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An Investigation of the Views of Preschool Teachers Participating in the 'Forest Teaches, I Discover' Project Carried Out within the Scope of Tübitak 4004 on Nature Education

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Abstract: The aim of the study is to reveal the expressions of the preschool teacher, who participated in the teacher nature workshops in the 'Forest Teaches, I Discover' project carried out within the scope of TÜBİTAK 4004 Nature Education and Science Schools Support Program, about the awareness, views and skills of transferring the experiences gained in the workshops to the learning processes of the students. In the project, the presentation of the theoretical framework on the subject, wood production and various nature activities were carried out in teacher nature workshops. The participants are 10 pre-school teachers selected by convenient sampling method, working in Kocaeli. Phenomenology (phenomenology) research design, one of the qualitative research methods, was used in the project. Data were collected through semi-structured interview questions and analyzed by content analysis method. As a result of the analysis of the data, Views on Nature Education in terms of Professional and Personal Development, Views on the Effect of Children's Science Process Skills in Nature Education, Teachers' Emotions and Thoughts on Nature Education, Views on Nature Education in terms of Values Education, Views on the In-Class Adaptation of the Achievements Acquired by Nature Education Teachers and Six themes were identified: Project Satisfaction, Creation of Similar Events, and Views on Recommending to Others. They stated that teachers have gained gains such as implementing nature-based activities in the classroom, creating a naturebased activity plan, using natural materials in the classroom, planning field trips, creating activity examples, creating awareness of nature in children, and enabling children to connect with living things. In addition, it was determined that they experienced a workshop process that exceeded their expectations, that they demanded the continuity of the project, and that they were motivated in terms of nature-based activity practices. According to the research findings, it is seen that teachers stated that many values can be gained to children in nature-based learning processes and that values education is a part of nature education. Finally, teachers; It has been revealed that nature-based learning processes contribute to the development of children's basic scientific skills such as observation, classification, measurement, implementation, communication, evaluation and problem solving.

Keywords: TUBİTAK 4004, Nature Education, Teacher Opinions, Preschool Education.

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Introduction

The experiences that people have in their social and physical environment from the moment they are born have an important role in shaping their attitudes and behaviors. In this context, early childhood is a critical period in which attitudes and behaviors that will be carried into adulthood and cognitive, social and emotional development are provided (Köşker, 2019). Providing rich learning environments to children in the early childhood period covering the 0-8 age range supports all developmental areas of children (Poyraz & Dere, 2011). It is very important to introduce children to nature in their early childhood and to give nature awareness and love. Natural learning environments are places where children realize their experiences, learn by doing-living, and where effective and permanent learning is performed. In addition, it is stated that many attitudes and skills developed in the preschool period, and the use of natural environments in learning processes laid the foundation for the development of scientific concepts related to nature and the development of attitudes and skills related to science and nature (Gür, 2022). In the modern industrial world, with the effect of urbanization, many children cannot interact with the natural environment and grow up in closed areas away from physical activities and being exposed to technology (White, 2004). It is stated that if early childhood, which has a critical importance in all developmental areas, is deprived of insufficient experience and natural living environment, it will bring negative feelings such as anxiety, stress and hopelessness (Louv, 2018; Sobel, 2014).

Within the literature, some researchers have tried to reveal the views of children about nature. In the study conducted by Bonnet and Williams (1998), it was stated that nature is essentially important for children, that children see nature as the home of animals and that they do not want to be disturbed in their homes. Rickinson (2011) stated that children perceive nature as an unmanned and natural entity, and although they call it wild and dangerous, they also see it as an environment where they can have fun and spend time. In a qualitative study conducted by O'Brien (2009), children attending forest kindergarten were observed and it was concluded that at the end of the year, children showed improvement in self-confidence, motivation, language and communication and motor skills. In another study conducted by Waters and Begley (2007), it was observed that children who attend a forest kindergarten have more positive risk-taking behaviors than children who attend a traditional kindergarten both in the garden of the school and in the forest. Considering the results of the mentioned researches, it is thought that the contribution of nature to the development of children cannot be ignored.

When the historical processes of nature-based education are examined, it is seen that philosophers such as Jean-Jacques Rousseau, Locke, Johann Pestalozzi, Froebel, who are pioneers in child education, emphasized that children learn by exploring in the natural environment. These philosophers in question constantly developed the natural learning model, and they led the way to "kinder-gartens" or "children's gardens" model. Inspired by Froebel, McMillan opened the first open-air nursery school in England (Yalçın, 2017). These educational models include a learning process in which children directly experience, carry out learning practices, and build deep interactions with nature. It has been stated that children strengthen their attention, self-awareness and cognitive development with the research processes they carry out in the natural environment (Hargrave, 2013). The common denominator that many alternative education thinkers consider in education is nature. When the practices related to nature education are examined; these models have become widespread and started to be implemented in many countries such as Germany, England, Russia, Japan and Lithuania, especially Scandinavian countries, which have adopted the forest school approach (Hargrave, 2013). The forest school approach, which strongly deals with the relationship between nature and children, is an approach based on children's learning by exploring and playing freely in forest or wooded areas all year long, regardless of weather conditions. There are warehouses in the form of mobile or caravans and a shed where school materials are kept. In the approach

where the number of teachers is high and the curriculum is child-directed, the motto of the teachers is 'no rush, no panic'. It is among the characteristics of the teachers in these schools that the teacher respects the learning speed of the children, provides opportunities for exploration, and has the ability and experience to guide their learning (Amus, 2013).

In order for people to have a more livable nature, to respect natural life and other living things, to internalize that human beings are also a part of nature, and not to see their own race as superior to other stakeholders of the ecological system, nature education should be given systematically, continuously and at an early age. Yağcı (2016) stated that long-term and qualified nature education helps children become a part of nature and develops a new perspective on nature. Children's understanding of the details of the environment, their connection with the environment and their interest in natural events are closely related to their cognitive maturity. It is stated that children in middle childhood establish more realistic relationships with nature while children in early childhood establish more emotional relationships with nature (Legault, 1999). It is possible to strengthen this emotional bond of children with nature in early childhood with various naturebased activity contents. Cevher Kalburan (2009) stated that the early childhood period, in which children are curious and willing to explore, is the critical period in which the potential to acquire attitudes and behaviors is the highest. While explaining the basic policies in the 2023 Education Vision for a Strong Future of the Ministry of National Education of the Republic of Turkey, it is mentioned that education in the 21st century does not take place only in schools and learning takes place in various environments. In addition, it is stated in the education vision that raising consciousness and awareness in basic education will be the basis, children will get to know nature and culture starting from the environment they live in, and will play an active role in the process (Http-1, Accession Date: 30 September 2022). It is important for the teacher to be a positive model in creating knowledge, positive attitudes and behaviors about nature (Akköse, 2008; Güler, 2010). For this reason, pre-school teachers' tendencies, attitudes, perceptions and experiences about nature play a key role in the acquisitions that children will acquire about nature. In this context, early childhood teachers need to be able to use the close environment in activities and keep children's curiosity and exploration of nature vigorous (Gerrish, 2014). Teachers are expected to have sufficient knowledge and skills on nature-based education so that they can use the natural environment in the learning processes of children (Ernst & Theimer, 2011). The influence of nature on the development of children is too great to be ignored. For this reason, learning environments offered to children in schools should be planned in a way that prevents negative emotions and satisfies children's curiosity. On the other hand, it has been stated that providing rich stimulating learning environments, planning and implementing game-based and childcentered activities in learning processes and out-of-school learning environments where naturebased education takes place are related to the use of knowledge by preschool teachers (Ünser, 2021). Within the literature, in the study conducted by Ayvacı et al. (2002) it was stated that most of the preschool teachers participating in the study were not at a sufficient level in planning and conducting science and nature activities, using different teaching methods and techniques, and developing materials. In addition, it was stated that teachers could not reach the determined target due to limitations such as the activities being structured, not suitable for the purpose, and low sustainability (Demiriz & Ulutaş, 2000; Karamustafaoğlu & Kandaz, 2006; Kıldan & Pektaş, 2009; Ravanis & Bagakis, 1998). When the preschool education program of the Ministry of National Education (MoNE) is examined, it is seen that there are no direct gains and indicators for the learning and teaching processes of natural environments, and the concept and certain days-weeks are few in number (MoNE, 2013). On the other hand, there are many organizations and programs in Turkey that emphasize the importance of nature education and support learning processes. One of them is TUBİTAK 4004 Nature Education and Science Schools support program. TUBİTAK 4004 Nature Education and Science Schools support programs consist of activities carried out within the framework of a specific education program, which allow children to understand science and nature through observation and experience, in

order to raise awareness of individuals on nature, science and technology. The program aims to enable participants to expand their perspective on creativity, scientific literacy, science and nature, and provide interdisciplinary learning (TUBİTAK, 2022).

This study includes the implementation results of the teacher nature workshops included in the project number 524884 "Forest Teaches, I Discover" supported by the 2019/1 call of TUBİTAK 4004 Nature Education and Science Schools. The aim of the project is to increase the awareness of pre-school teachers, who have a key role in nature education, about nature, to develop their perspectives on nature and to enable children to use the natural environment in a qualified way in learning environments. Through the teachers participating in the project, it is aimed that children in early childhood can discover natural life, create an emotional bond with nature, create values of love, respect and responsibility towards nature, develop creative solutions to the problems they encounter by gaining experiences in nature and support their holistic development. Children's respect for natural life and the ecological cycle can only happen when they see themselves as a part of nature, but only when they are in touch with nature. The fact that science and nature activities carried out in institutions providing education to the early childhood period are structured, the importance of out-of-class education is not given much importance, the activities are limited in the classroom, and the teachers' awareness and environmental literacy are low, revealed the problem situation of this research.

In this context, in this study, it is aimed to reveal the views of 10 preschool teachers who participated in nature-based teacher workshops within the scope of TUBİTAK 4004 'The Forest Teaches, I Discover' project about their experiences regarding nature-based activities and their transfer to students' learning processes. As a role model, pre-school teachers should first increase their awareness of natural learning environments in order to use natural environments in qualified learning processes. The contribution of the project to this requirement is considered important. It was stated in the teacher statements that there were positive changes in the attitudes of the preschool teachers who participated in the nature teacher workshops towards the subject. In this research, it is thought that determining the opinions of teachers will contribute to the literature in terms of determining the level of reaching the final goals of the project and its dissemination.

Method

Qualitative research method was used in the research carried out within the scope of TUBİTAK 4004 'The Forest Teaches, I Discover' project since it was aimed to determine the opinions of preschool teachers about teacher nature workshops in a given time and environment. Strauss and Corbin (1997) used qualitative research. Instead of statistical descriptions, it is a method that enables the data to be examined in more detail and in-depth and the questions about the problem situation to be examined. Phenomenology design was used as the research design. The phenomenology research design covers the phenomena that individuals are aware of in their daily lives but do not have a deep understanding of; it aims to reveal the individual's own experiences, meanings and perspectives attributed to events (Patton, 2018; Wilson, 2015). In the phenomenology research design, it is tried to reveal the basic features that are common in the experiences of individuals and the meanings they attribute to the events (Creswell, 2020, p. 82). In this context, data were collected from 10 pre-school teachers involved in the project by semi-structured interview technique.

Participants

The participants of the study consist of 10 pre-school teachers who participated in the teacher nature workshop within the scope of the TUBİTAK 4004 'Forest Teaches, I Discover'

project working in Kocaeli. The working group was formed by using the appropriate sampling method by creating a project implementation form. Appropriate sampling method is the selection of people or units suitable for the feasibility of the study in terms of time, cost and labor (Büyüköztürk et. al., 2012). Participants who have not participated in any TUBITAK project before were preferred. Ten preschool teachers were randomly included in the project among 21 applicants. Demographic information about the study group is given in Table 1.

Table 1
Demographic Characteristics of Participants

Name	Gender	School Type	Year of Service
Aslı	Female	Kindergarten in primary school	7 years
Anıl	Male	Independent kindergarten	6 years
Ayşe	Female	Independent kindergarten	7 years
Bahar	Female	Kindergarten in primary school	4 years
Hilal	Female	Kindergarten in secondary school	9 years
Melis	Female	Kindergarten in primary school	10 years
Özge	Female	Kindergarten in primary school	4 years
Sevcan	Female	Kindergarten in primary school	6 years
Yeliz	Female	Kindergarten in secondary school	13 years
Zeynep	Female	Kindergarten in secondary school	6 years

* Participants were given pseudonyms.

With Table 1, it is seen that teachers work in various school types. Considering the years of service, it was determined that 9 participants were in the first 10 years of their duties.

Data Collecting

In the study, data was collected by interview technique. In-depth interview is a technique that cares about the details and essence of the subject that the participant wants to tell with deepening questions in line with the general answers of the participants, without a certain category and question list (Akmehmet Şekerler, 2015). A semi-structured interview form (Appendix-1) was used as a data collection tool. The semi-structured interview form consists of five open-ended questions, and it was revised and finalized by taking the opinions of three different experts working in the field of pre-school education.

At the end of the project, data were collected through interviews in the spring term of the 2020-2021 academic year from the teachers who participated in the teacher nature workshops, which included theoretical framework, wood production and nature activities, which lasted for three days in total.

Analysis of Data

In the study, interviews with preschool teachers were transcribed and evaluated with content analysis. Content analysis aims to emphasize similar or different aspects in the text by categorizing the concepts, words or themes in many texts in a meaningful way (Weber, 1990). The data were analyzed by reaching a consensus by the researchers to ensure consistency between the themes and codes. Then, two different expert opinions were taken for the themes and codes created, and the final version of the data analysis was created by revising it. While analyzing the data, pseudonyms were given to the participants and quotations from the interviews were given to support the results.

Implementation Phase of the Study

Supported by TUBİTAK 4004 nature education and science schools in the 2019/1 call period, the project numbered 524884 "Forest Teaching, I Discover" was carried out in Kocaeli in the 2020-2021 academic year. With the idea that nature is children's homes, the aim of the project is to love and respect nature, learn by discovering and living, to develop children's sense of curiosity and creativity, to increase their cognitive and language skills, and to develop preschool teachers' perspectives on nature, to raise awareness and to develop their creativity by using different methods and techniques. The target audience of the project is the preschool teachers in the district and the preschool students studying in their classrooms. The project consists of two phases: In the first phase, there are teacher-nature workshops, where teachers gain new experiences in nature education and the theoretical information on nature education, wood production and activity content on nature education take place within three days. The second phase of the project consists of the process of practicing nature activities by spending a school day in nature, where teachers and students have different perspectives on nature education. In the second phase of the project, an additional group of permanent students was provided to spend a day in nature, one day a week for 10 weeks, and the long-term results of the project were revealed.

This study includes the results of the first phase of the project. At the end of the project, the data were collected through a semi-structured interview form applied to preschool teachers in order to reveal the opinions and experiences of the teachers. The course of the day and contents of teacher-nature workshops are given in Table 2.

Table 2
Course Of The Day and Contents of Teacher-Nature Workshops

Teacher-Nature Workshops	
1. Day (Theoretical Training)	<p>Purpose: It is aimed to convey the philosophical foundations of the approach of Forest Kindergartens, to inform teachers about innovative developmental approaches to nature education and the role of nature in the development of their children.</p> <p>Description: Educators first got to know each other through the introduction game. Afterwards, teachers were informed about the role of nature in child development and the contribution of unstructured materials to brain development. By introducing forest kindergartens in alternative education, good project examples in the world in nature education were given. The workshop was concluded by evaluating the teachers' experiences, feelings and experiences during the activity.</p>
2. Day (Nature Diary)	<p>Purpose: The aim of this workshop is to develop a product that will connect with nature and to prepare a material for educators to use throughout the project.</p> <p>Description: After designing the page design of the nature diary (the subject is trees and plants) with natural felt and wet felt, the second page of the nature diary was designed (the subject is edible plants). After the design, the parts prepared using different hand tools were combined. The workshop was concluded by evaluating the teachers' experiences, feelings and experiences during the activity.</p>
3. Day (Education in Nature)	<p>Purpose: It is aimed to ensure that teachers have information about the activities to be done in nature by making observations in nature, and to enable them to use nature in their activity plans.</p> <p>Description: In order for the teachers to get to know the activity space in nature, they were first given the opportunity to make observations, and then the examples of activities that they could do with the children in nature were presented to the teachers by practice. After the activity</p>

examples, a game activity for language education was applied within the scope of visual perception and memory activities within the scope of attention and focus activities in nature, and language development activities in nature. In the continuation of the workshop, the teachers designed a picture of a well-known artist with materials from nature within the scope of art education activities in nature. Then, a pattern study was carried out with natural materials within the scope of mathematics education activities in nature. The workshop was concluded by evaluating the teachers' experiences, feelings and experiences during the activity.

With Table 2, it is seen that the preschool teachers involved in the project gained experience with the basics of the philosophy of nature education, product development to be used in the project, and implementation examples of activities targeting different development areas and achievements that will support the holistic development of children. The project consists of three days in total, including teacher nature workshops, theoretical framework, nature diary production and nature education activities.

Findings

In this section, the analysis of the interviews conducted to determine the opinions of the teachers involved in the project are included. The thematic components used by the teachers in the interview forms are given in Table 3.

Table 3
Thematic Components Used by Teachers in Interview Forms

Themes	Codes
Views on Nature Education in terms of Professional and Personal Development	Obtaining Philosophical Knowledge Gaining Nature Awareness Gaining Perspective Gaining Experience Developing Creativity Creating a product
	Obtaining Concrete Examples
Views on the Effect of Children's Science Process Skills in Nature Education	Observation Classification Measuring Implementation Communicating Evaluation Problem solving
	Interesting Fun Pleasurable Exciting Efficient
Teachers' Emotions and Thoughts on Nature Education	Patience Sensitivity Rapport Attitude Partnership Sharing
	In-Class Nature Based Activity Implementation Creating a Nature Based Activity Plan
Views on Nature Education in Terms of Values Education	
Views on the In-Class Adaptation of the Achievements Acquired by the Teachers in	

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Nature Education	Use of Natural Materials in the Classroom Field Trip Planning Creating Event Instances Creating Awareness of Nature in Children Getting Children to Connect with Living Things
Views on Project Satisfaction, Creation of Similar Events, and Recommending to Others	Time Limitation Project Continuity Satisfaction Expectation Level Dissemination of the Project Encouragement

Whit Table 3, the themes and codes created from the answers given by the teachers to the interview questions within the scope of the project are seen. The themes created were analyzed in six categories. Themes: Views on Nature Education in terms of Professional and Personal Development, Views on the Effect of Children's Science Process Skills in Nature Education, Teachers' Emotions and Thoughts on Nature Education, Views on Nature Education in Terms of Values Education, Views on the In-Class Adaptation of the Achievements Acquired by the Teachers in Nature Education and Project Satisfaction, Views on Creation of Similar Events, and Recommending to Others.

The themes determined for the interview questions of the project named 'The Forest Teaches, I Discover' and the statements of the teachers regarding the themes were included.

Theme 1: Views on Nature Education in terms of Professional and Personal Development

Within Table 3, the theme 'Views on Nature Education in terms of Professional and Personal Development' from the opinions of 10 teachers is analyzed. With the codes in this theme, it is revealed that the teachers state their gains from Obtaining Philosophical Knowledge, Gaining Nature Awareness, Gaining Perspective, Gaining Experience, Developing Creativity, Creating a product and Obtaining Concrete Examples workshops. The reasons and statements of the preschool teachers involved in the project regarding the theme of 'Views on Nature Education in terms of Professional and Personal Development' are given below.

"On the first day, theoretical information about forest schools was shared with us. I am interested and researching these schools and activities in nature. For this reason, it was very instructive that we were presented with concrete examples about the problems that the countries participating in an international conference experienced as a forest school, what they did and how they progressed." (Ayşe Teacher, Obtaining Concrete Examples).

"The theoretical information given on the first day and the work we did on the other days gained meaning for me. On the second day, I realized how enjoyable it is to produce exciting things with work that I have not experienced before in the wood workshop." (Zeynep Teacher, Gaining Experience).

"We experienced a new and unfamiliar process. Being in the process contributed in many ways. How we evaluate nature, how it affects our perception of nature, our differences, our awareness, what children can experience in nature and what triggerstheir creativity... It helped me to get ideas and gains on many topics." (Aslı Teacher, Gaining Nature Awareness, Developing Creativity).

Theme 2: Views on the Effect of Children's Science Process Skills in Nature Education

According to Table 3, the theme of 'Views on the Effect of Children's Science Process Skills in Nature Education' is analyzed from the opinions of eight teachers, and it is the total number of codes. Considering the codes in the theme, it is seen that the teachers stated they support children's scientific process skills such as Observation, Classification, Measurement,

Implementation, Communication, Evaluation and Problem Solving. The reasons and statements of the preschool teachers involved in the project regarding the theme of 'Views on the Effect of Children's Science Process Skills in Nature Education' are given below.

"Unlike classical learning methods, theoretical knowledge was integrated with nature studies with the activities prepared by an expert educator and nature itself was used as a laboratory. Observing nature and living things on the spot, the inner motivation of children, the thought of children encountering a problem in the forest, discovering a new plant gave me the courage to do many activities in nature." (Sevcan Teacher, Observation, Problem Solving).

"I think that in nature education, both children and teachers will get many gains such as enriching their knowledge, skills and experiences, broadening their perspective, observation, measurement, research and curiosity." (Hilal Teacher, Measuring, Observation).

"With activities in nature, children expand their cerebral schemas while using their exploration, observation, awareness, curiosity and creativity." (Melis Teacher, Observation).

"I aim to develop the skills of creating awareness on nature, working together, adapting to the group, problem solving and self-management in students. I think that in case of a problem, children will communicate with each other in their active practices and decide with a common evaluation." (Özge Teacher, Implementation, Communicating, Evaluation).

Theme 3: Teachers' Emotions and Thoughts on Nature Education

In Table 3, the theme of 'Teachers' feelings and thoughts on nature education' is analyzed from the opinions of 10 teachers and when the codes are examined, the teachers stated that the activities were Interesting, Fun, Enjoyable, Exciting and Efficient. The reasons and statements of the preschool teachers involved in the project regarding the theme of 'Teachers' feelings and thoughts about nature education' are given below.

"In our three-day workshops, seeing different implementations on the first day and integrating them with the educator's own life created an interesting learning environment. The second day was a lot of fun for me as our work in the wood workshop was hands-on and it was an area of my interest. I consider the third day as an efficient day as it offers creativity opportunities in the forest and I experience it by doing examples of activities." (Yeliz Teacher, Efficient, Interesting).

"During the workshop, it was very fun and enjoyable to design and learn by doing. I could not understand how the time passed. I've never done anything like this before. It was a good experience for me, and the concrete implementation of examples of what we can do with children in nature, by associating them with the achievements, gave me a different perspective. They were workshops to raise awareness." (Ayşe Teacher, Pleasurable).

"The last day of the training was the most crucial point for me. It was important in terms of pre-school education to give art, mathematics and language activities that can be given in nature in an integrated way. The content of the activity and its implementation were beneficial in terms of professional development. The tricks of education in nature, being creative, harmonious and fun, increased our learning level." (Anıl Teacher, Fun)

Theme 4: Views on Nature Education in Terms of Values Education

In Table 3, it is seen that the theme of 'Views on nature education in terms of values education' is analyzed from the views of seven teachers, and when the codes in the theme are examined, it is seen that the teachers stated that there are values such as Patience, Sensitivity, Harmony, Attitude, Cooperation and Sharing in the nature education activity processes. Below

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are the reasons and statements of the preschool teachers involved in the project regarding the theme of 'Views on nature education in terms of values education'.

"Especially on the third day, I saw that the aims and achievements presented to us in written form in the activities held in nature can be brought to children in their own flow in the natural environment. In every activity we held, I observed how important it can be to cooperate and have a common idea through group work. I realized that nature refreshes human creativity. I saw once again that patience and obtaining products in the wood workshop are very important for children." (Bahar Teacher, Patience, Cooperation, Sharing).

"I think it is necessary to include children's meeting with nature at least once a month in the curriculum because I believe that the basis of the sensitivity of the next generation to the benefit of nature should be established. I believe that the education applied to us should be expanded and that at least one teacher from all schools should receive this education and make it widespread." (Hilal Teacher, Sensitivity).

"We shared with other preschool teachers in the district where I work. We experienced very well how different designs come out in an event. Working collaboratively in the process is also very important for children. We experienced what can be done with natural objects. This showed me that children can do something creative together in harmony with patience." (Melis Teacher, Harmony, Cooperation, Patience).

"We have seen that we can apply many of the activities we implement in the classrooms by combining them with the opportunities in nature to teach by doing and experiencing, and while doing this, we can bring many values such as awareness and respect, protection, sharing, cooperation, group dynamics to children." (Aslı Teacher, Respect, Cooperation, Sensitivity).

Theme 5: Views on the In-Class Adaptation of the Achievements Acquired by the Teachers in Nature Education

According to Table 3, the theme of 'Views on the In-Class Adaptation of the Achievements Acquired by the Teachers in Nature Education' is analyzed from the views of eight teachers, and when the codes in the themes are analyzed, it is seen that the teachers were asked to implement a nature-based activity in the classroom, to create a nature-based activity plan, and to use natural materials in the classroom. It is seen that they stated that they would carry out adaptations such as Planning a Field Trip, Creating Activity Examples, Creating Nature Awareness in Children, Enabling Children to Connect with Living Things. Below are the reasons and statements of the preschool teachers involved in the project regarding the theme of 'Views on the In-Class Adaptation of the Achievements Acquired by the Teachers in Nature Education'.

"I think that I can easily apply it in all kinds of activities within the framework of education by including nature trips in my plan and bringing natural objects to the classroom environment." (Hilal Teacher; Field Trip Planning, Use of Natural Materials in the Classroom).

"I realized that I would integrate nature with many of my classroom activities and I am thinking of having every material in nature in my classroom and bringing nature to my classroom." (Özge Teacher; Creating a Nature Based Activity Plan, Use of Natural Materials in the Classroom).

"Once again, I realized how beneficial it can be to do activities with natural materials, both for our world and for us. Simply extending the duration of gardening activities, growing a plant in the classroom, etc. I am thinking of including myself and my children in the nature education process with the beginning activities. I would definitely like to try the mathematics (activity related to animal nutrition) activity we do in nature in my classroom." (Bahar Teacher Creating Event Instances; In-Class Nature Based Activity Implementation).

Theme 6: Project Satisfaction, creation of similar events and views on recommending to others

In Table 3, the theme of 'Project Satisfaction, Creation of Similar Activities and Suggestions to Others' is analyzed from the opinions of 10 teachers and when the codes are analyzed, it is seen that the teachers' views are such as Time Limitation, Continuity of the Project, Satisfaction, Expectation Level, Dissemination of the Project, Encouragement. Below are the reasons and statements of the preschool teachers involved in the project regarding the theme of 'Project Satisfaction, Creation of Similar Activities and Suggestions to Others'.

"In my opinion, the continuity of education and its reach to all pre-school teachers should be ensured. Training can be increased as a day, as the number of days increases, more different activities can be included." (Anil Teacher, Project Continuity, Dissemination of the Project).

"The content of the project was good, but it was short. I would like to spend a little more time in more projects to reach more teachers in order to support the work to be done with children more." (Özge Teacher, Dissemination of the Project, Project Continuity, Satisfaction).

"I would like to thank all of our friends who contributed to this work for their dedication, interest and efforts, for bringing us together with such an enjoyable project. During the training, I gained a lot of new information that contributed to my personal and professional development. Thanks to the experiences transferred and given to us throughout the project, it made me enjoy the project, benefit from it and be enthusiastic and excited for the continuation of the project. I hope that we will be able to bring our students together with nature more often and that we will be provided with more opportunities to improve ourselves in this field. (Aslı Teacher, Satisfaction).

Conclusion and Discussion

The 'Forest teaches, I discover' project aims to increase children's love of nature, respect for nature, learning by exploring, doing and living, improving their creativity, and increasing their cognitive and language skills. On the other hand, it aims to raise awareness of preschool teachers about nature-based activities and to give more space to children's learning processes. After the activities carried out in the project, it is thought that the objectives of the project have been achieved to a great extent by analyzing the data obtained from the research. The data, analyzes and evaluations discussed in the findings section of the research form the basis of this idea.

According to the findings, when the themes and codes that emerged from the interviews with the teachers within the scope of the research are examined, it is seen that the teachers internalized the philosophical foundations of nature education in terms of professional development, gained different perspectives and experiences, gained concrete examples through unstructured processes, and gained awareness of nature education by improving themselves in creativity, producing knowledge and guiding children. expressions have been identified. In addition, it is striking that they stated that they gained information about the measures to ensure a safe environment in the education processes in nature. Within the literature, in the study conducted by Sönmez (2018), it is determined that nature-based activity processes increased teachers' experience and awareness of nature and contributed to their professional development. Studies have shown that when nature education takes place in nature and with unstructured processes, it becomes easier to transform experiences into permanent knowledge (Farmer et al., 2007; Rice & Torquati, 2013; Wells & Lekies, 2006). In this context, it is seen that the results obtained in the theme of "nature education in terms of professional and personal development" are supported by similar studies in the literature.

It is determined that the teachers stated that the stages of Observation, Classification, Measurement, Application, Communicating, Evaluation and Problem Solving in nature education emerge with an unstructured process within the scope of scientific process skills in nature education. In addition, teachers stated in their statements that they can reveal their scientific process skills by running nature, and that children can be encouraged to question and research. It can be said that nature education contents enable children to gain scientific process skills at their own learning levels by actively including them in the learning process. According to Wilke and Straits (2005), basic process skills include observing, classifying, designing and recording, measuring, predicting, relating, analyzing, applying, summarizing, communicating, evaluating, synthesizing, creating, and problem solving. Gaining basic science process skills in early childhood is important as it will form the basis of high-level scientific process skills (Padilla, 1986). In addition, it has been stated that nature-based activities are child-centered activities that enable children to participate actively and develop scientific process skills (Toprakkaya, 2016). Within the literature, Bartan and Bařal (2018) examined the views of preschool teachers on scientific process skills. In that study they state that while teachers were teaching scientific process skills to children, most of them used the demonstration-have and experiment method, and some of them used case studies and out-of-class learning environments. In addition, in the research conducted by Őzoęlu (2020), the relationship between pre-school teachers' proficiency in science and nature activities and the basic scientific process skills of 60-72 month-old children is examined. It is stated that the proficiency of the preschool teacher in science activities, the materials and methods they use affect the classification skills of the preschool students. On the other hand, in another study, within the scope of the TUBİTAK 4004 project, an applied training program is implemented for preschool teachers to prepare nature-based (using nature and natural materials) science, mathematics and art activities in preschool. It is stated that after the teachers participated in the project, they prepared more structured nature-based activities that would contribute to the development of scientific process skills such as collecting data, taking notes, and interpreting children's observation skills (Temiz & Karaarslan Semiz, 2019). Within the scope of science and nature activities, it can be said that teacher competence, use of materials and use of out-of-class environments in the implementation of nature-based activities have an important place in the cognitive development of children.

When the theme covering the feelings and thoughts of the teachers involved in the project is examined, it is seen that they are happy to participate in the project, that the educational content is interesting, enjoyable and fun, and that they are excited during the implementation process and that they have a productive education process. In addition, when we look at the theme of project satisfaction, creation of similar activities and suggestions to others, it is seen that the duration of the project is limited, but they have an educational process that exceeds their expectations, they want to spend more time and experience the continuity of the project, and that all preschool teachers should benefit from the dissemination of the project. It is remarkable that they thanked TUBİTAK and the project staff for their role in the realization of the project. It is thought that the positive feelings and thoughts of the teachers about the project and the encouragement towards continuity is an indication that the project has achieved its purpose.

When the answers given by the teachers to the interview questions are examined, it can be said that the nature education process shows its role in the acquisition of values that have an important place in early childhood. Considering the theme of views on nature education in terms of values education, the teachers stated that values such as harmony, sensitivity, patience, attitude, cooperation, and sharing can be taught to children in the content of nature education. Since nature education content takes place in unstructured learning environments at each child's own learning pace, values can be gained in activity content. It can be said that children gain values in activities created for other purposes in an informal way. Kale (2007) stated that various environmental problems and measures to be taken regarding environmental problems

should be included in the education process in values education. When the literature was examined, no study was found in which the relationship between nature education and values education was examined. However, in the philosophy of the forest schools approach, 'If you make the child love nature, the child will protect herself.' applies (Yalçın, 2017). It can be said that values such as love, protection and respect are included in the philosophy of nature education. Tahiroğlu et al. (2010), in their study aiming to determine the effect of environmental education activities developed according to values education methods on secondary school students' attitudes towards the environment, stated that environmental education using values education methods is more effective in developing positive attitudes towards the environment than traditional environmental education. As a result of this study, it shows that nature education provides holistic development of children, and it is also possible to gain values that are a part of social life.

At the end of the project teachers have expressed that they have gained various experiences such as implementing nature-based activities in the classroom, creating a naturebased activity plan, using natural materials in the classroom, planning field trips, creating activity examples, creating awareness of nature in children, enabling children to connect with living things, and creating a safe environment in out-of-class educational environments. It is stated that teachers have an important role in the positive attitudes and behaviors towards nature in children in early childhood (Güler, 2010). Today, it can be said that in order for children who are deprived of nature to interact with nature again, there should be activities that will enable children with nature awareness to meet with nature. For this reason, it has been stated that preschool teachers' experience and competencies with nature education should be developed (Davis & Macleod, 2006; Kennelly et al., 2012). The results of the project, in which it is tried to determine how the knowledge and experience of teachers in nature education are transferred to in-class practices, are supported by similar results in the literature. For example, in the study conducted by Temiz et al. (2019), a nature-based education program was applied to 25 preschool teachers so that they could prepare activities using natural materials in science, nature, art and mathematics activities within the scope of TUBİTAK 4004 project. They were asked to prepare a nature-based activity file consisting of art activities. The results of the study indicated that nature-based activities were not used frequently before the study, and at the end of the study, teachers prepared a wide variety of activities using nature and natural materials. In the study conducted by Güler (2010), 12 days of ecology-based environmental training was applied to 24 teachers. The teachers, who stated that they felt inadequate about environmental education before the application, stated that they gained versatile information about education after the application, their self-efficacy increased, their awareness of the environment increased, they would share the information they gained in their classrooms and their environment, and that there were many activities that they could apply in their branches. In this project, preschool teachers experienced that nature offers rich opportunities to learning environments, that all activities in the preschool education program can be applied in nature, that they can give children all development areas and achievement indicators in the preschool education program. In addition, they realized that unstructured natural environments can also be instructive for children's individual learning. At the end of the project, it is expected that the preschool teachers participating in the project will research and apply how nature will be used in learning processes, employ nature in educational environments, and use nature's guidance. It is stated that nature-based applied studies are important in pre-school education because early childhood years are critical periods in order to gain awareness of nature, gaining values, and attitudes and skills related to nature (Gerrish, 2014).

In the twenty-first century, an interdisciplinary holistic understanding of education is gaining in importance. Qualified nature-based activities support the holistic development of children, enable children to acquire gains and indicators with integrated activities, and enable them to acquire basic scientific skills. Nature-based applied studies should be given more space

in early childhood. For this reason, it is thought that this study will contribute to knowledge, practices and experiences related to nature-based education.

In line with the research findings, the reasons for the preschool teachers' inability to perform their out-of-class practices can be investigated and studies can be carried out to remove the obstacles in the middle. School principals, teachers and parents can be informed to increase preschool teachers' use of out-of-class spaces. In-service trainings can be organized to expand the activity pools of preschool teachers for out-of-class learning environments. Nature-based activities can be offered within a comprehensive program that will benefit all education stakeholders.

Ethical Permissions

This research was carried out with the permission of Kocaeli Provincial Directorate of National Education with the decision numbered 99332089/605, 01/24058745 dated 04/12//2019.

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