

## Determining The Level Of Involving Environmental Education Activities In The Monthly Plans And Daily Educational Flows Of Preschool Teachers

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### Abstract

The purpose of this study is to determine the level of involving environmental education activities in the monthly plans and daily educational flows of preschool teachers. The sample group of the study consisted of 30 preschool teachers working in the Pamukkale, Merkezefendi and Kale districts of Denizli province. The data of the study were obtained by interviews made by using “Questionnaire for Determining the Level of Involving Environmental Education Activities by Preschool Teachers”, which was developed by the researchers, monthly educational flows and through analysing the ten-day educational flows. Percentage and frequency distributions were used in the analysis of the data. According to the results of the study, all of the teachers were using the monthly plans and daily educational flows prepared by the publishers. The teachers initially considered the titles for science courses and nature activities-area visits as the environmental education. Most of teachers stated that environmental education should begin from the age of three. It was observed that the teachers teaching environmental education twice or more than twice a week and those teaching once a month were at the same level. According to the teachers, science experiment activities are the most suitable activity type for environmental education. Most of the teachers expressed that they prepared environmental education programme and family involvement activities concerning environmental education. The results of the study revealed that environmental education should take a more regular place in the daily educational flows and monthly plans of preschool education.

**Keywords:** Preschool teachers, environmental education, monthly plan, daily educational flows.

### Introduction

At the present time, each of problems such as unconscious and rapid destruction of the natural resources, global warming, unbalanced population increases in the countries, desertification, erosion, air, water and noise pollution, industrialisation, and unconscious consumption of natural resources are indicated to be among the significant threats our world is facing. The reasons for those threats are affected by the life styles, value judgements, and attitudes of people. Therefore, man not only damages the natural resources and different species living in nature but also gives involuntarily harm to numerous balance elements. Therefore, the presence of an environmental education which can change perspective of today's men toward nature and reshape their values and attitudes is of great importance (Demirkol, 2010; Gökçe, Kaya, Aktay and Özden, 2007).

The natural environment appears a very important concept for the children's lives. Nature can improve children's world and train them. It can offer an opportunity to relax for children living in negative family conditions. It is offering the children an exact empty puzzle board on which they can draw and reinterpret the imaginary products of culture. By encouraging the visual imagination power and full usage of emotions, it can support the creativity

of children. Children can find a lot of kinds of resources to feel free in nature and develop their imagination. In addition, being interwoven with nature can improve the cognitive skills of children, decrease the behavioural disorders, and give resistance to negative pressures and depression (Louv, 2012). The multiple advantages of the nature bring forward the significance of environmental education. The main purpose of the environmental education is to make each individual gain personal attitude and sense of responsibility concerning the environment. Environmental education can be seen as an opportunity to understand the relationship between the human and the habitat they are in (Sabo, 2010). Moreover, it includes processes such as informing, raising awareness, warning, balancing, developing, protecting, and development of respect and aims to make each individual gain such behaviours (Güler 2009). In addition, gaining knowledge about the environment and assisting in the development of positive attitudes and behaviours related towards environment are among the principle purposes of environmental education (Gülay Ogelman, Körükçü, Güngör and Erten Sarıkaya, 2014). Davis (1998) states environmental education as a way of thought and a process to bring behaviour. In this direction, there are numerous variables that may provide a possibility for children at preschool period to develop knowledge, attitude and behaviours related to environment and one of them is the preschool education (Evren, 2008). Preschool teachers have important responsibilities concerning the environmental education instruction. They should execute their applications in a way to make their students gain attitudes, behaviours, and love towards the environment as well as environmental literacy and awareness at the stage of arranging the educational environment, preparing the programme and its application. In this direction, it would be useful to begin the environmental education from the initial years of life in order to bring up environment friendly individuals that are awareness toward environment and have awareness for environment (Erten and Aydoğdu, 2011).

The environmental education to be taught in the preschool period must be continued based on pleasure and motivation to be obtained through the feelings of curiosity and exploration. In this direction, it is important that the child is involved in the process by gaining experiences at base level. These experiences can be shaped by the principle of “from near to far”. For instance, the education should be initiated by knowing about the near environment by examining a tree in a yard or a playground before a large remote forest. Children should be encouraged to spend regular time in open air by doing and experiencing things. Furthermore, teachers should be an example for children to introduce them the environment as well as protecting and embellishing the environment. It is important to transform the school into an environmentalist place as soon as possible and to realise the environmental education in various ways regularly (Wilson, 1996). Georgopoulos, Birbili and Dimitriou (2011) state that preschool teachers can bring up children as citizens of the future with the help of environmental and experimental education.

When the literature was examined, it could be observed that studies where preschool teachers are participants of environmental education were conducted. In the study conducted by Günindi (2010), in order to examine environmental friendly behaviours of preschool behaviours, it was indicated that male teachers had more knowledge about environmental education than female teachers, teachers brought up in small cities had higher environmental attitudes than those brought up in big cities, and there was a positive low relationship between the teachers' attitudes toward environment and environment protection behaviours. In the study conducted by Buhan (2006) to determine whether preschool teachers involve environmental education in their educational plans or not by using a questionnaire developed by the researcher, it was stated that the levels of involving environmental education in the educational plans of the teachers differed in a significant manner based on the type of school they worked in, their ages, and their level of education, and it did not differ in a significant manner based on the professional seniority. In their study, Gülay and Ekici, (2009) analysed the objectives, gains, concepts, designated days and weeks of Preschool Education Programme prepared by Ministry of National Education in terms of environmental education and stated that the objectives in the development areas within preschool education programme, and psychomotor and language fields did not include objectives and gains related to environmental education; environmental objectives in the social-emotional, cognitive and self-care skills covered a 25.9% of the objectives among all the programmes; it covered 15.5 % of all the gains in the programme among the gains related to environmental education; 29.0% of the concepts involved in the programme and 26.3% of the specified days and weeks in the programme are related to the environmental education. In the study conducted by Kandır, Yurt, and Kalburan (2012), by comparing the preschool teacher candidates' and teachers' attitudes toward the environment, it was found that preschool teacher candidates had higher score than the preschool teachers in the total score of environmental attitude scale, and the subscales of importance of trips in environmental education and environment protection movement; and that the scores they received from the sub-factors of environmental protection and protection and the educational requirements for the environmental problems were not significant. In a study of Flogaitis, Daskolia and Agelidou (2005), they evaluated the preschool teachers as participants and

the preschool teachers initially based on the protection of nature in environmental education programmes; the students were more likely to learn in the environment itself with area trip activities; and they considered as necessary to provide environmental education as from the preschool period.

Numerous studies can be observed in the literature when examining the researches including the preschool teachers in the sample. However, as a result of the review carried out, no study that examined views regarding the involving the environmental activities in the monthly plans and daily educational flows by the preschool teachers providing environmental awareness to the children and organising the environmental activities within the frame of MEB (Ministry of National Education) 2013 Preschool Education programme was found. Based on this, the purpose of the study is to determine the levels of involving environmental education activities in the monthly plans and daily educational flows of preschool teachers, and it was tried to seek answers for the following objectives in the direction of this main purpose:

- What are the initial titles that the preschool teachers consider regarding the environmental education?
- What should be the age to begin the environmental education according to the preschool teachers?
- What are the opinions of preschool teachers concerning the levels of involving environmental education in the daily educational flows?
- What are the most suitable activity types for environmental education according to the preschool teachers?
  - What are the opinions of preschool teachers regarding the activities on family involvement in the environmental education?
  - What are the experiences of preschool teachers concerning the environmental education programmes?
  - How do the preschool teachers evaluate the current preschool education programme in terms of environmental education activities?
  - What are the most challenging situations for the preschool teachers while implementing the environmental education activities?
  - What are the levels of involving environmental education activities in the monthly plans between September 2014 and March 2015 for the preschool teachers?
  - What are the levels of involving environmental education in the two week daily educational flows in March 2015 for the preschool teachers?

## **Method**

### **Design of the Study**

This study, aiming at determining the level of involving environmental education in the monthly plans and daily educational flows by preschool teachers, was conducted through scanning model. According to Karasar (2014), scanning model is a research approach that aims to reflect a past or ongoing condition as is. The data of the study were collected by using qualitative research method. Qualitative research is a type of research, where qualitative data collection methods such as observation, interview and document analysis are used, and where a process in which the perceptions and events are presented in a realistic and holistic manner in a natural environment is followed (Yıldırım and Şimşek, 1999, p. 18).

### **Participants (Sample Group)**

The sample group of the study consists of totally 30 preschool teachers from the province of Denizli. While 15 of the participant teachers were working from city centre of Denizli, 15 teachers were working in Kale district. The distribution of participants was as 25 females (83.3%) and 5 males (16.7%). In addition, 46.7% of preschool teachers (14 people) had an experience of 6-10 years, and 20% (6 people) had an experience of 11-15 years, and 3.3% (1 person) had an experience of 15 and more years. While 56.7% (17 people) of the teachers were working in an independent kindergarten, 43.3% (13 people) were working in kindergartens within the body of a primary school. There were 253 (48.8%) male students and 241 (51.2%) female students in the teachers' classes. The sample group of the study was determined through an easily accessible situation sampling technique. Patton, (2014) defines easily accessible sampling as doing the most suitable thing in terms of time and cost.

**Table-1** Demographic information of the preschool teachers

		<i>f</i>	<i>%</i>
Gender of the teacher	Female	25	83.3
	Male	5	16.7
	Total	30	100.0
Occupational experience of the teacher	1-5 years	9	30.0
	6-10 years	14	46.7
	11- 15 years	6	20.0
	15 years and above	1	3.3
	Total	30	100.0
School where the teacher is working	Kindergarten	17	56.7
	Independent Kindergarten	13	43.3
	Total	30	100.0
Number of children in the classroom of the teachers	Between 10 and 15	12	40.0
	Between 16 and 20	10	33.3
	20 and above	8	26.7
	Total	30	100.0
Gender of the children in the classroom of the teachers	Female	241	48.8
	Male	253	51.2
	Total	494	100.0

**Table-2** State of the preschool teachers concerning the preparation of monthly plans and daily educational flows

		<i>f</i>	<i>%</i>
States for preparing monthly plans	Those preparing their monthly plans themselves.	0	0.0
	Those using ready plans with no alteration.	1	3.3
	Those using ready plans with alteration.	29	96.7
	Total	30	100.0
States for preparing daily educational flows	Those preparing their daily educational flows themselves.	0	0.0
	Those using ready daily educational flows with no alteration.	1	3.3
	Those using ready daily educational flows with alteration.	29	96.7
	Total	30	100.0

### Data Collection Tools

*Questionnaire for Determining the Level of Involving Environmental Education Activities by Preschool Teachers:* For the purpose of revealing the level of involving environmental education in the plans of preschool teachers, the questionnaire developed by researchers was used. While preparing the questionnaire; as face and scope validity, expert opinion was taken from five academicians and five preschool teachers (having an experience of minimum 10 and maximum 12 years) working in evaluation and assessment, preschool education, and child development fields and particularly in the field of environmental education. A pilot implementation was carried out with three teachers outside the sample group before the application. The questionnaire consisted of 14 questions apart from the demographic information of the teachers.

*Monthly Plans and Daily Educational Flows of the Preschool Teachers:* 6.5-month monthly plans between September 2014 and March 2015 and a 15-day educational flow applied in March 2015 by the preschool teachers interviewed within the scope of the study were analysed in terms of environmental education activities.

### Data Collection Process

The data were collected through the individual interviews carried out with teachers and the analysis of monthly plans and daily educational flows. Before the individual interview, the teachers were provided with form and information on the purpose of the study.

### Data Analysis

Frequency and percentage distributions were used for the analysis of the data obtained in the study.

### Results

**Table-3** Distribution of subject titles considered by the preschool teachers concerning environmental education

Subject titles designated regarding environmental education		<i>f</i>	%
1	Science and nature activities – area trips	15	21.1
2	Forest, tree and plant species	7	9.9
3	Greening works	5	7.0
4	Cleanliness	5	7.0
5	Saving	5	7.0
6	Environmental pollution (Air, Water, Soil)	5	7.0
7	Family involvement and education	4	5.6
8	Love of nature	4	5.6
9	Protecting the environment	4	5.6
10	Animals	4	5.6
11	Environmental awareness	2	2.8
12	Visual adaptation and organisation	2	2.8
13	Classroom environment	1	1.4
14	Recycling	1	1.4
15	Museum	1	1.4
16	Healthy life	1	1.4
17	Environmental responsibility	1	1.4
18	Being a model	1	1.4
19	Learning by doing and experiencing	1	1.4
20	Recognising the environment	1	1.4
21	Social environment	1	1.4
Total		71	100.0

Table 3 illustrates twenty one subject titles were indicated by the preschool teachers when they were asked about environmental education. Among these titles, the most commonly expressed ones were; science and nature activities-area trips (21.1%) and forests, trees and plants (9.9%). The least commonly expressed ones were: recycling (1.4%), healthy life (1.4%), being a model (1.4%), learning by doing and experiencing (1.4%), recognising the environment (1.4%), museum (1.4%), classroom environment (1.4%), social environment (1.4%), and environmental responsibility (1.4%).

**Table-4** Distribution of opinions regarding the age to begin the environmental education by the preschool teachers

At what age should the environmental education begin?		<i>f</i>	%
1	When the mother is pregnant.	1	3.3
2	From the birth.	1	3.3
3	From the age of 2.	1	3.3
4	From the age of 3	21	70.0
5	From the age of 4	3	10.0
6	From the age of 5	3	10.0
Total		30	100.0

When examining Table 4, a great majority of the preschool teachers (70.0%) indicated that environmental education begins from the age of 3.

**Table-5** Distribution of opinions regarding the level of involving environmental education in daily educational flows by the preschool teachers

Opinions on involving environmental education in daily educational flows		<i>f</i>	<i>%</i>
1	I have never involved it this year.	0	0.0
2	I regularly involve it.	2	6.7
3	I involve it once a week.	8	26.6
4	I involve it twice or more than twice a week.	9	30.0
5	I involve it once in two weeks.	2	6.7
6	I involve it once a month.	9	30.0
Total		30	100.0

When examining Table 5, it was observed that preschool teachers involving environmental education twice or more than twice a week were at the same level with those involving it once a month (30.0%). It could also be observed that minimum level of involving was among the responses on regular involving and involving it once in two weeks (6.7%).

**Table-6** Distribution of the most suitable activity types for environmental education according to the preschool teachers

The most suitable activity types for environmental education		<i>f</i>	<i>%</i>
1	Science and experiment activity	35	46.1
2	Area trips	17	22.4
3	Drama	5	6.6
4	Observation	4	5.3
5	Turkish language activity	3	3.9
6	Family involvement activity	3	3.9
7	Literacy preparation activity	3	3.9
8	Games and movement activity	3	3.9
9	Art activity	2	2.6
10	Math activity	1	1.3
Total		76	100.0

When examining Table 6, the most suitable activity type for environmental education according to the preschool teachers was science and experiment activities (46.1%), and the least type was math activity (1.3%).

**Table-7** Distribution of opinions about family involvement activities in environmental education by the preschool teachers

Opinions about family involvement activities in environmental education		<i>f</i>	<i>%</i>
The state of whether the teachers do any family involvement activities works in environmental education or not	I do not.	11	36.7
	I do.	19	63.3
	Total	30	100.0
Reasons for why teachers do not do any family involvement activity in environmental education	Families are not interested.	4	36.4
	Families cannot spare enough time due to their employment.	2	18.1
	Families give more importance to other activities.	1	9.1
	Those mentioning no reason.	4	36.4
	Total	11	100.0
Frequency of doing family involvement activities in	Once a week.	3	15.8
	More than once a week.	2	10.5
	Once in two weeks.	2	10.5

environmental education by the teachers	Once a month.	7	36.9
	Not doing it regularly.	5	26.3
	Total	19	100.0
Family involvement activities done by the teachers within the scope of environmental education	Doing activity at home.	8	34.8
	Going to an area trip.	5	21.7
	Organising yard and classroom arrangements.	3	13.1
	Making house visits.	2	8.7
	Doing an activity in the classroom.	2	8.7
	Giving brochures.	1	4.3
	Bringing pets to the classroom.	1	4.3
	Bringing things such as paper, plastic, battery, etc. from home.	1	4.3
	Total	23	100.0
State of the teachers to find family involvement activities challenging within the scope of environmental education	I do not find it challenging.	13	43.3
	Yes I do find it challenging.	11	36.7
	Those giving no answer.	6	20.0
	Total	30	100.0
The challenging situations for the teachers in family involvement activities in environmental education	Insensitivity, indifference and unwillingness of the family.	9	81.8
	Having many paper works.	2	18.2
	Total	11	100.0

When examining Table 7, 63.3% of the preschool teachers carried out family involvement activities within the scope of environmental education. The most common reason given for not doing any family involvement activities by those not doing any family involvement activity was indifference of families (36.4%). The frequency of carrying out family involvement activities by the teachers was once a month (36.9%) at the highest rate. Within the scope of family involvement, the teachers mostly sent environmental education activities to homes (34.8%). Approximately half of the teachers (43.3%) stated that they had no difficulty in family involvement activities. A great majority of the teachers having difficulty in family involvement activities (81.8%) regarding environmental education stated that they found it challenging due to insensitivity, indifference, and unwillingness of the families.

**Table-8** Distribution of preschool teachers' experiences on environmental education programmes

			<i>f</i>	<i>%</i>
State of preparing a programme related to environmental education	Yes	Respect to environment programme	1	3.3
		Raising awareness for a clean environment programme	1	3.3
	No		28	93.3
	Total		30	100.0
State of participating in an environmental education project	Yes	We are learning about the soil with Tipitop and his friends	1	3.3
		Let them laugh Project	1	3.3
		Waste Oil Collection Project	1	3.3
		I have a tree Project	1	3.3
		Eco School	1	3.3
	No		25	83.5
Total		30	100.0	
State of participating in a training on environmental education	Yes	Seminar (Damages of Batteries on the environment)	1	3.3
		Seminar (Ecological Problems)	1	3.3
	No		28	93.3
	Total		30	100.0

According to Table-8, a great majority of the preschool teachers neither prepared any environmental education programme (93.3%); nor participated in an environmental education project (83.5%) and participated in a related training concerning environment (93.3%).

**Table-9** Distribution of opinions by the preschool teachers on MEB 2013 Preschool Education Programme in terms of the environmental education activities

		<i>f</i>	<i>%</i>
The programme is satisfactory in terms of environmental education – Environmental education was involved from these points.	The activities were at a satisfactory level.	7	38.9
	They were involved at specified days and weeks.	7	38.9
	They were involved in gains and concepts.	3	16.7
	They were involved in family involvement.	1	5.6
	Total	18	100.0
The programme is not satisfactory in terms of environmental education – Environmental education was not involved from these points.	Activities are not really involved in much.	6	50.0
	The activities are not diverse.	3	25.0
	The applicability of the activities involved is unsatisfactory.	2	16.7
	The activities are not suitable for everywhere.	1	8.3
	Total	12	100.0

According to Table 9, 18 of 30 participating teachers (60.0%) stated that they found the MEB 2013 Preschool Education Programme satisfactory in terms of environmental education activities, whereas 12 (40.0%) stated that they did not find the programme at satisfactory level in terms of environment activities. Among those finding the programme satisfactory, the level of those stating that the environmental education was taking place in designated days and weeks, and those stating the environmental education activities were at satisfactory level were at the same level (38.9%), whereas among those finding the programme unsatisfactory, the mostly stated response was that the activities are not really involved much (50.0%).

**Table-10** Distribution of challenging situations for the preschool teachers while carrying out environmental education

Distribution of challenging situations in environmental education		<i>f</i>	<i>%</i>
1	Coping with the permission procedures in area trips.	2	15.4
2	The crowded classes	2	15.4
3	Teaching minor age groups.	1	7.8
4	Teaching mixed age groups.	1	7.8
5	Road safety.	1	7.8
6	Lack of interest of the family.	1	7.8
7	Inadequacy of the yard.	1	7.8
8	Children pay excessive attention on animals in the classroom environment.	1	7.8
9	Insufficient development levels of the children.	1	7.8
10	Problems in group meetings.	1	7.8
11	Those having difficult in giving information to the children about the subject.	1	7.8
12	Total	13	100.0

In Table-10, when the preschool teachers were carrying out environmental education activities, they state that the most challenging ones were the permission procedures in area trips (15.4%) and crowded classes (15.4%).



**Table-11** Levels of involving environmental education activities by the preschool teachers in the monthly plans between September 2014 and March 2015

Type of Activity	Total number of activities	Number of activities related to environmental education		Number of activities not related to environmental education	
	<i>f</i>	<i>f</i>	%	<i>f</i>	%
Turkish language activity	510	115	30.0	395	19.0
Preparation for literacy	420	25	6.5	395	19.0
Game and movement activity	360	20	5.2	340	16.4
Art activity	330	22	5.7	308	14.8
Science activity	180	85	22.2	95	4.6
Music activity	180	40	10.4	140	6.7
Drama activity	150	18	4.7	132	6.4
Math activity	110	8	2.1	102	4.9
Area trips	50	10	2.6	40	1.9
Family involvement activity	170	40	10.4	130	6.3
Total	2460	383	100.0	2077	100.0

When examining Table-11, it was observed that 15.6% (383) of 2460 activities implemented in line with the monthly plans between September 2014 and March 2015 by the preschool teachers were environmental education activities. While 22.5% (510) of the Turkish language activities among these activities were related to environmental education, 6.0% (25) of the preparation for literacy activities (420); 5.6% (20) of the game and movement activities (360); 6.7% (22) of the art activities (330); 47.2 % (85) of the science activities (180); 22.2%(40) of the music activities (180); 12.0% (18) of the drama activities (150); 7.3 (8) of the math activities (110); 20.0% (10) of the area trips (50), and 23.5% (40) of the family involvement activities (170) were related to the environmental education. In the distribution of the type of activity among 383 environmental education activities implemented within a period of six and half months, it was observed that the highest one was Turkish language activity (30.0%), which was followed by science (22.2%), and music activities (10.4%); the least one was math activity (2.1%) and area trip activity ( 2.6%).

**Table-12** Levels of involving in environmental education activities by the preschool teachers in the two-week daily educational flows in March 2015

Two weeks chosen in the month of March	16-20 March 2015		23-27 March 2015	
	<i>f</i>	%	<i>f</i>	%
Number of activities related to environmental education	5	4.0	120	79.3
Number of activities not related to environmental education	115	96.0	30	20.7
Total	120	100.0	150	100.0

When examining the daily educational flows of the preschool teachers in the week of 16-20 March according to Table-12, 4.0% of the activities were related to the environmental education, while 79.3% of the activities implemented in the Forest Week of 23-27 March were related to the environmental education.

### Discussion and Conclusion

Interesting results were obtained in this study, analysing the levels of involving environmental education activities in the monthly plans and daily educational flows by preschool teachers. The first one of them was that no teacher preparing the monthly plans and daily educational flows themselves was found among 30 teachers, The teachers preferred to use the plans already prepared by the publishers. The teachers need to consider the developmental levels, interests, demands, and needs of children in accordance with “Relativity with the Child” which is stated

among the preschool education principles (MEB, 2013). Plans prepared by the publishers in line with their commercial purposes arouse curiosity about how they would meet the interests, demands and needs of 494 children in the classes of the teachers in this study. In Table 2, it was observed that the teachers stated that they modified and used these ready plans. Nevertheless, the plans prepared by those who never saw the children in these classes (even if altered) arouse suspicion about how they would address to the interests, demands, needs, individual differences of the children and the class dynamic. The teachers considered initially the science and nature activities, area trips as the activities of environmental education. It was observed that a big part of the titles indicated by teachers were about the environmental education (Table 3). Most of the teachers thought that environmental education should begin at the age of three (Table 4). This result shows parallelism with the related literature (Wilson, 1996). The frequency for the involvement of environmental education in daily educational flows by the teachers varied. However, it was determined that they usually involved it twice a week or more and also once a month (Table 5). When 6.5 month monthly plans of the teachers were examined, corresponding to twice or more than twice a week response, the levels of involving environmental education were less than their statements (Table 11). Regular involvement of environmental education would support the children's feeling of curiosity in a regular manner and enable them to constantly learn new information and corroborate the knowledge learnt (Gülay Ogelman, Körükçü, Güngör and Erten Sarıkaya, 2014).

The teachers stated that they mostly carried out science and experimental activities as well as area trips concerning the environmental education (Table 6). When considering the subjects related to environmental education (animals, plants, protecting the environment, saving, recycling); the fact that science activity was among the first activity type that comes to mind is considered to be an expected result. In addition to opinions of the teachers; among the distributions of the environmental education activities implemented in the period of the six and half months according to the types of activities, they mostly carried out the environmental education activities within Turkish language activity type, whereas science activity was the second, and area trips were the second from the last (Table 11). According to these results, it was observed that there was no parallelism between what the teachers thought and did about the environmental education. Most of the teachers were carrying out family involvement activities related to environmental education. The most fundamental reason behind why the family involvement could not be implemented those who were unable to do so was indicated to be the lack of interest of family. The teachers stated that they mostly carried out the family involvement activities about the environment once a month and they could not realise regularly (Table 7). In various studies (Aktaş Arnas, 2011; Ersoy, 2004; Tezel Şahin and Özyürek, 2011), a study related to family involvement activity in numbers varying between 20 and 28 was present. In this study, it was observed that 8 types of family involvement work related to environmental education by the teachers were carried out (Table 7). The results of the study revealed the significance of why the respective teachers should take precautions to draw the attention of families concerning the environmental education through different strategies. Increasing the variety of family involvement activities, informing the families, acknowledging the families participating in family involvement, sharing the positive results of family involvement on children, and exhibitions on family involvement and such implementations can make the family involvement more attractive for the parents. It is seen that the teachers in this study did not have much experience in preparing environmental education programmes, participating in the applied environmental education programmes, and receiving training on subjects related to environmental education (Table 8). In-service trainings on environmental education should be provided for teachers and they should be encouraged to prepare environmental education programmes. The environmental education programmes that can be applied by the teachers in the classroom should be increased and become more widespread through collaborating with organisations and institutions such as universities, Ministry of National Education and NGOs. It was observed that number of the teachers finding the 2013 Preschool Education Programme satisfactory was higher than those who did not find it satisfactory (Table 9). However, 12 teachers also found it unsatisfactory in terms of environmental education. Taking into account the fact that the teachers stated that they did not prepare their own plans; it is remarkable to wonder how the teachers got their experience to evaluate on the new preschool programme. Future studies related to the subject of the programme can examine why the teachers used a ready plan or according to which criteria they chose the ready plans they used. It was observed that there were various challenging situations for teachers while they carried out the environmental education (Table 10). The bureaucratic procedures during trips and the crowded classes among such situations were revealed to be the most challenging factors. In addition, variables related to the physical conditions are among the other challenges. The physical conditions can reduce the quality of the education. Decreasing the number of children in the classes, or having 2 teachers together in crowded classes may facilitate the works of the teacher in general, and thereby may increase the quality of the education. When examining distribution of the environmental education activities of the teachers within a period of 6.5 months, it can be seen that the environmental education activities within this period covered a part of 15.6% among all the

activities. It was observed that science activities were the most in the distribution of the environmental education activities pertaining to the types of activities within the specified period, whereas game and movement activities were the least (Table 11). Teachers also stated the science activities as the first one in the ranking of the most suitable activity types in the environmental education (Table 6). Therefore, it was obvious that science activities were on the first rank concerning environmental education among the applied activities of 6,5 years, and consequently there was a parallelism between what the teachers thought and done. The only factor showing difference in this result was observed in the game and movement activities. The teachers indicated that the most suitable activity type for the environmental education were the math activities (Table 6); however, they applied the game activity at the least concerning environmental education in the distribution within specified period in the application (Table 11). It is noted that the activities made related to the environmental education took place at a relatively higher degree in terms of the daily educational flows within the week corresponding to the Forest Week, between 23 and 27 March compared to the previous week. On the other hand, environmental education activities covered a part of 4% in the week between 16 and 20 March, when no day or week related to the environment was present. The preschool teachers should be provided with training on how to approach toward the environmental education outside these designated days and weeks and within all types of activities.

The following can be suggested for further studies regarding environmental education in the preschool period in addition to the various aforementioned suggestions: All the monthly plans of the teachers for one year can be examined. Instead of the selected weeks of a particular month as in this study, a week from each month can be studied. The teachers' attitudes toward the environment and how they involve environmental education in their programmes can be examined. More crowded sample groups can also be formed.

## References

- Aktaş Arnas, Y. (2011). *Okul öncesi eğitimde aile katılımı stratejileri*. Y. Aktaş Arnas, (Ed.). Aile eğitimi ve okul öncesinde aile katılımı (98-159). Vize yayıncılık: Ankara.
- Buhan, B. (2006). *Okul öncesinde görev yapan öğretmenlerin çevre bilinci ve bu okullardaki çevre eğitiminin araştırılması* (Yayınlanmamış yüksek lisans tezi). Marmara Üniversitesi: İstanbul.
- Davis, J. (1998). Young children, environmental education and the future. *Early Childhood Education Journal*, 26 (2), 117-123.
- Demirkol, E. (2010, Kasım). Çevre Sosyolojisi (Environmental Sociology), *Bilim ve Teknik*, 516, 60-63.
- Erten, S. ve Aydoğdu, C. (2011). Türkiyeli ve Azerbaycanlı öğrencilerde, ekosentrik antroposentrik ve çevreye karşı antipatik tutum anlayışları. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 41, 158-169.
- Ersoy, Ö. (2004). *Aile katılımı çalışmaları*. E. Ömeroğlu, (Ed.). 36-72 aylık çocukların eğitimi için yıllık plan örnekleri ve aile katılımı çalışmaları (115-129). Morpa Kültür Yayınları: İstanbul.
- Evren, I. (2008). *Sosyo-ekonomik durumun çevre bilincinin gelişimine etkisi*. (Yayınlanmamış yüksek lisans tezi). Marmara Üniversitesi: İstanbul.
- Flogaitis, E., Daskolia, M., ve Agelidou, E. (2005). Kindergarten teachers' conceptions of environmental education. *Early Childhood Education Journal*, 33 (3), 125-136.
- Georgopoulos, A., Birbili, M. ve Dimitriou, A. (2011) Environmental Education (EE) and Experiential Education: A Promising "Marriage" for Greek Pre-School Teachers. *Creative Education*, 2(2), 114-120.
- Gökçe, N., Kaya, E., Aktay, S. ve Özden, M. (2007). İlköğretim Öğrencilerinin Çevreye Yönelik Tutumları. *İlköğretim Online*, 6(3), 452-468.
- Gülay, H. ve Ekici, G. (2009). MEB Okul Öncesi Eğitim Programının Çevre Eğitimi Açısından Analizi. *Türk Fen Eğitimi Dergisi*, 1, 74-84.
- Gülay, H. ve Önder, A. (2011). *Sürdürülebilir gelişim için: Okul öncesi dönemde çevre eğitimi*. Nobel yayın dağıtım: Ankara.
- Gülay Ogelman, H., Körükçü, Ö., Güngör H., ve Erten Sarıkaya, H. (2014). *Okul öncesi eğitim kurumlarında çevre eğitimi*. H. Gülay Ogelman, (Ed.). Çocuk ve Çevre (71-110). Eğiten kitap. Ankara.
- Güler, T. (2009). Ekoloji Temelli Bir Çevre Eğitiminin Öğretmenlerin Çevre Eğitimine Karşı Görüşlerine Etkileri. *Eğitim ve Bilim*, 151, 30-43.
- Günindi, Y. (2010). Okul öncesi öğretmenlerinin çevre dostu davranışlarının araştırılması. *Türk Bilim Araştırma Vakfı Bilim Dergisi*, 3(3), 292-297.
- Kandır, A., Yurt, O. ve Kalburan C. N. (2012). Okul Öncesi Öğretmenleri ile Öğretmen Adaylarının Çevresel Tutumları Yönünden Karşılaştırılması. *Kuram ve Uygulamada Eğitim Bilimleri*, 12(1), 317-327.
- Louv, R. (2012). *Doğadaki son çocuk*. (Çev. Temürcü, C.). TÜBİTAK bilim kitapları: Ankara.
- Milli Eğitim Bakanlığı (2013). Okul Öncesi Eğitimi Programı, Ankara.

- McKeown, R. (2002). Progress has been made in education for sustainable development. *Applied Environmental Education and Communication*, 1, 21–23.
- Önder, A. ve Özkan, B. (2013). *Sürdürülebilir çocuk gelişimi: Okul öncesinde etkinliklerle çevre eğitimi*. Anı yayıncılık: Ankara.
- Patton, M. Q. (2014). *Nitel araştırma ve değerlendirme yöntemleri* (Çev. Ed. M. Bütün ve S.B. Demir). Pegem akademi yayıncılık. Ankara.
- Sabo, H. M. (2010). *Why from early environmental education?* US-China Foreign Language, ISSN 1539-8080, USA, Volume 8, No.12 (Serial No.87).
- Tezel Şahin, F., ve Özyürek, A. (2011). Anne baba eğitimi ve okul öncesinde aile katılımı. İstanbul: Morpa Kültür Yayınları.
- Wilson, R., A. (1996). *Starting Early: Environmental Education during the Early Childhood Years*. ED402147 ERIC Digest.
- Yıldırım, A. ve Şimşek, H. (1999). *Sosyal bilimlerde nitel araştırma yöntemleri*. Seçkin Yayıncılık: Ankara.