A Qualitative Assessment on 'My School Rize Project'

Arzu KÜÇÜK¹

National Ministry of Education

Nagihan YILDIRIM²

Recep Tayyip Erdogan University

Abstract

The use of out-of-classroom and/or school teaching environments has become increasingly important in recent years and is included in the 2023 educational vision document of the Turkish Ministry of National Education. Within the scope of this new vision of the document, provincial directorates of national education have started to plan various activities aiming at bringing teachers out of classes and/or especially schools. One of them is the "My School is Rize Project". In the scope of this project; a guide teaching material was prepared for the matching of course acquisitions with various out-of-school settings in Rize province with the participation of one representative teacher from all branches from pre-schools to high schools. The first researcher was one of the participants of this project. This study aimed to present the views of the teachers who had worked on the preparation period of this material. Based on the qualitative paradigm, the data were collected through semi-structured interviews from the twenty teachers at the end of the project. The data obtained from each question were subjected to descriptive analysis after being transcribed. The results were interpreted in line with the codes and categories that emerged from the analysis. In line with the critical results of the study, some suggestions were made to various stakeholders such as national education directorates, teachers, and also researchers to use out-of-classroom and/or school teaching environments.

Keywords: My School is Rize Project, Out-of-School Learning, Teacher Education

DOI: 10.29329/epasr.2020.373.6

 ${\bf Correspondence:}\ arzukucuk@gmail.com$

¹Dr., National Ministry of Education, Rize, Turkey, ORCID: 0000-0001-8933-8179

² Assoc Prof. Dr., Faculty of Education, Recep Tayyip Erdogan University, Rize, Turkey, ORCID: 0000-0002-2985-6086, Email:nagihan.yildirim@erdogan.edu.tr

Introduction

Educational literature includes different definitions of learning that are possible in many ways (Ainsworth & Eaton, 2010). One is a formal education in schools, in line with the objectives and achievements of teaching programs. Another is more informal learning that is realized by chance and interaction with the environment through the individual's own life (Lacin Simsek, 2011; Sen, 2019). Out-of-school learning takes place in an area where both informal and formal learning intersect (Gerber et al., 2001; Rogoff et al., 2016). Many institutions, organizations, and natural environments can be used as an out-of-school learning environment. Factories, planetariums, museums, science centers, botanical gardens, zoos, and national parks can be counted among these environments (Dillon et al., 2006).

The use of out-of-school learning environments enables children to gain first-hand rich experiences, to see and observe events and elements in their usual environment, to perceive many sensory organs by employing them, to experience abstract and complex events in concrete, to increase their attention and motivation, to establish an inter-disciplinary relationship, personal and social skills (Atmaca, 2012; Balkan et al., 2010; Dillon et al., 2006). It also provides students with opportunities to learn and strengthen their learning with different learning styles at their learning speed, through learning channels that are not available in the classroom (Ertas et al., 2011; Sahin & Saglamer-Yazgan, 2013; Tatar & Bagriyanik, 2012). The happiness of the students in the out-of-school settings ensures that the positive life is kept in mind for a long time, but also the permanence of the knowledge and the increase in academic success (Ayotte-Beaudet et al., 2017; Bakioglu & Karamustafaoglu, 2014; Braund & Reiss, 2006; Kelly, 2000; Rivkin, 2000). In addition to increasing learning and success, individuals think critically, empathize with events, and their curiosity increases. It can also enable individuals to develop high-level skills, increase awareness of science and technology and gain values (Coskun Keskin & Kaplan, 2012; Kucuk & Yildirim, 2020). In short, out-of-school learning environments offer rich opportunities for individuals to develop in terms of social, cognitive, affective, and skills (Anderson et al., 2000; Ayotte-Beaudet et al., 2017; DeWitt & Storksdieck, 2008; Eryaman et al., 2010; Morag et al., 2013; Orion & Hofstein, 1994).

Because of these advantages for education and training, teachers should go beyond the physical boundaries of the school when they find or create opportunities (Anderson et a., 2006; DeWitt & Osborne, 2007). However, different mental images can be found in the stakeholders of the school regarding the concept of out-of-school activity. Students, parents, and teachers who are among these stakeholders can perceive these activities not as a rich learning opportunity, but as entertaining activities where pleasant and new places are seen (Lacin Simsek, 2011; Sen, 2019). First of all, this perception should be corrected. The process to be carried out should be well planned, as it would not be right to leave the important outcomes of out-of-school learning activities to chance (Kucuk, 2020).

This process should be the practice that the teacher prepares within the scope of a specific plan and carries out step by step within the plan to achieve the targeted acquisitions (Braund & Reiss, 2006). The content of the course should be applied in a meaningful and consistent way through out-of-school learning environments. In this way, it will be possible for out-of-school settings to offer rich learning opportunities for children (Kucuk, 2020; Kucuk & Kucuk, 2019; Tatar & Bağriyanik, 2012; Okur Berberoglu & Uygun, 2013).

In this context, out-of-school learning activities should be planned in three stages (Kucuk & Yildirim, 2019).

- 1. Works to be done before the trip
- a) Preparations for education
- During these preparations, the teachers should go and see the place they intend to study in advance. If support from a specialist in the field is to be received, the teacher should talk about his / her expectations and exchange ideas.
- What should be focused on in such a way that the interests of the students do not dissipate should be determined and the planning should be done accordingly.
- Brochures presenting the environment to be visited should be taken as ready, if available, or prepared and distributed to the students. These brochures should contain brief information and rules to be followed.
- Students should be briefly informed about where to go, as well as what they aim to do, what to do and what to learn.
- Worksheets should be prepared for use during the activity and they should be in such a way that students can add their pre-questions.
- The teacher should decide what methods and techniques he/she will use while preparing the material and prepare materials if necessary.
- If there are any inconveniences related to security, they should be identified and the necessary precautions taken and eliminated. (Where safety issues cannot be resolved, another safe out-of-school learning environment should be preferred.)
 - b) Bureaucratic works and preparations for transportation
- If you leave the provincial borders after informing the parent and school administration and obtaining the necessary permissions, timely permission should be obtained from the local

administrative authorities. If going out of the district, the director of the institution should inform the provincial/district national education directorate at least three days in advance and also by official procedures within the social activities regulation of the National Ministry of Education (NME, 2019).

- The mode of transportation, the route to be preferred in transportation, the time of departure, the duration of the trip, the number of students, and the cost of the trip, if any, should be determined.
- By contacting the institution to be visited, information should be given about the day, hour, many students, and an appointment should be made.
 - c) Preparations for eating and drinking and lodging
- If there is a need for nutrition in the environment, preliminary preparation should be made. Or, if the event is going to take place outside the city limits for a few days, preparations and reservations should be made for both eating and lodging.
 - 2. Activities during the trip
 - The specialist or teacher should provide the necessary information.
 - Students should be allowed to observe the environment and be guided to explore.
 - Activities to increase students' motivation should be included.
 - Students should be allowed to investigate in line with their interests and curiosities.
 - There should be a process that provides opportunities for social interaction.
 - 3. Activities to be done after the trip
 - Complementary activities outside the school should be carried out.
 - What they learn from outside the school environment should be repeated and discussed.
- Measurement and evaluation activities should be carried out (These activities may vary according to subject or course. Among the most widely used are composition, painting, poetry, board preparation, poster work, open-ended questions, alternative measurement tools).
- Images and information about the activity should be shared with other students in various areas of the school.
 - Parents should be informed about the activity.

Although certain steps should be followed and should not be ignored, there are studies in the literature about the subject area that teachers experience some difficulties in performing out-of-school

learning activities (Anderson el al., 2006; Aydin et al., 2016; Buyukkaynak et al., 2016; Cicek & Sarac, 2017; Chantrell, 2015; Demir & Oner Armagan, 2018; Ernst & Tornabene, 2012; Ernst, 2013; Mirka, 2014; Sarısan-Tungac & Unaldi-Coral, 2017; Sontay & Karamustafaoglu, 2017; Tatar & Bagriyanik, 2012) and that teachers' knowledge and skills in teaching environments are not sufficient (Smith-Sebasto & Smith, 1997; Türkmen, 2018). Some studies are suggesting that teachers also have some concerns about using out-of-school settings. These include security, attitudes towards out-of-school teaching, time, lack of financial resources, number of students and student age, and physical and mental deficiencies (Dillon et al., 2006). The deficiencies of teachers in terms of knowledge, skills, and experience on this subject create serious difficulties both for the implementation and for the qualified execution of the application (Thomas, 2010).

In Turkey, the National Ministry of Education emphasizes the importance it attaches to out-of-school learning in both its curriculum and the 2023 Education Vision Document (see http://2023vizyonu.meb.gov.tr/doc/2023_VIZYON_ENG.pdf. In the 2nd Action of the 2nd Objective of the Vision Document;

"innovative applications will be provided which is included in the basic education theme; cooperation with schools, science centers, museums, art centers, technoparks, and universities will be increased."

In the 2nd Action of the 3rd Objective of the Vision Document;

"Natural, historical and cultural places and extra-curricular learning environments such as science-art centers and museums will be used more effectively in line with the acquisitions in the curricula".

In addition, with the official letter dated 08.02.2019 and numbered 84037561-602.07.01-E.2830032, it was requested to determine the out-of-school learning environments in the provinces in line with the National Ministry of Education Out-of-School Learning Environment Guide. In this direction, studies have been initiated to identify out-of-school learning environments and to create local guidelines. In this context, a team of teachers from various branches was established under the auspices of the Rize provincial directorate of national education, and a study entitled "My School Rize" was conducted and a guide was prepared for the Rize out-of-school learning environments.

This study aimed to examine the total process beginning from the team-building phase to make an action plan, implementing and developing out-of-school learning environments teaching material.

Method

This study used a phenomenology pattern in terms of examining the outdoor teaching experiences based on a qualitative research approach and has a phenomenology pattern in terms of examining the science fair experiences (Cresswell, 2003). This qualitative pattern is used as a study to reveal how a certain number of people make sense of a concept or a phenomenon they experience.

Study Group

22 teachers, 17 males, and 5 females, working under the Rize provincial directorate of national education are involved in the study. While 18 of the teachers in the study group took the students out of school throughout their professional life at least once, 4 of them never went out of school. The professional experience periods of the teachers in the study are given in Table 1.

Table 1. Professional experience of the study group

	Year	Frequency
	1-5	4
	6-10	4
Professional	11-15	9
experience	16-20 years	4
	Over 20 years	1
	Total	22

Context of "My School Rize Project"

Within the scope of this study, primarily the Provincial Directorate of National Education established a team and the teachers to be included in the team were determined. The teachers were selected from among the teachers whom one of the staff working in the Provincial Directorate of National Education had previously known and thought they could do this job. While 16 of the teachers were willing to participate in such a study at the beginning, 6 of them were not willing and only participated in the study because they thought it was not appropriate to reject the offer.

First of all, a meeting was held with the selected teachers and they were informed about the objectives, content, and process of the project. In the beginning, some places were determined by the research team of the project, and an opportunity was provided for teachers to access the same file and intervene via the internet. In this way, acquisition-place matches were initiated. One week later, the second meeting was held and mutual communication was established again, and then teachers were made to make the new venue and acquisition matches. Certain travel routes have been prepared and some places have been visited, with priority places being added frequently. After the visits made with the places that were not visited, the teachers made the necessary additions and subtractions by working on the online document again. After that, this document was sent to the District National Education Directorates to receive contributions from the related branch teachers. After the necessary revisions were made in line with the feedback provided in this way, the provincial directorate of the

national education research and development team designed the booklet and sent the booklet to print. The electronic edition of the book has been shared with the public on the web (see https://rize.meb.gov.tr/rista/). In this material, it is explained where and what kind of activities can be held for which acquisition within the scope of the subject and themes of the teaching curriculums.

Data Collection

The data were collected through semi-structured interview questions developed by the researchers to determine the post-study views of the teachers who participated in the "My School Rize Project." After the interview form was prepared, necessary arrangements were made by contacting the expert opinion. During the interview, demographic characteristics of the teachers such as professional seniority year and branch were recorded, and then other questions were passed. A total of 13 questions were asked to the teachers and the interviews lasted approximately 30 minutes. The data were recorded with the permission of the participants.

Data Analysis

In this study, after the interview data were transcribed, they were checked by a full reading method by the first researcher. Then, the data were separated according to the code and themes by using the descriptive analysis method, which is one of the qualitative data analysis methods, and was critical for its suitability to the literature (Cresswell, 2003). To ensure the reliability of the research, the data obtained were coded by other researchers and a joint decision was made and their final arrangements were also made. To ensure the validity of the research, although direct quotations from the interview notes are not given the codes of the teachers who shared the relevant views were presented separately. For example, teachers coded as T6,7,10 and 15 said that they were not taking students out of school (see Table 3.2).

Results

The findings are presented in the relevant tables by making a descriptive analysis of each question asked during interviews with teachers.

Question 1: "Have you encountered any difficulties during this study process? If so, what kind of difficulties did you encounter?"

Table 2 includes the descriptive analysis of the first question.

Table 2. Teachers' difficulties during the project process

Category	Code	Frequency	Total
		(f)	Frequency
			(tf)
No difficulty	I didn't face any difficulty	7	7
Acquisition-place	Acquisition-environment association	5	8
	Finding a suitable place for acquisitions	3	-
The concern	The concern that the relationship between acquisitions	3	
(anxiety)	and place will be considered worthless.		
	Insufficiency concern	1	9
	Anxiety about not being able to train the curriculum	4	-
	within due time		-
	Lack of information due to the lack of preparatory	1	
	education		
Insufficient support	Insufficient feedback	2	_
from others	Only one teacher from each branch in the team	2	4
The others	Working and data loss in the same Excel program	1	_
	Working outside business hours	1	4
	Weather conditions	1	_
	Nausea	1	-

It is seen from Table 2 that, 7 of the teachers stated that they did not encounter any difficulties. In addition, teachers stated that it was difficult to associate the acquisitions with predetermined venues (f = 5) and to find a suitable venue (f = 3). However, it is seen that teachers experience difficulties due to anxiety in the process. Anxiety-related difficulties, anxiety because matching is not required by the teachers who will use the guide in schools (f = 3), not being able to train the curriculum within the period (f = 4), inadequacy (f = 1), and lack of preparatory education (f = 1) was repeated 9 times.

Among the difficulties faced are the fact that there is 1 teacher from each branch in the study team (f = 2) and the feedback given to the working drafts sent to the districts in the districts (f = 2). In addition, it has been stated that there are difficulties (f = 4) due to working outside the working hours, weather conditions, nausea during travel, and working by the entire team to intervene in the same file.

Question 2: 'Have you ever taken your students to out-of-school environments during your professional life?' If your answer is yes, the question of what purpose and how often did you take it?'

Table 3.1 includes the descriptive analysis of the second question.

Table 3.1. Teachers' aims to take students out of the school environment

Category	Code	Frequency (f)	Total Frequency (tf)
Associated with	Lesson processing	9	10
acquisition	Seeing the relation of the lesson with daily life	1	_
	Having a good time	4	
	Reading	2	_
	Motivation	2	_
Not associated with the	Travel-observation	2	_
acquisition	Knowing professions	1	_
	Socialization	1	15
	School introduction	1	_
	Specific days and weeks	1	_
	Values education	1	=

According to Table 3.1, the number of teachers who stated that they used out-of-school learning environments for teaching purposes was 10, and the number of those who declared that they went out of school settings in a way that is not related to acquisitions is 15. The teachers, who said that they came out of school learning environments in a way that is not related to acquisitions, mentioned goals such as having a pleasant time (f = 4), reading a book, observing trips, providing motivation (f = 2).

In Table 3.2, data are showing how often the teachers who use out-of-school learning environments use.

Table 3.2. Frequency of taking students out of school settings

Category	Code	Frequency (f)	Total Frequency (tf)
	2 times a month	1 (T3)	
Several times a year	1 time a month	3 (T11, T13, T17)	9
	1 time in two months	1 (T21)	_
	Several times a year	4 (T2, T10, T12, T16)	_
Every few years	Most once a year ****	9 (T1, T4, T5, T8, T9, T14, T18, T19,	9
		T20)	
Not taking students out of school	Not ****	4 (T6, T7, T10, T15)	4

According to the data in this table, it is seen that 9 of the teachers responded to the learning environments out of school, 9 of them responded at most once a year and 9 of them were several times a year. Four of the teachers stated that they never used out-of-school learning environments.

Question 3: 'Would you consider using out-of-school learning environments from now on? If you are a thinker, how often would you like to use it? "

Table 4 includes the descriptive analysis of the third question.

Table 4. The frequency of using out-of-school environments from now on

Category	Code	Frequency (f)	Total Frequency (tf)
	2 times a month	1 (T3)	_
With the same	1 time a month	3 (T11, T13, T17)	_
frequency	1 time in two months	1 (T21)	15
	Several times a year	3 (T2, T12, T16)	_
	Most once a year	7 (T1, T4, T20, T8, T14, T18, T19)	_
	1 time a month	1 (T5)	_
More	1 time a year	1 (T6)	6
	Several times a year	4 (T7, T9, T10, T15)	_
Not taking students out of school	Not	1 (T18)	1

According to table 4, Ö18 stated that he has used out-of-school learning environments before, except for course acquisitions once a year, and stated that he will never use it from now on. He stated that he would use 15 of the teachings with the same frequency, while 6 would use it more often. Table 3.2. Compared to Table 4, it is understood that 4 of these 6 teachers are those who have not used out-of-school learning environments before.

Question 4. 'Is it necessary and important to use out-of-school learning environments? What changes and improves the student?"

Table 5 includes the descriptive analysis of the fourth question.

Table 5. Contribution of out-of-school learning to students

Category	Code	Frequency	Total
		(f)	Frequency (tf)
	Learning the relationship between the subject and	7	
For learning the	daily life		_
concepts	Permanent learning ****	7	17
	Learning	3	
	Motivation ****	5	
	Developing a positive attitude towards the course ****	3	
For Interest and	Wonder ****	3	-
Attitude	Getting to know the jobs	1	=
	Plant growing	1	18
	Respect for nature	1	.
	Realizing the importance of the course	1	
	Awareness	1	
	Teacher perception	1	
	Sensitivity to historical monuments	1	-
	Perspective on life and events	4	_
	Making observations	3	_
	Self-confidence	3	_
	Reading-research	2	_
	Socialization	2	-
	Self-awareness	2	-
	Intra-group and teacher interaction	4	

	Problem-solving	1	
	Teamwork	1	
For skill and	Critical looking	1	
personality	Commenting	1	
	Generating ideas	1	28
	Ability to act with the community	1	
	Reasoning and analytical thinking	1	
	Interaction with the expert	1	
	Psychomotor skill	1	
	Behave according to the environment	1	
	Visual perception	1	
The others	Beautiful moment	1	
	Feeling comfortable	1	3
	Be happy	1	

It is seen from Table 5 that, the teachers gave answers to this question in 4 different categories: learning the concepts, interest and attitude, skill and personality, and others. It is seen that 28 codes for skill, 18 for interest and attitude, and 17 for learning the concepts are repeated. It is understood that the codes of permanent learning (f = 7) and seeing the reflections of the subject in daily life (f = 7) are repeated for understanding the subject. In the category of interest and attitude, answers were given that mostly motivation (f = 5), attitude towards the course (f = 3), and wonder (f = 3). Among the responses given to the skill and personality, it is seen that the perspective of life (f = 4), observation (f = 3), and self-confidence (f = 3) codes are frequently repeated.

Question 5: "What are the disadvantages and limitations of teaching in out-of-class environments?"

Table 6 includes the descriptive analysis of the fifth question.

Table 6. Limitations of the out-of-school learning process

Category	Code	(f)	T(f)
	Loss of other courses	8	16
Time	Spending a lot of time on the road	7	_
	Conflict with other schools in place	1	_
	Risk of accident	3	10
Security	Security	6	_
	Additional personnel for security purposes	1	_
	Age	2	13
Class domination	Number of students	5	_
	Classroom management	6	_
	Financial opportunities	5	13
Cost	Transportation cost	7	
management-related limitations	Management difficulties	2	
	Student parent's permission	1	_ 5
Permission	Management's permission	1	_
	Car rental and documents	3	_
	Distractions in the environment	2	_ 5
Environment-related limitations	The ignorance of the employees of the	2	_
	institution		_
	Not being able to find a place to be active in	1	
	the environment		

-	It is tiring	1	
	Classroom readiness for out-of-school activities	1	6
The others	Knowing the problems from the teacher	1	_
	Weather conditions	1	_
	Students coming unprepared	1	_
	Inequality of opportunity	1	

When the table is examined, it is seen that it is among the categories that are repeated over time 16, class domination 13, cost 13, security 10 times.

Question 6: "How do you deal with the disadvantages and limitations of teaching in out-of-school learning environments?"

Table 7 includes the descriptive analysis of the sixth question.

Table 7. Ways to combat limitations

Category	Code	Frequency (f)	Total Frequency (tf)
Permission	To inform the student	3	_ 5
	Informing the parent	2	
	Financial resources	3	_
	Parent support	2	_
Finding financial	Financial support for students with economic difficulties	1	_
support	The school provides financial support	3	9
	Going with several classes and several teachers at the same time	3	
Time	Exchange between teachers	2	- 8
	Good planning	1	_
	School support	1	_
	Going out on issues of more importance	1	_
security	Class size reduction	1	
	Guiding the student in the process	1	
	Parent support	1	8
	Identifying the risks of the environment ***	1	_
	Additional personnel	1	_
	Taking security measures	1	_
	Don't go to the environment he knows	1	_
	Describe the rules	1	
Can't cope	Not possible	2	_ 3
	So hard	1	
The others	Taking relevant students ***	2	<u> </u>
	Cover to be protected from rain	1	<u> </u>
	Motivation	2	_
	Training of administrators and the teachers on this	2	9
	issue		_
	Communication with the institution	1	_
	Administrative support	1	

In Table 7, there are two codes in the permissions category: parent information (f = 2) and student information (f = 3). A total of 9 codes are listed in the financial support finding category. It is seen that there are codes such as going with several classes and teachers at the same time (f = 3) and

exchanging lessons between teachers (f = 2). Each code in the security category has been repeated only once and it is seen that there are codes such as taking security precautions, determining the risks of the environment, getting support from the parents. It is seen that 3 of the teachers have responded that these difficulties cannot be overcome. Among the codes collected under the other name, it is seen that codes such as taking relevant students (f = 2), administrative support (f = 1), and teacher education (f = 1) are included.

Question 7: "What preparations are required to be able to teach in out-of-school learning environments?"

Table 8 includes the descriptive analysis of the seventh question.

Table 8. Preliminary preparations to be made in out-of-school learning environments

Category	Code	Frequency (f)	Total Frequency (tf)
	Planning the Process	6	` `
	Getting to know the environment	5	="
	Goals and acquisitions of the curriculum should be known	5	•
	Lesson Planning	3	-
	Acquisition- environment harmony	3	-
Lesson Planning	Material preparation	4	•
_	Measuring preparation	4	. 38
	Preparing an activity	2	_
	Method determination	1	<u>-</u> .
	Time planning	1	_
	Alternative activity planning	1	_
	Cooperation with the management	1	
Permission***	Parent's permission	5	_
	Management's permission	5	10
Environment	Seeing the environment before	3	_
	Appointment - contact	9	12
Transportation ***	Rent a car	2	
	Financial account	1	3
Student's	Assigning students	1	
responsibilities	Student readiness	1	3
	Requesting material from the student	1	-
	Security measures	4	
	Determining the limitations of the environment	2	-
	Additional personal	1	9
Security ***	Apply for peer experience related to the institution to be visited	1	•
	Identifying security problems	1	-
Information***	Informing the student	6	7
~	Brochure	1	. '
	Taking precautions to meet the physical needs of children	1	
The others	Student clothing	1	2

When Table 8 is analyzed, it was seen that the teachers stated the most ideas for the planning of the lesson to be taught outside (f = 38). In the preparations category for the environment, the codes of seeing the environment in advance (f = 3) and making an appointment - establishing communication (f = 9) were included, but they were repeated 12 times in total. However, the codes in the permissions category are 10, security 9, information 7, and transportation 3 times.

Question 8: "How should the course be taught in an out-of-school learning environment?"

Table 9 includes the descriptive analysis of the eighth question.

Table 9. Lesson teaching process during an out-of-school learning activity

Category	Code	Frequency	Total
		(f)	Frequency (tf)
Teaching method-	Give a lecture	9	
technique	Application and activity	9	20
	Discussion	1	_
	Presentations of the student	1	_
	Travel	1	
Observation ***	Observation	3	5
	Make research	1	_
Record ***	To write	2	3
	Video- photo	1	_
The others	Animation	1	
	Answering student questions ***	1	4
	Free time ***	1	=
	General information about the environment	1	=

It is seen from Table 9 that the teaching methods and techniques (f = 20), observation (f = 5), and recording (f = 3) categories are included. The codes for answering students' questions and giving students free time were repeated under the other category and were repeated 1 time.

Question 9: "What should be done after returning from of school environment?"

Table 10 includes the descriptive analysis of the ninth question.

Table 10. Things to be done after the out-of-school learning activity

Category	Code	Frequency	Total
		(f)	Frequency (tf)
Summing up the topic	Verbal sharing (expressing what they see)	5	_
	Repeating	3	9
	To write	1	_
Deepening the subject	Doing research	1	2
	Making a model	1	_
	Verbal feedback	4	
Getting ideas about	Survey	5	12
the environment ***	Opinion	3	_
	Text-poem-story-songs	4	
Assessment and	Open-ended question	2	12
evaluation ***	Question-answer	5	-
	Control List	1	

From table 10, it is seen that two codes of assessment and evaluation and getting ideas of children about the environments were repeated 12 times, and also summing up the topic code for 9 times about what should be done after out-of-school learning activities. However, the code for deepening the subject was repeated just only twice.

Question 10: "What do you think about the suitability of out-of-school education for your branch?"

Table 11 includes the descriptive analysis of the tenth question.

Table 11. Eligibility for the branch

Category	Code	Frequency (f)	Total Frequency (tf)
Positive	Very suitable	9	17
	suitable	8	
Negative	Limited	3	5
	Not suitable	2	

When the categories in table 11 are examined, it was seen that 17 teachers responded positively and 5 teachers responded negatively.

Question 11: "What kind of competencies does the teacher need to have to carry out out-of-school learning activities?"

Table 12 includes the descriptive analysis of the eleventh question.

Table 12. Teacher competencies

Category	Code	Frequency	Total
		(f)	Frequency
			(tf)
Cognitive	Subject area knowledge	8	
competencies	Out-of-school learning knowledge ***	2	11
	Knowing the curriculum well	1	
	Contact	4	
	Being responsible	2	
	Being an idealist	2	
	Love your job	2	
	Innovation	2	
Personal competencies	Being able to motivate the student	2	19
	Fast problem solving	1	
	Dynamism	1	
	Courage	1	
	Be patient	1	
	Leadership	1	
	Classroom management	5	
Professional	Professional experience	2	8
competence	Getting to know the student	1	
Others	No physical disability	1	2
	Getting to know the environment	1	

It is seen from Table 12 that, teachers' answers were classified into three categories in terms of cognitive, affective, professional, and physical competencies. It is seen that most of the answers by teachers are in the affective competence dimension (f = 19) and communication skills are repeated more than other codes (f = 4). In the cognitive competency dimension, it is seen that the area information code is repeated 8 times, and out-of-school learning knowledge is repeated twice. In terms of professional competence, it is seen that class management is the most (f = 5).

Question 12: "What would you recommend to be used effectively in your branch?"

Table 13 includes the descriptive analysis of the twelfth question.

Table 13. Teachers' suggestions for effective use

Category	Subcategory	Code	Frequency	Total
			(f)	Frequency
				(tf)
		Getting to know environments	3	-
		Process planning	2	_
		Communication with other teachers	2	_
		Selection of suitable environments	2	-
	Planning	Being selective	1	•
		Don't go with few students	1	
		Activity planning	1	16
5 0		Observation	1	•
Before activity		Time planning	1	•
		Foreseeing the environment	1	•
		Complete material	1	•
		Security measure	1	
	Security***	Risk assessment	1	4
		Informing the student	1	•
		Informing the student	1	4
During activity	Process	Motivating the student	2	-
		Getting to know the student	1	-

It is seen from Table 13 that, teachers stated some ideas which can be collected in two categories as pre-activity (f = 20) and during the activity (f = 4). The pre-activity category is divided into two sub-dimensions: planning and security. It is seen that the codes for planning are repeated 16 times and the codes for security are repeated 4 times.

Question 13: "Did getting involved in this project bring you new things?"

Table 14 includes the descriptive analysis of the thirteenth question.

Table 14. Contribution of the project to teachers

Category		Code	Frequency (f)	Total Frequency (tf)
		Acquisition-environment association	9	
		Getting to know environments	9	•
		Gaining interdisciplinary perspective	2	•
Pedagogical		Going to out-of-school environments	2	•
content		Realizing the importance of informal learning	2	29
knowledge	for	Learning the process	2	•

out-of-school	Noticing your shortcomings	1	
learning	Learning about out-of-school learning ***	1	•
	Realizing the limitations of the environments	1	-
	Realizing the importance of collaboration between teachers	4	_
	To examine program acquisitions in detail	2	-
	Generating ideas	2	-
	Leading teachers as managers - limiting expectations	1	-
	Career development	1	•
	Empathy	1	16
Professional development	Dominate the program	1	-
	Developing a new perspective	1	-
	Realizing the shortcomings of the acquisition and program	1	-
	Improving out-of-school activities	1	-
Socio-cultural	Getting to know the environment	13	15
impact	Meet other teachers	2	-
Affective effect	Professional satisfaction	1	3
	Happiness - pride	2	-

It is seen from the Table 14 that the codes are divided into four categories as pedagogical content knowledge for out-of-school learning (f = 30), professional development (f = 17), sociocultural impact (f = 15) and affective effect (f = 3). The codes of establishing a relation between learning out of place and learning places are also mentioned nine times. On the other hand, learning about out-of-school learning is emphasized just only once. In terms of professional effects, teachers' learning from each other's takes place with the code of cooperation between teachers, and it is understood that it is emphasized four times. However, codes of examining the gains in detail and generating ideas are emphasized twice. The number of teachers who state that they know the places and the environment in terms of social culture is 13.

Discussion, Conclusion and Recommendations

In this study, we aimed to reveal the views of teachers who worked on the preparation of the guide material. First of all, teachers were asked what kind of difficulties they faced in this process. From table 2, it is understood that the participant teachers stated that they experienced various difficulties, such as finding a suitable environment for the acquisitions of teaching programs and needing support opinions with the acquisition-place matching. It is thought that these difficulties may be caused by the fact that teachers have not used out-of-school environments based on the acquisitions of teaching programs (f = 15) (see Table 3.1) and some of them have never used out-of-school environments (see Table 3.2) until the study carried out. However, it is understood that teachers feel inadequate with some concerns arising from the lack of preparatory education for out-of-school teaching during the study process (see Table 2). It was also reflected in the statements of teachers that the reason for these concerns may be the lack of information about out-of-school teaching. However, it is thought that the concerns may be caused by the lack of knowledge of most teachers to teach in out-of-school settings, as well as their experience. As an indicator of this, it can be presented that 4 of the teachers never went out of school, and 9 of them went out every few years (see

Table 3.2.). Similarly, the fact that rarely out-of-school goals are not directly related to course acquisitions can be considered as a normal situation for teachers who go out for this purpose for the first time.

Remarkably, a teacher who appeared in Table 4 stated that most of the teachers who participated in such a study (f = 15) would continue to use them outside of school as often as before and that a teacher who said that he rarely used it before the study would not teach any lessons in out of school environment. It is believed that the reason for this situation is that the teachers have been to out-of-school environments only for purposes not directly related to their course acquisitions and that they have not been able to adequately associate out-of-school environments with their lessons throughout the study. However, it is seen that some of the teachers who have never used out-of-school learning environments before are planning to use them from now on. It turned out that all three teachers who used out-of-school learning environments previously planned to increase their frequency of use. These results can be accepted as positive outcomes of the studies conducted. This result may have resulted from the relevant teachers' familiarization with the external environments, recognizing their importance, establishing perspectives on how the achievements will be given in the environment, exchanging ideas with other teachers about learning activities outside the school, and the encouraging actions of the Directorate of National Education on this issue.

In the context of the out-of-school learning environments examined, when teachers were asked about the contribution of out-of-school practices to learning, all of the teachers could not give appropriate answers according to the conceptual framework of the subject. As it is known, the main purpose of out-of-school learning is to provide individuals with the opportunity to learn in-depth subjects in the curriculum outside the walls of the school in various ways (Balkan Kıyıcı & Atabek Yiğit, 2010). However, these outcomes are not sufficiently formed by preparing a guide for out-of-school learning which does not have a clear purpose. Although it is reported in the literature that out-of-school learning environments develop some skills and attitudes in the student (Balkan Kiyici & Atabek Yigit, 2010; Bozdogan, 2007; Griffin, 2004; Kelly, 2000; Martin, 2004; Hannu, 1993; Pedretti, 2004; Sozer & Oral, 2016). Teachers in the study group mostly gave answers in these categories without elaborating skills and attitudes. The reason for this is that most of the teachers do not have an education on the theoretical basis of out-of-school learning and that they have used out-of-school environments outside of their course acquisitions so far.

Likewise, teachers who use out-of-school environments both rarely and mostly out of the teaching of program acquisitions are happy to be in such a team and develop a positive attitude towards out-of-school learning (see Table 3.2, 4, and 14). Nevertheless, it is out of the question that how to perform out-of-school learning practices has emerged as a side effect of such an examination activity. Teaching directly before this process may produce more qualified outcomes.

On the other hand, the teachers were asked what kind of preparations could be made before going out of school, and the answers to the planning of the lesson were obtained. Adequate opinions on permits have not been provided. However, it is not possible to go beyond the borders of the school without obtaining the permissions under the legislation. Making an appointment, security, preliminary information and preparations for transportation from the environment to be visited are the most important stages of the process (Bozdogan, 2007; Hannu, 1993; Pedretti, 2004). The answers given in these categories belong only to less than half of the teachers. It is believed that they did not experience the stages needed until they were included in such a work process in a planned and programmed way and that they did not undergo open training at the beginning of the process, causing such results. Although there are teachers who plan to increase the frequency of out-of-school learning activities in the future, important deficiencies regarding planning, implementation, and evaluation processes will make this difficult.

Participant teachers also gave answers such as time, security, classroom domination, cost, permission as the limitations of out-of-school learning environments (see Table 6.) None of the teachers mentioned them with a holistic approach. When asked about ways to combat these limitations, three teachers responding as "unmanageable" and the answers given to determine the risks of the environment and take precautions in the security category are still very remarkable results. It is not possible for teachers, who do not know the ways to cope with the limitations towards out-of-school learning, to manage the process healthily (Atmaca, 2012; Jarvis & Pell, 2005; Turkmen, 2018).

As a solution to the related limitations, it was observed that some teachers stated ideas about going out of school by reducing the number of students (for example, by taking the relevant students). This solution does not coincide with the principle of equal opportunity in education. Another solution proposed is to reduce class sizes. It is also reported in the literature that crowded classes will have difficulties in out-of-school practice (Turkmen, 2018). The realization of this proposal requires some arrangements that exceed the teacher. To overcome this limitation, training managers need to take a role and produce solutions. For administrators to play such a role, they are expected to have positive thoughts on the importance and necessity of out-of-school learning.

Even though the participant teachers talked about the teaching methods and techniques they will use during out-of-school learning activities, it is seen that they do not express enough ideas to record the facts and events with observation (see Table 9). This result was similar in previous studies (Tatar & Bagriyanik, 2012).

In the literature on the subject area, it is stated that students should be given free time in out-of-school environments by their interests, while only one participant teacher referred to this subject. This result coincides with the information obtained in similar studies. In a study by (Griffin & Symington, 1997), it was revealed that teachers do not have enough ideas about how to handle the

lesson in out-of-school learning environments and they do not have sufficient efforts to relate the outcomes of the lesson with the out-of-school environments around them. Similarly, after returning from the out-of-school learning environment, repeating the subject and measuring and evaluating are among the steps to be followed. It can be seen from the statements in Table 10 that the participants have limited knowledge in this regard. Similarly, it was noteworthy that the participants' opinions about the environment were needed only in planning the activities in the future, but that the participants stated that they would use various ways for this purpose (see Table 10). It is concluded from this that teachers still need rich feedback and different practices in the process of enriching pedagogical content knowledge for out-of-school learning.

A few of the teachers whose evaluations were applied within the scope of this study stated that they did not find out of school learning environments adequate in terms of their branches (see Table 11). Similarly, they emphasized personal competencies, not professional, mostly about the competencies that teachers should have to carry out out-of-school learning activities successfully. At this point, although the relevant competencies were found to be very important for teachers to manage the implementation process, there was hardly any reference to the competence of how out-of-school activities should take place for this process to be efficient. All the data discussed up to this point reveal that the participants could not gain enough information for the execution of the process and even they do not see this issue as a need.

Participants were also asked to provide recommendations to other teachers that encourage out-of-school learning practices. At this point, it was revealed that the suggestions shared were mostly directed before the out-of-school activity (see Table 13). In this context, they stated very few ideas about security, which is often referred to as the most important limitation of out-of-school learning practices in the literature (see Table 13). Similarly, they did not express an opinion regarding the post-activity. This result reveals that participatory teachers do not see the post-activity phase as part of out-of-school learning to support the previously discussed findings.

Participants suggested that pedagogical content knowledge for out-of-school learning changed as the most important output of the project (see Table 14). Knowledge of establishing the most shared acquisition-place relationship and getting to know the places in this category can be evaluated as having both professional and socio-cultural and affective effects on the process experienced by the participants. However, the fact that teachers share their contributions in this way may not mean that they can conduct out-of-school learning activities effectively. At this point, in the light of the information shared in the first part of the study, where the theoretical foundations of the research are discussed, the inclusion of the process after the first effective training can create more positive outcomes.

Teachers' involvement in the process without training on out-of-school learning has caused various difficulties. Even though they have provided a guideline at the end of this process, identifying the venues and matching the achievements with the venues is not sufficient to carry out out-of-school learning activities even for the participants. Even for teachers who are partially or directly interested in the subject, the ongoing problems will affect their tendency towards out-of-school practice, considering that other teachers in schools are not as motivated as those who experience the project process themselves. This problem can be solved by teachers at work gaining a positive attitude towards out-of-school learning through well-planned educational programs. Similarly, it may be an appropriate action strategy to integrate out-of-school learning into compulsory courses at the undergraduate level, which integrates into the curriculum, is highlighted in various documents, and has been found to produce desired results in many respects. In the literature on the subject area, it is among the difficulties that the curriculum is not designed to facilitate the execution of the relevant out-of-school activities (Tatar & Bagriyanik, 2012). In this context, it is expected that the Ministry of National Education does not leave the various limitations in the process to the solution of teachers who are practitioners only and to make the necessary facilitative arrangements in administrative dimensions, for example, during school hours.

References

- Ainsworth, H. L., & Eaton, S. E. (2010). Formal, non-formal, and informal learning in the sciences. Calgary: Onate Press.
- Anderson, D., Kisiel, J., & Storksdieck, M. (2006). Understanding teachers' perspectives on field trips: Discovering common ground in three countries. *Curator*, 49(3), 364-386.
- Anderson, D., Lucas, K. B., Ginns, I. S., Lynn, D., & Dierking, L. D. (2000). Development of knowledge about electricity and magnetism during a visit to a science museum and related post-visit activities. *Science Education*, 84(5), 658-679.
- Atmaca, S. (2012). Derslik dışı fen etkinlikleri ve bu etkinliklere dayalı öğretimin öğretmen adayları üzerindeki etkileri [Outdoor education activities in science education and effects of these activities on pre-service teachers] (Unpublished doctoral thesis). Hacettepe University, Ankara.
- Aydın, S., Hasiloglu, M. A., & Kunduraci, A. (2016). Fen bilimleri öğretmenlerinin ders dışı etkinlikleri kullanmada özyeterlik algılarının farklı değişkenler açısından incelenmesi [Evaluation of science teachers' usage of extracurricular activities with respect to various variables]. *International Journal of Education, Science and Technology, 2*(2), 94-103.
- Ayotte-Beaudet, J. P., Potvin, P., & Lapierre, H. G. (2017). Teaching and learning science outdoors in schools' immediate surroundings at K-12 levels: A meta-synthesis. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(8), 5343-5363.
- Bakioglu, B., & Karamustafaoglu, O. (2014). Okul dışı ortamlarda fen eğitimi: Diyaliz merkezine teknik bir gezi [Outdoor science education: Technical visit to a dialysis center]. *Turkish Journal of Teacher Education*, 3(2), 15-26.

- Balkan Kiyici, F., & Atabek Yigit, E. (2010). Sınıf duvarlarının ötesinde fen eğitimi: Rüzgâr santraline teknik gezi [Science education beyond the classroom: A field trip to wind power plant]. *International Online Journal of Educational Sciences*, 2(1), 225-243.
- Bozdogan, A. E. (2007). Bilim ve teknoloji müzelerinin fen öğretimindeki yeri ve önemi [Role and importance of science and technology in education] (Unpublished doctoral thesis). Gazi University, Ankara.
- Braund, M., & Reiss, M. (2006). Towards a more authentic science curriculum: The contribution of out-of-school learning. *International Journal of Science Education*, 28(12), 1373-1388.
- Buyukkaynak, E., Ok, Z., & Aslan, O. (2016). Fen bilimleri öğretmenlerinin fen eğitiminde okul dışı öğrenme ortamlarına yönelik görüşleri [Science teachers' views on out-of-school learning environments in science education]. *Kafkas University Journal of the Institute of Social Sciences*, 1, 43-60.
- Coskun Keskin, S., & Kaplan, E. (2012). Sosyal bilgiler ve tarih eğitiminde okul dışı öğrenme ortamı olarak oyuncak müzeleri [Toys museums as out- of- school learning method in social studies and history education]. *Electronic Journal of Social Sciences*, 11(41), 95-115.
- Cresswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd Ed.). Sage Publication.
- Cicek, O., & Sarac, E. (2017). Fen Bilimleri öğretmenlerinin okul dışı öğrenme ortamlarındaki yaşantıları ile ilgili görüşleri [Science teachers' opinions about experience in out of school learning environments]. *Ahi Evran University Journal of Kırsehir Education Facuty, 18*(3), 504-522.
- Chantrell, G. (2015). *Challenges, as perceived by teachers, to learning outdoors* (Unpublished master thesis). Nanaimo: Vancouver Island University
- Demir, N., & Oner Armagan, F. (2018). Okul dışı öğrenme ortamlarına yönelik fen bilgisi öğretmenlerinin görüşleri: Planetaryum [Science teachers views about informal learning environments: Planetarium] *Journal of Social And Humanities Sciences Research*, 5(30), 4241-4248.
- DeWitt, J., & Osborne, J. (2007). Supporting teachers on science-focused school trips: Towards an integrated framework of theory end practice. *International Journal of Science Education*, 29(6), 685-710.
- DeWitt, J., & Storksdieck, M. (2008). A short review of school field trips: Key findings from the past and implications for the future. *Visitor Studies*, 11(2), 181-197. https://doi.org/10.1080/10645570802355562
- Dillon, J., Rickinson, M., Teamey, K., Morris, M., Choi, M. Y., Sanders, D., & Benefield, P. (2006). The value of outdoor learning: evidence from research in the UK and elsewhere. *School Science Review*, 87(320), 107-111.
- Ernst, J., & Tornabene, L. (2012). Preservice early childhood educators' perceptions of outdoor settings as learning environments. *Environmental Education Research*, *2*(1), 97-122.
- Ernst, J. (2013). Early childhood educators' use of natural settings as learning environments: An exploratory study of beliefs, practices, and barriers. *Environmental Education Research*, 20(6), 735-752.

- Ertas, H., Sen, A. I., & Parmaksizoglu, A. (2011). Okul dışı bilimsel etkinliklerin 9. sınıf öğrencilerinin enerji konusunu günlük hayatla ilişkilendirme düzeyine etkisi [The effects of out-of school scientific activities on 9th grade students' relating the unit of energy to daily life]. *Necatibey Faculty of Education Electronic Journal of Science and Mathematics Education*, 5(2), 178-198.
- Eryaman, M. Y., Ozdilek, S. Y., Okur, E., Cetinkaya, Z. & Uygun, S. (2010). A participatory action research study of nature education in nature: Towards community-based ecopedagogy. *International Journal of Progressive Education*, 6(3), 53-70.
- Gerber, B. L., Marek, E. A., & Cavallo, A. M. (2001). Relationships among informal learning environments, teaching procedures and scientific reasoning ability. *International Journal of Science Education*, 23(5), 535-549.
- Griffin, J. (2004). Research on students and museums: looking more closely at the students in school groups. *Science Education*, 88(1), 59-70.
- Griffin, J., & Symington, D. (1997). Moving from task-oriented to learning-oriented strategies on school excursions to museums. *Science Education*, 81(6), 763–779.
- Hannu, S. (1993). *Science center education: Motivation and learning in informal education (*Unpublished doctoral dissertation). Helsinki University.
- Jarvis, T., & Pell, A. (2005). Factors influencing elementary school children's attitudes toward science before, during, and after a visit to the U.K. National Space Centre. *Journal of Research in Science Teaching*, 42(1), 53-83.
- Kelly, J. (2000). Rethinking the elementary science methods course: A case for content, pedagogy, and informal science education. *International Journal of Science Education*,
- Kucuk, A. (2020). Fen bilimleri 5. sınıf insan ve çevre ünitesinin okul dışı öğrenme ortamında öğretimi [Teaching the grade-5 human and environment unit of science course in an out-of-school learning environment] (Unpublished doctoral thesis). Recep Tayyip Erdogan University, Rize.
- Kucuk, A., & Kucuk, M. (2019). Türkiye'de okul dışı öğrenme ortamlarına yönelik yapılan lisansüstü tezlerin içerik analizi [A content analysis study of the graduate thesis related to outdoor learning environments in Turkey]. In D. Koksal (Eds.), X. International Congress on Research in Education Proceedings Book, (pp. 502-510). http://ulead2019.ulead.org.tr/files/50/editor/files/ulead 2019(10).pdf
- Kucuk, A., & Yildirim, N. (2019). Doğa eğitimi ve doğa okulları [Nature education and nature schools]. In A. I. Sen (Eds.), *Okul dışı öğrenme ortamları* [Out of school learning environments], (pp. 246-272). Ankara: Pegem Academy.
- Kucuk, A., & Yildirim, N. (2020). The effect of out-of-school learning activities on 5th grade students' science, technology, society and environment views. *Turkish Journal of Teacher Education*, 9(1), 37-63.
- Lacin Simsek, C. (2011). Fen öğretiminde okul dışı öğrenme ortamları [Out-of-school learning environments in science teaching]. In C. Laçin Şimşek (Eds.), *Okul dışı öğrenme ortamları ve fen eğitimi* [Out-of-school learning environments and science education], (pp. 1-23). Ankara: Pegem Academy.

- Martin, L. M. (2004). An emerging research framework for studying informal learning and schools. *Science Education*, 88, 71-82.
- Mirka, G. (2014). Factors which influence teachers' use of outdoor classrooms. *The Journal of Environmental Education*, 19(2), 25-33.
- Morag, O., Tal, T., & Rotem-Keren, T. (2013). Long-term educational programs in nature parks: Characteristics, outcomes, and challenges. *International Journal of Environmental & Science Education*, 8(3), 427-449.
- NME. (2019). *Millî Eğitim Bakanlığı Eğitim Kurumları Sosyal Etkinlikler Yönetmeliği* [Educational Institutions Social Activities Regulation]. Ankara: National Ministry of Education.
- Okur Berberoglu, E., & Uygun, S. (2013). Sınıf dışı eğitimin dünyadaki ve Türkiye'deki gelişiminin incelenmesi [Examining of outdoor education development in the world and in Turkey]. *Mersin University Journal of the Faculty of Education*, 9(2), 32-42.
- Orion, N., & Hofstein, A. (1994). Factors that influence learning during a scientific field trip in a natural environment. *Journal of Research in Science Teaching*, 31(10), 1097–1119.
- Pedretti, E. G. (2004). Perspectives on learning through research on critical issues-based science center exhibitions. *Science Education*, 88(1), 34-47.
- Rivkin, M. S. (2000). *Outdoor experiences for young children*. ERIC. https://files.eric.ed.gov/fulltext/ED448013.pdf adresinden alındı.
- Rogoff, B., Callanan, M. A., Gutierrez, K. D., & Erickson, F. (2016). The organization of informal learning. *Review of Research in Education*, 40(1), 356–401.
- Sarisan-Tungac, A., & Unaldi-Coral, M. N. (2017). Fen bilimleri öğretmenlerinin okuldışı (doğa deneyimine dayalı) eğitime yönelik görüşlerinin değerlendirilmesi [Evaluation of science teachers' views towards outdoor (nature-based) education]. *International Journal of Eurasia Social Sciences*, 8(26), 24-42.
- Smith-Sebasto, N. J., & Smith, T. L. (1997). Environmental education in Illinois and Wisconsin: A tale of two states. *The Journal of Environmental Education*, 28(4), 26-36.
- Sontay, G., & Karamustafaoğlu, O. (2017). Fen bilimleri öğretmenlerinin gezi düzenlemeye ilişkin özyeterlilik inançlarının incelenmesi [Investigation of science teachers' self-efficacy beliefs related to trip arrangement]. H. U. Journal of Education, 32(4), 863-879
- Sozer, Y., & Oral, B. (2016). Sınıf içi öğrenmelerini destekleyen okul dışı aktif öğrenme süreci: Bir meta sentez çalışması [Supplementary active outdoor learning process for classroom learning: A meta-synthesis study]. *International Journal of Eurasia Social Sciences*, 7(22), 278-310.
- Sahin, F., & Saglamer-Yazgan, B. S. (2013). Araştırmaya dayalı sınıf dışı laboratuvar etkinliklerinin öğrencilerin akademik başarısına etkisi [The effect of inquiry based outdoor laboratory activities on academic achievements of students]. *Sakarya University Journal of Education*, 3(3), 107-122.
- Sen, A. I. (2019). Okul dışı öğrenme nedir? [What is out-of-school learning?], In A. I. Sen (Eds.), *Okul dışı öğrenme ortamları* [Out of school learning environments], (pp. 2-18). Ankara: Pegem Academy.

- Tatar, N., & Bagriyanik, K. E. (2012). Fen ve teknoloji dersi öğretmenlerinin okul dışı eğitime yönelik görüşleri [Opinions of science and technology teachers about outdoor education]. *Elementary Education Online*, 11(4), 883-896.
- Thomas, G. (2010). Facilitator, teacher, or leader? managing conflicting roles in outdoor education. *Journal of Experiential Education*, 32(3), 239–254.
- Turkmen, H. (2018). Ortaokul öğretmenlerinin sınıf-dışı ortamlarda öğretime bakış açıları [Perspectives of secondary school teachers about out-door teaching]. *Journal of Ege Social Science, 1*(1), 12-26.