the Forest School sessions in terms of the way the case study preschool center implemented it. This included the data about how outdoor spaces were used, what kinds of resources were used, which developmental areas are focused by the program and how the program contributed to the learning and development of the participating children. Analyzing the observations and interviews revealed the importance of two issues; unique outcomes for each child; and the factors that motivated the teachers and the parents. The first one presented specific outcomes of participating in the twelve- session Forest School program in this case school and the second one gave a broader view about the factors that play a key role in the implementation and maintenance of the Forest School program in this case school. These findings answered my research questions and provided a deeper understanding of how and why this state preschool center implemented the Forest School Program and how the program contributed to the learning and the development of the participating children.

#### 4.1 Examining the Forest School program at the case preschool

Gathering the description and aims of the sessions together enabled me to examine the curriculum of the Forest School Program in this case study school. The balance among all developmental areas and the balance between structured and free exploration was examined.

#### 4.1.1 Balance among all developmental areas

One of the principles that differentiate the Forest School from any other outdoor activities is promoting the holistic development of all those involved. Holistic development is the overall development of all areas of development in children. It was found that this case preschool's Forest School program attempted to foster children's holistic development. Children's development was encouraged in all areas of development; personal and social, emotional, cognitive, linguistic, physical, and creative and risk taking (See Table 4).

Moreover, some activities were inclusive of all developmental areas like Smelly Cocktails and Find the Treasure activities. For example, the goals of the activity of smelly cocktails dealt with cognitive, linguistic, physical, creative areas. In addition, the goals of the find the treasure activity dealt with personal, social, emotional, cognitive, physical creative areas. It was found that in the sessions with two activities children could be encouraged to develop in almost all areas of development. Figure 5 shows the example of a topic web indicating goals of the session that link to holistic developmental areas.

The analysis of the plans of the twelve sessions according to Holistic Developmental Grid showed that some developmental areas were not balanced well. For example, the session plans included goals of cognitive, linguistic development, personal and social, emotional areas more, but they included less risk taking. I planned these sessions according to children's needs and interests; however, the activities in the sessions were set to represent standard implementations of the program in the case preschool. I did not add anything more attractive to the program.

Table 4. Holistic Development Grid (Clarke, K., 2011)

| Developmental Areas  | ACTIVITIES FROM FOREST SCHOOL PROGRAM IN THE CASE PRESCHOOL  |   |   |  |
|--|--|---|---|--|
| Personal and Social<br>Self-awareness and development of relationships, skills and attitudes with others.                | meet a tree<br>eyes to eyes,<br>ground picture,<br>ground picture,<br>“bat and both” game  |   | health and safety talk,<br>smelly cocktails,<br>Hungry Bird & Woolly Worms,<br>“shrinking forest” game<br>Find the Treasure |  |
| Emotional<br>Self-esteem and feelings, awareness of feelings of others, wellbeing.                                       | special place in the woodland<br>ground picture<br>giant bird nest<br>ground picture 'tree'<br>“shrinking forest” game             |   | Interview with Nature<br>Find the Treasure  |  |
| Cognitive<br>Thinking and understanding concepts, problem solving, reasoning, memory, concentration, involvement.        | making risk analysis<br>game<br>giant bird nest<br>“shrinking forest”<br>Find the Treasure<br>woodland<br>sound map<br>Meet a tree | smelly cocktails<br><br>ground picture 'tree'<br>be a seed game<br>matching trees<br><br>Sorting Events | “bat and both”<br>scavenger hunt<br>ladder<br>shades of<br><br>The Forest Cycle   |  |
| Linguistic<br>Communication, language, literacy, expressing ourselves.   | finding adjectives<br>hungry bird woolly worms<br>matching trees in our garden<br>The Forest Cycle<br>Sort Events Storybook        |   | smelly cocktails<br>scavenger hunt<br>sound map<br>reading a book<br>“shrinking forest” game<br>Interview with Nature       |  |
| Physical<br>Gross motor, fine motor, skill, control, coordination and performance of the body.                           | “1, 2, 3 Where are you?”,<br>mud monsters,<br>giant bird nest,<br>Hungry Bird & Woolly Worms<br>ground picture “tree”              |   | smelly cocktails,<br>group pictures,<br>“shrinking forest” game<br>Find the Treasure  |  |
| Creative<br>Expressing our individual ideas and feelings imaginatively, experimenting and investigating new experiences. | smelly cocktails,<br>mud monsters,<br>giant bird nest,<br>be a seed game,<br>ground picture “tree”                                 |   | Monster Joe Coming,<br>sound map,<br>act as a tree<br>Find the Treasure   |  |
| Risk Taking<br>Awareness of own ability, confidence and resilience   | meet a tree,<br>ground picture “tree”,<br>The Forest Cycle<br>Making Fire<br>worm farm,  |   | “bat and both” game   |  |

The activities I did were very similar to the ones that the other group leaders did. After implementing the program, I analyzed the sessions I set. In contrast to leaders and teachers in Scandinavian countries, as Turkish teachers we did not provide children with sharp tools like knives that could be dangerous since we thought they were not old enough to use such tools carefully. Even though woodland area was safe, we used ropes on the first days to keep them together so that they did not get lost.

One of the unique components of Forest Schools is that in the Forest School program learning should be linked to national curriculum objectives. Examining plans of all sessions showed that twelve-session Forest Program connected with the Turkish Early Childhood Education Curriculum (TECEC, 2013) in terms of objectives and indicators (See Table 5). Although the areas of cognitive development seem to be more focused; in TECEC (2013), cognitive development has the highest number of objectives compared to other developmental areas ( $n = 22$ ). In the case of the Forest School program, fifteen objectives out of twenty-two were focused. In social emotional development, seven objectives out of seventeen, in language development seven objectives out of twelve, in motor development three objectives out of five were focused. However, self-care is the least developmental area placed in the session plans, just two objectives out of eight was focused.

Moreover, in almost all sessions, some objectives of cognitive and social emotional development were aimed; in eight sessions, objectives of motor development and language development were aimed; however, objectives of self-care development were placed just in three sessions for the sake of teaching children health and safety issues. In nine other sessions objectives of self-care were not

Table 5. Objectives of Turkish Early Childhood Education Curriculum (TECEC, 2013) linking with Forest School Program

| Cognitive Development  | Social Emotional Development  | Language Development  | Motor Development  | Self-Care Skills  |
|--|---|---|--|---|
| <p>O1: Pay attention to the object/situation/event<br/>                     O2: Predict about object/situation/event<br/>                     O3: Remind that s/he perceived<br/>                     O5: Observe the objects and beings<br/>                     O6: Match objects according to its properties<br/>                     O7: Group the objects and beings according to its properties<br/>                     O8: Compare objects according to its properties<br/>                     O9: Sort object/beings according to its properties<br/>                     O10: Implement directive related to location<br/>                     O13: Knows the symbols using in daily life<br/>                     (O) 17: Establish cause and effect relationship<br/>                     O13: Knows the symbols using in daily life<br/>                     O 17: Establish cause and effect relationship<br/>                     O18: Explain concepts about time<br/>                     O19: Create solutions for problems</p> | <p>O3: Express him/herself in creative ways<br/>                     O10: Fulfill his/her responsibilities<br/>                     O12: Obey the rules of different environment<br/>                     O15: Self Confidence<br/>                     O3: Express him/ herself in creative ways<br/>                     O7: Self-guided for doing a job<br/>                     O17: Solve problems with others</p> | <p>O1: Distinguish sounds<br/>                     O4: Use grammar structures while speaking<br/>                     O6: Develop vocabulary<br/>                     O8: Expresses what s/he listened in various ways<br/>                     O10: Read visual materials.<br/>                     O5: Use language for communication<br/>                     O4: Explain the feelings of others about an event or situation</p> | <p>O1: Make displacement movements<br/>                     O3: Makes movements which is needed object control<br/>                     O4: Make movement that needs fine motor skills</p> | <p>Objective (O) 7: Protect him/herself from hazards and accidents<br/><br/>                     Objective (O) 8: Take necessary precautions regarding health</p> |

(O=Objectives)

included in my session plans as putting on, taking off clothes and boots, (Self-Care; Objective 2 in TECEC), gathering materials that we used in the Forest School carefully (Self Care; Objective 6 in TECEC, 2013) were part of children's daily routine .

In terms of the relationship between objectives and indicators of TECEC (2013) and Forest School program, aims about environmental issues which were encompassed by Forest School Program (“Take care of living things and protect them”, “explain what s/he shares life with other living things”) could not be found in national curriculum (TECEC, 2013). In self-care skills part of TECEC (2013); one of the objectives (Objective 6) is that the child “makes necessary arrangements in living areas”. The indicators of this objective aim at using materials or stuff at school and home carefully. These objectives are not linked to outdoor environments or environmental issues. In social emotional developmental area there is one objective, which may be associated with environmental issues. This objective (O13) is protecting aesthetic values. The indicators of this objective aim at the value, the beauty of the surrounding/environment. The objectives in TECEC (2013) do not address environmental issues clearly and directly. As a forest leader and classroom teacher who gives importance to environmental issues, while preparing lesson plans I could not find a proper objective or indicator in TECEC (2013) matching with the aims of my activities, including environmental issues.

#### 4.1.2 Balance between structured activities and free exploration

In the Forest Schools, the sessions provide a careful balance between children's own exploration and structured activities. In the sessions as a new Forest School leader sometimes I found myself more inclined to stick to the activities that I had planned for the session, so I got the feeling of being time constrained and needed to remind

myself to be flexible. Two of the teachers who were also Forest School leaders in the school I interviewed thought that the sessions should be flexible so as to allow children for their own self exploration but sometimes educators are inclined to stick to the plan.

It is important to plan structured activities and free time in the Forest School in a balanced way, as children need time to relax... and to interact with their friends, or to engage in something that attracts their attention outside. As an educator, even though we tend to apply our plan that we have prepared, we need to establish a good balance (between exploration and structured activities) and if we can be flexible about the plan according to the current situation of the children, we will keep that balance. Children become more open to learning after free time, and there are few attention problems so free play/ exploration time and structured activities are integrated in a healthy way into the session plans (FS Leader 1).

We should give free time, free exploration time; I think the ratio (structured and free time) should be equal (FS Leader 3).

One of the leaders did not mention the importance of the balance between structured and free play time but she stated that if they had enough time after children finished what she had planned, she allowed children for free play and exploration.

In the Forest School sessions, I give priority to finish what I have planned for the session. Free play can take place as long as the activities have been done as planned and we have time (FS Leader 2).

Forest School Leader (3) explained the reason why they did not allocate time for free exploration. According to her, because they implement Forest School Program one day a week, their focus was just on structured activities.

When we do activities as we do, there is no time for free time. In Germany, for example, between 9am and 12am they are in the forest and start with structured activity for an hour followed by free time, snack, free time, last hour gathering and evaluation of the session. Because they are in the forest all week, time for their structured activity is enough. Because we do it weekly, or because there are certain days of the week in the UK, there are more structured activities (in the session).

The statements of the leaders and the way I implemented the program showed that except one leader who gives free play time at the beginning of the session (but

she did not mention about the duration), time allowed for free play and exploration is not sufficient. It is clear that some days children cannot have free time. The reason of this may lie under the thought that although it is structured, the Forest School provides many activities with free exploration and creativity for students.

Structured and Unstructured activities...When I thought of my past years as an educator, I understood that I prepared too many activities for one class hour., For example, if the child is expected to make 3-5 moves, the child makes them, but you do not give the child the opportunity to be creative and you get tired more. Because you have to do everything...Your activities vary. You not only make your own educational material, but you make something irrelevant to a completely educational material and make it an activity for your children (FS Leader 2).

#### 4.1.3 A Forest School program at school garden

In the case school the school garden was mainly used for the Forest School program. The school's Forest School area was large and wooded but it was not in a forest. It included a circle log, i.e. a fire circle that acts as a gathering area and there was a tunnel from the ivy, separating the Forest School area from the play equipment. In the play equipment area there were two balance beams and two wall bars made from woods. At the top of the wall bars there was one little wooden house. At the beginning of the sessions, first, we went to the gathering area and then we used the entire garden including these pieces of equipment. In the sessions, children used the equipment when necessary, for example, to hide in the "1, 2, 3 Where are you?" game or to sit and talk in their small groups. One of the leaders in the interview stated that she had some difficulty in adapting children to the Forest School session and she had difficulty in transition from the garden area where children used to play free to Forest School area.

In the first session, I had difficulty because the children were 3.5-4 years old, and they were used to playing with their toys in the garden outside. I could not get their attention because they were interested in their toys. That is why I was disappointed but later they understood what we were doing and I did what I was supposed to do as we aimed (FS Leader 1).

The case preschool's forest school program included many activities that required the children to explore with multiple senses; hearing (activities such as sound map, meeting a tree), smelling (such as smelly cocktails, meeting a tree, etc.), observing (such as forest cycle, matching trees) and listening (such as bat and both; interviewing with nature). A range of natural materials like sticks, leaves, soil, water, herbs, mud, stones, etc. were used in the sessions. However, all the other three leaders and I think that the physical conditions of the area that we run the Forest School sessions are not adequate in terms of biological diversity. In the interview my colleagues stated that the forest nearest the school did not have biological diversity and they made a lot of effort to make our garden suitable for the Forest School program to be implemented.

No one offers you these facilities, you yourself have to pay effort to create educational environment. You need to do a lot of things in two years. Two years is quite a long time (FS Leader 2).

When we look at our forests, they are limited in terms of biodiversity. Şamlar forest was very limited. There were the same kinds of trees. (FS Leader 1)

Although we had arranged our school garden so as to meet the Forest School Program requirements, we planted new herbs and flowers because we had difficulty in finding a variety of natural materials. As one of our colleagues said, we needed a larger area including various plants and animals.

Our garden could be larger; there could be various plants and animals. I think there should be both fragrant and fragrant free flowers in the garden (3).

Some days we had difficulty even in finding sticks. To overcome this difficulty we asked gardeners not to cut the grass and asked them to leave sticks after pruning the trees.

At the beginning our physical environment was adequate, but as we did the activities, we needed a lot of things that we had never thought of. I had difficulty because of limited biodiversity and another problem was that the municipality was in charge of our school garden. Sometimes they cut and took away some trees and bushes (FS Leader 1).

## 4.2 Unique outcomes for unique children

The most crucial part of this research is the experiences of the children; how they react to the program, and observing the children's developmental progress in key areas. The analysis of Forest School Leader reporting sheet, which was filled in, by the assistant teacher and me as the Forest School leader; and parents' views about their children's experiences showed that each child's experiences are unique. Not in all areas all children were observed to change. It was seen that although all children experienced the same process, Forest School consequences were unique for each child.

In this part so as to see each child's experiences each child's data is explained. First, children are introduced according to observations from reporting sheet and the statements of the parents. Then the observed changes in children are explained.

The tables "Observed Changes" give a summary of reporting sheet and statements of the parents. As filling in the reporting sheet, parents' statements were matched with themes of the impacts of Forest School with the help of forms that were used in Pentre Forest School Project Evaluation done by the researchers Jenner and Hughes (2006). If changes were observed, they were written on the tables. The areas of development, which were not written, meant that no differences were observed by the FS leader, assistant teacher or parents.

### Osman

Osman was very sensitive to nature and all living things. When he gave me a flower, he said that he had found it on the ground; he had not pulled it off. He had high self-esteem and confidence as observations indicated. He objected when he saw that the teacher did not notice his work. His parents defined him as a child acting like a grown up. He was interested in nature and involved in all activities actively in the Forest School. His knowledge about the flora was high. He was the only child who

drew the roots of a tree. He was eager to learn in the sessions. He liked talking individually with the Forest School leader. He was not physically active in the sessions, even in free time he preferred sitting or talking one to one. When the reporting sheet was analyzed, a change was observed in Osman. In the last sessions, he started to participate in group discussions more. In addition, in the interview, his mother mentioned that she observed changes in Osman in the area of language and communication skills (see Table 6).

He acts like a grown up. Perhaps he has built up confidence. He was more childish but now he expresses himself more clearly. When I postpone something or when I do not listen to him, he frankly and openly says, ‘You don’t listen to me. You don’t care about me’ (1).

Table 6. Observed Changes in Osman

| Themes of the Impacts of FS | Observation report                   | Statements of the Parent |
|-----------------------------|--------------------------------------|--------------------------|
| Language and Communication  | Involving group discussions actively | Expresses himself better |

### Güney

According to the observation report of the Forest School leader and assistant teacher, Güney liked being the leader of the group. In all activities he wanted to be a leader. He was interested in nature; in the sessions he explained the properties of worms to his friends. He participated in all activities eagerly. His knowledge and understanding skills of nature were high. He named stork as migratory bird, he explained when I asked a question about trees, he said that the birds leave seeds on the ground, and then trees are formed. He participated in every group discussion. When his friends did not listen to him, or when they objected to him, he raised his voice in the group discussions. He could not cope with failure. He had cried in the hungry worms game because the students from the other group had said they won

with a loud laughter. In the last session when the other group found their treasures before his group, he started to cry sobbingly, and shouted at the other group members “do not rejoice”.

He maintained his physically activity also in the sessions. In the interview, his parent mentioned that he is more motivated to come school and more interested in nature.

He has become more observant and more willing to come to school and he likes observing and exploring more. He has reinforced such attributes (2).

First of all, this program has taught him to love and nature, which forms the basis of human love. I do not think that a person who does not love nature can love other people. I think program has made him more observant, more environmentally conscious, and more loving (2).

The increased interests in nature were also reflected to his TV program choice. According to his parent, he started to watch cartoons that were about nature.

Last year he fancied watching Heidi, but this year he relates himself with her because she lives in the mountains and loves nature (2).

According to his parent, after attending the Forest School program he was more willing to stay longer at school. Especially on the days they went to the forest, his interest in school activities increased.

With the start of school, I mean the Forest School; he started to enjoy school more. Normally, he used to leave school early, but now he really loves school, especially going to the forest. He does not want to leave school early anymore (2).

The parent observed that his child was calmer and less worried after Forest School at home. However, this change was not observed by the leader and the assistant teacher throughout the sessions (see Table 7).

*Children are now more relaxed, less worried, and calmer. This is what I observe in Güney. When he comes back from Forest School, because he has spent time in nature, because he is peaceful and happy, he does not get angry; he feels calmer (2).*

Table 7. Observed Changes in Güney

| Themes of the Impacts of FS  | Reporting Sheet | Statements of the Parent                              |
|------------------------------|-----------------|---|
| Social Skills                |                 | Feeling calmer on the FS days                         |
| Motivation and Concentration |                 | Eager to come to school on FS days, loves school more |
| Knowledge and Understanding  |                 | loves nature more, more interested in nature          |

### Kuzey

The classroom teacher gave the list of their students who would participate in the Forest School program and wrote a note next to his name; “difficulty in anger management. Kuzey did not participate in the first two sessions. He showed up on the “worm farm” day and he wanted gloves, after that he caught seven worms without gloves, he worked individually and collected worms during the whole session. Till the end of twelve sessions he treated others positively, expressed his thoughts properly even when his peers hurt him. In one session one of his friends pulled a piece of branch off his hand, his hand got slightly hurt. He just said that he expected her to apologize. The assistant teacher who observed him both in class and in the Forest School said that she was surprised by him, two days ago in the dining hall, he cried loudly because one of his friends passed in front of him while waiting in the line. He had two teachers in the school. One was the classroom teacher. One was the assistant teacher. Both teachers said that he had difficulty in anger management. However, in the Forest School sessions his difficulty in anger management was not observed. In the last session when in his group children were arguing loudly about who the leader of the group should be, he did not participate in the argument. He played outside of the group instead. When he was asked the reason, he said that there was a fight and he did not want to be there. There might be many parameters that affected him; difference between in class and outdoor rules; or

teachers' attitude towards him. In any case, according to his mother Forest School helped him feel calmer. His mother stated:

The Forest School has helped him feel calmer. He used to get angry easily at school. But I have noticed that he feels calmer at Forest School days. We have familial problems; this program was very useful for him. And me, even if it was not for others' (3).

These observations pointed out that his difficulty in anger management did not disappear totally. His problem with anger management continued in the class; however, at home and in the Forest School sessions he could cope with his negative feelings and express himself. He seemed to love and trust me. In the last sessions he gave me flowers and when he and his friends fell into conflict, he said "let the Forest School teacher decide it". Along with the positive relationship with the leader, he was interested in nature and activities in nature. The assistant teacher said that he was more interested in the activities at Forest School; normally he did not have high motivation to participate in classroom activities (See Table 8).

Table 8. Observed Changes in Kuzey

| Themes of the Impacts of FS     | Reporting Sheet  | Statements of the Parent                      |
|---------------------------------|--|---|
| Self-Esteem and Self-Confidence | Expressing himself   |   |
| Motivation and Concentration    | Eager to participate activities  | Talk about his day at school with his parents |
| Social Skills                   | More active participation in group works, coping with negative feelings. | Feeling calmer on the Forest School days      |
| Knowledge and Understanding     |  | More interest in nature                       |

His mother believed that this program helped his son build self-esteem because he started to talk about his day at school. This was his mother's interpretation; however, it might be related with high motivation and concentration. Because he loved Forest School and had high motivation to participate in Forest School activities, he might

have started to talk about what he did on these days. In the end, this development might have promoted good relationship between him and his mother.

I think his self-esteem has developed. He was unsociable. He never told me about his dialogues with his friends. I used to look for ways to have him talk or convince him to tell about what he did at school but now he feels comfortable talking about his day at school. He says ‘Mum, I did this, I did that, I sweated, but this happened. This program helped him build self-esteem (3).

Kuzey continued Forest School activities at home although the Forest School program ended; his interest in nature was increased. He was happy to be intertwined with nature.

He is picking insects and bringing home. Even though the Forest School is over, he is still bringing home insects and worms. He continues picking seeds. We are planting them all and giving worms to chickens. That is why he is happy (3).

Ümit

Ümit was interested in woodland environment, He was eager to learn about nature. For example, at the end of third session he said that on that day he had learned that the worms had no eyes. He was actively involved in the activities; he found new things to explore. However; he did not respect the environment, he crashed the beetle with his foot, kicked the trees. He was a follower than a leader in his group. In the activities if his friend did not participate, he also did not participate in the activity. At the beginning of the program he had some difficulties in following the group game rules and group discussions. He talked one to one, and asked questions about nature. Towards the end of the program he began to make meaningful contributions to group work, group discussions and listened to the group discussions. He started to warn his friends who were talking at group discussions individually. In the discussions, he said, “Animals need trees to drink water”, “People need trees to make tables”. When asked them to say something interesting about the tree, they put themselves in

tree's place, he said that "I have a mother" and so he started a different discussion about the proliferation of trees. He started to respect the environment. He said, "I am leading the bug to go to his nest", when his friend warned him not to kill the bug".

The Forest School leader and assistant teacher observed changes in three areas; self-esteem, language and communication, knowledge and understanding (See Table 9).

Table 9. Observed Changes in Ümit

| Themes of the Impacts of FS      | Reporting Sheet                     | Statements of the Parent |
|----------------------------------|-------------------------------------|--------------------------|
| Self -Esteem and Self Confidence | Participating in group discussions  |                          |
| Language and Communication       | Contribution to the team activities |                          |
| Knowledge and Understanding      | Respecting the environment          |                          |

His mother stated that she did not notice any changes because she did not observe him in the forest.

I did not notice any change because we could not take him to the forest (4)

Although this parent stated that she did not observe any changes, she said that her child was very happy with and interested in Forest School activities and that he wanted to continue participating in the Forest School program.

He was very pleased and he was sad that it was over. He wanted to go to the Forest School again. He was happy indeed (4).

#### Merve

According to the observations on the recording sheet, Merve was a child who showed high confidence, expressed her ideas easily, showed features of a leader, and insisted on her desires in group work. She disputed when another child refused her idea. However, according to her assistant teacher, she was coping with rejections. In the fourth session she wanted to pour the soil back from a bowl; "You're doing everything," she said, and her friend did not listen and she poured. According to the

assistant teacher's observation, if it had happened in class, the case would have been different; she could have shown aggressive behavior. However, in the Forest School session she disregarded this. In the first sessions, she had difficulty in obeying Forest School rules. For example, she played with park equipment or passed across the circle. In addition, she had difficulty in following the instructions of the forest school leader and assistant teacher. After the first three sessions, she developed understanding and knowledge about the Forest School rules and processes.

In the group if a child or a teacher asked her that why she did like that, she always answered because she wanted it that way. She spent time in perfecting and elaborating on her tasks. She told what she knew about nature; For example, she said “stinging nettle grows on the ground”, grouped the tree varieties as fruit and pine. She also added new information; she remembered what they had learned from the previous sessions. She answered one question as, “animals need trees because they need oxygen”, “if there were not any bugs, there would not be trees and we couldn’t eat anything” and she said “the trunk” of the tree instead of saying “bark”. She did not participate in the last two sessions. When she could not participate in the sessions because of her inappropriate clothing, she started to cry.

In the interview, her mother stated that she did not notice any change because she did not observe him in the forest (See Table 10).

Table 10. Observed Changes in Merve

| Themes of the Impacts of FS | Reporting Sheet  | Statements of the Parent |
|-----------------------------|--|--------------------------|
| Social Skills               | Dealing with rejections  |                          |
| Knowledge and Understanding | Getting more information about nature, knowing and understanding FS Rules. |                          |

I did not notice any change because we could not take him to the forest but she always told about his experiences enthusiastically and happily, but I don’t

know what he has learned and what he hasn't because we haven't had the chance to go on a picnic. How can I understand what he has learned while sitting at home? I do not know (5).

### Dinçer

Throughout the twelve sessions, he participated in all activities eagerly and with a big smile on his face. He was so social, before the first session, he came to me and he said his name spontaneously. He treated all his friends positively. He had low self-esteem. In each activity he did, he expected his teacher / leader's approval. He was a follower than a leader. He preferred doing what his friends did. In some activities like "matching trees" or "drawing parts of a tree he wanted help from his friends, they helped him. He looked very happy after having finished his task with the help of others. Sometimes he had difficulty in obeying rules. After five sessions he understood the rules of Forest School.

He participated in group work and did what others asked him to do. However, he was not involved in group discussions till the last session. In the last session he participated, he put himself the place of a tree and said, "I was a sapling then I grew". He reminded one part of a story in the story line activity. In the last two sessions, he started to move individually, for example in the forest he filled in his forest cycle sheet by himself. On the way to school after forest, he asked his friend; "what do you think about coming to the forest; was it good?"

According to parent's statement of Dinçer, his knowledge and interest about nature increased. He started to share their observations about nature with his family. He was eager to observe and learn new things about nature. His awareness about nature was increased thanks to the Forest School program he participated (See Table 11).

Table 11. Observed Changes in Dinçer

| Themes of the Impacts of FS     | Reporting Sheet                              | Statements of the Parent  |
|---------------------------------|--|---|
| Self-Esteem and Self-Confidence | Taking decisions by himself/herself          | High Self-esteem, self-confident  |
| Social Skills                   | Eager to contribute to the group discussions |   |
| Language and Communication      | Being involved in group discussions actively |   |
| Motivation and Concentration    |  | Continuing FS activities at home, feeling happy after FS day, feeling sad for missing a FS session                            |
| Knowledge and Understanding     | Understanding the rules of FS                | Starting to observe nature, being interested in nature, respect the environment, having increased knowledge about environment |

He has started to observe the nature. He can predict when it rains and, worms and snails come out. He notices such things easily and tells us. The place where we live is green. He observes and is curious about what he might see around (6).

His attitude towards nature has changed. What he has learned here has contributed to his knowledge about outside world. He has started to notice insects, leaves more often (6).

He knows a lot of things about animals and soil now, He tells us how they feed, which living things live in soil, when they come out for example, when it rains and so on (6).

The parent stated that his level of consciousness increased after the program; he started to warn his parents about polluting the environment.

He has a different attitude towards nature now. He is more environmentally conscious. For example, he does not throw litter anymore. He used to throw litter very rarely, but now he warns- “Mum, it doesn’t biodegrade”. I think this program was beneficial in that sense (6).

His parent feels that his son’s self-esteem increased a little; however she did not give any example about that area she just said that she felt like that. She observed that he was very happy at home after he came home from Forest School.

His self- esteem has improved. He already has self-esteem, but I think he is a bit more self- confident now (6).

You are having them pick brushwood here; he is picking brushwood outside. He is even picking wood chips. He is doing the same things (6).

He was pleased and happy when he came home from Forest School. When he is happy, we feel happy. He was sad when it was over. The last week he was ill, so he could not attend classes. You made marshmallow that week. He was very sad that he missed classes. He was complaining about that at home (6).

### Mehmet

According to notes on the observation report sheet, Mehmet was a leader rather than a follower, even if he was not the leader of the group work; he behaved like a leader of that group. For example, he decided what kind of ground picture his group would do. He was confident; he told his idea in or out of the group. In the second session group discussion, he offered suggestions to reduce risks. However, he had difficulty in following the discussions in the group. It took him time to participate in a discussion or to begin another activity. First he did not want to participate and refused, when the leader approved him by saying “whenever you want, you can participate”, he participated in the activity.

He was eager to learn about nature; he said that he learned that worms could be found on wet ground or he started to use “roots” in his sentences. He respected environment and encouraged the others to respect it. He was good at gross motor skills; he could climb trees. On the day his father came early to pick him up he did not want to leave early. He said that he loved everything in the Forest School. In the last two sessions, it was observed that he participated in group discussions without any distraction (See Table 12). He did not participate in two sessions in total.

Mehmet’s parent observed that her son was calmer after the program. According to the parent, he was more relaxed and less worried about his problems. She also thought that he started to express himself well after attending this Forest School program.

Table 12. Observed Changes in Mehmet

| Themes of the Impacts of FS      | Reporting Sheet                              | Statements of the Parent                          |
|----------------------------------|--|---|
| Self-Esteem and Self -Confidence |  | More self-confidence, expressing him/herself well |
| Social Skills                    | Participating in discussions                 |   |
| Language and Communication       | Being involved in group discussions actively |   |
| Physical Skills                  |  | Good gross motor skills                           |
| Knowledge and Understanding      | More informed about the nature               |   |

He is less worried, more relaxed, and more confident, He can climb trees, every day he tears another tracksuit in the tree (7).

I do not know what has happened to him recently, in fact, I told his father about this last week, but he has developed self-confidence; he can express himself well. I believe that this program has helped him (7).

Ayşegül

Before the Forest School sessions, the classroom teacher told me about her anxiety about cleanliness and she refused to wear waterproof clothing. Her therapist suggested not bothering her about dressing as long as it was not too cold, so she was allowed to participate in the Forest School program. She showed her anxiety about cleanliness in the sessions; she did not hold natural materials in her hand, she did not touch the soil and mud, she started to cry when there was sand in her boots. Change in anxiety about cleanliness was not observed in the sessions.

In the third session, she accepted to wear her boots but again she had a skirt on her. Because the weather was cold, she wanted to go inside the school. She did not come to the school on the day they went to the forest; her parents said that she could not come because she refused to wear appropriate clothing. On the second day the group went to the forest she came to the forest wearing her tights.

In the first session, she participated in the activities by holding the assistant teacher's hand and did not participate in group discussions. In the second session she participated in games, she loved "frightening Joe" game and wanted to be a leader in

the group game. In the following weeks, she started to talk with the Forest School leader, not with the group. In the sixth session, she started to talk within the group by raising her hand while she was talking, she got stuck and then she never talked again. After eight sessions, she started to contribute to group work as a group member; however, she did not talk.

She was not physically active at the beginning. While all the group and the leader were running around the garden, she just walked. After the seventh session, it was observed that she started to run, hang up iron bars, and walk alone in the forest (See Table 13).

Table 13. Observed Changes in Ayşegül

| Themes of the Impacts of FS                      | Reporting Sheet   | Statements of the Parent   |
|--|---|--|
| Self-Esteem and Self Confidence<br>Social Skills | Working as a part of group                              | Playing with children outside, playing outside more, making friends easily, playing the Forest School game with other children |
| Motivation and Concentration                     | More interested in woodland environment and activities. | Continuing FS activities at home and outside with his friends  |
| Physical Skills<br>Knowledge and Understanding   | Gross motor skills                                      | Gross motor skills<br>More nature lover, more informed about nature  |

At the beginning of the sessions she said that she enjoyed only breaks in the Forest School. However, at the end of the seventh session she said that she liked almost every activity.

According to Ayşegül's parent, she started to be more interested in nature and natural materials.

Her love for nature has deepened (8).

You did an activity about birds. She knows about birds (8).

Thanks to the Forest School program, she started to go to the park and her social ability developed as she played the same games the leaders had them play in

the Forest School with children at the park. Her physical development was also cherished; she started to climb trees.

We, three of us, played the game ‘Frightening Joe’ at home. She had us play the game when we were with friends. She says she wants to do what she has learned when she goes to her grandparents’ summerhouse in İ. (8).

For example, she did not used to play in the park much. Because of the activities you do here, he has learned to spend time with his friends outside in the park. He enjoys it now. She wants to play outside more. She can make friends easily now and she wants to play with close friends and at the park she wants to play the same games you had them play in the Forest School with them (8).

I have noticed that she has started climbing trees this week (8).

She has climbed trees this week. She already loves nature; in the summer, she planted trees in her grandfather’s garden. This program has proved to be useful (8).

One statement of the parent did not match with the “proposition for change”.

According to the parent, Forest School program helped him reduce his anxiety about cleanliness.

He never used to play with sand. Today he told me he carried sand. His behavior has changed. For example, when we went to a restaurant, he would not sit on a chair just because it could be dirty, but now he has gotten used to it because you have them sit on the ground in the Forest School garden. He does not care much about his clothes; he does not worry much about cleanliness. Of course, he did not overcome the anxiety at all (8).

Barış

Barış is eager to learn, he asked lots of questions, his language and communication development was good; He was the only one in the group to guess the concept of “edge” in the “scavenger hunt” game. He made a sentence like; “I heard a quadruped migratory bird running at lightning speed”.

He expressed his feeling and thoughts in the group discussions, contributed to work by talking; he offered to make a fruit tree at the edge of the picture they drew on the ground, he offered to make a picture on the sand. He found solutions to the problems in the group; “Then Osman, you choose the leader” when one of his friends

did not want Barış to be a leader. He listened to the Forest School leader very carefully in the group discussions and could wait for his turn in the discussions. He participated meaningfully in the group discussions.

He took time to perfect his work; he worked a lot on his mud monster and named it “mud ghost”, he worked a lot on “leaves” without any distraction. He was interested in nature and learned new things from sessions, he reminded and told what he had learned after a session; he said, “If we killed bugs, we could die” by making direct cause and effect relationship (after worm farm sessions, he learned worms are beneficial for our soil).

As well as the leader, Barış’s parent observed that he was more informed about nature after the program. Also, she mentioned that he continued Forest School activities at home (See Table 14).

Table 14. Observed Changes in Barış

| Themes of the Impacts of FS  | Reporting Sheet            | Statements of the Parent          |
|------------------------------|----------------------------|-----------------------------------|
| Motivation and Concentration |                            | Continuing FS activities at home. |
| Knowledge and Understanding  | More informed about nature | More informed about nature        |

He knows about nature. He learned about how nature works (9).

When you went to the forest the first day, they listened to sounds of the forest. When I came home from work, he listened to the sounds outside. He tried to distinguish them (9).

Nazlı

After the first session, Nazlı participated in all games, activities eagerly; she was always smiling. However, in the group discussions she just listened and observed. After the first session, she participated in all discussions and group work by talking. She expressed her feelings clearly. In the group there was an argument about which

game to play, some of them wanted to play “1, 2, 3 Where are you” and the Forest School leader offered to play a new game. They voted. When she voted, she said that she would like to learn a new game. The assistant teacher was surprised because in the class she would not insist on what she wanted. In the Forest School, she started to show the characteristics of a leader. In one session, one of her friends who was dominant on her, wanted to pour the soil himself. Nazlı did not listen to him and poured the soil from bowl. It showed that the balance of relationship in the classroom could change in the Forest School (See Table 15).

Table 15. Observed Changes in Nazlı

| Themes of the Impacts of FS     | Reporting Sheet            | Statements of the Parent      |
|---------------------------------|----------------------------|-------------------------------|
| Self-Esteem and Self Confidence | Leader than a follower     |                               |
| Knowledge and Understanding     | More informed about nature | More environmental awareness. |

She was eager to learn and asked a lot of questions. She remembered what she had learned. She said that she had learned that the worms dug the land. Same with the leaders’ observation, parent of Nazlı observed changes just in the knowledge-understanding theme.

She has gained more environmental awareness. (10)

#### 4.2.1 Summary; outcomes for children

After examining each child’s experiences one by one, the summary of leaders’ observations and parents’ statements on children’s development showed that the changes were observed in each area, but not each child developed in each area. Both teachers and parents observed changes mostly on increased knowledge and understanding. According to the families, the second area that the children developed mostly was the area of increased motivation to go to school and concentration on

activities they did at Forest School. On the other hand, according to the teachers, the second area the children developed mostly was the areas of increased self-esteem and social skills (see Table 16). This study showed that each child's experience was different from each others. Some changes could be observed only by the teacher and the Forest School leader in the group, some changes could be noticed just by the parents outside the school at home or park among a group of children.

After analyzing the Forest School program implemented in the case preschool, it was seen that the program had more emphasis on cognition. In all the sessions, there were activities aimed at cognitive development. The results of the analysis of the teachers' observations of children and the interviews with parents about their children showed that changes in children were observed mostly on increased knowledge and understanding. Except one child, changes were observed in all children in the area of knowledge and understanding. Therefore, there may be a link between focusing cognitive developmental area and increased knowledge and understanding in children. The observations and the interviews showed that the children were more environmentally conscious, more informed about nature and they had increased awareness about nature.

Parents focused that children's motivation to go to school increased especially on Forest School days. Parents' statement also showed that children continued the Forest School activities, observations, games at home or outdoors. In some cases, this led to increased social skills, as the children started to play more with other children outdoor via Forest School program. In addition, in some cases it led to increase the parent-child interaction as the child started to share his/her experiences in the Forest School at home.

Table 16. Summary of Teachers' Observation and Parents 'Statement on Children's Development

| Proposition for Change           | Reporting Sheet   | Statements of the Parent  |
|----------------------------------|---|---|
| Self-Esteem and Self--Confidence | Expressing himself<br>Participating to the group discussions<br>Taking decisions by himself/herself<br>Working as a part of group<br>Leader than a follower | Build self- esteem; feeling comfortable while talking, self confident (n=2)   |
| Social Skills                    | More active participation to group works<br>Coping with negative feelings.<br>Dealing with rejections<br>Eager to contribute to the group discussions (n=2) | Feeling calmer on the FS days (n=2)<br>Playing with children outside,<br>playing outside more making friends easily,<br>playing the Forest School game with other children  |
| Language and Communication       | Involving group discussions actively (n=3)<br>Contribution to the team activities   | Expresses himself better  |
| Motivation and Concentration     | More interested in woodland environment and activities.   | Eager to come to school on FS days, telling about the day at Forest School (n=2), loving school more feeling happy after FS day, feeling sad for the missed FS session<br>Continuing FS activities outside with his friends<br>Continuing Fs activities at home (n=3) |
| Physical Skills                  | Gross motor skills  | Good gross motor skills (2)   |
| Knowledge and Understanding      | Respecting to the environment<br>Getting more information about nature (n=4)<br>Knowing and Understanding rules of FS (n=2)                                 | More environmentally conscious, respect to the environment (n=3), more nature love, more interest in nature, starting to observe nature (n=4)<br>increased knowledge about environment (n=4)  |

n= number of times parent stated/ number of children observed from text

The observations of the teachers and the statements of the parents indicated that there was very little change in children in the area of gross motor development. One of the possible reasons may lie in the fact that in this preschool mainly the garden was used for Forest School program. Another reason may be the duration of the program-twelve sessions.

#### 4.3 Factors that motivated teachers and parents to implement Forest School program

To understand the reason why an alternative education model is implemented in this case school, where the idea came from, with the structured interviews Forest School leaders are asked questions about the process of the training; before and after.

Moreover, the interviews with parents provided meaningful data to understand how the program might continue for years and motivation factors for parents to allow their children to attend Forest School program.

##### 4.3.1 The factors that motivated teacher/leader to implement the Forest School program

In order to find the driving force in the launch of the Forest School program in the case study school, the leaders that participated in the program were asked about their expectations about the Forest School training. It was found that none of the leaders had any expectations before the training program and all of them were very worried about the implementation of Forest School in Turkey because they did not know anything about the Forest Schooling.

In fact, before starting the program, I did not have big expectations because Forest School education is a new field that we need to explore....Being worried is quite normal in a new field. However, as you learn about it, you gain confidence and start thinking about how well you can do it. The more you learn, the more you expect in order to be able to do your job properly (FS Leader 2).

Although leaders did not have any expectations and information about Forest School, they wrote an Erasmus+ Project for training and went to England to get Forest School training courses. One of the leaders explained the starting point of this project. The starting point of this project is a wish to be involved in a European Union Project.

We wanted to be involved in a European Union Project. One of our teachers, Mrs. Büşra Eroğlu had attended a workshop about Forest Schools. She mentioned about it for the first time. We thought that it would be good both for our school and our environment and it would be a great experience for our students, too. We decided that it would be a good idea to implement such a program. Our teachers prepared the project. The National Agency accepted it and we started. We were very happy (FS Leader 3).

All of the leaders were interested in education in nature, and they were all actively involved in national and international nature education programs.

While we were studying on projects related to environment, we thought of getting professional training on Outdoor Learning and implementing such a program in our school and we wrote a project all together (FS Leader 2).

All of these statements showed that the starting point of this Forest School program was writing an Erasmus project, but the determining factors of the subject area of the project were the teachers' interest in nature education program and the needs of the children in the preschool center.

The lack of open space for our children to make use of when compared to the open space children in the countryside use, their easy access to computers and technology tools, lack of environmental consciousness were some of the factors that motivated us to implement the Forest School program (3).

After the Forest School training in the UK, the leaders started to implement a pilot program, which would be observed and supervised by a Forest School expert educator. Teachers stated that they had some difficulties in terms of adaptation of children and finding natural materials after starting to run the program. One of the leader said that she did not have difficulty as the children were very willing, loved to participate to Forest School and children understood and obey the rules. One

teacher stated that she had difficulty in transition from garden area where children used to play free to Forest School area (as mentioned above p.66).

For the pilot study, by using National Agency funding for project “Learning in nature through Forest School” ten set of spare waterproof tracksuits and boots were bought. After the pilot program, these tracksuits were used in case the children did not have their own. One of the leaders mentioned that buying waterproof clothing, which is appropriate for weather conditions, was problematic for some parents; he claimed that they hesitated to buy as they thought that they would not use the clothing anymore after the program.

Parents hesitated to buy outdoor clothes for various weather conditions. They thought they would never use them later. Maybe they were not aware of the importance of clothing (*1*).

After the pilot program and supervision, teachers who had Forest School Training prepared a portfolio, and they got their certificate of L3 Forest School Practitioner. After they got certificate of L3 Forest School Trainer at the end of two years, the National Agency of European Union stopped funding of the project. Although the teachers faced with some difficulties while they were applying the program, they were still implementing the program in the case preschool. The interviews with the teachers showed that there were some motivation factors for teachers to continue the Forest School program. They are the “positive feedback”, “collaboration”, “and change in teachers themselves” (see Figure 6).

#### 4.3.1.1. Positive feedback from parents after starting to implement the program

After the program began, the parents showed positive reaction to the program.

According to teachers’ statements, the reason behind this was that parents noticed the happiness of their children and changes in their children. After teachers got this positive feedback, their willingness to continue the program increased. And also as

did not allow them to join us, but when they heard from other students that they had fun at Forest School, they asked their parents to let them go. When the children are happy, their parents are happy, too. When parents notice positive changes in their children, look at their photos, and see how they enjoy our activities, they learn more about the program and its contribution. They have a more positive about the program. You are starting to think that what you are doing is right; you think you need to continue (FS Leader 2).

#### 4.3.1.2 Collaboration

When I asked how they had overcome the difficulties they faced, two of the leaders said that collaboration is the key factor in overcoming difficulties. They stated that if they were alone in the training and implementation process, it would be more difficult to face with difficulties.

I did not have much difficulty because I was not alone. We were a group of four. I would certainly have difficulty if I were alone. We always exchanged ideas, gave each other feedback about the things we did. That we collaborated helped me a lot and made me feel that I was not alone. (FS Leader 1)

I was not alone. There were three other colleagues who were going through the same process. If I were alone it would be much more difficult, but we had meetings, took decisions, went abroad and went through training all together. We helped each other. I was not alone. (FS Leader 2)

#### 4.3.1.3 Personal gains of teachers from the Forest School program

The last but the most important motivation factor that led teachers to continue the program was the changes in teachers. As the teachers stated, the program had a lot of positive impacts; they developed themselves professionally, their perceptions about outdoor learning changed. They gained a lot of knowledge about life in nature. The content of the activities they did with children changed, even in the classroom. They became more aware of their classroom management behavior. They built high self-esteem and greater self-confidence especially in terms of spending time outdoor and giving response to parents (See Figure 7).

It frees you of your worries. In an activity named ‘1, 2, 3 Where are you?’, the teacher covers her eyes and the children hide in the garden. Before this program, I would not have the children play this game. There is always the risk that children might go out of the garden and get lost (FS Leader 2).

Before the program, if someone told me to take the children to the forest, I would refuse. I used to think that it was impossible. I did not know how to ensure their safety and what to do in the forest. I was not trained and not informed to take them to forest and have them do activities. (FS Leader 2)

I know how to spend that time not only for the purpose of play but also for the purpose of education, not only for the children to have fresh air, not only for their physical development but also for their cognitive and emotional development. I know there are more risks outside; I think that when the children know the risks, it is easy to implement the program (FS Leader 3).

#### Increased self-confidence in terms of giving response to parents

Before the Forest School Training program, teachers faced parental pressure, as parents did not want their children to be dirty and get cold outside. Before the training as teachers felt pressure on themselves, they prefer not going outside. After the training they stated they now knew how to explain the benefits of going outside, they were confident in terms of this issue.

We can explain everything to parents easily because we learned how to. I believe I can because children also know the risks they may face (FS Leader 3).

It helped me a lot. Before the program, we did not approve of children getting dirty. There was pressure from parents even if I do not agree. I learned to make them less nervous by saying ‘Nothing happens if they get dirty.’ But in past I said to parents “if we go outside we could be cold” by thinking as they think, like collaboration on the same issue (FS Leader 1).

We go out every day, we change their clothes, and small accidents happened, they may get hurt. We have to account for what has happened. Some parents give positive and some give negative response. I said myself “They can sit in a safe place and I don’t get tired of explaining” (FS Leader 2).

#### Professional development

All of the three teachers stated that the Forest School Program improved their professional development. As they learned and implemented the new alternative education method, their horizons were broadened and they gained new perspectives

on teaching, so their motivation of implementing the Forest School program increased.

It was beneficial for children. We helped them develop in every way. After each session, my motivation increased. It broadened my horizons and improved my ability. It was worth being part of the program. It has helped my personal growth and professional development a lot. (FS Leader 3)

In addition, you develop new methods. You learn about alternative teaching methods. This is an undeniable benefit of the program. In the classroom you use specific methods more often than others do. You repeat the same things. However, this program is an innovation both for children and for the teacher. (FS Leader 2)

I have been a teacher for 12-13 years, but it has opened a new door to me in terms of education (FS Leader 1).

#### Changes in perception of outdoor learning

One of the teachers was formerly against going outside, especially in cold weather, now she is aware of the importance of outdoor learning. With the help of the program she has broken down her prejudice against going out with children in cold weather.

As an individual of our society, I was against outdoor learning. I used to say 'Children, let us not go out today. It is cold and you might catch cold. Thanks to this program, I have come to realize that this is wrong. I have learned that they can go out in all weather conditions every day and that they can learn different things in different weather conditions... We have broken down prejudice against going out with children in cold weather. We have learned that the more they are out the more they connect with nature. This was impressive. This has broken down my prejudice. We educated the parents as much as we could. We hope this will go on and on (FS Leader 1).

#### Changes in the content of the activities

Two of the FS Leaders were the managers of the school, but they went into classrooms sometimes. All the teachers stated that the content of activities even in the classrooms changed. They started to use materials that are more natural and to apply unstructured activities more.

Even if I am in class, I use natural materials. I use the garden more. Namely, I now use more materials and plan activities that are more related to the environment (FS Leader 3).

Before the program, we used to go out to play games and to use toys in the garden. However, after the Forest School program we have started to use plants and natural things in our activities (FS Leader 1).

Structured vs. unstructured activity .That is, before the program I myself planned the activities and expected them to finish in two to three stages. However, these activities curbed their creativity and did not let them produce something of their own (FS Leader 2).

I have turned the garden into an efficient place. It has become a good area for teaching and learning (FS Leader 2).

Increased self awareness about classroom management strategies

Except one of the teachers, the program had a positive effect on teachers in terms of decreasing their authoritarian discipline on children. The teachers realized that the flexible rules in the Forest School program did not lead to chaos in the teaching environment if the teachers took precautions beforehand. Teachers' attitude changed not only in outdoor learning environment but also inside of the classroom.

I realized that before the program, I was limiting the children but after the program, I let them free in the garden. Other than Forest School sessions at usual school times, I began to be more flexible and relaxed when we went out with children, so were children (FS Leader 1).

It affected my in class activities and authorities. I became more flexible and relaxed and this affected the children as well (FS Leader 1).

I used to think that having flexible rules had a negative effect on discipline. However, the flexibility at Forest School sessions did not affect the children negatively in terms of what they were supposed to do (FS Leader 1).

The rules at Forest School are more flexible than the in class ones. Children feel free and independent, so you do not have to warn them. The children feel free, you feel more relaxed, and you do not get tired because you give fewer instructions (FS Leader 2).

With the help of the Forest School program as the activities were done outdoor, the teachers got used to do activities in a messy environment, the teacher overcame their worries about keeping classroom and the children's clothes clean.

While doing the activities, I do not worry about cleanliness and limit them anymore. Before the program, I was meticulous about keeping the classroom, the children and their clothes clean (FS Leader 1).

Increased respect for children's independence

In addition, the teachers had increased respect for the children's ability to protect themselves; risk analysis. After the program, the teachers understood that when an opportunity is provided to children, they can do risk analysis and protect themselves, so their respect for children's independence increased.

It certainly affects. For example, I was very meticulous. I always wanted them to be under my control, in front of my eyes. I was worried about them. I had the fear that something bad might happen; they would fall down, get hurt, but now I feel better. When you determine the risk areas, they can protect themselves (FS Leader 2).

Sometimes you feel more authoritative as before but as you spend time outdoors, you curb those feelings. You do not feel the need to have strict control over children. I used to be nervous even when we went on school trips but now things are different. Actually, it is in your hands to minimize the risks. Planning everything carefully and taking precautions beforehand turn into an advantage (FS Leader 2).

The teacher who did not mention these changes declared that her understanding of education was similar to Forest School pedagogy, so she did not have difficulty in implementing the program in terms of more flexible rules.

Maybe my understanding of education was the same (as the education at the Forest School), maybe the view of education was the same. There was no situation in which I had difficulty... the children were also comfortable (FS Leader 3).

Increased information about life in nature

With the help of the program teachers not only learn about the pedagogy of the Forest School, but also they get information about life in nature, as they implement the program, they continue learning more about nature.

Before the program, I used to think that I would learn more games activities in the garden. However, I gained life skills in the forest (FS Leader 3).

Before the program, I was an environmentally friendly person but I did not know much about biodiversity. I realized that I could not identify plants and as I taught children about plants, I learned as well (FS Leader 1).

With this type of education, you begin to look around from a different angle. You learn about trees and the plants in your area and flora fauna. You have different activities for the children to do. Your ability to plan new activities improves. No one gave us such education at university. We learned about in class activities then (FS Leader 2).

The starting point of the changes

When I asked the teachers the factors that led to changes in themselves, all of the teachers said that the most important factor that increased their awareness was observation the Forest School applications abroad (See Figure 8). Moreover, two teachers focused on the weather conditions and risky environment when they were observing children. Considering these conditions, teachers' and children's relaxed behaviors brings about changes in teachers.

There were a lot of risk areas when we went to Wales the last time. Many stones, jagged rocks. The children were very comfortable and nothing happened to anyone, even we talked about this among us later. If we had been them, we would have thought of taking them out of the way. The comfort of the children, the comfort of the teachers seemed less important. That changed me at that point .... Even though we did not have a Forest School session, when we went to the garden at normal times.. I am becoming more flexible. More flexible and more comfortable. Children are also more relaxed (FS Leader 1).

It was winter when we went there. It was cold but it did not matter. We spent time in the forest in proper clothing. The children had fun. Observing a specific education system in a place where it originated, listening to the ideas of the teachers from different countries, learning about what they do and adapting all these to your own system, making use of other ideas are really important.... We have started to think about why Finland is better than others,

satisfaction and feel happy and peaceful. You can say you do something good because children feel happy at school and after school (FS Leader 2).

One of the teachers related her happiness to stress free environment when all children and teachers are outdoors. Changing the learning environment decreased the level of stress on teacher; teacher found outdoor activities more enjoyable than in class activities.

I am happy because children are happier and more have more fun while learning outdoors rather than in class. It is nice not to have walls and I spend more time enjoying myself with the children, it is stress free. I am more relaxed and more comfortable and the children find it enough, a day in a week. They were asking us to come out again. The same goes for me. In class I feel like I am confined to class. There are more free and enjoyable activities out there (FS Leader 1)

#### 4.3.2. Factors that motivated parents

Interviews were held after the twelve sessions with the parents of the children who participated in the Forest School program. In just one interview, there were both mothers and fathers. In the other eight interviews there were just mothers and just one interview was held with a father.

One of the main questions of this study was what the parents' experiences were. To understand the reasons of permitting their children to attend Forest School program parents were asked in structured interviews whether they were informed about the Forest School, or not. Only two parents knew about the program and content of the Forest School.

Yes, I knew. I learned about it while I was searching about this preschool on the internet. I saw the photos that you took in England and read about your experiences there. I was very interested indeed. He was 4 years old then. He was in another school. I knew about it then (5).

Since I made translations about Forest School last year, I knew about its content (8).

Three of the parents knew about the program but they had not been informed about the content. Half of them did not have any information about Forest School.

About a year ago one of my son's teachers went abroad to get education. I think it was during the semester break. Last year the program was applied in some classes for trial. I did not know about the content, but I knew about the program (1).

My child has been at this school for two years. Last year the administration told us about this program but they said that my child's class would attend the program the next year. Before that, I had not heard about it (2).

I knew that this school implemented this program but I did not know about the content. Last year my child's class did not join it (4).

If you ask me if I knew about it or searched for information about it, no I did not (7).

Just four parents had expectations about the program, they all expected being intertwined in nature and learning about nature. The others had no expectations or low expectation.

His being intertwined in nature, I did not have any other expectations (5). I just wanted him to learn about plants, insects under soil, unfortunately these are impossible in urban life (5).

Of course I wanted my child to connect with nature. It was a big chance for him (7).

Of course, we wanted him to be in nature that would be beneficial.. so he would avoid technology (8).

I thought he would learn about nature (9).

#### Low expectation

The reason for low expectation about the program was the Forest School without forest.

At first, I did not believe in the Forest School program. Since we live in Istanbul, there is no place to be in nature, but when I thought about our school garden, I thought it would be implemented. Then I thought to myself that our children spent the day in that garden, I thought the program was not likely to succeed (3).

children to participate in the FS Program might lie in their nature love or their children's nature love.

The family loves nature

The parents who sent their children to Forest School without any expectations were mostly the nature lovers. They were already interested in nature and tried to make children be aware of the natural environments and living things.

We are thinking of moving to a mountain village in I. if we could go there in summers (1).

We experimented with many things with worms. We already know a lot about them, how important vermicompost is. A friend of my husband's has a worm farm. There have been practices related to perm culture in our village. We already take permaculture lessons (1).

I cannot provide him with the facilities he likes because of financial difficulties and some other troubles in our life. He cannot be in nature. For all these reasons, this was a great experience for him. In the past, we used to go camping together. He wanted to do that again, but we did not have the money and time. His experience in nature was just like going camping. That was invaluable for us (3).

To me, nature is very beneficial. It means everything. I love it, too. I am trying to teach him that he must not step on or squash ants. He is afraid of bee sting. I tell him that if he does not do anything to it, it will not harm him and that a bee must eat this and that to make honey. I love nature very much (4).

As parents, we usually take our children to forest and live in a house with garden, collect insects and worms (10).

Some children are already interested in nature.

The child who participated in the Forest School Program was already interested in nature.

He was already interested in nature and loved it very much (8).

And also others who had expectations about the program loved nature or their children loved nature.

As I spent my childhood in my grandmother's village, I learned a lot about nature but I cannot teach these things to my daughter. I point to ants on pavements. I want my children to love nature because we can be happy and

lead a happy life only in nature. I am trying her not to be materialistic. Inevitably, she will be, but I am doing my best. (5)

I spent my childhood in a village. I love nature. We go on a picnic almost every week (7).

He is intertwined with nature. He is curious about nature. In our village he wakes up early, eats berries. He loves feeding hens and cows. He loved participating in this program. It was very enjoyable for him and invaluable for us (1).

In fact, this program is in harmony with his habits and his character. First all, he loves research. He loves discovering nature. Before the program, he was already interested in nature. We were not as systematic as you are, but we were trying to develop his awareness about nature. For example, he would recognize the start of spring and distinguish its colors. He would pick flowers, pine cones, and give them to his teacher (2).

He loves being in nature and enjoys such things (3).

Just one parent who loved the nature and being in nature said that their child did not like being in nature.

At the start of winter we suggested going to Belgrad. She refused. She asked if we would walk, if we would get wet, muddy. She always says she never wants to go to the forest or go on a picnic. I always heard her telling such things (5).

#### 4.3.2.2 Positive reaction of the child during the program

In order to understand what was happening and what the experiences of parents with their children were at home during the program, parents were asked questions about how children reacted to Forest School at home. The results showed that children told about their experiences at home and applied what they did at Forest School. Except one parent, all of them mentioned that they told about their experiences in the Forest School. Two of them added that normally their children did not tell much about school. One parent stated that she checked the website to learn about the program because her child did not mention the Forest School. Four of the parents said that they did Forest School activities at home.

“She told me about her experiences”

Most of the parents stated that their children told their experiences about the Forest School program, some children started to talk about their experiences with Forest School program and some talked more about the Forest School than normal school days.

He told me what he must be careful in the forest. He told me that he must not go far. He could identify kinds of trees. We usually told him the names of trees. Pointing at trees, he told us many times that he knew that tree was in his school garden and that he could identify trees himself from their leaves and flowers (1).

Normally he does not tell much about school, but he started telling me about the Forest School: I held worm in my hand; we ate our sandwich there; today it rained; we examined a tree; we painted pictures, I held a worm in my hand while my friends were afraid of it (3).

He said you built a warm farm, made magic perfume, played blind man’s bluff and played the game of identifying trees. These are all I can remember. He told about these things with pleasure (5).

He always told me about the things you did. As you know, he is a sociable child. He told me how worms eat and many other things you told them. (6)

Of course, he told me he was happy and he had a great time (7).

One of the parents thought that the child loved her Forest School leader.

Although the child had difficulties in adapting water proof clothing, she shared the experiences in the sessions with her parents.

At first, clothing was a big problem but she told me positive things. She loved you very much. As you may guess if she loves someone, she is warm and friendly. She told me positive things because she got good vibes from you. She told me everything you did in detail every day. For example, today we made magic perfume, examined trees, talked with friends about this topic and so on (8).

He usually told me about the things he learned, but during Forest School sessions, he told me more about the things he experienced (9).

One child did not mention what he did at Forest School.

He usually did not tell me a lot about what he did at Forest School sessions but I followed on the internet and knew what they did. They learned about nature, living things (3).

“At home he did everything he learned at school” The children did what they had learned at home. They continued the activities that they loved much at home.

He is picking insects and bringing home. Even though the Forest School is over, he is still bringing home insects and worms. He continues picking seeds. We are planting them all and giving worms to chickens. That is why, he is happy. (3).

You are having them pick brushwood here; he is picking brushwood outside. He is even picking wood chips. He is doing the same things (6).

We, three of us, played the game Frightening Joe at home. He had us play the game when we were with friends. He says he wants to do what he has learned when he goes to his grandparents’ summerhouse in Í. (8).

When you went to the forest the first day they listened to sounds of the forest. When I came home from work, he listened to the sounds outside. He tried to distinguish them (9).

#### 4.3.2.3 Positive views of parents about the program

The parents’ views differed but all of them were positive towards FS Program.

Parents seemed to be satisfied with the program. Two of the parents who had hesitations from the beginning of the program said the program surpassed all their expectations. Most of the parents believed that the program had long term effects and that they would see its benefits in the future.

While following a plan, it offers free environment

One parent was very happy because the Forest School provided free environments and today children cannot play outside on their own.

I think you follow a plan at the Forest School but it offers free environment. I think they are much more free. Normally children cannot play outside on their own, namely in the street. The garden is not big enough. I think Forest School approach is beneficial because children connect with the outside world in a vast space (1).

It is parallel to the education abroad

One of the parents stated that she had observed the schools abroad and she found that Forest School education program in our school was similar to the education given abroad.

When I went abroad, I had the opportunity to compare the Forest School education in Turkey with the one given abroad especially in terms of children's relationship with nature, their love for nature and the conservation of nature. Regardless of the season, whether it is summer or winter, and despite most parents' general tendency to be overprotective of their children, teachers take them to woodlands. The outdoor activities help children become better adapted to nature, improve their physical stamina and immunity. Seeing that Forest School education in Turkey is parallel to the one given abroad pleased me. The same approach is being implemented in Turkey. However, we lack the facilities they have. Our country, our city that we live in cannot provide the same facilities, yet I find this approach quite important as it reduces our tendency to be traditionally conservative about protecting our children (2).

It was planned, based on a program, and efficient

Two of the parents found that the program was very effective because it was implemented regularly.

I observed that the program was implemented without delay. It was efficient and good (2).

We know that it was very effective. I usually came earlier and secretly watched you and the children in the car. We think that it was very beneficial (8).

Being in nature

Parents loved the program as it allowed children to be in nature.

I think it is good that he has learned about nature and learned to protect himself. I wish they continued learning such beneficial things during their education (4).

Her learning about trees, touching tree trunks and holding worms, being in nature were all good things. We feel happy when we are in contact with nature. It was good that she learned and experienced all these (5).

It is good that children recognize their surroundings, the environment. They did experiments. These were valuable (3).

It increases their creativity.

In the program, the leaders presented many natural materials according to one of the parents engaging with this natural materials boosted children's creativity.

For example, when they come together, they just play. But when they had them do things with mud, they enjoyed mud. They learned that they could as well play with mud. I think the pictures they drew using tree branches boosted their creativity. At Forest School, they have learned many things that many children cannot unless they go camping (3).

The program came up to parents' expectations.

After the program began, the parents' opinion about the program implemented in the case school changed, the program came up to their expectations in terms of the content and quality of the program.

I changed my mind when I saw the photos. At the beginning, I had some hesitations, but now I think that I did the right thing for my child. I hadn't imagined that the Forest School would be so beneficial. I expected that it might have been a tough year for us and that we might have been furious. (3)

I did not know about it. You introduced it to us and we are pleased with it. We are lucky that my child is at this school. After our experience with the Forest School, I think that we are luckier than others at other schools. In my opinion, everything was good. What is more, this program surpassed all my expectations. Before the program started, I thought you would just take them to school garden and so. I did not think that you would take it so seriously. The content was satisfying (7).

The program has long-term effects

Parents believed that the program has long-term effects and they will see its positive effects in the future.

They have learned about nature and developed self-confidence. It takes confidence to climb a tree. I think it has a lot of advantages that I cannot think of now. It is not right to expect immediate results. This program has long-term effects on children and it is very beneficial (7).

I think that what they have learned here will help them throughout their life. I mean, positively with respect to what they have learned at Forest School about nature. The children who attend this program will probably be more environmentally conscious and more willing to protect nature for future generations. Unfortunately, people in our country are not yet aware of the

importance of the conservation of the environment. I hope parents gained more environmental awareness indirectly. I believe they came to understand its importance (8).

At least she must have learned something she had not thought of before or learned to look at things from a different angle. I am sure she will use these skills in the future. I know my child. (10)

Parents thought that they were lucky

I think it was a big chance. How many schools in Istanbul could be implementing this program, let alone this preschool. How many students may have the opportunity to take these lessons? You know, my elder daughter was in this school. I wish she had taken this opportunity, too (10).

#### 4.3.3 Views about the program and recommendations of parents

The parents expressed their views about the Forest School and suggested that it should last longer. Two of them asserted that if it had lasted during the year, they would have got better results. Other recommendations varied.

##### Duration of the program

Most of the parents thought that the duration of the program was so short and that there should be more Forest School days and they believed that if the duration was longer, it would be better. If it had lasted during the academic year, children could have observed the seasonal changes more and they would have learned more.

I could last longer. It was short, from the beginning of the year to the end, this is his last year. I wish they had attended Forest School program from the very beginning. In fact, he has some health problems, he has allergies, but I believe a child should go out in rain, step into mud. At least they should be outside in the forest for two seasons -in the winter and in the spring. In the first term, there were other classes; in the second term there were different classes. It should have lasted longer. They had Forest School classes one day a week. There should be more Forest School days (1).

It was a short period. I think if it had lasted during the year, we would have gotten better results. He is young but as he grows up, his awareness will increase. I wish he had the chance to attend further Forest School programs. I highly recommend this program. I think such a child can never destroy nature. On the contrary, he loves people much more (2).

I wish it had lasted longer, now the weather is getting warmer. They enjoyed cold weather and they could enjoy hot weather. I would prefer it if it lasted until the end of May (3).

You would teach more about nature if it were longer. I am pleased but I wish it were longer (6).

In fact, it was enjoyable but short. I expected it to be longer then it would be much more beneficial. It would have had an incredible effect on my daughter if it had lasted for a year. I am happy that she had this experience. I wish she had joined this program last year and that there were more schools that applied this program at every level two days a week during the academic year (10).

All children should benefit from the program.

One parent pointed out the children who attended club classes could benefit from Forest School program. She stated that it is unfair for children whose parents cannot afford the club classes because parents pay more many for club classes. At the end she concluded that the school putting this practice gradually.

Children who cannot join club classes because of financial difficulties should also benefit from the program. Such students can have time for this before or after school either in the morning or in the afternoon according to their schedule. It is not fair when not all students can make use of the program. I think you are also putting this into practice gradually (1)

The program should be carried out in a forest with more biological diversity.

Some parents wish the program was carried out in a big diverse forest with different, plants, trees and animals. In addition, they wish this forest was near their school.

I wish you could go to a forest, which is inhabited, by different species of trees, plants and animals (2).

It would be much better if there were a large forest near our school (6).

The program could be more informative

One parent wishes that her child could have learned the names of plants in Latin.

They could learn the names of plants in Latin. They could have learned a few easy Latin names of plants like Pinus Pinea (5).

In the case school, the parents were involved in the program via information letters before each session and one more parent session at the end of the program. In the interview I did not ask questions about them, a few parents mentioned parent session and none of the parents mentioned information letters.

Forest School session for parents

Just two parents told about their experiences. One stated that she enjoyed Forest School session for parents a lot. The other mentioned that the parent session was beneficial for her in that she learned about the activities that her child did at Forest School and the activities that he shared with his parents.

We were together last week; it was even better for us to know what he did, to share what he did (2).

To me, it was gorgeous, I enjoyed it, too (4)

It must be scheduled

One of the parent stated that the parent session should be done at a weekend at the beginning of the Forest School Program. If it were at the beginning of the sessions parents would be more encouraged to participate, more aware of their children's attendance and their prejudices would break down.

These parental involvement activities should be conducted at weekends considering working families and it would have been better if they had been carried out at the beginning of the Forest School program rather than towards the end. Parents would have been more encouraged to participate and more aware of the importance of their children's attendance then. If they had had prejudices, this would have broken them down, and they would have been more willing to send their children to Forest School (8).

#### 4.4 Summary

This case study examined the Forest School program, which was implemented in a state school in Istanbul. Ten children were observed throughout the twelve sessions. Both the Forest School leaders in the school and the parents of the children who attended Forest School program were interviewed. To analyze the data thematic analysis, which is a method for identifying, analyzing and reporting patterns within data, was used.

The study found that there was link between the objectives of TECEC (2013) and the goals of the activities of the Forest School program in the case preschool in terms of some development areas such as cognitive development and social emotional development, while there were very few common points in terms of other development areas such as self-care. The analysis of the plans according to holistic developmental grid showed that in this case Forest School program, as in TECEC (2013), the activities that aimed to develop children in the areas of cognitive, linguistic, personal and social, emotional were focused more, while the activities that involved appropriate risk taking were focused less.

As the children's needs were different, the outcomes of the program were unique for each unique child. It was found that the same experiences in the nature strengthen different development areas in different children. The observations and the interviews showed that the children became more environmentally conscious, more informed about nature and they had increased awareness of nature. The observations of the teachers and the statements of the parents indicated that there was very little change in children in the area of gross motor development. According to parents' statements, children's willingness to come school increased.

The results of this study suggested that the most important factor that led to the introduction of the Forest School program to a state school was the teachers' interest in nature education. The willingness of the teachers brought about changes in the school program and changes in the teachers' themselves after taking courses abroad. The teachers gained a new perspective on teaching and the Forest School training program opened a new door to them.

The parents who participated in the Forest School program were mainly nature lovers. They observed that the program promoted positive behavior in their children. The children continued the Forest School activities at home and outside and told about their Forest School experiences, so the parents had positive views about the program. Almost all parents thought that the program should have lasted longer.

## CHAPTER 5

### DISCUSSION

The Turkish Early Childhood Education Curriculum (2013) does not focus on the value of outdoor play environments, outdoor activities and environmental issues. Although the teachers are considered to have the responsibility to make up for this deficiency (Yılmaz, 2016a), outdoor activities are not perceived as curriculum related activities practiced out-of-doors by the teachers in Turkey, they are seen as a reason to go out to the school garden in good weathers (Alat et al., 2012). Moreover, according to the results of the environmental education researches, it is declared that the environmental issues described in the pre-school education program in our country are not adequate in order to develop environmental awareness in children (Yurt et al., 2012).

While the situation in Turkey in terms of outdoor education seems mediocre, attempts at implementing a Forest School program in a state preschool and the motivation factors for going out in all weather conditions are worth investigating. Although in the case preschool the starting point of the program was an Erasmus+ project, the main reasons for writing the project about Forest School were our interest in nature education. As the teachers, we were studying on projects related to environment. These projects had us realize that we needed professional training on outdoor learning and that children needed to be intertwined with nature more. In addition to the teacher interest in nature education, recognizing the children's needs to be in nature also triggered the change.

## 5.1 Examining the program according to Forest School key features

This new educational context via Forest School program was examined through the Forest School key features. Forest School has main components that differentiate Forest School from any other outdoor activities (Forest School Community, 2011). These features serve a purpose in the Forest School program (Waite & Davis, 2007). First key feature is woodland setting, which means using natural environment in children's local area. We used the school garden for Forest School program, which was children's local area. This also helped children feel familiar with the site. The school's Forest School area was large and wooded but it was not in a forest. It included a circle log; a fire circle that functioned as a gathering area and there was a tunnel from the ivy, separating the Forest School area from the play equipment. According to Forest School Association, the areas with only a few trees are able to support good Forest School practice (Forest School Community, 2011). Also in Denmark's urban areas where woodland is too far away, the kindergartens develop areas in town as their outdoor environment. (Williams-Sieghedsen, n.d) The important point is that when there is no access to outdoor space, management of the outdoor space has importance as access itself (Malone & Tranter, 2003). In the case preschool to improve the area, a three-year woodland management plan was made at the beginning of 2016. However, all these efforts mainly aimed at biological diversity as in Forest School children need to be encouraged to explore using multiple senses. As Forest School leaders, we did not add any equipment to the area that already had wall bars or balancing beams, so the features of that area probably were not as efficient as a woodland area providing some challenges for children with rough surface, hills to climb etc.

Increased adult to child ratio and a trained leader are other key features.

Increased adult to child ratio enables children to build good relationships with

leaders and to protect from the risk of harm. In the case preschool program, in one group the ratio was 1:5. In some other groups because of the high number of the children attending the school, the ratio was at most 1:8. In the case preschool, a trained leader set the sessions. As the number of the children attending the school was high, the assistant teachers attending classes were seen as co-leaders. This was the limitation of the program. In programs of Forest School training, Level 2 training is for the co-leaders but now in Turkey there is no chance to get this level of training. Within the process of implementing twelve-session Forest School program, the assistant teachers lacked Forest School education training, which was a disadvantage. For example, my assistant teacher who did not get forest school training got stressed on cold days because of parents' possible negative reactions as I used to get stressed before the Forest School training.

In a Forest School, learning should be linked to national curriculum objectives. In twelve sessions, the program could cover many developmental objectives in all areas including cognitive, social emotional, physical, language and self-care. However, the case study showed that the Forest School program in the case preschool focused on the goals in the cognitive and social emotional developmental areas more than the goals in the other developmental areas. Cognitive and social emotional goals were focused in all sessions' plans, however language, motor and self-care were not focused in any of the twelve- session plans. The activities I included in my plans were similar to the activities that we learned in the UK, such as, finding the treasure, ground picture, mud monsters, meeting a tree, scavenger hunt, sound map, eyes to eyes, and risk analysis. These activities in the Forest School program support interpersonal skills, communication, self-esteem and emotional and behavioral change through the encouragement of the expression of feelings, group work and trust games (Davis et al., 2006). After two sessions as children understood

the rules of the Forest School, I planned the other activities according to the subjects that children were interested in. The subjects were worms, birds and trees. The activities were mainly small group activities. The content of the activities included knowledge and understanding of environmental issues. I analyzed the goals of the activities and found that as I implemented the program, I put more emphasis on cognitive and social emotional developmental areas. All the Forest School leaders in this case school implemented the same program, but we were free to add activities that the children were interested in and the activities we chose were from the Forest School activity book we wrote together. I concluded that the case preschool Forest School program aimed to promote the areas of cognitive and social emotional development. The reason may come from the leaders' views on the priorities in relation to children's needs. For instance, the other Forest School leaders and I agreed that the groups that we worked with in the case preschool had always some difficulties in working in groups and they had less information about environmental issues.

Forest School program provided freedom to explore using multiple senses. The case school Forest School program included many activities that required the children to explore with multiple senses; hearing (activities such as; sound map, meeting a tree), smelling (such as; smelly cocktails, meeting a tree,), observing (such as; Forest Cycle, matching trees) and listening (such as; bat and both; interviewing with nature). A range of natural materials like sticks, leaves, soil, water, herbs, mud, stones etc, were used in the sessions (Waite et al., 2016).

Another feature of Forest School program is regular visits to the woodland area in all weathers all year around. Similarly, in the case school there were regular visits in all weathers. Each group of children was out in the garden once a week for a whole day. Although all parties, that is, the parents, the children and the teachers in

the case school wanted the program to last longer, because the number of children who wanted to attend the program was high, each group could attend the Forest School program for ten sessions in one educational year. This was the limitation for the case preschool as there were not enough trained leaders in the school. If all eight teachers in the preschool had gotten Forest School training, all children could have attended the program all year around without any restriction.

The session plans were done according to children's needs and interests. So it can be concluded that the program was child centered. In addition, the plans aimed to promote the holistic development of all those involved (Forest School Community, 2011). However, another limitation of the program was that the session plans included activities that involved less risk taking. In Forest Schools risk taking is given more importance because children's physical risk taking and learning how to deal with risks are a part of children's natural development and an important life skill, enabling children to develop self-confidence and the disposition to manage risk (Stephenson, 2003). However, meaning of risk taking differs from culture to culture. In Scandinavian cultures, feeding fire is seen as an opportunity for learning, and they let children feed the fire themselves, in the UK, not all the leaders allow for children to feed the fire. In this case preschool as Forest School leaders, we intervened in the risky situations to make it safe. These risky situations included walking in the forest by themselves, climbing trees, using tools. According to Waite et al. (2016), it is contradictory to have excessive adult intervention when the aim is to support children's freedom to explore. Making everything safer for the children may come from our parenting behavior that we have learned in Turkish culture, i.e., over-controlling (Sümer, Aktürk, & Helvacı, 2010). Although I learned how to prevent risk, as a new Forest School leader in Turkey who was brought up by a mother who has over-controlling parenting behaviors, I could see how it was difficult for me to

balance letting children take risks and controlling the environment and children's behaviors. I can reflect that I had my fears and anxieties about children, for example, we had children hold ropes at the beginning of the first session in the forest in case they might get lost even though they were supposed to move freely in the forest. In addition, I never allowed children to use knives; neither did the other Forest School leaders. Moreover, all of my colleagues in the interview addressed the physical conditions in terms of biological diversity of the environment, not in terms of risky areas. To improve the Forest School program, the case preschool needs to focus on increasing the opportunities for children to take and manage risks.

In this research, it was found that practitioners encounter difficulty in implementing Forest School program that combine freedom and structure. Although free play supports development of social bonds with friends, exploration and risk taking, and connection with nature (Pretty et al., 2009), same with Waite and Davis (2007), the Forest School program in the case school tended to be highly structured. Sometimes I found it extremely difficult to 'let go' meaning that leave the plan and allow children to take the lead in their learning (Maynard & Chicken, 2010). My colleagues also emphasized their difficulties with 'letting go', particularly given the perceived need to make session plans in a limited time frame. They give the priority to finish what they have planned as they implement the program one day in a week. Culture may play an important role on whether children are allowed to lead the path to their learning in a Forest School. While teachers in different cultures attribute different meanings to play (Sherwood & Reifel, 2010), in Turkey, we, as teachers, have difficulties in conceptualizing play as an important learning tool for the kids and feel obliged to teach something in a more structured educational context (Mynard & Waters, 2007). To see the opportunities in play to learn new concepts, as

teachers, we need to develop ourselves in terms of observing children's play, finding how teaching moments occur during play.

In summary, Forest School has some important components that differentiate Forest School from any other outdoor activities (Forest School Community, 2011). The case school that implemented the program encompassed such features as increased adult: child ratio, learning linked to national curriculum objectives, child centered program, freedom to explore using multiple senses, trained leaders, and regular visits in all weathers in woodland or outdoors. However, children could not participate in the Forest School program all year round in this case preschool. They participated in the Forest School program in a wooded area in their school garden one day in a week, for twelve weeks. Time and place restrictions may have prevented children from taking appropriate risks and free exploration. Very little change was observed in children in the area of gross motor development because the opportunities for physical activity was considerably limited, being only one day a week.

## 5.2 Positive aspects on child development

Although there were some limitations of the Forest School program implemented in the case school, program seemed to have positive effects on children's self-confidence, social skills, language and communication, motivation and concentration, physical skills, and knowledge and understanding, as the previous researches suggested (Murray, 2003; O'Brien & Murray, 2006; Jenner & Hughes, 2006; Swarbrick et al., 2004). In this study, it was seen that the program affected each child in a different way. As it was demonstrated by Maynard et al. (2013) in their findings, the findings of the current study showed that when the children were outdoors, some apparently shy or quieter children became more confident while

boisterous or aggressive children became calmer, more focused and there were significant improvements in their behaviors showing fewer problem behaviors. For example, a parent observed that her child's anxiety about cleanliness reduced. Similarly, another child was observed that he became calmer and more focused in both Forest School and at home while the child was attending the program and thereafter.

A Forest School, which is different from a typical classroom setting, offers opportunities to learn by doing, and allows children to use and demonstrate new and existing skills allowing children to rediscover their strengths and improve their self-confidence (Swarbrick et al., 2004). Additionally, social dynamics and hierarchy among children may change in a Forest School program (Herrington & Studmann, 1998). In the group, it was observed that one child who did not show features of leadership like giving directives to her friends in their regular classroom setting seemed to demonstrate some leadership skills such as attempting to lead other children in the Forest School. In the newly established social hierarchy, the leaders of outdoors were followed by the leaders of the classroom. Perhaps the classroom environment was more restrictive for some children than the others and when outside these children would no longer feel the restriction and act more freely. Thus, it can be concluded that an outdoor learning environment can allow for the emergence of new abilities and skills in children and this, in turn, leads to a change in the social interaction and hierarchy among children. It seems important to conclude that being in a woodland setting can affect children's social relationships. This was observed by the assistant teacher who knew the children well, as she could observe the students both in the classroom and in a woodland setting. On the other hand, Murray and O'Brien (2007) argued that observations done by a person knowing the children well could lead to bias because of the familiarity of the recording practitioners. However,

this study shows that the teacher who knows children well can be an advantage. Meanwhile, the familiarity bias can be eliminated by having another teacher (a Forest School leader) in the program who does not know the children well.

The observations and the interviews showed that except one child, all the children were more environmentally conscious, more informed about nature and they had increased awareness about nature after the program. It can be concluded that the activities of this Forest School program focusing more on environmental issues and cognitive development led to increased awareness about nature and as a result, children were more informed about nature. In the program, the activities seem to be games; however, all the games and activities included information about nature. For example in “be a seed” game children acted like a tree and could not move, the leader sprinkled four different cards, sun, water, air and soil cards on the floor among the children. Children tried to collect cards; they needed to collect at least one group of four different cards to grow. Another example is that in the “interview with tree” activity, children asked many questions, one boy asked the tree, “do you have mom?”, the entire group discussed how the trees reproduced. These examples show that children seemed to learn nature by playing. Moreover, some activities aimed increased awareness about nature, for example, “matching tree”. In that activity while children were trying to match the pictures of the trees and the trees in schoolyard; they recognized that the same tree was different at the time it was photographed and on the day, they observed it. They started to discuss the reason for this difference. To sum up, the program seemed to provide children with knowledge about environment by playing games and observing in the nature.

The feedbacks from parents suggested that children showed high levels of motivation and increased interest towards going to school, children started to come to

school willingly in general and especially on Forest School days. Parents' statements also showed that children continued the Forest School activities, observations, games at home or outdoors during and after school hours. Murray and O'Brien (2007) discussed a term called "ripple effect" of the Forest School suggesting that children tell their family and friends about their experiences, they bring the experiences home because children have enthusiasm for Forest School. This can bring changes in out of school routines and behavior with parents taking their children outdoors more. Similarly, it can be expected that the children in the present study will have effects on other children and other family members at home. In fact, findings did show that parents did perceive their children to have increased social skills because children started playing more with other children outdoors after they started the Forest School program. This can be seen as an evidence of children carrying Forest School activities outside of school. Similarly, it was also found that children shared their experiences more with their parents on the days they attended the program. It is reasonable to conclude that program leads to improvement and increase in parent-child interaction. In fact, for some children the experience was a turning point to have more initiative. One of the parents said that her child did not discuss what he did at school before the Forest School program, but there was more dialogue when the program began between the child and the parents. Moreover, the same child's teacher said that he did not use to participate in classroom activities as enthusiastically as he did during Forest School activities.

There could be several reasons for the enthusiasm and the motivation children had towards the Forest School program. It is highly likely that children feel more comfortable and free just because they are not limited by the school walls in a closed up environment. Classrooms are often places where teachers put children under pressure to complete activities that are artificially prepared with an assumption and

expectation that children will enjoy them. They require children to constantly engage in teacher directed, paper-pencil activities (McMullen et al., 2005; Göl-Güven, 2009). The environment, basically being in nature would be changing the teachers' approach towards children and children's learning, giving children more opportunities that are more meaningful and not requiring children to sit around a table to complete cut and paste like activities. It is, however, important to note that the skills the Forest School leaders have in identifying various opportunities for learning that emerge from the children's interaction with the setting is of utmost importance and can determine the success of the program (O'Brien & Murray, 2006). According to O'Brien and Murray (2006), a successful Forest School leader is able to both help children get excitement from their learning experiences and inspire them to benefit from their own learning experiences while having fun, playing and enjoying themselves. The implementation of the Forest School program, meaning that natural environments are the right places for children and being in nature provides many benefits for them; and the positive change in the attitudes of the teachers are probably both the reasons for this increased motivation towards school. However, future research should focus more on the factors associated with increased motivation children show towards school.

### 5.3 Starting point of implementing Forest School program; teachers' motivation

The outdoor learning education literature seems to highlight that there are many challenges to implement outdoor learning including institutional, personal and cultural levels. The challenges concerning outdoor learning that exists at institutional levels include the cost, curriculum pressures, early year's educational policies, physical conditions and the risks involved in delivering the programs in urban areas (Dillon & Dickie, 2012; Maynard & Waters, 2007a; Maynard, 2007b). The

challenges faced toward the implementation of a Forest School exist at personal levels as well. These challenges include teachers' perception of outdoor learning, meaning seeing their primary role as early years teachers to be teaching curriculum, and not seeing outdoor environment as an opportunity for teaching and learning. Moreover, teachers face difficulties in access to training to incorporate natural environments in their curriculum plans and they lack access to natural environments that are close to their schools (Malone & Tranter, 2003; Maynard & Waters, 2007a; Dillon & Dickie, 2012). Cultural perceptions related to how weather conditions affect the physical health of the children can be another challenge if that particular culture defines that child can only go outside when there is no precipitation. When the perception is such, it is highly likely that there are fewer children with proper clothing such as waterproof outdoor wear and few if any schools where children and teachers will have access to drying rooms unlike Scandinavian cultures (Maynard & Waters, 2007a). Finally, how a culture views and values the early year's education and development may be another challenge to overcome in order to implement and disseminate outdoor learning.

In this study, it was important to understand whether this case preschool faced these challenges of outdoor learning existing at both institutional and personal levels. If they faced these difficulties, the question becomes; how these teachers overcame these difficulties, and continued the program in a state school for three years. It is quite important to note that most Turkish school settings, and especially the ones in urban areas face these challenges and the case preschool was no exception. Findings however, suggested that the teachers used several strategies to overcome difficulties in implementing learning outdoors. Based on the findings, it was interesting to see that the main factor was teacher motivation and if they were

motivated, there would be little that could stop them. There were, however, different ways in which teachers became motivated towards implementing outdoor learning.

The results of this study suggest that the most important motivation factor that inspired teachers to overcome the challenges to use the Forest School program was how the program affected their personal and professional development. Teachers perceived that their professional development improved after they got training in Forest School leadership program and implemented the Forest School Program. The perception of the improvement in professional development might enable teachers to overcome difficulties in implementing the Forest School program. The teachers reported that the Forest School training program opened a new door to them and they gained a new perspective on teaching.

In this study, my colleagues stated that the teachers' perceptions of outdoor learning changed and so did the content of the activities they used even in their traditional classrooms. Contrary to the research about classroom teachers' view on the use and potential of the outdoor environment (Mynard and Waters, 2007), teachers in the case preschool declared that they started to see outdoor environment as an opportunity for teaching and learning. The teachers realized that they did not need materials to teach children, the nature itself provided materials for them. Teachers in this case preschool reported that they started to use natural environments more effectively (Malone & Tranter, 2003). They also argued that they started to go outside more on routine class days as they learned the benefits of outdoor learning and became skilled at how they could use outdoors and figuring out ways in which they could deal with problems if they were to arise. In the interviews, the teachers reported that feeling more comfortable using outdoors encouraged them to use outdoors more, highlighted how relaxed they felt during the sessions when they were

in the nature. It is thus possible that their feelings of relaxation and comfort being outside had effects on their decisions to be outside rather than in a classroom.

Another challenge to use outdoor learning at schools was cultural perceptions towards early learning and outdoor usage. Findings suggested that prior to implementing the program, teachers did not take children to their school playgrounds very often due to parental pressures. Parents did not want their children to go out, “catch cold” or “get dirty.” Before the pilot program, as teachers we all had worries about whether the parents would allow their children to participate in the pilot sessions or not. After the meeting, we held with the parents, except for a few parents, most parents let their children to participate in the program. Moreover, the parents who hesitated to give permission at the beginning wanted their children to participate in the sessions after two or three weeks. Some possible reasons why parents let their children participate were the teachers who got training in outdoor learning, being part of a project linked with the UK and the sessions, which were set in the school garden. The pilot program lasted from the end of March to the beginning of May 2015, so the weather was mostly rainy on some days. As my colleagues also discussed in the interviews, we did not face any negative reactions from parents aimed at the pilot sessions. According to teachers’ statements, the reason behind this was that parents noticed the happiness of their children and changes in their behaviors. It is also important to note that the teachers were better able to explain the positive effects of going outside on children to the parents after they attended the Forest School training and became leaders. Teachers confessed that before their own training they themselves were not sure if they could falsify the claims parents had about the negative effects of outdoor time or the benefits of outdoor learning. After the training, however, the teachers were much more confident discussing and convincing the parents. They had learned in their training and experienced when

implementing the program that they knew how to prevent risks and what to do outside and as a result, they might have felt more efficacious in turning outside environments to places for learning, development and fun for children. In my opinion, after the training, the parents might have trusted the teachers more as they noticed the confidence and the expertise the teachers had. The parents could have believed that the teachers knew the benefits and risks of being outside as well as how to prevent risks that were over children's developmental levels to tackle.

According to Dillon & Dickie (2012), inappropriate physical conditions seem to be a challenge that needs to be overcome to implement an outdoor learning program. However, the findings of the present study suggested that once teachers were motivated and dedicated themselves to start a Forest School program, they made every effort to find ways to create an environment that allowed for outdoor learning. The teachers at the case preschool created the setting themselves even though it was a state school. First, the teachers estimated the cost associated with rearranging the schoolyard and asked the municipality for help. As one of the teachers said, "no one offers you these facilities, you have to make an effort to create educational environment." This case study showed that the teachers who were eager to start the Forest School program found better ways to use the resources and find new outlets to create funding. This finding seems to support other findings that often it is in the hands of teachers to improve the physical conditions of a school and try to compensate for the deficiencies (Yılmaz, 2016a). It is worth noting that during our training in Wales we, as teachers engaged in many activities and experienced outdoor learning ourselves. We found them enjoyable, beneficial and fun. Therefore, we understood that changing the learning environment and moving learning outdoors reduced the level of stress on us, on teachers. The firsthand experience we had on the benefits of outside learning made us recognize that it is worth going through the

struggles of making changes in the environment and seeking and creating resources. Hence, we made a lot of effort to improve the conditions of our garden. The teachers became advocates of not only outdoor learning but also going outside in all weather conditions regardless of whether a school implements a Forest School program. As teachers saw the positive effects of outdoor learning on children, they believed that what they were doing was right.

This research supported that challenges to embedding outdoor environment in education exist at personal levels; teachers' confidence, self-efficacy and their access to training in using natural environments (Dillon & Dickie, 2012). Based on the findings of the present research it can be concluded that teachers felt more confident and efficacious after training and this enabled them to overcome such challenges as going outdoors in all weather conditions, convincing parents despite cultural beliefs, designing school backyards for a Forest School program. It is reasonable to conclude that when similar kinds of outdoor learning training opportunities are provided for teachers, candidates, and in-service teachers by Turkish Ministry of National Education, not only would the teacher education programs be improved, but also the teachers would have more progressive views on learning and development of young children and they would see outdoor environments as opportunities for teaching and learning (Mynard & Waters, 2007). Even the natural environments or backyards of schools could be used effectively (Çelik, 2012).

The teachers' motivation (see Figure 10) can also overcome some challenges that exist at institutional levels, such as the risk of accidents and curriculum pressures (Dillon & Dickie 2012). As this study showed, TECEC shares some common goals with the Forest School program suggesting that teachers can reach the aims they have based on the curriculum in all of the developmental areas by using natural

to obey. As implementing the Forest School program, two teachers realized that they needed to be more flexible in terms of rules. In this research, teachers' statements showed that as they implemented the program, their perceptions about their understanding of classroom management changed and their respect for children's independence increased. One of the teachers refused that her understanding of classroom management changed because she said that this program fit into her understanding of education as she was already a permissive teacher, so this study suggests that if teachers are more authoritative, after they learn how to analyze and prevent risk, and after they see that children can control themselves, they become more flexible in time in terms of rules. In conclusion, experiences of Forest School training had different effects on teachers who had different beliefs, practices and attitudes.

#### 5.4 Implications for forest schooling and outdoor learning

This research provides an example of implementing Forest School program for other state preschools in Turkey. It does not necessarily mean that this is the best way to implement a Forest School program. Nevertheless, the present research showed that any attempt for outdoor learning or Forest Schooling has significant potentials to have positive effects on teachers and children.

Although this Forest School program was implemented in the school garden, it seemed to have positive effects on children's self-confidence, social skills, language and communication, motivation and concentration, physical skills, and knowledge and understanding as suggested by previous research (Murray, 2003; O'Brien & Murray, 2006; Jenner & Hughes, 2006; Swarbrick et al., 2004). This study suggested, as teachers we needed to overcome many challenges to provide children with Forest School experiences. However, teachers do not have to overcome these

difficulties themselves. The Ministry of Education, universities, non-governmental organizations, municipalities should take many important steps for children to be intertwined with nature and to learn, socialize and play in nature. There need to be many attempts on both institutional and personal levels.

This research showed that the aims related to environmental issues encompassed by the Forest School program in this case preschool are not included in TECEC. Early childhood curriculum used in the nation, need to be updated to include more environmental focus and outdoor learning opportunities. Even though the teachers who are interested in nature learning may try to compensate for outdoor learning deficits in the curriculum (Yılmaz, 2016a), this responsibility should not be only on the shoulders of the teachers. In TECEC, there should be separate objectives about environmental issues. Even though providing information about environmental issues only in class does not make children love nature (Louv, 2008), it can be a first step to learning in nature.

Maynard & Waters (2007a) said that “the outdoor environment is not a central feature of British cultural identity and as a result, for some (teachers) ... the idea of being outside for an extended period of time may have been anathema” (p. 262). It may be the same with today’s teachers in Turkey (Çelik, 2012; Maynard 2007b). They see outdoor activities as a reason to go out to the school garden in good weathers (Alat et al., 2012). In the case preschool, teachers’ perspectives about outdoor learning changed when they observed sessions abroad in cold weather and implemented the Forest School program after training. Thus, based on the findings, I can suggest that teachers are exposed to different teaching and learning environments and curricula here as well as in other countries. In addition, environmental awareness helped teachers realize that they needed professional training in outdoor learning and human-environment interaction in order to help children to be sensitive to

environmental issues better. This awareness led teachers to open new doors and they combined their interest to create awareness to environmental issues and help children learn in natural settings and improve their teaching practices. Therefore, the universities' teacher education programs in Turkey need to incorporate an improved environmental education program (Tuncer et al., 2009). The universities and The Ministry of Education can cooperate to open courses about Forest School/ outdoor learning. It should be in our educational policy to make teachers more informed about environmental issues and outdoor learning.

Inappropriate physical conditions seem to be a challenge that needs to be overcome to implement an outdoor learning program (Dillon & Dickie, 2012). Findings imply that teachers, whether they work in preschools without a garden or with a garden that is not suitable for outdoor learning can always find ways to redesign what they have or use nearby natural areas after taking precautions for possible risks. Once the teachers were involved in Forest Schools and got a grasp of the principles of outdoor learning, they knew they could arrange any outdoor environment at their local area. Besides, it is important to note that teachers can seek opportunities to collaborate with other schools, local municipalities or various governmental offices to get help with the cost and share the workload. In this case preschool the teachers who implemented the Forest School program faced difficulties in arranging Forest School area. They helped each other and cooperated with the municipality. The results of the analysis of the interviews with teachers showed that implementing the program collaboratively motivated teachers positively to continue the Forest School Program. To arrange in the local areas or the school garden, teachers can cooperate with other teachers in the school, parents, and local municipality in their area. In fact, if the teachers increase the awareness of families about outdoor learning, families will start to demand more woodland environment

from municipalities. If families, school administrations, and teachers unite to demand garden or woodland in their local area, municipalities will give priority to create woodland area for children/students to play and learn.

Children today are much more separated from nature than they have ever been and spend most of their time indoors (Charles, 2009). If, however, children attend forest school programs, they can reconnect with nature and benefit from the experience. Besides this, the teachers themselves can benefit from being outdoors as well. In the interviews, the teachers stated that they felt more comfortable and more relaxed outdoors than in regular classrooms and observed positive changes in their own behaviors leading to improvements in children's behaviors. Then, the parents gave better feedback to teachers when they saw the children happy and motivated to go to school and learn. It looked like everyone involved was affected positively and moving learning outdoors helped create positive affect and improved the quality of relationships within the school community. Therefore, it is suggested that teachers should be given opportunities to spend time in nature. For example, workshops that can be supported by Ministry of Education, nongovernmental organizations, municipalities and universities can be held in woodland areas for teachers during the seminar periods (in-training educational activity periods for teachers to develop themselves).

Murray and O'Brien (2007) stated that there were impacts beyond the benefits children and teachers gained. They suggested that parents and siblings could be invited to forest school programs during open days. This way the concerns parents may have about risks, process of learning or exposure to cold weather can be alleviated. In the case study it was found that the children took their forest school experiences home more than their experiences at regular schools. The parents in that study stated that Forest School program should have lasted longer regardless of

weather conditions. However, in the program there was always trouble with waterproof clothing, although before each session parents were sent letters giving information about the forest school date, weather forecast, in some sessions children's clothing was not appropriate for the weather conditions. The reason of this may have arisen from carrying out just one parent session in a limited time. In the future implementations of forest school program should focus more on parental involvement. As one of the parents said, the session for parents can be carried out at the beginning of the forest school program rather than at the end and it can be repeated at regular intervals so that parents become more aware of the importance of the program and the procedures. If parents have prejudices, this may break them down; they may be less willing to send their children to forest school. Except two parents, in the interviews, none of the parents mentioned that parent session. One of the parents focused on the importance of this parent session as it was beneficial for understanding the activities that children did at forest school and at home. If there were more than one parent sessions, there could be more feedback about the benefits.

### 5.5 Limitations of the research and recommendations for further research

In the study, there was one Forest School group conducted by one Forest School leader who was not the children's classroom teacher, so when the parents or teachers observed some changes in children, reasons for these changes could have been interpreted as "the role of the Forest School leader" apart from the Forest School program. In the future, the role and the characteristics of a Forest School leader can be researched, or to be clear, to understand the effects of Forest School program, more than one forest group can be observed.

Time was a limitation of that study. I implemented the program from March to May 2017. I would have been able to get a more complete picture if I had been

able to observe the Forest School program over a longer period of time including winter. However, the Forest School program was implemented in the case school for ten weeks in each of the four groups as there were only four Forest School leaders in the case preschool and there were many parents who were willing to send their children to the Forest School. In future, to get a more complete picture in terms of cultural and educational implications, a Forest School program can be observed over a longer period of time, and its long-term effects on children, teachers and parents can be examined as well.

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## APPENDIX A

### INTERVIEW WITH FOREST SCHOOL LEADERS

The experiences of teachers, students and parents in the program of Forest School will be examined in a research. I am talking to the teachers who participate in the program for this. I want you to share your opinions about this project, what you have experienced and what effect it has on you. There is no right or wrong answer to the questions. It is important that you share your own feelings and thoughts with me. The information you provide will only be used for research purposes, your name will not be disclosed, and. it will not be shared with anyone.

1. I want to get information about you

How old are you?

How long have you been teaching in preschool?

What is your education status?

What year and from which college did you graduate?

Where did you work before this preschool? Private or State?

2. First let's talk about the impact of the Forest Schools and the Learning on the Nature project on you.

How did you decide to participate in this project? Would you tell me?

What were your expectations before you started the project?

Considering your two-year experience... Do you think this project you participated in affected you? What has changed? Could you tell me?

I want you to think about the project from the beginning to the end. What changes have you noticed as a teacher ?

As far as the effects of the project are concerned, is there anything that you could not do/ you did not do in the past, but you can do now?

(If yes) Could you tell me what these are?

Could this project have led to this change?

(If yes) What might have led to this change in the project?

How do you feel about participating in such a project when you consider all your experience?

Considering all the effects of the project, in the school who did take the advantage of the project, who needed the project most?

3. Now I would like to talk about Forest School training and your teaching career.

How has The Forest School Training affected you as a teacher when considering your experience before and after the training ?

After you started the t, did you make any changes in the activities you did with your students? If yes, what were the changes?

Could the Forest School training you received have led to these changes?

(If yes,) what aspects of the training could have caused these changes?

(If yes,) how do you feel about experiencing these changes?

What are the differences between indoor and outdoor teaching.

In your opinion, what are the advantages of Forest School trainer?

Are there any disadvantages of being a Forest School trainer? What are they?

4. Now let us talk about your ideas about the Forest School training.

Can you tell me about the Forest School training? What did you experience during the training?

What were your expectations from the Forest School training? What did you expect to learn and experience?

How were your expectations different, to what extent did it meet your expectations?

(If expectations were not met) What would meet your expectations in the training program?

During the theoretical training you discussed many topics such as Maslow's theory, children's rights, holistic learning, emotional intelligence, self-confidence, factors affecting learning, etc. and you learned a lot. What were the topics you benefited most in the training program?

What topics did you benefit the least, or which topics should not have been included in the training program at all?

During the practical training, you discussed many topics such as risk analysis, session planning, day-to-day procedures, flora and fauna determination, woodland area management, necessary hand skills in woodland. What were the topics you benefited most in the training program?

What topics did you benefit the least, or which topics should not have been included in the training program at all?

What was the most effective part of the training?

What was the least effective part of the training?

5. Now let us talk about your experiences before and during the implementation of the program.

What preparations did you make before the implementation of the program?

How did you determine the students who would participate in the program?

What difficulties did you have before the implementation of the program? What were they?

What difficulties did you have during the implementation of the program? What were they?

Were the physical conditions of the site where you implemented the program adequate and appropriate?

After you received the training, you started to implement it, before the implementation of the program how did you inform the parents? What were their reactions?

Did you receive negative reactions? What were they and how did you handle them?

After you started the implementation of the program did the parents' reactions or views changed? Can you give examples of such cases in which they first reacted negatively but then they changed their minds ?

(If yes,) What made them change their minds?

How were your students' reactions before you started to implement the program, that is, before the first session?

Have the students' reactions changed after the first session and later on?

Did the feedback you received from the parents and your students affect you? How?

6. Now let us talk about the weekly sessions. You implemented the Forest School program with your group every week.

Did you feel comfortable during the implementation of the program? Do you think you could apply what you learned?

(If no,) what is necessary to implement the program more successfully?

Let's talk about your relationship with the students? Was it different from the relationship you develop in a classroom environment?

(If yes,) What are they?

7. How did the program contribute to the students? Considering the program in terms of your students, what were your expectations? What effect did you expect the program to have on your students?

Did it meet your expectations? How were the effects of the program different from your expectations? To what extent did it meet your expectations?

Did you observe any changes in your students? If you did, could you tell me?

Do you think this program will have a long-term effect on the students who participated in the program? What could they be?

After receiving the Forest School training, on routine school days did you make changes the times you took children to the garden?

When you contrast the schools you observed in England with the ones you worked at in Turkey, is there a difference between the duration of time children spend outdoors? How are they different?

What do you think are the reasons why children do not spend enough time outdoors?

You went to England for Forest School training. You received theoretical and practical training and you applied it and you were inspected. Do you think the training you received was worth the time and energy you spent? If yes, what makes you say this?(think so?)

APPENDIX B  
CONSENT FORMS

**KATILIMCI BİLGİ ve ONAM FORMU**

**Araştırmayı destekleyen kurum: Boğaziçi Üniversitesi**

**Araştırmanın adı: “İstanbul’daki Bir Devlet Anaokulu’ndaki Orman Okulu Programının Niteliksel İncelenmesi”**

**Proje Yürütücüsü: Yrd. Doç. Ayşegül Metindoğan**

**E-mail adresi: ametindogan@boun.edu.tr**

**Araştırmacının adı: Sümeyra Büşra Eroğlu**

**E-mail adresi: bsoezbilir2000@yahoo.com**

**Telefonu: 05358398403**

Sayın Müdür Yardımcısı/ Orman okulu lideri

Boğaziçi Üniversitesi Okulöncesi Öğretmenliği Programı yüksek lisans öğrencisi olarak ben Sümeyra Büşra Eroğlu tez danışmanım Yar. Doç Dr. Ayşegül Metindoğan’ın gözetiminde “**İstanbul’daki Bir Devlet Anaokulu’ndaki Orman Okulu Programının Niteliksel İncelenmesi**” adı altında bilimsel bir araştırma yürütmekteyim. Bu çalışmanın amacı anaokulunuzda uygulanan orman okulu programını incelemektir. Müdürünüz anaokulunun bu çalışmaya katılması için izin verdi. Bu çalışmada bize yardımcı olmanız için sizi de araştırmamıza davet ediyoruz. Kararınızdan önce araştırma hakkında sizi bilgilendirmek istiyoruz. Bu bilgileri okuduktan sonra araştırmaya katılmak isterseniz lütfen bu formu imzalayıp kapalı bir zarf içinde bize ulaştırınız.

Bu araştırmaya katılmayı kabul ettiğiniz takdirde 5A sınıfınızdaki 10 öğrenciniz ile birlikte orman okulu seanslarına katılmanızı ve Orman Okulu Eğitimi alan bir lider olarak araştırmacının düzenlediği seansları gözlemlemenizi ve değerlendirmenizi isteyeceğim. Bu gözlem notları araştırmacının Orman Okulu Programını amaçlarına göre uygulayıp uygulamadığı hakkında bilgi verecektir.

Programın sonunda velilerinizle kısa bir mülakat yapacağız. Amacımız velilerin de program sürecinde yaşadığı deneyim hakkında bilgi edinmek. Orman Okulu seanslarında Orman Okulu lideri ve araştırmacı olarak ben Büşra Eroğlu ve klüp öğretmeni 12 seans öğrencilerinizle yaptığımız orman okulu uygulamalarına yönelik gözlem notları tutacağız. Seans sırasında öğrencilerin faaliyetleri fotoğraflanacaktır.

Bu araştırma bilimsel bir amaçla yapılmaktadır ve katılımcı bilgilerinin gizliliği esas tutulmaktadır. Gözlem notlarında çocukların ismi yerine bir numara kullanılacaktır. Seans sırasında çekilen fotoğraflar araştırma sona erdiğinde silineceklerdir. Seçilmiş fotoğraf kayıtları araştırmanın makalesinde kullanılabilir. Ancak bu fotoğraflarda yer alan çocuklar sadece anne-babası tarafından izin alınarak ve orman okulu programının işleyişini göstermek amacıyla kullanılacaktır.

Bu araştırmaya katılmak tamamen isteğe bağlıdır. Katıldığınız takdirde çalışmanın herhangi bir aşamasında herhangi bir sebep göstermeden onayınızı çekmek hakkına da sahipsiniz. Bu araştırmada farklı yuvaları veya farklı sınıfları karşılaştırmadığımızı vurgulamak istiyoruz. Araştırma hakkında ek bilgi almak istediğiniz takdirde lütfen Boğaziçi Üniversitesi Okulöncesi Bölümü Öğretim Üyesi Ayşegül Metindoğan ile temasa geçiniz (Tel: 2122575036 Adres: Boğaziçi Üniversitesi, Okulöncesi Bölümü ETA-B Blok, 34342 Bebek, İstanbul).

Eğer bu araştırma projesine katılmasını kabul ediyorsanız, lütfen bu formu imzalayıp kapalı bir zarf içerisinde bize geri yollayın.

Ben, (katılımcının adı) ....., yukarıdaki metni okudum ve katılmam istenen çalışmanın kapsamını ve amacını, gönüllü olarak üzerime düşen sorumlulukları tamamen anladım. Çalışma hakkında soru sorma imkânı buldum. Bu çalışmayı istediğim zaman ve herhangi bir neden belirtmek zorunda kalmadan bırakabileceğimi ve bıraktığım takdirde herhangi bir olumsuzluk ile karşılaşmayacağımı anladım.

Bu koşullarda söz konusu araştırmaya kendi isteğimle, hiçbir baskı ve zorlama olmaksızın katılmayı kabul ediyorum.

Formun bir örneğini aldım / almak istemiyorum (bu durumda araştırmacı bu kopyayı saklar).

Katılımcının Adı-

Soyadı:.....

İmzası:.....

Tarih (gün/ay/yıl):...../...../.....

Araştırmacının Adı-Soyadı:.....

İmzası:.....

Tarih (gün/ay/yıl):...../...../.....

## KATILIMCI BİLGİ ve ONAM FORMU

**Araştırmayı destekleyen kurum: Boğaziçi Üniversitesi**

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**Araştırmacının adı: Sümeyra Büşra Eroğlu**

**E-mail adresi: bsoezbilir2000@yahoo.com**

**Telefonu: 05358398403**

Sayın Klüp Öğretmeni,

Boğaziçi Üniversitesi Okulöncesi Öğretmenliği Programı yüksek lisans öğrencisi olarak ben Sümeyra Büşra Eroğlu tez danışmanım Yar. Doç Dr. Ayşegül Metindoğan’ın gözetiminde “**İstanbul’daki Bir Devlet Anaokulu’ndaki Orman Okulu Programının Niteliksel İncelenmesi**” adı altında bilimsel bir araştırma yürütmekteyim. Bu çalışmanın amacı anaokulunuzda uygulanan orman okulu programını incelemektir. Müdürünüz anaokulunun bu çalışmaya katılması için izin verdi. Bu çalışmada bize yardımcı olmanız için siz velilerimizi de araştırmamıza davet ediyoruz. Kararınızdan önce araştırma hakkında sizi bilgilendirmek istiyoruz. Bu bilgileri okuduktan sonra araştırmaya katılmak isterseniz lütfen bu formu imzalayıp kapalı bir zarf içinde bize ulaştırınız.

Bu araştırmaya katılmayı kabul ettiğiniz takdirde sınıfınızdaki 10 öğrenciniz ile birlikte orman okulu seanslarına katılmanızı ve her seansta gözlem notları tutmanızı rica edeceğim. Bu gözlem notları öğrencilerinizin Orman Okulu Programının etkilerini anlamamıza yardımcı olacaktır.

İkinci olarak, programın sonunda velilerinizle 5 soruluk kısa bir mülakat yapacağız. Amacımız velilerin de program sürecinde yaşadığı deneyim hakkında bilgi edinmek. Orman Okulu seanslarında Orman Okulu lideri olarak araştırmacı olarak ben de Büşra Eroğlu 12 seans öğrencilerinizle Orman Okulu seansları yaparak gözlem notlarımı tutacağım. Seans sırasında öğrencilerin faaliyetleri fotoğraflanacaktır.

Bu araştırma bilimsel bir amaçla yapılmaktadır ve katılımcı bilgilerinin gizliliği esas tutulmaktadır. Gözlem notlarında çocukların ismi yerine bir numara kullanılacaktır. Seans sırasında çekilen fotoğraflar araştırma sona erdiğinde silineceklerdir. Seçilmiş fotoğraf kayıtları araştırmanın makalesinde kullanılabilir. Ancak bu fotoğraflarda yer alan çocuklar sadece anne-babası tarafından izin alınarak ve orman okulu programının işleyişini göstermek amacıyla kullanılacaktır.

Bu araştırmaya katılmak tamamen isteğe bağlıdır. Katıldığınız takdirde çalışmanın herhangi bir aşamasında herhangi bir sebep göstermeden onayınızı çekmek hakkına da sahipsiniz. Bu çalışmada farklı yuvaları veya farklı sınıfları karşılaştırmadığımızı vurgulamak istiyoruz. Araştırma hakkında ek bilgi almak istediğiniz takdirde lütfen Boğaziçi Üniversitesi Okulöncesi Bölümü Öğretim Üyesi

Ayşegül Metindoğan ile irtibata geçiniz (Tel: 2122575036 Adres: Boğaziçi Üniversitesi, Okulöncesi Bölümü ETA-B Blok, 34342 Bebek, İstanbul).

Eğer bu araştırma projesine katılmasını kabul ediyorsanız, lütfen bu formu imzalayıp kapalı bir zarf içerisinde bize geri yollayın.

Ben, (katılımcının adı) ....., yukarıdaki metni okudum ve katılmam istenen çalışmanın kapsamını ve amacını, gönüllü olarak üzerime düşen sorumlulukları tamamen anladım. Çalışma hakkında soru sorma imkânı buldum. Bu çalışmayı istediğim zaman ve herhangi bir neden belirtmek zorunda kalmadan bırakabileceğimi ve bıraktığım takdirde herhangi bir olumsuzluk ile karşılaşmayacağımı anladım.

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Araştırmacının Adı-Soyadı:.....

İmzası:.....

Tarih (gün/ay/yıl):...../...../.....

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**E-mail adresi: bsoezbilir2000@yahoo.com**

**Telefonu: 05358398403**

Sayın Veli,

Boğaziçi Üniversitesi Okulöncesi Öğretmenliği Programı yüksek lisans öğrencisi olarak ben Sümeyra Büşra Eroğlu tez danışmanım Yrd. Doç Dr. Ayşegül Metindoğan’ın gözetiminde “**İstanbul’daki Bir Devlet Anaokulu’ndaki Orman Okulu Programının Niteliksel İncelenmesi**” adı altında bilimsel bir araştırma yürütmekteyim. Bu çalışmanın amacı anaokulunuzda uygulanan orman okulu programını incelemektir. Müdürünüz anaokulunun bu çalışmaya katılması için izin verdi. Bu çalışmada bize yardımcı olmanız için siz velilerimizi de araştırmamıza davet ediyoruz. Kararınızdan önce araştırma hakkında sizi bilgilendirmek istiyoruz. Bu bilgileri okuduktan sonra araştırmaya katılmak isterseniz lütfen bu formu imzalayıp kapalı bir zarf içinde bize ulaştırınız.

Bu araştırmaya katılmayı kabul ettiğiniz takdirde programın sonunda siz velilerle 5 soruluk kısa bir mülakat yapacağız. Amacımız sizin program sürecinde yaşadığınız deneyim hakkında bilgi edinmek. Orman Okulu seanslarında Orman Okulu lideri ve araştırmacı olarak ben Büşra Eroğlu 12 seans çocuğunuzla okulunuzun bahçesinde ve daha sonraki seanslarda Şamlar Ormanında Orman Okulu seansları yaparak gözlem notlarımı tutacağım. Seanslar sırasında öğrencilerin faaliyetleri fotoğflanacaktır.

Bu araştırma bilimsel bir amaçla yapılmaktadır ve katılımcı bilgilerinin gizliliği esas tutulmaktadır. Gözlem notlarında çocukların ismi yerine bir numara kullanılacaktır. Seans sırasında çekilen fotoğraflar araştırma sona erdiğinde silineceklerdir. Arzu eden velilerle çocuklarının olduğu fotoğraflar ve araştırma sonuçları paylaşılabilir. Seçilmiş fotoğraf kayıtları araştırmanın makalesinde kullanılabilir ancak kullanılacak fotoğraflar programın işleyişi ve yapılan seansları

betimlemek için kullanılacaktır. Dolayısıyla çocuklar fotoğrafların odağında yer almayacaktır.

Bu araştırmaya katılmak tamamen isteğe bağlıdır. Katıldığınız takdirde çalışmanın herhangi bir aşamasında herhangi bir sebep göstermeden onayınızı çekmek hakkına da sahipsiniz. Bu araştırmada farklı yuvaları veya farklı sınıfları karşılaştırmadığımızı vurgulamak istiyoruz. Araştırma hakkında ek bilgi almak istediğiniz takdirde lütfen araştırmacı olarak ben, Büşra Eroğlu İLETİŞİM BİLGİLERİ ile temasa geçebilirsiniz. Ayrıca Boğaziçi Üniversitesi Okulöncesi Bölümü Öğretim Üyesi Ayşegül Metindoğan ile irtibata geçebilirsiniz. (Tel: 2122575036 Adres: Boğaziçi Üniversitesi, Okulöncesi Bölümü ETA-B Blok, 34342 Bebek, İstanbul).

Eğer bu araştırma projesine katılmasını kabul ediyorsanız, lütfen bu formu imzalayıp size iletilen zarf içerisinde kapalı olarak bana geri yollayabilirsiniz

Ben, (katılımcının adı) ....., yukarıdaki metni okudum ve katılmam istenen çalışmanın kapsamını ve amacını, gönüllü olarak üzerime düşen sorumlulukları tamamen anladım. Çalışma hakkında soru sorma imkânı buldum. Bu çalışmayı istediğim zaman ve herhangi bir neden belirtmek zorunda kalmadan bırakabileceğimi ve bıraktığım takdirde herhangi bir olumsuzluk ile karşılaşmayacağımı anladım.

Bu koşullarda söz konusu araştırmaya kendi isteğimle herhangi bir baskı olmadan katılmayı kabul ediyorum.

Formun bir örneğini aldım / almak istemiyorum (bu durumda araştırmacı bu kopyayı saklar).

Katılımcının Adı-

Soyadı:.....

Katılımcının VELİSİNİN Adı-Soyadı:.....

İmzası:.....

Tarih (gün/ay/yıl):...../...../.....

Araştırmacının Adı-Soyadı:.....

İmzası:.....

Tarih (gün/ay/yıl):...../...../.....

APPENDIX C

FOREST SCHOOL LEADER REPORTING TEMPLATE

**Name of the Child:**

|  |              |              |              |              |              |
|--|--------------|--------------|--------------|--------------|--------------|
| <b>The Main Activity</b>                             |              |              |              |              |              |
| <b>Observed Areas</b>                                | <b>Date:</b> | <b>Date:</b> | <b>Date:</b> | <b>Date:</b> | <b>Date:</b> |
| <b>Self Confidence</b>                               |              |              |              |              |              |
| <b>Social Skills</b>                                 |              |              |              |              |              |
| <b>Language and Communication Skills</b>             |              |              |              |              |              |
| <b>Knowledge and Understanding about Environment</b> |              |              |              |              |              |
| <b>Motivation and Concentration</b>                  |              |              |              |              |              |
| <b>Physical Skills</b>                               |              |              |              |              |              |

## APPENDIX D

### PROGRAM BASELINE ASSESSMENT FORM ENGLISH

Appendix 4 – Example of a Teacher’s End of Programme Assessment Form

**Child's Name:**

| General comments/observations          |  |   |   |   |
|--|--|---|---|---|
|  |  |   |   |   |
| Proposition for change                 | Criteria   | ✓ | Criteria  | ✓ |
| <b>Self-esteem and self-confidence</b> | 2. Happy in him/herself  |   | 13. Works well as part of a team  |   |
|  | 2. Happy to make decisions   |   | 14. Has compassion for others   |   |
|  | 3. Feels secure, is not a worrier  |   | 15. Speaks up for oneself   |   |
|  | 6. Keen to learn   |   | 16. Doesn't worry what others think of him/her                                      |   |
|  | 7. Confident and outgoing  |   | 17. Contributes to discussions  |   |
|  | 6. Happy to take risks   |   | 13. Wants to try new things   |   |
|  | 2. A leader rather than a follower   |   |   |   |
| <b>Total</b>                           |  |   |   |   |
| <b>Social skills</b>                   | 1. Comes to FS willingly   |   | 7. Takes part in discussions  |   |
|  | 2. Expresses wishes and preferences clearly                                    |   | 8. Asserts own rights and needs appropriately                                       |   |
|  | 3. Has positive relations with most children within the class                  |   | 9. Makes spoken contributions to group/teamwork                                     |   |
|  | 4. Has capacity for humour   |   | 10. Can negotiate with others   |   |
|  | 5. Approaches other positively   |   | 11. Can wait to take his/her turn   |   |
|  | 6. Deals with failure/rebuffs well   |   |   |   |
| <b>Total</b>                           |  |   |   |   |
| <b>Language and communication</b>      | 6. Willing and happy to share ideas and contribute to group discussions        |   | 10. Communicates confidently with adults and peers                                  |   |
|  | 7. Holds eye contact with adults when communicating                            |   | 11. Works co-operatively with peers   |   |
|  | 8. Contributes and shares ideas with peers on practical issues/team activities |   | 12. Uses appropriate language for situations, choosing appropriate words            |   |
|  | 9. Is able to negotiate solutions  |   | 13. Takes turn in speaking/using tools  |   |
|  | 10. Respects others' views and thoughts  |   |   |   |
| <b>Total</b>                           |  |   |   |   |
| <b>Motivation and concentration</b>    | 3. Is keen and excited to go to Forest School                                  |   | 4. Is interested in the woodland environment and is curious to learn and understand |   |
|  | 4. Asks a lot of questions   |   | 5. Keen and eager to participate  |   |
|  | 5. Can concentrate on task for long periods                                    |   | 6. Takes time in perfecting/adding to task  |   |
|  | <b>Total</b>   |   |   |   |
| <b>Physical skills</b>                 | 4. Has good spatial awareness  |   | 5. Has good physical stamina  |   |
|  | 5. Has good gross motor skills   |   | 6. Deals well with terrain, obstacles   |   |
|  | 6. Has good fine motor skills  |   | 7. Handles tools/equipment confidently  |   |
|  | 7. Moves in a confident and co-ordinated manner around FS site                 |   |   |   |
| <b>Total</b>                           |  |   |   |   |
| <b>Knowledge and understanding</b>     | Takes interest in the woodland surroundings                                    |   | Knows, understands and respects FS rules  |   |
|  | Encourages others to respect environment                                       |   | Encourages others to follow and respect FS rules                                    |   |
|  | Has respect for the environment  |   |   |   |
| <b>Total</b>                           |  |   |   |   |

## APPENDIX E

### PROGRAM BASELINE ASSESSMENT FORM TURKISH

#### **FS Program Değerlendirme Formu**

##### **Özgüven**

|   |  |
|---|--|
| Kendinden memnundur                                 |  |
| Karar almaktan mutluluk duyar                       |  |
| Güvende hisseder, endişeli değildir                 |  |
| Öğrenmeye isteklidir.                               |  |
| Güvenli ve dışa dönüktür.                           |  |
| Risk almayı sever                                   |  |
| Takipçiden çok liderdir                             |  |
| Takımın bir parçası olarak iyi çalışır              |  |
| Başkaları için merhametlidir                        |  |
| Kendini rahatça ifade eder                          |  |
| Başkalarının onun hakkında düşündüklerini umursamaz |  |
| Tartışmalara katkıda bulunur                        |  |
| Yeni şeyler denemek ister                           |  |

##### **Sosyal Beceriler**

|   |  |
|---|--|
| Orman Okuluna istekli gelir                                       |  |
| İsteklerini ve tercihlerini net bir şekilde ifade eder            |  |
| Sınıftaki birçok çocukla olumlu ilişkilere sahiptir               |  |
| Mizah kapasitesi vardır   |  |
| Diğerlerine olumlu yaklaşır                                       |  |
| Başarısızlık/ Terslenmek ile başa çıkar                           |  |
| Tartışmalara katılır  |  |
| Uygun bir dille kendi hakkını savunur ve ihtiyaçlarını ifade eder |  |
| Grup/Takım çalışmalarına sözlü katkıda bulunur                    |  |
| Başkalarıyla müzakere edebilir                                    |  |
| Sırasını bekleyebilir   |  |

##### **Dil ve İletişim Becerileri**

|  |  |
|--|--|
| Fikir vermek ve grup tartışmalarına katkıda bulunmak için isteklidir                     |  |
| İletişim kurarken erişkinlerle göz teması kurar  |  |
| Uygulama içerikli/ takım aktivitelerinde akranlarıyla fikir paylaşır ve katkıda bulunur. |  |
| Çözümleri tartışır.  |  |

|   |  |
|---|--|
| Başkalarının görüşlerine fikirlerine saygı duyar.     |  |
| Yetişkinlerle ve yaşlılarıyla güvenle iletişim kurar. |  |
| Yaşlılarıyla işbirliği içerisinde çalışır             |  |
| Durumlara uygun dil kullanır, uygun kelimeleri seçer  |  |
| Konuşurken ve araç kullanırken sırasını bekler        |  |

### **Motivasyon ve Konsantrasyon Becerileri**

|  |  |
|--|--|
| Orman Okuluna gitmek için hevesli ve heyecanlıdır                                      |  |
| Bir çok soru sorar   |  |
| Bir görev üzerine uzun süre yoğunlaşabilir   |  |
| Ormanlık/Dışarı Alana gitmek ile ilgilidir, orada öğrenmek ve anlamak için meraklıdır. |  |
| Katılmak için çok isteklidir   |  |
| Mükemmelleştirmesi/ yeni görev eklemesi zaman alır                                     |  |

### **Fiziksel Beceriler**

|  |  |
|--|--|
| Mekânsal farkındalığı iyidir                                 |  |
| Kaba motor becerileri iyidir                                 |  |
| İnce motor becerileri iyidir                                 |  |
| Ormanlık alanda güvenle koordineli bir biçimde hareket eder. |  |
| Engebe ve engelleri aşar                                     |  |
| Fiziksel takati, tahammülü iyidir.                           |  |
| Araçları, donanımı güvenle idare eder.                       |  |

### **Çevre Hakkında Bilgi ve Anlayış**

|  |  |
|--|--|
| Ormanlık/Açık Alana ilgi duyar   |  |
| Başkalarını çevreye saygılı olmaya teşvik eder   |  |
| Çevreye saygılıdır.  |  |
| Orman Okulu Kurallarını bilir, anlar, sayar.   |  |
| Başkalarını Orman Okulu Kurallarını takip etmeye ve bunlara saygı duymaya teşvik eder. |  |

APPENDIX F

REFLECTIVE SESSION DIARIES

**Formative assessment after each session and make recommendations for future sessions**

Evaluation of session by Leader

|                               |  |
|-------------------------------|--|
| What worked well?             |  |
| What didn't work so well?     |  |
| Unexpected outcomes?          |  |
| What will I change next time? |  |

**Notes about the Reflection and Evaluation of the sessions by Children**

|  |
|--|
|  |
|--|

APPENDIX G

OTHER FOREST SCHOOL LEADER EVALUATION FORM

**Name of the Forest School Teacher**

**Session Number & Date:**

- 1) Thoughts and opinions about the session in general: Did the Forest School leader achieve the learning objectives?
- 2) Did the activities set meet your expectations? Were they related to your topic?
- 3) How can we make sessions and activities more efficient?
- 4) Please make comments about the points given below.

|   | High | Sufficient | Tolerable | Low |
|---|------|------------|-----------|-----|
| Learning During the Session/                      |      |            |           |     |
| Organization of the session                       |      |            |           |     |
| The quality and the professionalism of the leader |      |            |           |     |

5) Your Opinion or view on any of the points given above:

6) Other Comments:

## APPENDIX H

### PARENTS INTERVIEW

The experiences of teachers, students and parents in the program of Forest School will be examined in a research. I am talking to the parents whose children participate in the program for this. I want you to share your opinions about this project, what you have experienced and what effect it has on you. There is no right or wrong answer to the questions. It is important that you share your own feelings and thoughts with me. The information you provide will only be used for research purposes, your name will not be disclosed, and, it will not be shared with anyone.

- 1) Did you generally know about the Forest School before participating in the program? What were your expectations from the program?
- 2) Did your child say anything about the Forest School while attending the Forest School? If yes, what did he say?
- 3) Are there any changes you have observed in your child after the 12-session Forest School Program? If yes, what changes have you observed?
- 4) Do you think your child has benefited from participating in the Forest School Program? What makes you think that?
- 5) What are your thoughts, opinions and suggestions about the 12-session Forest School practice in our school?

Do you want to add any comments or suggestions to your child's Forest School experience?

## APPENDIX I

### EXPLANATION OF THE CONCEPTS IN SESSION PLANS

|  |  |
|--|--|
| Age Group                              | age group targeted for the purposes of the session   |
| Adult: Children Ratio                  | As two adults; The Forest School leader and substitute teacher and the group of ten children, our Forest School ratio is 1:5 |
| Session Aims & Links to the Curriculum | It shows basic aims of the session plan which is linked to the national curriculum.  |
| Session Objectives                     | It shows aims of the session which are special to related session; not written in the national curriculum                    |
| Time                                   | Time Arrivals beginning with changing clothing of children to the end of the evaluation of the session.                      |
| Session Content                        | The activities planned for the day   |
| Method of delivery                     | The techniques to be used by the Forest School leader for teaching and learning experiences                                  |
| Resources Required                     | The materials needed for the activities of that session  |

## APPENDIX J

### PLAN OF SESSION 1

|  |   |
|--|---|
| <p style="text-align: center;">Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p style="text-align: center;">✓ <b>Cognitive development:</b><br/>Objective (O)13: Knows the symbols using in daily life<br/><i>I2: Tell the meaning of the symbol to be showed</i><br/>Objective (O) 17: Establish cause and effect relationship:<br/><i>Indicator (I) 1: Tell the possible causes of an event</i><br/><i>Indicator (I) 2: Tell the possible consequences of an event</i></p> <p style="text-align: center;">✓ <b>Social Emotional Development:</b><br/>Objective (O) 12: Obey the rules of different environment<br/><i>Indicator (I) 1: Tell his/her opinion about the setting rules for different environment</i><br/><i>Indicator (I) 2: Tell the rules is necessary</i><br/><i>Indicator (I) 3: Behave appropriately to the rules when it conflicts with wishes and rules</i><br/>Objective (O) 15: Self Confidence<br/><i>Indicator (I) 2: Express him/herself in the group</i></p> <p style="text-align: center;">✓ <b>Self-Care Skills:</b><br/>Objective (O) 7: Protect him/herself from hazards and accidents<br/><i>Indicator (I) 1: Tell dangerous situations</i><br/><i>Indicator (I) 2: Tell what to do to protect him/herself from danger and accidents</i><br/>Objective (O) 8: Take necessary precautions regarding health<br/><i>Indicator (I) 1: Tell what he has to do to protect his health</i><br/><i>Indicator (I) 2: Explain the consequences that may occur when he / she does not pay attention to health</i></p> |
| <p style="text-align: center;">Session Objectives</p>  | <p>Be aware about environmental issues<br/>Identifying the hazards that may cause harm at the school garden, making risk assessment with children<br/>Identifying the rules of Forest School Sessions at the school garden with children</p>  |

| Time                     | Sessions content  | Method of delivery   | Resources required  |
|--------------------------|---|--|---|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Playing warm-up games "my name is"</li> <li>• Making risk analysis</li> <li>• "Health and Safety Talk";<br/>Playing "eyes to eyes" and 1, 2, 3 Where are you?" games.</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <ul style="list-style-type: none"> <li>✓ sign of attention required.</li> <li>✓ A Ball</li> </ul> |

Warm -up Games; My Name is /Throwing Ball:

Make a circle with children; throw the ball by saying your name to a child. The child is asked to throw the ball by saying his/ her name. And the game continues like that until all children say their name and throw the ball. If they want, the game can be continued.

Making Risk Analysis & Health and Safety Talk:

Have children sit on wood block circle, show them sign of attention and ask the meaning of it. Talking with children, how they should behave in garden, what kind of hazards they can face. Talk about the dangerous areas in our garden. Take 10 sign of attention, and ask children find dangerous areas that we should look out. Walk around the school garden all together, stop when children show a dangerous area, talk altogether about the area with their pros and cons. Talk about how we could behave at this area. After this brief discussion, put a sign of attention on this area. These identifying the hazards that may cause harm at the school garden continue until walking around all garden. After making risk analysis, ask the group about the rules of the class, after that mention the differences based on the answers of the children, for example you can run, you can speak loud.etc.

Eyes to Eyes:

Children sit on wood block circle. Mention circle rules, one of the important rules of the Forest School is walking around the circle, not to walk through or stand in the middle of the circle. Explain the need for this rule; to make a fire in the middle of that circle. Let children play a game about this rule. All children tilt their head, while the leader counts one, two, and three. When the leader says "3", all children look up from ground, and who comes eyes to eyes with one of his/her friends exchange their places. However; the important thing is not to forget the rule; "walking around the circle".

1, 2, 3 Where are you?

The aim of this game is to teach the children to call out and to listen when they are lost or when a group member is lost. The leader count until 20, all children go and hide. When the leader have finished counting, he/she calls out "1, 2, 3 Where are you?" The hidden children call out in reply; "1, 2, 3 we are over here" without coming out. During the search the children can continue to call out "1.2, 3..." so the leader can follow the sound of the replies and find all hidden children.

## APPENDIX K

### PLAN OF SESSION 2

|  |   |
|--|---|
| <p style="text-align: center;">Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p style="text-align: center;">✓ <b>Cognitive development:</b></p> <p>O 2: Predict about object/situation/event<br/> <i>I 1: Tell the clues about object/situation/event</i><br/> <i>I2: Tell his/her predictions by combining clues</i><br/> <i>I3: Predict and compare his/her predictions and reality</i></p> <p>O 6: Match objects according to their properties<br/> <i>I 10: Match objects according to their fragrance</i></p> <p>O 8: Compare objects according to their properties<br/> <i>I 7: Differentiate and compare objects according to its fragrance</i></p> <p style="text-align: center;">✓ <b>Social Emotional Development:</b></p> <p>O 12: Obey the rules of different environment<br/> <i>I) 1: Tell his/her opinion about setting rules for different environment</i><br/> <i>I 2: Tell why the rules are necessary</i><br/> <i>I 3: Obey the rules and behave appropriately when their wishes conflict with the rules</i></p> <p>O 15: Self Confidence<br/> <i>I 2: Express himself/herself in the group</i></p> <p style="text-align: center;">✓ <b>Self-Care Skills:</b></p> <p><i>O 7: Protect himself/herself from hazards and accidents</i><br/> <i>I 1: Tell dangerous situations</i><br/> <i>I) 2: Tell what to do to protect him/herself from danger and accidents</i></p> <p style="text-align: center;">✓ <b>Language Development</b></p> <p>O 6: Develop vocabulary<br/> <i>I3: Uses the words that have just learned within an appropriate meaning</i></p> <p style="text-align: center;">✓ <b>Motor Development</b></p> <p>O 4: Do movement that needs fine motor skills<br/> <i>I 14: Tear and rip the objects</i></p> |
| <p>Session Objectives</p>  | <p>Remind Forest School Session Rules</p> <p>Promote children's sensory development by using natural materials</p> <p>Make the children be aware of their environment by using their senses.</p> <p>Talking about the features and feelings about the tree touched</p>  |

| Time                     | Sessions content  | Method of delivery   | Resources used  |
|--------------------------|---|--|---|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Playing warm-up games "Monster Joe Coming"</li> <li>• Reminding risk analysis with children by walking around the school garden all together.</li> <li>• "Health and Safety Talk"; Discussing and talking about rules with children</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>For identifying risk areas just sign of attention required.</p> <p>Piece of cloths to fold their eyes</p> <p>Plastic cases for smelly cocktails.</p> |

|  |   |  |  |
|--|---|--|--|
|  | <p>at circle time. Reminding the rules that we set in the last session.</p> <ul style="list-style-type: none"><li>• Doing sensory activities; "meet a tree", "smelly cocktails"</li></ul> |  |  |
|--|---|--|--|

## APPENDIX L

### PLAN OF SESSION 3

|  |   |
|--|---|
| <p style="text-align: center;">Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p style="text-align: center;">✓ <b>Cognitive development:</b></p> <p>O 1: Pay attention to the object/situation/event<br/> <i>I1: Focus on the object/situation/event needed to pay attention</i><br/> <i>I2: Ask questions about the object/situation/event needed to pay attention</i><br/> <i>I3: Explain in detail the object/situation/event that took his/her attention</i></p> <p>O 5: Observe the objects and beings<br/> <i>I 1: Tell the objects/beings 'colors</i><br/> <i>I 6: Tell the objects/beings 'texture</i><br/> <i>I 8: Tell the objects/beings 'fragrance</i><br/> <i>I12: Tell the objects/beings 'aim for usage</i></p> <p style="text-align: center;">✓ <b>Social Emotional Development:</b></p> <p>O 3: Express him/herself in creative ways<br/> <i>I1: Express his/her feelings, thoughts, dreams in an original way</i><br/> O10: Fulfill his/her responsibilities<br/> <i>I1: Show his/her enthusiasm to take on responsibility</i><br/> <i>I2: Fulfill responsibilities s/he took on</i><br/> <i>I3: Tell the possible consequences when the responsibilities taken were not fulfilled.</i></p> <p style="text-align: center;">✓ <b>Language Development</b></p> <p>O 4: Use grammar structures while speaking<br/> <i>I3: Use adjectives while making sentences</i></p> <p style="text-align: center;">✓ <b>Motor Development</b></p> <p>O 3: Makes movements which is needed object control<br/> <i>I 1: Control objects individually or paired</i></p> |
| <p>Session Objectives</p>  | <p>Encourage children to examine their surroundings carefully with group.</p> <p>Introduce children to use tools while searching worms</p> <p>Take care of the living beings and protect it.</p>  |

| Time                     | Sessions content  | Method of delivery   | Resources used  |
|--------------------------|---|--|---|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• “1,2,3 Where are you” and “Monster Joe Coming”</li> <li>• Finding Adjectives</li> <li>• Worm Farm</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <ul style="list-style-type: none"> <li>• Observation Boxes</li> <li>• The narrowest transparent box</li> <li>• Sand, soil, blighted leaves</li> </ul> |

APPENDIX M

PLAN OF SESSION 4

|  |   |
|--|---|
| <p>Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p>✓ <b>Cognitive development:</b><br/> O 1: Pay attention to the object/situation/event<br/> <i>I1: Focus on the object/situation/event needed to pay attention</i><br/> O3: Remind that s/he perceived<br/> <i>I1: Tell object/event/situation again after a while</i><br/> <i>I2: Use what s/he reminds in a new situation</i><br/> O 7: Group the objects and beings according to its properties<br/> <i>I 1: Group objects/beings according to its color</i><br/> <i>I2: Group objects/beings according to its shape</i><br/> <i>I3: Group objects/beings according to its size</i><br/> <i>I4: Group objects/beings according to its length</i><br/> <i>I5: Group objects/beings according to its texture</i><br/> ✓ <b>Social Emotional Development:</b><br/> O 3: Express him/herself in creative ways<br/> <i>I1: Express his/her feelings, taught, dreams in an original way</i><br/> ✓ <b>Language Development</b><br/> O 4: Use grammar structures while speaking<br/> <i>I3: Use adjectives while making sentences</i><br/> ✓ <b>Motor Development</b><br/> O 4: Do movement that needs fine motor skills<br/> <i>I 19: Shape materials by using his/her hands</i></p> |
| <p>Session Objectives</p>  | <p>Make the children be aware of their environment by using their senses.<br/> Encourage children to examine their surroundings carefully with group.<br/> Introduce children to use natural materials; help them discover textures, smells and colors of mud.</p>  |

| Time                     | Sessions content   | Method of delivery   | Resources used   |
|--------------------------|--|--|--|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Playing warm-up game "Ladders"</li> <li>• Scavenger Hunt</li> <li>• Mud Monster</li> <li>• Special Place in the Woodland</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>For Scavenger Hunt, 4 half egg boxes and list of items for children to collect.<br/><br/>Bucketful of Mud</p> |

APPENDIX N

PLAN OF SESSION 5

|  |  |
|--|--|
| <p>Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p>✓ <b>Cognitive development:</b><br/> O10: Implement directive related to location<br/> <i>I1: Tell the location of the object</i><br/> <i>I2: Put the objects into right place according to directives</i><br/> O17: Establish cause and effect relationship:<br/> <i>I1: Tell the possible causes of an event</i><br/> <i>I2: Tell the possible consequences of an event</i></p> <p>✓ <b>Social Emotional Development:</b><br/> O 3: Express him/herself in creative ways<br/> <i>I3: Creating products with original features</i><br/> O 12: Obey the rules of different environment<br/> <i>I 1: Tell his/her opinion about setting rules for different environment</i><br/> <i>I 2: Tell the rules is necessary</i><br/> <i>I 3: Behave appropriately to the rules when it conflicts with wishes and rules</i><br/> O 15: Self Confidence<br/> <i>I 2: Express him/herself in the group</i></p> <p>✓ <b>Language Development</b><br/> O 1: Distinguish sounds<br/> <i>I1: Tell the direction of the sound coming</i><br/> <i>I2: Tell the source of the sound</i><br/> O8: Expresses what s/he listened in various ways<br/> <i>I4: Exhibit what s/he listened via drawings</i></p> <p>✓ <b>Motor Development</b><br/> O 1: Make displacement movements<br/> <i>I 2: Walk with the directives of a guide</i><br/> O 4: Do movement that needs fine motor skills<br/> <i>I 21: Hold the pencil correctly</i><br/> <i>I22: Control the pencil</i></p> <p>✓ <b>Self-Care Skills:</b><br/> O 7: Protect him/herself from hazards and accidents<br/> <i>I1 Tell dangerous situations</i><br/> <i>I2 Tell what to do to protect him/herself from danger and accidents</i></p> |
| <p>Session Objectives</p>  | <p>Promote children's sensory development; by listening sound of nature<br/> Encourage children to examine their surroundings carefully with group to develop spatial awareness.<br/> Encourage children to describe sounds or natural objects within groups.<br/> Identifying the hazards that may cause harm at the Forest School area, making risk assessment with children<br/> Identifying the rules of Forest School at the forest with children</p>   |

| Time                                     | Sessions content   | Method of delivery   | Resources used  |
|--|--|--|---|
| 13:00 –<br>15:30<br><br>Şamlar<br>Forest | <ul style="list-style-type: none"> <li>• Making risk analysis with children by walking around the place in the woodland area.</li> <li>• "Health and Safety Talk"; Discussing and talking about rules with children at circle time. Setting the rules altogether.</li> <li>• Sound Map</li> <li>• Collecting natural materials for our activities in school garden</li> <li>• Special Place in the Woodland</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>For Sound Map, for each child a blank piece of paper with an X in the center.</p> <p>For identifying risk areas, just sign of attention is required.</p> <p>Mat, water, first aid kit, cardboard to put under the papers, bags to put natural materials, napkins, safety strap, rope to walk</p> |

## APPENDIX O

### PLAN OF SESSION 6

|  |   |
|--|---|
| <p style="text-align: center;">Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p>✓ <b>Cognitive development:</b><br/>O9: Sorts object/beings according to its properties<br/><i>I5: Sort object/beings according to color tones</i></p> <p>✓ <b>Social Emotional Development:</b><br/>O 3: Express him/herself in creative ways<br/><i>I2: Use objects unusually</i><br/><i>I3: Creating products with original features</i><br/>O7: Self-guided for doing a job<br/><i>I2: Effort to end the work in time</i><br/>O15: Self Confidence<br/><i>I2: Express him/herself in front of group</i><br/><i>I3: Tell his/her different opinions if necessary</i><br/><i>I4: Take over leadership when it is necessary</i><br/>O17: Solve problems with others<br/><i>I1: Solve problems with others by talking</i><br/><i>I2: Ask help from adults when unable to solve the problem with others</i><br/><i>I3: Behave accommodationist when it is necessary.</i></p> <p>✓ <b>Motor Development</b><br/>O 4: Do movement that needs fine motor skills<br/><i>I 16: Use different objects to make a picture</i></p> |
| <p>Session Objectives</p>  | <p>Promote children's sensory development by using natural materials<br/>Encourage children to communicate with each other and to share their opinions, and contributes to team work<br/>Make the children aware of their environment by using their senses.<br/>Use of natural resources to imagine<br/>Encourage children to examine their surroundings carefully.</p>  |

| Time                     | Sessions content  | Method of delivery   | Resources used   |
|--------------------------|---|--|--|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Playing warm-up games</li> <li>• Activity 1 "Shades of Woodland in our Palette"</li> <li>• Activity 2 "Ground Pictures"</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>8 (for each child) small piece of cards with double sided tape</p> <p>For frame four sticks (be sure that at the garden there are enough sticks for each group)</p> |

APPENDIX P

PLAN OF SESSION 7

|  |   |
|--|---|
| <p>Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p>✓ <b>Cognitive development:</b><br/>O6: Matches objects/beings according to its properties<br/><i>I2 Differentiate objects/beings according to its colors</i><br/>O10: Implement directives related location<br/><i>I1: Tell the location of the object</i><br/><i>I2: Put the objects into right place according to directives</i></p> <p>✓ <b>Social Emotional Development:</b><br/>O 3: Express him/herself in creative ways<br/><i>I1: Express him/her feelings, thoughts, dreams in original ways</i></p> <p>✓ <b>Language Development</b><br/>O8 Express what s/he listened/watched in various ways.<br/><i>I1 Ask questions about what s/he listened/watched</i><br/><i>I2 Give answers what s/he listened/watched</i><br/><i>I3 Tell to others what s/he listened/watched</i><br/><i>I6 Show what s/he listened through drama</i><br/>O10 Read visual materials.<br/><i>I1 Examine visual materials.</i><br/><i>I2 Explain visual materials.</i><br/><i>I3 Ask questions about visual materials.</i></p> <p>✓ <b>Motor Development</b><br/>O1 Make displacement movement<br/><i>I3 Run according to directives.</i><br/>O4 Do movements that needs fine motor skills<br/><i>I1 Collecting objects.</i></p> |
| <p>Session Objectives</p>  | <p>Promote children's sensory development by using natural materials<br/>Make the children be aware of their environment by using their senses.<br/>Use of natural resources and imagination<br/>Encourage children to examine their surroundings carefully.<br/>Be aware of environmental issues</p>   |

| Time                     | Sessions content   | Method of delivery   | Resources used  |
|--------------------------|--|--|---|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Playing warm-up games; Hungry Bird and Woolly Worms</li> <li>• Giant Bird Nest</li> <li>• Reading a Book “In the Nest”</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>30 colorful worms<br/>Book: In the Nest (Yuvada) TÜBİTAK<br/>Flash Cards Showing nests for birds; "Stork", "Blackbird" and "Eagle", "Swift</p> |

## APPENDIX Q

### PLAN OF SESSION 8

|  |   |
|--|---|
| <p style="text-align: center;">Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p style="text-align: center;">✓ <b>Cognitive development:</b></p> <p>O13: Knows the symbols using in daily life<br/> <i>I1: Show the symbol related to given explanation</i><br/> <i>I2: Tell the meaning of the symbol to be showed</i></p> <p>O 17: Establish cause and effect relationship:<br/> <i>I 1: Tell the possible causes of an event</i><br/> <i>I 2: Tell the possible consequences of an event</i></p> <p>O19: Create solutions for problems<br/> <i>I1: Tell the problem</i><br/> <i>I2: Suggest solution ways for the problem</i><br/> <i>I3: Select one solution from many ways</i></p> <p style="text-align: center;">✓ <b>Social Emotional Development:</b></p> <p>O 3: Express him/herself in creative ways<br/> <i>I1: Express him/her feelings, thoughts, dreams in original ways</i></p> <p>O15: Self Confidence<br/> <i>I2: Express him/herself in front of group</i><br/> <i>I3: Tell his/her different opinions if necessary</i><br/> <i>I4: Take over leadership when it is necessary</i></p> <p>O17: Solve problems with others<br/> <i>I1: Solve problems with others by talking</i><br/> <i>I2: Ask to help from adults when s/he does not solve the problem with others</i><br/> <i>I3: Behave accommodationist when it is necessary.</i></p> <p style="text-align: center;">✓ <b>Language Development</b></p> <p>O8 Express what s/he listened/watched in various ways.<br/> <i>I1 Ask questions about what s/he listened/watched</i><br/> <i>I2 Give answers what s/he listened/watched</i><br/> <i>I3 Tell to others what s/he listened/watched</i><br/> <i>I6 Show what s/he listened through drama</i></p> <p>O10 Read visual materials.<br/> <i>I1 Examine visual materials.</i><br/> <i>I2 Explain visual materials.</i><br/> <i>I3 Ask questions about visual materials</i></p> <p style="text-align: center;">✓ <b>Motor Development</b></p> <p>O1 Make displacement movement<br/> <i>I3 Do warm up activities with the guidance.</i></p> <p>O4 Do movements that needs fine motor skills<br/> <i>I1 Collecting objects.</i></p> |
| <p>Session Objectives</p>  | <p>Promote children's sensory development by using natural materials<br/> Exploring living things and their habitats.<br/> Make the children be aware of their environment by using their senses.<br/> Develop problem-solving skills with sharing ideas in the group work<br/> Use of natural resources and imagination<br/> Drawing the parts of tree<br/> Promote gross motor development by moving branches</p>   |

| Time             | Sessions content  | Method of delivery   | Resources used                    |
|------------------|---|--|-----------------------------------|
| 12:30 –<br>15:00 | <ul style="list-style-type: none"> <li>• Warm-up activity: Act As A Tree</li> <li>• “Be a Seed” Game</li> <li>• Ground Picture; A Tree</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | Seed Cards: Sun, Water, Air, Soil |

APPENDIX R

PLAN OF SESSION 9

|  |   |
|--|---|
| <p>Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p>✓ <b>Cognitive development:</b><br/> O1: Pay attention to the object/situation/event<br/> <i>I1: Focus on the object/situation/event needed to pay attention</i><br/> <i>I3: Explain in detail the object/situation/event that took his/her attention</i><br/> O 2: Predict about object/situation/event<br/> <i>I 1: Tell the clues about object/situation/event</i><br/> <i>I3: Predict and compare his/her predictions and reality</i><br/> <i>I4: Explain his/her predictions and real situation</i><br/> O5: Observe objects/beings<br/> <i>I1: Tell the name of the object/being</i><br/> <i>I2: Tell the color of the object/being</i><br/> <i>I3: Tell the shape of the object/being</i><br/> <i>I4: Tell the size of the object/being</i><br/> O 6: Match objects according to its properties<br/> <i>I1 Match objects / beings one to one.</i><br/> <i>I2 Distinguish and match objects/beings according to color.</i><br/> <i>I3 Distinguish and match objects /beings according to their shapes.</i><br/> <i>I4 Distinguishes and matches objects /beings according to their size.</i><br/> <i>I5 Distinguish and match object /beings according to their length.</i><br/> <i>I6 Distinguishes and matches objects /beings according to their texture</i><br/> O10: Implement directives related to location<br/> <i>I1: Tell the location of the object</i><br/> <i>I2: Put the objects into right place according to directives</i><br/> O 17: Establish cause and effect relationship:<br/> <i>I 1: Tell the possible causes of an event</i><br/> ✓ <b>Language Development</b><br/> O1: Distinguish the sound<br/> I1: Tell the direction of the sound</p> |
| <p>Session Objectives</p>  | <p>Make the children be aware of their environment.<br/> Promote children's sensory development; listening<br/> Encourage children to examine their surroundings carefully.<br/> Explain what s/he shares life with other living things</p>   |

| Time                     | Sessions content   | Method of delivery   | Resources used   |
|--------------------------|--|--|--|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Warm-Up Activity: Bat and Both</li> <li>• Matching Trees in our Garden</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>Pictures parts of some trees in our school garden</p> <p>Two cloths for closing eyes and a bell</p> |

APPENDIX S

PLAN OF SESSION 10

|  |   |
|--|---|
| <p>Sessions Aims &amp; Links to Turkish Early Childhood Education Curriculum (TECEC)</p> | <p>✓ <b>Cognitive development:</b><br/> O1: Pay attention to the object/situation/event<br/> <i>I1: Focus on the object/situation/event needed to pay attention</i><br/> <i>I3: Explain in detail the object/situation/event that took his/her attention</i><br/> O 6: Match objects according to its properties<br/> <i>I1 Match objects / beings one to one.</i><br/> <i>I2 Distinguish and match objects/beings according to color.</i><br/> <i>I3 Distinguish and match objects /beings according to their shapes.</i><br/> <i>I8 Distinguish and match objects /beings according to the material they are made of</i><br/> <i>I12 Distinguish and match objects /beings according to its purposes</i></p> <p>✓ <b>Social Emotional Development:</b><br/> O 3: Express him/herself in creative ways<br/> <i>I1: Express him/her feelings, thoughts, dreams in original ways</i><br/> O15: Self Confidence<br/> <i>I2: Express him/herself in front of group</i><br/> <i>I3: Tell his/her different opinions if necessary</i><br/> O6: Protect himself/ other selves' right<br/> <i>I2: Express others have rights</i></p> |
| <p>Session Objectives</p>  | <ul style="list-style-type: none"> <li>• Plants; Animals including humans; Seasonal changes; Living things and their habitats.</li> <li>• Make the children be aware of their environment.</li> <li>• Use of natural resources and imagination</li> <li>• Encourage children to examine their surroundings carefully.</li> <li>• Stretch in different directions</li> <li>• Taking responsibility for the improvement and protection of life</li> <li>• Explain what s/he shares life with other living things</li> </ul>   |

| Time                 | Sessions content  | Method of delivery   | Resources required  |
|----------------------|---|--|---|
| <p>13:00 – 15:00</p> | <ul style="list-style-type: none"> <li>• Shrinking Forest Game: Trees for people and animals</li> <li>• The Forest Cycle</li> <li>• Woodland Perfume</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>Five tree pictures (oak, scots pine, lime, douglas fir, ash)</p> <p>Forest Cycle Activity Sheet</p> <p>Yogurt Pots for each group (4 groups)</p> |

APPENDIX T

PLAN OF SESSION 11

|  |  |
|--|--|
| <p>Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p>✓ <b>Cognitive Development</b><br/>O3: Remember that s/he perceived<br/><i>I1: Tell again the situation/event/object after a while</i><br/>O18: Explain concepts about time<br/><i>I1: Sort events according to its occurrence</i></p> <p>✓ <b>Social Emotional Development</b><br/>O4: Explain the feelings of others about an event or situation<br/><i>I1: Tell other's feeling</i><br/><i>I2: Tell the reasons of others' feelings</i></p> <p>✓ <b>Language Development</b><br/>O5: Uses language for communication<br/><i>I8: Participate in a conversation</i><br/><i>I9: Await one's turn for talking</i><br/>O8 Express what s/he listened/watched in various ways.<br/><i>I3 Tell to others what s/he listened/watched</i><br/>O10 Read visual materials<br/><i>I5 Use visual materials to create compositions, events and stories</i></p> |
| <p>Session Objectives</p>  | <p>Pleasure in reading<br/>Reveal feelings by putting himself in the place of other beings</p>   |

| Time                     | Sessions content  | Method of delivery   | Resources used  |
|--------------------------|---|--|---|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Interview with Nature</li> <li>• Sort Events Storybook “Elmer with Rainbow”</li> </ul> | <ul style="list-style-type: none"> <li>• Learning Through Experience</li> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <p>Interview Questions</p> <p>Storybook “Elmer with Rainbow”</p> <p>Picture or Toys of Characters in the book</p> <p>A Rope</p> |

APPENDIX U

PLAN OF SESSION 12

|  |   |
|--|---|
| <p>Sessions Aims<br/>&amp;<br/>Links to Turkish Early<br/>Childhood Education<br/>Curriculum (TECEC)</p> | <p>✓ <b>Social Emotional Development:</b><br/> O 3: Express him/herself in creative ways<br/> <i>I2: Use objects unusually</i><br/> <i>I3: Creating products with original features</i><br/> O7: Self-guided for doing a job<br/> <i>I2: Effort to end the work in time</i><br/> O15: Self Confidence<br/> <i>I2: Express him/herself in front of group</i><br/> <i>I3: Tell his/her different opinions if necessary</i><br/> <i>I4: Take over leadership when it is necessary</i><br/> O17: Solve problems with others<br/> <i>I1: Solve problems with others by talking</i><br/> <i>I2: Ask to help from adults when s/he does not solve the problem with others</i><br/> <i>I3: Behave accommodationist when it is necessary.</i><br/> ✓ <b>Cognitive development:</b><br/> O10: Implement directives related to location<br/> <i>I1: Tell the location of the object</i><br/> <i>I2: Put the objects into right place according to directives</i><br/> <i>I3: Get location in a place</i><br/> <i>I4: Use maps and sketch</i></p> |
| <p>Session Objectives</p>  | <p>Promote children's ability of making decision within group.<br/> Promote children's sensory development by using natural materials</p>   |

| Time                     | Sessions content   | Method of delivery  | Resources used  |
|--------------------------|--|---|---|
| <p>12:30 –<br/>15:00</p> | <ul style="list-style-type: none"> <li>• Find the Treasure</li> <li>• Mud Cupcakes</li> <li>• Making Fire</li> </ul> | <ul style="list-style-type: none"> <li>• Discovery</li> <li>• Asking and Answering Questions</li> </ul> | <ul style="list-style-type: none"> <li>• For treasure; shells</li> <li>• Papers, pencils for drawing map</li> <li>• Cupcake Cups</li> <li>• Marshmallows and Stick</li> </ul> |