Nature-based Education Experiences of Pre-school Teachers and Children in Türkiye

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Abstract

Providing nature-based education to children who are disconnected from nature with the opportunities provided by developing technology is important for their holistic development. In the preschool education period, which covers a significant part of early childhood, teachers should provide children with nature-based education experiences and keep them active in their development and learning. Children can experience permanent learning in environments where their senses are active. In addition, when children are active in nature, they can also gain environmental awareness, compassion and respect for nature. This study examined the nature-based education experiences of 6 preschool teachers' reports by using the document analysis method. The reports were analysed using the content analysis method. Three main themes were discussed in the findings with their own sub-themes. First of all, the teachers' nature-based education implications before, during and after were examined. Secondly, the teachers' nature-based education implications experiences were addressed and examined in two sub-themes. Under this theme, the activities that teachers implicated in nature were examined with their content and the spontaneous situations they encounter when they go out into nature were addressed. Then, teachers' evaluations of themselves and the process in nature-based education were addressed. Finally, the findings of children's nature-based education experiences were reached from the teachers' reports. This finding examined the dialogues that emerged from teachers' observations of children during the implementation and their conversations with the children after the implementation. The effects of the nature-based education practices of the teachers on all developmental areas of the children were examined. As a result of the study, nature-based education was welcomed positively by the teachers because it helped to improve the children's cognitive, social-emotional, physical, language development and self-care skills. Some teachers who prepared the reports stated that they wanted to use the nature-based education approach again. It is recommended that studies be carried out to disseminate nature-based learning in the preschool period.

Keywords: Nature-based education, Pre-school education, Early childhood education, Teacher, Children

E-International Journal of Pedandragogy

Vol: 4, No: 2, pp. 101-116

Research Article

Received: 03.10.2024
Accepted: 01.12.2024

Suggested Citation
Karaoglu, S. (2024). Nature-based education experiences of pre-school teachers and children in Türkiye, *E-International Journal of Pedandragogy (e-ijpa) 4(2), 101-116. TrDoi: https://trdoi.org10.27579808/e-ijpa.130*

INTRODUCTION

The importance of pre-school education for societies to achieve their educational goals is undeniable. Although the awareness of this importance has increased from yesterday to today, it is necessary to be aware that we are now in a time when quality is gaining importance along with quantity. In other words, it is no longer only necessary to expand preschool education (Toprakçı, 2010), but also to improve the quality of preschool education. From this point of view, it becomes important to offer rich experiences to children in the school environment in the preschool period, which is the first step of children's development, where skills belonging to all developmental areas are supported. These rich experiences can be provided in the schoolyard or in nearby areas surrounded by nature. However, the use of outdoor areas in the preschool period is decreasing day by day (Çelik, 2012). This creates physical and emotional passivity in children. It causes many problems such as gaining over- weight, attention deficits, and weakening of social relationships due to inactivity (Muslu & Gökçay, 2019; Louv, 2008). According to Avraamidou (2015), children receive most of the information they acquire about the world outside the school environment. On the other hand, taking advantage of the opportunities offered by nature outside is a matter of interest for experts working in preschool education today. This situation is also often seen in early childhood education practices (Lysklett, 2017). Energic play provides to children in nature ensure the growth and development of the relevant neural networks in the brain to provide children with greater learning capacity (Jenson, 2000; Clements, 2004). There are studies showing that contact with nature has positive effects in terms of health and psychological well-being, and in terms of physical, social and emotional development areas (Bowler et al., 2010; Cooper, 2015; Said, 2012; Wells & Evans, 2003). Therefore, children's experiences in nature-based learning need to be increased at the preschool.

At the present, the spread of industrialisation and urbanisation has caused the decrease in natural areas and accelerated the separation of social life from nature (Berberoğlu & Uygun, 2013; White, 2004). Children have also been negatively affected by this situation. Louv (2008) mentioned nature deprivation syndrome in children in his book The Last Child in Nature. Children grow up unaware and ignorant of the natural environment they live in (White, 2004). Children's ties with nature need to be strengthened for generations that are responsible for environmental problems and produce solutions (Chawla & Cushing, 2007; Collado, Staats & Corraliza, 2013). Therefore, preschool teachers have important responsibilities. Preschool teachers should be able to use the environment to develop children's sense of curiosity and exploration of nature (Gerrish, 2014). Depending on this, teachers may adopt a nature-based education approach and make children active in outdoor learning environments. Because children learn faster and more effectively in an environment where they can use their senses, be curious and observe in early childhood stage (Erentay & Erdoğan, 2017). For this reason, firstly, teachers must develop their own nature experiences and increase their knowledge and skills regarding nature-based education (Ernst & Theimer, 2011).

Interaction with nature in early childhood not only ensures that children develop holistically and healthily in the future, but also ensures that they become ecologically conscious (Köşker, 2019; Turhan & Özbay, 2019). When teachers apply outdoor learning activities to classroom learning activities, it positively affects children's cognitive and emotional development (Sözer & Oral, 2016). It has been revealed that outdoor education in nature makes learning more fun, meaningful and permanent (Smeds et al., 2011). Polat and Demirci (2021) emphasised that outdoor education in nature provides children with open-ended learning opportunities and activates all their senses, thus positively affecting their cognitive development. For this reason, teachers need to bring children together with nature frequently. However, preschool teachers encounter problems in terms of implementation due to obstacles such as adequate weather conditions and attitudes of parents and school administration (Ernst, 2014; Ernst & Theimer, 2011; Gerrish, 2014). Preschool teachers also have lack of such learning in their undergraduate education in order to gain sufficient knowledge and skills. In Türkiye, preschool teacher undergraduate education programs do not offer opportunities in the field of nature-based

education (Güner, 2013). For this reason, pre-school teachers are insufficient to implement nature-based education. However, opportunities should be provided to teachers in order to eliminate this deficiency and improve their knowledge and skills regarding nature-based education (Güler, 2009; Güzelyurt & Özkan, 2018; Kandır, Yurt & Cevher Kalburan, 2012). Temiz and Karaarslan Semiz (2018) provided practical training to teachers within the scope of the TUBITAK 4004 project, which lasted for one week and included 25 preschool teachers. At the end of the training, it was observed that teachers prepared various activities for children using nature and natural materials. There are very limited studies examining the nature-based education experiences of preschool teachers. This study will examine the nature-based education plans and evaluations that preschool teachers implement with children. In this context, this study seeks answers to the following questions:

1. How do preschool teachers implement nature-based education?
2. How do preschool teachers evaluate children in nature-based education practices?

METHOD

The study was designed as a document analysis method among qualitative analysis methods. Qualitative research is a type of study in which qualitative data techniques such as interview, observation or document analysis are used and events are carried out in their natural environment (Yıldırım & Şimşek, 2018). Özkan (2021, p.22) defined document analysis in the field of education as "obtaining, reviewing, questioning and analysing various documents that qualify as primary or secondary sources constituting the data set of the research". Sak et al. (2021) emphasized that the documents to be used in document analysis should be reliable and valid sources and stated that they should be primary sources directly related to the research topic. In this study, reports of teachers' implementations of nature-based education were examined.

1. Data Collection

The implementation records of 6 preschool teachers working in cities of Ağrı, Erzurum and Iğdır are listed as data. The nature-based education implementations of teachers with children in the 2023-2024 spring term were reported. The reports consist of subheadings as pre-implementation, implementation process and implementation evaluation. The implementations consist of unstructured activities and one structured activity.

Table 1. *Preliminary information of the reports*

	Implementation area	Type of institution implemented	Number of children implemented	Time spent on implementation
Report 1 / T1	Ağrı	Independent pre-school	19	130 mins
Report 2 / T2	Erzurum	Independent pre-school	17	180 mins
Report 3/ T3	Ağrı	Pre-school class in primary school	9	180 mins
Report 4/ T4	Iğdır	Independent pre-school	6	180 mins
Report 5/ T5	Ağrı	Pre-school class in primary school	13	75 mins
Report 6/ T6	Ağrı	Independent pre-school	15	75 mins
Total			79	820 mins

The implementations of the examined reports were carried out in 4 of them in Ağrı, 1 in Erzurum and 1 in Iğdır. 4 of the reports were carried out in independent pre-schools and 2 in pre-school classes within primary schools. The applications were carried out with a total of 79 children and a total of 820 minutes were spent. The numbers of the reports and teachers are given in the same way. For example, Report 1 was prepared by Teacher 1 (T1). The identities of the teachers were kept confidentiality and they were numbered from 1 to 6.

2. Data Analysis

In this study, Merriam's (2009) stages were used while conducting document analysis. Firstly, documents were accessed in accordance with the subject aimed at the study. In the second step, the originality of the documents was confirmed by the teachers who implemented. In the third step, codes and categories were created in accordance with the documents. Finally, the created codes and categories were arranged in accordance with the content analysis. Content analysis is a frequently used method in document analysis studies and is a technique used to understand human behaviour and human nature (Bowen, 2009; Büyüköztürk et al., 2014). While conducting content analysis, firstly the internalised data and reports were read repeatedly, then codes and categories were created, and finally themes were created by bringing them together in a meaningful way (Creswell, 2007). The main themes of this study were determined as the pre-, process and post-nature learning; secondly, teachers' nature-based learning implementation experiences and finally children's nature-based learning experiences. The main themes were closely examined with sub-themes within themselves.

3. Validity and Reliability

The documents used in this study are primary sources because they were written by the teachers themselves. Sak et al. (2021) stated that in order for the documents to be reliable and valid in research conducted in the field of education, primary sources that address the research topic should be accessed. The fact that the reports used in this study are from primary sources increases the reliability and validity of this study. Providing the preliminary information of the reports clearly has also been shown as an important detail in terms of ensuring their validity and reliability. Also, the reports collected in the field in total 820 mins to collect deep knowledge from the implementations.

FINDINGS

The findings of this study were examined under three headings. First of all, a general review of the documents was conducted. In this review, teachers' reports of nature-based education implementation were examined before, during and after the application. Secondly, teachers' experiences were examined from the application process and application evaluation details in the reports, and thirdly, children's experiences were examined.

1. Pre-Implementation, Implementation Process and Post-Implementation in Nature-Based Education

A summary of the detailed information before, during and after the implementation in the report prepared by the teachers is given in Table 2.

Before the implementation, all teachers checked the weather condition and informed the institution manager and parents. Parents were asked to dress the children in appropriate clothing. First aid kits were prepared before the implementation. Necessary materials and children's nutrition were prepared, and finally, the safety rules that children should follow when going out were explained. During the implementation, two teachers reminded the children of the traffic rules when they went out and took care to implement them. One teacher reported that she did warm-up exercises. All teachers gave the children free time to explore nature and reported that they observed the children. Only in the report of T4, she reported that they watered the saplings they had previously planted with the children, and planted vegetable seedlings and seeds. After the implementation, all teachers reported that they cleaned the area, then collected the belongings, and the cleaning of the children at school was completed, they talked with the children about what they saw in the nature.

Table 2. *Summary of the reports*

	Pre-implementation	Implication process	Post- implementation
R1- T1	- Weather conditions were checked - Permission was obtained from the institution manager and parents - Parents were asked to dress their children appropriately - First aid kits were checked - Necessary materials were prepared - Safety rules were explained to the children - Children's nutrition was checked - Children were informed about the area - They went out in a single row	-Traffic rules were reminded and participated in while going to the area. - Observations were made in the area and conversations were held about the observations - Warm-up activity was done with movement cards - Children were grouped and asked to make observations with lights - Questions were asked to enable them to discover nature - Attention was paid to safety	- Area was cleaned - Traffic rules were reminded and lined up to return to school and we moved together - Children were cleaned at school - Chatted with children at school
R2- T2	- Weather conditions were checked - Permission was obtained from the institution manager and parents - Parents were asked to dress their children appropriately - First aid kits were checked - Necessary materials were prepared - Safety rules were explained to the children - Children's nutrition was checked - Children were informed about the area - They went out in a single row	- Children were told about traffic rules and guided to follow them - Children were observed - Open-ended questions were asked to explore nature	- Area was cleaned - Materials were cleaned - Time was given for children to clean - Chatted with children at school
R3- T3	- Weather conditions were checked - Permission was obtained from the institution manager and parents - Parents were asked to dress their children appropriately - First aid kits were checked - Necessary materials were prepared - Safety rules were explained to the children - Children's nutrition was checked - Children were informed about the area - They went out in a single row	- Free play time was given - Observation was made - Children were directed to green and soil areas in nature - Children were asked open-ended questions - Appropriate materials were used	- Area cleaning - Materials used were cleaned - Children were helped to clean - Chatted with children
R4- T4	- Weather conditions were checked - Permission was requested from the institution manager and parents - Parents were asked to dress their children appropriately - First aid kits were checked - Necessary materials were prepared - Safety rules were explained to the children - They went out in a single row	- The boundaries of the areas that children will use in the area were determined - Children were guided to explore nature and asked open-ended questions - Previously planted saplings were watered - Vegetable seedlings and seeds were planted and watered	- Children were asked to draw what they saw in the area - Area was cleaned - Items were collected - Children were helped to clean up - Chatted with children
R5- T5	- Weather conditions were checked - Permission was obtained from the institution manager and parents - Parents were asked to dress their children appropriately - First aid kits were checked - Necessary materials were prepared - Safety rules were explained to the children	- Free play and planned play time were allocated - Observations were made and notes were taken - Children were given the opportunity to explore nature and questions were asked to attract their attention - Children's safety was ensured - Children were helped when they wanted	- Area was cleaned - Chatted with children - During the chat, children were asked open-ended questions about what they saw in nature
R6- T6	- Weather conditions were checked - Permission was obtained from the institution manager and parents - Parents were asked to dress their children appropriately - First aid kits were checked - Necessary materials were prepared - Safety rules were explained to the children	- Free play and planned play time were allocated - Observations were made, observation notes were taken -Guiding was provided for children to explore nature -Necessary materials were provided to children	-Area cleaned -Materials collected -Back to school -Children completed their cleaning - Chatted with children for evaluation

2. Teachers' Experiences of Implementing Nature-Based Education

When the information in the documents was examined in-depth, two sub-themes were created: the activities carried out by teachers regarding their nature-based education application experiences and the teacher's evaluation of the process.

2.1. Activities carried out by the Teachers: The activities carried out by the teachers, their contents and the spontaneous situations encountered when they went to the field are given in Table 3.

Table 3. *Reported activities, contents and spontaneous situations encountered*

	Implemented Activities	Content of Activities	Spontaneous Situations Encountered
R1 -T1	Warm-up exercises Free play time Art activity Planned play	-chat about plants, trees, vehicles -warm-up exercises were done with movement cards -magnifying glasses were given to children -an art activity called nature palette was held -guess what game was played -balloon carrying game was played	-puppies
R2 -T2	Free play time Art activity	-free time for children to explore the area -frame made from craft sticks and natural materials glued -stone painting activity was done -warp game played -father wolf game played	-pile of sand -birds drinking water
R3 -T3	Free play time Art activity Planned play	-time was given to explore the area -water carrying game was played -painting was done with mud	-A dead insect on the wall
R4 -T4	Free play time Art activity Science activity	-children filled out observation sheets given to them in the nature -flowers were examined with magnifying glasses -sculptures and prints were made from mud -salad was made, children were given cucumber peelers -the pulp left over from the salad activity was buried in the soil	- puppies
R5 T5	Free play time Breathing exercise Art activity Science activity Planned play	- natural materials were collected - pictures were made with the collected natural materials - living and non-living things in nature were examined with a magnifying glass - children were given rope and asked to tie the branches they used while painting as they wished and create something creative - a game of tail grab was played	- bird's egg - fighting cats
R6 -T6	Free play time Planned play	-Children played games and chatted among themselves -Children were given magnification and asked to make examinations -Chain game was played	-felled tree and sprouted green leaves on it

Table 3 includes the activities reported by teachers. In nature-based education, all the teachers reported that they left children free for free play time. The teachers reported that they used free play time for children to explore nature and play freely among themselves. During free time, teachers observed children and reported that they asked them questions about living and non-living things they encountered in nature and encouraged them to think more. The teachers observed children's interactions and dialogues with each other during the free time they gave to children and took notes. 5 out of 6 reports benefited from art activities while providing children with a nature-based learning opportunity. Children were guided by their teachers to make art works with natural materials. Children's products were discussed and questions were asked during art activities. It was reported that the products made within the scope of art activities were photographed and included in children's portfolios.

All of the teachers stated in their reports that they planned play for children with rules that are suitable for playing outdoors within the scope of nature-based education. It was reported that all of the play with rules included movement and supported the motor development of the children. Within the scope of play with rules, the teachers preferred the play of carrying balloons, guess what, tug of war, father wolf, carrying water, tail grabber and chain. The teachers also observed the children during these games and took notes. T1 took the following notes on this subject ¨While blowing up the balloons, after several balloons burst one after the other, a student said, "opened them up in the sun and the air got heated, so that might be why they burst." C2: During the game, he said to his friend, "We need to stay calm and hide in order to win the game."

All the teachers reported the spontaneous situations they encountered when they went out into nature. Two teachers reported encountering puppies, one teacher reported encountering piles of sand and drinking birds, one teacher reported encountering dead insects, one teacher reported encountering bird eggs and fighting cats, and one teacher reported encountering a felled tree. They talked to the children about these spontaneous situations and reported that they evaluated these situations as learning opportunities by having conversations that triggered their curiosity and encouraged them to think creatively and critically. All the teachers emphasized in their reports that spontaneous situations attracted the children's attention more than planned activities and that they got very excited. T4 noted the following in his report on this subject: ¨ C1: He is very thirsty, the weather is very hot, he said. Yes, he might be thirsty, I said what should we do. C1: Let's give him water, teacher said. I said where are we going to put the water, we need to find something. The class tried to find a container to give the dog water. Finally, they found a container where they could put water and C1 gave the water and made him drink it. They were very happy doing this. ¨

Four teachers reported in their reports that they gave children magnifying glasses and guided them to examine living and non-living things in nature. Two teachers reported that they had science activities done during nature-based learning activities and stated that they gave magnifying glasses to children within the scope of these activities. The other two teachers who used magnifying glasses stated that they gave magnifying glasses within the scope of free time. Teachers who used magnifying glasses in their activities also emphasized in their reports that children loved magnifying glasses. Two teachers reported that they had children do physical exercises and breathing exercises within the scope of nature-based education.

2.2. Teachers' Assessments in Nature-based Education The reports were examined in two parts: the teacher's self-evaluation and the process evaluation.

Table 4. *Self-assessments and process assessments of teachers*

	Self-Assessment	**Process Assessment**
R1- T1	-I was excited like the kids too -an approach I will use from now on	-It was a very productive and nice experience
R2- T2	-I was so excited -I was happy to see them happy	-the process was very productive -we caught up learning opportunities
R3- T3	-I was very happy and relaxed -I am thinking of leaving because the distribution of children's suggestions is good -This is an approach that I will use frequently from now on	-It was difficult to do the application in the schoolyard within the primary school, the older children came and tried to interfere -The situations I did not include in the activity were very educational for the children
R4- T4	-I really enjoyed it -I will use this approach more often as I have found that children learn more	-I didn't realise how time passed and I had no difficulty in classroom management.
R5- T5	-I had concerns about how I would manage the children before going into the field, but after the application, I no longer had any concerns -I learned that I could create a richer educational environment by using natural materials	-the richness of the area attracted the children's attention and I had no difficulty in classroom management -I realized how hungry the children were for discovery and learning
R6- T6	-I was confident in my classroom management since I made sure to take them out to the garden regularly -This time we encountered more learning opportunities	-it was difficult to practice in the schoolyard within the primary school, there was distraction from the older children -it was productive because unexpected situations were turned into learning opportunities

Table 4 summarizes the teachers' self-assessment and process assessment reports. The teachers reported that they felt excited because they witnessed that children's learning processes in nature were more effective and meaningful in nature-based education practices. T6 stated in her report that she felt confident in classroom management because she regularly took the children to the garden. In return, T1, T3 and T4 stated that they would frequently use nature-based education approaches. T5 reported that he overcame her concerns about classroom management in nature-based education after the practice. All teachers reported that nature-based education was productive for children's

learning and development. T3 and T6, who work in a primary school, complained that primary school children came to pre-school children who were implementing nature-based education during break times, interfered with their activities and distracted the children. The teachers emphasized in their reports that the spontaneous situations encountered were turned into learning opportunities and that this was very productive in terms of the practice process.

3. Children's Nature-Based Education Experiences

The report prepared by the teachers included the evaluations of the children in the nature-based education process. The children's nature-based education experiences were examined in five separate sub-themes in terms of cognitive development, social and emotional development, physical development, language development, self-care skills. First, the teachers' evaluations of the children regarding their nature-based education experiences are given in Table 5.

Table 5. *Assessments of children's nature-based education experiences by the teachers*

	Assessments of Children	
R1-T1	-They were excited -They were meticulous about cleaning the environment -Their creativity was higher than in the class -They were more active and more harmonious -They had high energy	-They were more interested and sensitive to questions -They were eager to complete an activity and help their friends -They had fun -They were happy
R2- T2	-their awareness of the beings in nature increased -they were happy -they had fun -having full control during free time gave them self-confidence	-they found different shades of green and compared them -they compared their own height with big trees -they discovered how birds can drink water -they climbed on pile of sand
R3- T3	-children's different emotions were observed: surprise, excitement -they became aware of living and non-living things in nature -their communication was strengthened -children who were afraid of getting dirty overcame that fear	-they were happy -they paid attention to cleaning the environment -they discussed why the insect might have died -they observed a bird's nest and talked about how birds can build a nest -they did gross motor movements such as running, jumping, rolling
R4- T4	-they were happy -they were enthusiastic about the activities -there was less undesirable behaviour compared to the classroom -they learned to respect nature -they saw different types of leaves	-they examined the parts of flowers and said different colours -they compared the weights and surfaces of stones -they created creative designs with the natural materials they found -they noticed small details by observing nature
R5- T5	-children adapted very quickly -there were fewer undesirable and incompatible behaviour patterns outside -they helped each other when they fell while playing	-they had fun -they made up games together -their communication was very strong -sharing and helping skills were observed very often -they discovered the living spaces of ants
R6- T6	-using a magnifying glass made children excited -their communication and interaction behaviours observed more than in the classroom -they observed the movements of the birds -they questioned the types of trees and grass in the garden	-they compared the colours of the leaves -they noticed that some of the branches of the trees were broken, they talked about the need to treat trees kindly -they shared the plants whose names they knew

Table 5 shows the teachers' evaluations of the children regarding nature-based education practices. All teachers stated in their reports that all the children were happy and fun in nature-based education. T1, T4 and T5 compared the time they spent in nature compared to the time spent in the classroom and stated in their reports that the children were more interested, sensitive and exhibited less undesirable behaviour. None of the teachers stated any negativity in their reports regarding the children's experience of nature-based education. As can be seen in Table 5, the children were more excited in nature, they participated in the activities willingly, their cognitive, social, emotional and physical developments were supported positively and it is understood from the reports that they also reinforced their self-care skills by cleaning the area and cleaning themselves when they returned to school.

3.1. Cognitive Development of Children in Nature-Based Education

In the reports, children learned the characteristics of living and non-living things in nature. For example, in the report of T2, children compared their own heights with big trees; in the report of T4, children compared the weights of stones. T5 reported that children became aware of the living spaces of ants and discovered them; T2 and T6 reported that children compared the different colours of leaves with each other. In addition, S6 reported that children knew the names of plants. T3 stated in his report that children were curious about birds' nests and had dialogues about how they made them. Teachers reported in their reports that children produced creative ideas and products using natural materials. All these experiences are aimed at supporting cognitive development skills such as curiosity, questioning, creativity, critical thinking, comparison, remembering, and creativity.

3.2. Social and Emotional Development of Children in Nature-Based Education

When the teachers' evaluations of children in terms of social and emotional development are examined in the reports; the fact that children are happy and excited in their nature-based education experiences and that they can reflect these is an indicator of children's emotional development. T2 stated that children behave self-confidently because they manage the process themselves in their free time. As stated in the teachers' reports; the increase in children's interaction with each other, their dialogue, helping each other, sharing their knowledge and what they see with each other and being aware of the environment they live in are indicators of social development. For example, T6 stated in his report that children were upset when they saw that some of the branches of the trees were broken and that trees should be treated with care. On the other hand, T5 stated in his report that children helped their friends when they fell while playing.

3.3. Physical Development of Children in Nature-Based Education

When the reports are examined in terms of physical development, it is stated that children can run, roll, climb and jump freely thanks to nature-based education. This helps children to discharge their physical energy comfortably. In his report, T1 stated that children have very high energy and need to move. In his report, T2 stated that children climb and slide down the sand dunes they see in the area. T3 stated that children engage in activities aimed at gross motor skills such as running, jumping and rolling. It is seen that nature-based education experience contributes to children's physical development.

3.4. Language Development of Children in Nature-Based Education

According to the teachers' reports, it is possible to emphasize that children's language development is positively supported in nature-based education due to the increase in children's interaction and communication with each other. In the report of T6, it was stated that a child knew the name of a plant in the school garden and shared it with his friends and then the other children repeated the name of that plant. T3 stated in his report that the children were very excited and happy and that some children expressed themselves as "teacher, please let's go out again, it's so fun outside." T1 drew attention to the fact that a child with mild learning difficulties in his class was more talkative in nature-based education. T4 emphasized in his report that children were more talkative in activities carried out in nature. It was revealed in the records in the reports that the language development of children who experienced nature-based education was positively supported.

3.5. Self-care Development of Children in Nature-Based Education

Teachers stated in their reports that they directed children to clean the environment after activities in nature and helped children to maintain hygiene when they returned to school. In the evaluation conversation with the children, teachers reported that children were disturbed by garbage and that they had dialogues about being careful about nature. In this respect, it was revealed that the nature-based education experience created an awareness of self-care skills in children regarding the need to be clean and careful about themselves and their environment.

DISCUSSION, CONCLUSION and RECOMMENDATIONS

The examination of the implementation reports including teachers' nature-based education experiences was examined under three main themes. First of all, the teachers in nature-based education were evaluated before, during and after the implementation of nature-based education. It was observed that teachers obtained the necessary permissions from the institution director and parents before the implementation, paid attention to preparing appropriate clothing and materials, and checked the weather and first aid kits. During the implementation process, they definitely gave children free time. During this free time, they asked open-ended questions and gave magnifying glasses to children to ensure that they explored nature. After the implementation, all teachers paid attention to the cleanliness of the application area and the hygiene of the children and had evaluation conversations with the children. As the second main theme, teachers' nature-based education implementation experiences were addressed and examined closely under two sub-themes. First, the activities carried out by teachers within the scope of nature-based education were addressed with their contents and the situations they encountered spontaneously; then, teacher evaluation in nature-based education was examined under the subheadings of teachers' self-evaluations and process evaluations. As the last main theme, the findings of children's nature-based education experiences from teachers' reports were mentioned. This finding was obtained from the notes about children in the teachers' reports and the children's dialogues. Children's nature-based education experiences were examined under a close lens under five subheadings: cognitive development, social and emotional development, physical development, language development and self-care skills. This study found that teachers had a positive approach to nature-based education practices both in terms of classroom management and the students' increased spontaneous learning. According to teachers' reports, students also benefited maximum from nature-based education practices.

According to the reports of preschool teachers examined in the study, children got to know their surroundings and developed environmental awareness thanks to nature-based education. This situation is consistent with the finding that effective approaches should be taken into consideration in order to ensure the development of children's environmental awareness, which Soydan and his colleagues (2013) revealed in their study. Similarly, Güzelyurt and Özkan (2017) emphasized in their study that people should love nature and exhibit environmentally friendly attitudes and behaviours during childhood. Children gaining love and respect for nature at a young age will provide skills in the future. Therefore, nature-based education given in early childhood provides the basis for children to gain sustainable skills. In the reports examined in this study, it is seen that teachers are knowledgeable about the things to do before going out into nature in the practices they carry out within the scope of nature-based education. However, this finding contradicts the finding of Güzelyurt and Özkan (2018) in their study, which revealed that teachers do not look favourably on environmental education practices because they encounter too many negativities. Contrary to the findings of Güzelyurt and Özkan (2018), the reports examined in this study revealed that teachers liked nature-based education, wanted to use it again, and had a positive attitude by stating that it was good for children and themselves. Teachers mostly used free time and art activities in nature-based education. Various studies have revealed that art activities facilitate children's connection with nature (Arabacı & Gök, 2021; Flowers et al., 2015; Temiz & Karaarslan Semiz, 2018; Kanat, Dağlı & Dalfidan, 2023). In this study, teachers stated that they did not have difficulty in classroom management in nature-based education. In this sense, it can be said that nature-based education adds a different dimension to classroom management.

The teacher's reports revealed that nature-based education experiences positively support all developmental characteristics of children. Nature-based education experiences contributed to children's creativity, increased curiosity, and development of observation skills. It has been revealed that there is faster and more permanent learning in situations that make children active in early childhood period (Erentay & Erdoğan, 2017). In this study, nature-based learning opportunities

provided to children activated their senses and emotions, and in the process evaluation conversation that teachers had with children after the application included in the report, children transferred what they learned in nature to the classroom. Therefore, this finding of the study is consistent with the study of Erentay and Erdoğan (2017). In their studies, Kanat, Yeşil Dağlı, and Dalfidan (2023) emphasized that activities done in nature create awareness, love of nature, and consciousness of nature in children and that these activities support children's cognitive, social, emotional, and physical development. The situations that children encounter in nature-based education make it easier for them to connect with real life and grasp cognitive skills more easily (Taner, 2019). Nature awareness should be gained by children through practices through the nature they are in (Budianto & Torsch, 2002; Migliarese, 2008; Köşker, 2019; Mol, 2019). Interacting with nature in early childhood can improve children's awareness and sensitivity, as well as be effective in teaching children ecological responsibility (Ballantyne & Packer, 2002; Chawla, 2006; Civelek & Özyılmaz Akamca, 2017; Güzelyurt & Özkan, 2018; Louv, 2008; Mitchell et al., 2016). In order to ensure children's development, teachers asked intriguing questions to draw children's attention to nature during their free time, and provided children with various sensory experiences by allowing them to use materials in nature freely. There are some studies supporting this dimension (McCormick, 2022; Philip, 2022; Yıldırım & Akamca, 2017).

This study has revealed that children's nature-based education experiences have improved cognitively. Similarly, Polat and Demirci (2021) emphasized in their literature study that nature-based education helps children's cognitive development. Kiewra and Veselack (2016) revealed in their research that natural environments develop children's creativity and imagination. Ernst and Burçak (2019) stated in their study that nature-based education experiences develop children's curiosity, creativity and endurance skills. It is thought that nature-based education also has a positive effect on school success, healthy living and positive behaviour development (Polat & Demirci, 2021). Also, Aydın and Aykırı (2023) revealed in their studies that all primary school teachers had fruitful experiences from the forest school implications. Currently, there is lack of studies about the in-depth implementations of nature-based education in pre-school level in Türkiye. Thus, this research shed a light and create an awareness in pedagogical applications in this study, the teachers also stated in their reports that children's behaviour was positively affected. The finding of the activity used by teachers in nature in this study coincides with the study conducted by Temiz and Karaarslan Semiz (2018). Temiz and Karaarslan Semiz (2018) emphasized in their study that the activities that support science, art and cognitive development provided to children through nature-based education provide an unforgettable experience that cannot be measured by exams. It has been revealed in the teachers' reports that nature-based education offers children unique opportunities not only in academic terms but also in social and emotional terms. Bardakçı and Mart (2023) emphasized in their study that the values of respect, responsibility and love are acquired in the outdoor environment.

Teachers have approached nature-based learning experience applications positively and have concluded that learning is more effective because it is a method that makes children active. In the preschool period, teachers' activities within the scope of nature-based education can be diversified and children can be provided with opportunities to experience nature more. This study is limited to only 6 teacher reports. Reports of more teacher groups can be examined, children can be interviewed and anecdotal records can be taken and another in-depth study can be conducted. Considering the development of children in nature-based education, it is recommended that the Ministry of National Education conduct studies to spread this education. The Ministry of National Education may make agreements with local governments and civil organizations and arrange parks and gardens in a way that is suitable for the access of pre-school classes are located, which will facilitate both the safety of children and teachers' access to nature-based education.

Türkiye'de Okul Öncesi Öğretmenlerinin ve Çocuklarının Doğa Temelli Eğitim Deneyimleri

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Özet

Gelişen teknolojinin sağladığı olanaklarla doğadan uzaklaşmış çocuklara doğa temelli eğitim verilmesi onların bütünsel gelişimleri açısından önemlidir. Erken çocukluğun önemli bir bölümünü kapsayan okul öncesi eğitim döneminde öğretmenler çocuklara doğa temelli eğitim deneyimleri sunmalı ve onları gelişim ve öğrenmelerinde aktif tutmalıdır. Çocuklar duyularının aktif olduğu ortamlarda kalıcı öğrenmeler yaşayabilirler. Ayrıca çocuklar doğada aktif olduklarında çevre bilinci, şefkat ve doğaya saygı da kazanabilirler. Bu çalışmada 6 okul öncesi öğretmeninin raporlarındaki doğa temelli eğitim deneyimleri doküman analizi yöntemi kullanılarak incelenmiştir. Raporlar içerik analizi yöntemi kullanılarak analiz edilmiştir. Bulgularda üç ana tema kendi alt temalarıyla birlikte ele alınmıştır. Öncelikle öğretmenlerin doğa temelli eğitim çıkarımları öncesinde, sırasında ve sonrasında incelenmiştir. İkinci olarak öğretmenlerin doğa temelli eğitim çıkarımları deneyimleri ele alınarak iki alt temada incelenmiştir. Bu tema altında öğretmenlerin doğaya dahil ettikleri etkinlikler içerikleriyle birlikte incelenmiş ve doğaya çıktıklarında karşılaştıkları spontane durumlar ele alınmıştır. Daha sonra öğretmenlerin doğa temelli eğitimde kendilerini ve süreci değerlendirmeleri ele alınmıştır. Son olarak öğretmen raporlarından çocukların doğa temelli eğitim deneyimlerine ilişkin bulgulara ulaşılmıştır. Bu bulgu, öğretmenlerin uygulama sırasında çocukları gözlemlemeleri ve uygulama sonrasında çocuklarla yaptıkları konuşmalardan ortaya çıkan diyalogları incelemiştir. Öğretmenlerin doğa temelli eğitim uygulamalarının çocukların tüm gelişim alanlarına olan etkileri incelenmiştir. Çalışma sonucunda doğa temelli eğitim, çocukların bilişsel, sosyal-duygusal, fiziksel, dil gelişimi ve öz bakım becerilerini geliştirmeye yardımcı olması nedeniyle öğretmenler tarafından olumlu karşılanmıştır. Raporları hazırlayan bazı öğretmenler doğa temelli eğitim yaklaşımını tekrar kullanmak istediklerini belirtmişlerdir. Okul öncesi dönemde doğa temelli öğrenmenin yaygınlaştırılmasına yönelik çalışmalar yapılması önerilmektedir.

Anahtar Kelimeler: Doğa temelli eğitim, Doğa, Okul öncesi eğitim, Erken çocukluk eğitimi, Öğretmen, Çocuk

E-Uluslararası Pedandragoji Dergisi

Cilt: 4, Sayı: 2, ss. 101-116

Araştırma Makalesi

Gönderi: 03.10.2024
Kabul: 05.12.2024

Önerilen Atıf

Karaoğlu, S. (2024). Türkiye'de Okul Öncesi Öğretmenlerinin ve Çocuklarının Doğa Temelli Eğitim Deneyimleri, *E-Uluslararası Pedandragoji Dergisi (e-upad*), 4(2), 101-116. *https://trdoi.org10.27579808/e-ijpa.130*

GENİŞLETİLMİŞ ÖZET

Problem: Toplumların eğitsel amaçlarına ulaşmalarında okul öncesi eğitimin önemi yadsınamaz. Bu önemin farkındalığı dünden bugüne artış göstermekle birlikte artık nicelle birlikte nitelin de önem kazandığı bir zaman kesitinde olunduğunun bilincinde olmak gerekmektedir. Yani artık sadece okul öncesi eğitimi yaygınlaştırmak (Toprakçı, 2010) değil aynı zamanda okul öncesi eğitimin kalitesini artırmak gerekmektedir. İşte tam olarak bu açıdan, çocukların gelişimlerinin ilk basamağı olan bütün gelişim alanlarına ait becerilerin desteklendiği okul öncesi dönemde çocuklara okul ortamında zengin deneyimler sunmak önemli hale gelmektedir. Bu zengin deneyimler okul bahçesinde ya da yakın alanlarda doğa ile iç içe sağlanabilir. Ancak okul öncesi dönemde açık havadan yararlanma durumu gün geçtikçe azalmaktadır (Çelik, 2012). Bu durum ise çocuklarda fiziksel ve duygusal olarak pasiflik yaratmaktadır. Hareketsizliğe bağlı olarak fazla kilo alma, dikkat eksiklikleri, sosyal ilişkilerde zayıflama gibi birçok sorun ortaya çıkarmaktadır (Muslu & Gökçay, 2019; Louv, 2008). Avraamidou (2015)'ya göre çocuklar okul ortamı dışında dünyaya dair edindikleri bilgilerin büyük kısmını almaktadır. Diğer taraftan okul dışında doğanın sunduğu fırsatlardan faydalanmak günümüzde okul öncesi eğitiminde çalışan uzmanlar için ilgi konusu olmaktadır. Bu durum erken çocukluk eğitim uygulamalarında da sıklıkla görülmektedir (Lysklett, 2017). Doğada çocuklara sağlanan yüksek enerjili oyunlar, çocuklara daha fazla öğrenme kapasitesi sağlamak için beyinde ilgili sinir ağlarının büyümesini ve gelişmesini sağlamaktadır (Jenson, 2000; Akt. Clements, 2004). Doğa ile temasın sağlık ve psikolojik iyi oluş açısından, fiziksel, sosyal ve duygusal gelişim alanları açısından olumlu etkilerinin bulunduğunu gösteren çalışmalar mevcuttur (Bowler vd., 2010; Cooper, 2015; Said, 2012; Wells & Evans, 2003).

Günümüzde sanayileşme ve şehirleşmenin yayılması, doğal alanlar azalmasına sebebiyet vermekle birlikte sosyal hayatın doğadan kopmasını da hızlandırmıştır (Berberoğlu & Uygun, 2013; White, 2004). Çocuklar da bu durumdan olumsuz etkilenmişlerdir. Louv (2008) Doğadaki Son Çocuk kitabında çocuklarda doğa yoksunluğu sendromundan bahsetmiştir. Çocuklar içinde bulundukları doğal çevreden habersiz ve bilgisiz bir şekilde yetişmektedirler (White, 2004). Çevre sorunlarına karşı sorumluluk sahibi olan ve çözüm üreten nesiller için çocukların doğayla bağlarının kuvvetlendirilmesi gerekmektedir (Chawla & Cushing, 2007; Collado, Staats & Corraliza, 2013). Bu yüzden, okul öncesi öğretmenlerine önemli sorumluluklar düşmektedir. Okul öncesi öğretmenleri çocukların doğayı merak etme ve keşfetme duygularını geliştirmek amacıyla çevreyi kullanabilmelidir (Gerrish, 2014). Buna bağlı olarak öğretmenler doğa temelli eğitim yaklaşımını benimsemeli ve çocukları okul dışı öğrenme ortamlarında aktif kılmalıdır. Çünkü çocuklar erken yaşlarda gördükleri, dokundukları ve duyabildikleri yani duyularını aktif olarak kullanabildikleri, merak ettikleri, gözlemleyebildikleri bir ortamda öğrenmeleri daha hızlı ve etkili olmaktadır (Erentay & Erdoğan, 2017). Bu nedenle öğretmenlerin öncelikle kendi doğa deneyimlerinin geliştirilmesi, doğa temelli eğitime ilişkin bilgi ve becerilerinin artırılması gerekmektedir (Ernst & Theimer, 2011).

Yöntem: Çalışma nitel analiz yöntemlerinden doküman analizi yöntemi olarak tasarlanmıştır. Nitel araştırma, görüşme, gözlem veya doküman analizi gibi nitel veri tekniklerinin kullanıldığı, olayların doğal ortamlarında gerçekleştirildiği bir çalışma türüdür (Yıldırım ve Şimşek, 2018). Özkan (2021, s.22) eğitim alanında doküman analizini "araştırmanın veri setini oluşturan birincil veya ikincil kaynak niteliğindeki çeşitli dokümanları elde etme, inceleme, sorgulama ve analiz etme" olarak tanımlamıştır. Sak vd. (2021) doküman analizinde kullanılacak dokümanların güvenilir ve geçerli kaynaklar olması gerektiğini vurgulayarak, doğrudan araştırma konusuyla ilgili birincil kaynaklar olması gerektiğini belirtmişlerdir. Bu çalışmada öğretmenlerin doğa temelli eğitim uygulamalarına ilişkin raporları incelenmiştir.

Bulgular: Bu çalışmanın bulguları üç başlık altında incelenmiştir. Öncelikle dokümanların genel bir incelemesi yapılmıştır. Bu incelemede öğretmenlerin doğa temelli eğitim uygulamasına ilişkin raporları uygulama öncesi, sırasında ve sonrasında incelenmiştir. İkinci olarak öğretmenlerin uygulama süreci ve raporlardaki uygulama değerlendirme detaylarına ilişkin deneyimleri incelenmiş ve üçüncü olarak çocukların deneyimleri incelenmiştir. Uygulama öncesine ait bulgularda; uygulama öncesi tüm

öğretmenler hava durumunu kontrol ederek kurum müdürüne ve velilere bilgi vermiştir. Velilerden çocuklarına uygun kıyafetler giydirmeleri istenmiştir. Uygulama öncesi ilk yardım çantaları hazırlanmıştır. Gerekli malzemeler ve çocukların beslenmesi hazırlanmıştır, son olarak çocukların dışarı çıkarken uyması gereken güvenlik kuralları anlatılmıştır. Uygulama esnasında iki öğretmen çocuklara dışarı çıktıklarında uymaları gereken trafik kurallarını hatırlattı ve uygulamaya özen göstermiştir. Bir öğretmen ısınma egzersizleri yaptığını bildirmiştir. Tüm öğretmenler çocuklara doğayı keşfetmeleri için serbest zaman vermiş ve çocukları gözlemlediklerini bildirmiştir. Sadece Ö4 raporunda çocuklarla birlikte daha önce diktikleri fidanları suladıklarını, sebze fidesi ve tohum ektiklerini bildirmiştir. Uygulama sonrası tüm öğretmenler alanı temizlediklerini, ardından eşyalarını topladıklarını ve çocukların okulda temizliğinin tamamlandığını, çocuklarla doğada gördükleri hakkında konuştuklarını bildirmiştir. Öğretmenlerin doğa temelli eğitim uygulama deneyimlerine ilişkin gerçekleştirdikleri etkinlikler ve öğretmenin sürece ilişkin değerlendirmeleri olmak üzere dokümanlarda yer alan bilgiler derinlemesine incelenerek iki alt tema elde edilmiştir. Üçüncü bulgu olarak ise; öğretmenlerin hazırladığı raporda doğa temelli eğitim sürecinde çocukların değerlendirmeleri yer almıştır. Çocukların doğa temelli eğitim deneyimleri bilişsel gelişim, sosyal ve duygusal gelişim, fiziksel gelişim, dil gelişimi, öz bakım becerileri olmak üzere beş ayrı alt temada incelenmiştir.

Sonuç ve Öneriler: Öğretmenler doğa temelli öğrenme deneyimi uygulamalarına olumlu yaklaşmışlar ve çocukları aktif kılan bir yöntem olduğu için öğrenmenin daha etkili olduğu sonucuna varmışlardır. Okul öncesi dönemde öğretmenlerin doğa temelli eğitim kapsamındaki etkinlikleri çeşitlendirilebilir ve çocuklara daha fazla doğa deneyimi yaşama fırsatı sağlanabilir. Bu çalışma sadece 6 öğretmen raporu ile sınırlıdır. Daha fazla öğretmen grubunun raporları incelenebilir, çocuklarla görüşmeler yapılıp anekdot kayıtları alınabilir ve başka bir derinlemesine çalışma yapılabilir. Çocukların doğa temelli eğitimdeki gelişimi göz önünde bulundurulduğunda, Millî Eğitim Bakanlığı'nın bu eğitimi yaygınlaştırmak için çalışmalar yapması önerilir. Millî Eğitim Bakanlığı yerel yönetimler ve sivil toplum örgütleriyle anlaşmalar yaparak park ve bahçeleri okul öncesi sınıflarının erişimine uygun şekilde düzenleyebilir hem çocukların güvenliğini hem de öğretmenlerin doğa temelli eğitime erişimini kolaylaştıracaktır.

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Destek/Finansman Bilgileri: Yazar(lar), bu makalenin araştırılması, yazarlığı ve yayınlanması için herhangi bir finansal destek almamıştır.

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