

STUDENTS' OPINIONS TOWARDS PLACE-BASED EDUCATION APPROACH IN SCIENCE EDUCATION: A CASE STUDY

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ABSTRACT

The aim of this study is to state the views of students on place-based education in science education. For this reason, it was primarily tried to establish the perspectives of the students against nature. It has been tried to show how their proximity to nature and their immediate environment affects their view of place-based education. This research is a qualitative study and was conducted in 2019-2020 academic year. Six volunteer students participated in the study. Semi-structured interviews were used for the data collection tools. The study was implemented to 6 students who attending elementary school in Turkey. Results of the study revealed the relation between the science education and nature. Even though the students accepted that the science course and nature are in a close relationship with each other, but activities in nature were not related to science lecture. Additionally, it was determined that although they lived in an environment that is rich in natural beauty, they did not have adequate information related to their environment. The study also showed that the student are very interested in outdoor activities but they cannot relate those activities to the science education. Considering all these findings, new studies can reveal how beneficial place-based education is for science lessons by having students do outdoor activities. Because it is seen in the research results those students may be interested in different learning environments. In addition, after the activities to be done, students the level of linking between science lessons and out-of-school practices can be looked at. Also, one of the studies that can be done is to examine the change in their interest towards the place where they live as they get to know their close environment.

Keywords: Environmental Education, Place-Based Education, Student Views

INTRODUCTION

The main purpose of science education is to increase the number of individuals who can investigate, question, examine the age in which they live, solve the problems they encounter scientifically, adapt their science education to daily life and make connections between their daily life and science subject (Temiz & Tan, 2003). Science education helps us to make sense of the world. It systematically makes sense of the events, changes and substances that take place around us, while at the same time allowing us to get to know ourselves. With the development of technology and science throughout history, many changes have occurred in social life. For this reason, each century requires an education system according to its needs and characteristics. Today, instead of directly transferring information to the

individual, it has become more important to guide the individual in the way of accessing the information and to transfer the acquired information to life. In other words, instead of teacher-centered education, student-centered education is seen as a more effective form of teaching (Yeşilpınar, Uyar & Doganay, 2018; Winteler, 2009). One of these student-centered educational approaches is place based education.

Place based education is a form of teaching which supports outdoor education, that improves students' problem-solving skills based on their own environment. Placed-based education is not only a teaching method, but also a theory that will change our perspective on the educational process. Although the place-based education approach has attracted attention in recent years, it has not started to be examined recently. The teaching concept of understanding children's needs and experiences was implemented in the writings of many educators such as Jean-Jacques Rousseau, Johann Heinrich Pestalozzi, Friedrich Wilhelm August Froebel from the early 18th to 20th century (Evans & Kılınc, 2013; Köşker, 2012).

One of the reasons why place-based education has become more important in recent years is that the relationship between human beings and nature has started to disappear. Louv (2010) describes the move away from nature as nature-deficit disorder syndrome and suggests that with an increase in this syndrome, attention problems will increase and cause both physical and mental illnesses. For young people living disconnected from nature and society, reality is now an event that takes place in the technological world and virtual spaces such as computers, televisions, and cellphones (Louv, 2010; Smith & Sobel, 2010; Schock, 2014; Schwery, 2013). For this reason, an understanding of education that has existed for centuries has become inadequate for individuals living in the age of technology today.

Place-based learning encourages students to take responsibility for their learnings, provides a collaborative learning environment and helps students with leadership skills to develop these abilities. Place based learning by the agency of applied activities is beneficial for different types of learners, such as visual and kinesthetic learners (Rote, Schroeder & D'Augustino, 2015). Köşker (2012) draws attention to the place as the most important element of place-based education, while emphasizing that this element is not sufficient for the content of the model to form. Place based education is a method that helps the student's learning in cooperation with teacher, based on the student's personal experience starting from his/her close surrounding. This learning is possible when the student learns about his/her environment and learns from that environment. Due to this reason outdoor activities are indispensable part of place-based education. Sesigur (2019) stated that standard educational content can cause people to become alienated from their close environment by giving information about places far from where they live. This leads to lose student's interest in learning. In this respect, place-based education is also closely related to the special purpose of the elementary science curriculum; increasing interest and curiosity about the events that occur in nature and its close surroundings.

Place-based education aims to provide a sense of place and commitment, by getting the students to know their close environment through the knowledge and skills they gain depending on the experiences in the natural and social environment they live in (Yıldız, Yilmaz & Tabaru, 2017). Sense of belonging will develop sense of responsibility also. Elements of environment gain meaning and value with the relationship with human beings (Gebhard, 2013). Place based education aims to allow students to develop solutions to local problems with their knowledge and skills by recognizing the resources of the region they are part of, this will improve their sense of belonging, too (Köşker & Karabağ, 2012). Additionally, place-based education aims to allow students to develop solutions to local problems with their knowledge and skills by recognizing the resources of the region they are part of, this will improve their sense of belonging (Köşker & Karabağ, 2012) and encourage students to be attracted to the society they are affiliated with and are a part of, and to make them enthusiastic to take the necessary steps to build a better future for that community (Russel Ciardi, 2006).

Place-based education is part of environmental education. However, it can be distinguished from conventional environmental education that its practitioners take attention to social and natural environments (Smith, 2007). To increase the number of environmentally conscious individuals, students need ability to relate their knowledge to real life, for this suitable environment should be provided and

practical trainings must be carried out (Kıyıcı, Yigit & Darçın, 2014). Especially, to increase the number of scientifically literate person, teacher-centered traditional teaching methods such as lecturing and taking notes are not enough, activities where students are actively involved such as laboratory studies, sightseeing and observation should be included (MoNE, 2005; 2013; 2018). One of the most important problems in terms of environmental education is that students cannot develop a sense of protection because they do not internalize the environment (Louv, 2010).

Place-based education approach provides a roof for methods that are widely used in science courses which help student to understand by personal experience, such as experimenting, nature studies, observing and make by showing (Yıldız Yılmaz & Tabaru, 2017). The relationship of science with nature is an undeniable fact. When considered physics, chemistry, and biology subjects, it is seen that most of the subjects are for understanding nature and events in nature. Yıldız Yılmaz and Tabaru (2017) emphasize that the lack of re-association of science courses with daily life causes students to be perceive science subjects as subjects that are only seen in laboratories. In the light of all this information, the place-based education approach seems to be beneficial for students. For this reason, students' views related to place-based education are important. The specific research question of the study is: What are the opinions of students with regards to place-based education approach?

In order to reveal this problem sentence in more detail, examinations were made under 4 sub-problems. Those are:

1. What are student's own opinions about the student's place of residence and accordingly to this, the degree of closeness to nature. What are the positive and negative sides where they live?
2. How well do the students know their close environment, which is an important element of place-based education?
3. How do students perceive nature. Are they interested in outdoor activities or is the modern technology more tempting?
4. What are the student opinions on place-based teaching practices. Would they participate in them or are they unnecessary?

METHODOLOGY

The study is qualitative study in which case study was used. Cases can appear in several forms such as an individual, institution or a group (Yıldırım & Şimşek, 2006). The study aims to find out the views of students on place-based education. The study was conducted in Turkey in 2019-2020 academic year. Students were asked a total of 13 open-ended questions.

Study Group

The study group of the research was formed by using purposive sampling method. Participants of the study included six students who studied in 7th and 8th grades. Semi-structured interviews were held with three 7th graders and 8th graders voluntarily.

In the school where we conducted the study, there are students living in the city centre as well as students from the villages. For this reason, students from the 7th and 8th grade in this school who wanted to voluntarily participate in the study were selected. In addition, the region where the school is located is a region rich in natural diversity. Another notable feature of the school is that there are students who continue their education here due to the relocation of their parents after studying in a major city of Turkey for a while. This study group was chosen because it is thought that the students, who are at different points in terms of closeness with nature, will contribute to the study with different perspectives.

Data Collection Tool

The data collection tool of the study was formed using semi-structured interview technique. The form was developed by researchers in line with two science education experts. It was prepared under expert

guidance. The form included 13 questions. Questions were formed as clear, easily understandable. Open-ended questions were organized as four categories:

- General information about the student’s place of residence
- Information and opinions about the student’s close environment
- Student’s view on nature and student’s relationship with nature
- Student’s views on place-based education practices

A studies internal validity can be affected by the characteristics of the group, number of the students leaving the study, time, and selection of sampling (Fraenkel, Wallen & Hyun,2012). In order to increase the internal validity of the study measures have been taken. Such as; students who choose to participate voluntarily were included to the study to prevent leaving. Therefore, no student left the study. The characteristic of the group is suitable for the study. The students chosen for the study have different intimacy to nature, also their residency is different in closeness to nature.

For external validity; the persuasiveness for internal validity, transferability and suitability concepts can be used (Mile &Huberman,1994). Generalizability of survey results are important facts of external validity (Yildirim & Simsek, 201). Findings regarding the study must be consistent and meaningful. The data obtained in this study fits these concepts. The findings are compliance with the framework created early. The method of survey was explained in detail to improve external validity. Records were tried to be explained in detail as regards the methods and procedures followed during the survey. Raw data were kept so that they could be analysed by others.

The interview was conducted at the school where the students were studying. The interviews were conducted with the help of a school psychological counselor to make the students more comfortable. Interviews were conducted in an average of 20 minutes and audio recordings were taken. These taken audio recordings later were converted into written text and used. The answers given by the students during the interview were categorized and a descriptive analysis was used to analyze data.

FINDINGS

Findings Related to the First Sub-Problem

The findings were interpreted in four sub-problems. Nature is an important element in place-based education. The reason why this form of education, which is built on what students can learn from the nature, is so necessary today is that even children who are close to nature are now beginning to lose interest in their close environment. As soon as the person begins to question the power of the place which he does for analysis, sees that it can increasingly be applied structurally to any field of human experience or research (Gruenewald, 2003). For this reason, the first sub-problem is based on student’s own opinions about the student’s place of residence and accordingly to this, the degree of closeness to nature. The questions which are asked to determine the first sub problem are not in the form of the residence addresses of the students, but whether the place where they lived was in the form of a city center or village, apartment, or detached house. This sub-problem is discussed in two questions.

1st question is that: Can you tell me about yourself, where you live? Table 1 indicates the answers related to first question.

*Table 1
Answers to Question 1 in the Interview Form*

	City-detached house	City- apartment	Village
Student 1		X	
Student 2			X
Student 3			X
Student 4	X		
Student 5			X
Student 6			X

When describing the place where the students live the vast majority preferred to talk about who owns the apartment or house rather than its surroundings. As for the question of where you live, the general opinion is perceived as home and there is no need to define the surroundings of the house. When we look at the table, it was seen that the students who were educated with transportation were in the majority. Although they live in the center of province, it is learned during the interview that the other two students have also experience in village life.

2nd question is that: Are there any animals you feed, or do you grow plants? Table 2 indicates the answers related to second question.

*Table 2
Answers to Question 2 in the Interview Form*

	I grow plants	I feed animals	I've fed it before.	No, I've never had one.
Student 1			X	
Student 2		X		
Student 3		X		
Student 4	X		X	
Student 5		X		
Student 6				X

As seen in Table 2, most of the students formed a close friendship with an animal. During the interview when the student who said he had never fed animals was asked if he/she would like to feed an animal, he/she replied, "Yes, I would, because I wish it could be my friend." We can see that the assumption of thinking that students who live in the countryside are expected to be very close to nature and animals is not always true. The students who said that he had never fed animals lives in the village while, the student who is living in the city said that he had fed several animals so far. From the interviews we learned that; most of the students who have been fed animals have the animals as pets like cats or dogs. But there are student who live in the city who fed stray animals too. One student especially indicated that they have cows and he likes to take care of them.

Findings Related to the Second Sub-Problem

In this part questions were asked about how well the students know their close environment, which is an important element of place-based education. One of the most important objectives of out-of-class education is to increase the student's interest in the natural and cultural environment and to develop responsibility for everything in this environment. (Yazici & Çobanoğlu, 2017). The way to do that is to help students get to know their close surroundings. Therefore, in this section students' knowledge of natural areas in their close environment is tried to be measured. For this purpose, two questions were asked, and their answers were interpreted.

3^d question is that: Can you tell me the names of five of the trees you see most around you? Table 3 indicates the answers related to third question.

*Table 3
Answers to Question 3 in the Interview Form*

	Pine Tree	Plane Tree	Fig Tree	Walnut Tree	Other(Plum-poplar-linden-apple-pear-oak-peach-apricot)
Student 1	X	X	X		X
Student 2	X				X
Student 3	X	X		X	X
Student 4	X	X			
Student 5	X	X	X		X
Student 6	X			X	X

As can be seen from Table 3, students have listed the trees they see most around them, which are usually fruit trees. Although they live in an area with a wide variety of natural habitats, especially in a region where it is possible to see a wide variety of trees in terms of forest, the students usually gave the same answers, which means that they do not have a close relationship with the nature around them.

4th question is that: *What are the places to visit in Bartın or Ulus?* Table 4 indicates the answers related to fourth question.

Table 4
Answers to Question 4 in the Interview Form

	A riverside	A waterfall	A bazaar	A national park
Student 1				
Student 2		X		X
Student 3		X		X
Student 4	X			
Student 5				X
Student 6		X	X	

Table 4 indicates that some of the student have not mentioned the waterfall which is the nearest scenic beauty where the students live. Although the national park is a natural area located within the nation district, it has been preferred by only half of the students. It is among the last things said during the interview. It is also noteworthy that the first place said, to the question where to visit, is the city centre.

Findings Related to the Third Sub-Problem

The purpose of the questions in this section is to reveal the way students perceive nature. A positive change in the individual's view of nature makes them feel responsible to it. This is the basic element of environmental awareness that has been desired to be given to students for many years in environmental education. There is a relationship between students feeling like they belong somewhere and showing responsible behavior to this place (Erentay & Erdogan, 2009). Data on this sub-problem were tried to be obtained by asking questions about the student's relationship with nature and their view of nature. Three questions related to this topic have been asked.

5th question is that: *Have you ever helped someone on the field, in a greenhouse or whit fruit picking? How did that make you feel?* Table 5 indicates the answers related to fifth question.

Table 5
Answers to Question 5 in the Interview Form

	Yes, I loved to help	Yes, I helped because it was needed.	No, I didn't help.
Student 1		X	
Student 2	X		
Student 3		X	
Student 4	X		
Student 5	X		
Student 6	X		

It is indicated in Table 5 that students usually do this kind of gardening with pleasure. During the interview, most of the students said that they collected fruit and that they loved it and that their parents did not request it. One of the students said, "I go fruit picking when I'm bored." The living place of students, in the city or village, is not associated with their liking for a nature-related activity.

6th question is that: *What are the advantages and disadvantages of living in a village?* Table 6 indicates the answers related to sixth question.

Table 6
Answers to Question 6 in the Interview Form

	It is too far away from the city	The Internet is very slow	The quality better	air is	There are many places for sightseeing	It is possible to grow your own product
Student 1		X	X			
Student 2	X		X			
Student 3						X
Student 4			X			
Student 5		X			X	
Student 6						X

One of the points that stands out in Table 6 is that students complain about the slowness of the internet when asked about village life. One of the answers that attracted attention during the interview is one of the students said that he felt more peacefully in the village because of the sound of water. The general conclusion that can be said is that village life does not attract many children. Although positive reviews have been made to visit in the summer the majority of opinions are that it is not preferred for a permanent life.

7th question is that: How would it feel to watch a frog metamorphosis in an aquarium, study the growth of a fruit you planted, or see a tree bloom? Table 7 indicates the answers related to seventh question.

Table 7
Answers to Question 7 in the Interview Form

	It made me happy.	I didn't feel a thing.
Student 1	X	
Student 2	X	
Student 3	X	
Student 4	X	
Student 5	X	
Student 6	X	

This is the only interview question in which all the students come to the same conclusion. The answers received from the students are that they usually plant trees and feel a certain love and responsibility towards these trees.

Findings Related to the Fourth Sub-Problem

In the fourth chapter, questions were asked to get student opinions on place-based teaching practices. It is the fragment of the interview where most questions are. The purpose of these questions are to reveal the perspectives of student of the activities that can be done within place-based education. Place based education was not asked to students as a concept. The reason for this is that students are not expected to have an opinion on this issue since this is still a new teaching model. Although it is mostly like out-of-school activities, it would be a wrong perception to approach place-based education as only an element of out-of-classroom education. For this reason, questions are not only associated with out-of-school activities. In addition, the relationship between science education and nature was evaluated from the perspective of the students. In this section, 6 questions are asked.

8th question is that: How do you spend your time outside of school? Table 8 indicates the answers related to eighth question.

Table 8
Answers to Question 8 in the Interview Form

	By studying	I'm out with my friends	Watching TV at home	By playing games on a phone or computer
Student 1		X		
Student 2	X			
Student 3	X	X		X
Student 4		X		
Student 5				X
Student 6	X		X	

Based on the interviews, it can be said that the time spent outside is far less than the time spent in front of technological devices such as computers, televisions, or phones. As it can be understood from here, today's technological developments are one of the important reasons for students to move away from nature (Scharmer, 2020). One of the students stated that he was playing games on the computer to relax during the interview. Another student said he liked to hike in nature, but his parents would not let him because it would be dangerous.

9th question is that: For which subjects do you think a nature trip would be helpful for? Table 9 indicates the answers related to ninth question.

Table 9
Answers to Question 9 in the Interview Form

	Science	Social sciences	Physical education	Painting lessons	Math
Student 1		X			
Student 2		X			
Student 3		X			
Student 4	X				
Student 5	X	X		X	X
Student 6	X	X	X		

As can be seen from Table 9 when it comes to environment and nature, the first lesson that comes to the minds of students is social sciences. It is quite normal for social sciences to come to mind when looking at the course contents. However, it is note that some students have never said science. There are students who say that nature can be associated with all courses by looking at it from very different angles. This way of thinking is similar with the place-based teaching approach.

10th question is that: How does science lesson relate to nature? Table 10 indicates the answers related to tenth question.

Table 10
Answers to Question 10 in the Interview Form

	It's not related.	It has a close relationship	Science helps us understand nature
Student 1			X
Student 2			X
Student 3		X	
Student 4			X
Student 5			X
Student 6		X	

When Table 10 is examined, it is understood that students know the relationship between science and nature. However, the answers to the previous question contradict the answers given to this question at this point. Students accept the relationship of science course with nature, but do not accept an activity

to be held in nature as part of the science course. This reveals that students perceive science as more of an in-class course. Some students also answered this question as science teaches the order of nature.

11th question is that: Some schools have greenhouses in their gardens, and students can grow fruit and vegetables in these greenhouses. What do you think of this activity? Table 11 indicates the answers related to eleventh question.

*Table 11
Answers to Question 11 in the Interview Form*

	It is Irrelevant to the lessons	Contributes to the lessons	Students would attend	Students would not attend
Student 1			X	
Student 2			X	
Student 3		X	X	
Student 4		X	X	
Student 5			X	
Student 6	X		X	

Although students find this activity fun and interesting, it is seen that they cannot fully perceive the link between the lessons and a greenhouse. One of the answers given by the students is "A lesson is something taught in the classroom, this is an outdoor activity, I don't think it is linked.". This answer helps us understand the view of student towards outdoor activities. Another student's view that they can increase their agricultural activities brings a different perspective to the issue. The consensus is that participation in this type of event will be high, but this is not seen as a lesson.

12th question is that: What should be in a schoolyard, how should it be designed? Table 12 indicates the answers related to twelfth question.

*Table 12
Answers to question 12 in the interview form*

	Sports field	Playground	Trees	Benches
Student 1	X		X	X
Student 2	X			
Student 3		X		X
Student 4			X	
Student 5		X	X	
Student 6	X	X	X	X

Students' expectations of a schoolyard in general show us their area of relaxation. The same answers are usually given to this question about how they want to spend their free time. In addition to these answers, there is also a student who says he would put a flower garden. One of the interesting answers was the student's request for security systems.

13th question is that: What was most interesting subject to you among what you learned in science class? Why? Table 13 indicates the answers related to thirteenth question.

*Table 13
Answers to question 13 in the interview form*

Student 1	Magnets
Student 2	Cell subject
Student 3	Microscopic creatures
Student 4	Mitosis division
Student 5	Acid bases- elements
Student 6	DNA and heredity

Since it is not possible to general this last question in the interview form, a table has been created in this way. The aim of the question is to understand which topics attract attention among the science subjects. The ones related to nature or other subjects. It is also seen from the table that nature subjects attract the attention of students more.

DISCUSSION

The purpose of this research is to determine 7 and 8 grade students view of nature and in this context their opinions to place based education and its activities. In addition, students' knowledge about their close environment was tried to be revealed. Students opinions on the relationship between the natural environment and the science course were asked.

The answers to the questions for the first sub-problem can be generalized as the followings. One of the best conclusions that can be drawn from interviews is that students value other living things in their close environment. It is seen that students are not completely insensitive to the natural environment. However, it is understood from their answers to the question about where they live, they don't recognize their close natural environment as a part of their living space. According to the students, the concept of the place where they live is not connected with the surroundings, natural beauties, physical structure. This tells us that students: whether they live in the village or in the city centre, do not have a close relationship with their close surroundings and live disconnected from their natural surroundings. Louv (2010) suggests that this distancing will cause nature-deficit disorder syndrome, which he expresses as a lack of nature. Place based education can be seen as an effective way of learning because it allows students to relate to their close surroundings while studying course subjects. Akkaya (2014) stated that place-based education is effective in developing positive attitude towards students' close surroundings. Also, it is very important for students to know their close environment to be involved in the environmental problems in their area. Mostly student know the environmental problems from the media and because of that they are not aware of the problems of their own city (Pinto & Totti ,2020).

One of the elements of place-based education is the detailed learning of the region in which the students live and the development of a sense of belonging as a result. Smith (2002) notes that children show an innate curiosity towards the physical world, but that curiosity is rarely satisfied in schools. The out-of-school activities of place-based education ensure that both this curiosity is satisfied, and first-hand information is learned. When the students' answers to the questions about getting to know their close surrounding are examined, it is understood that most of them do not know the nature close to them, places such as waterfalls, mountains or beaches and the general characteristics of the city in which they live. Regarding place-based training practices; Smith (2007), Cakmak (2018), Akkaya (2014), Köşker (2012) and many other studies show that this form of teaching increases students' interest and knowledge towards their close environment.

In studies it is found that the students who participated in the place-based education practice were more interested in the environmental problems where they lived and began to care more about their close surroundings (Littrell, 2020; Khadka, Li, Stanis, & Morgan, 2020). Similarly, within the framework of this research, as a result of the answers given to the interview questions about the student's view of nature; it has been concluded that students love nature, but their degree of closeness and love are not proportional. Among the main reasons why this love cannot turn into an interest in nature is the fear of the student or their family from nature (Damhorst, 2012). The other important factor is the presence of electronic devices. Among the answers given by students one is remarkable. His statement that he was playing computers to relax is telling us something very important. Although the concept of relaxation and calming down is generally associated with nature (Kruse, 2013). It is seen that this perspective has changed among the students.

The answers to the questions aimed at determining the student's views on place-based education practices have shown us very important results. The most important of these is that students do not see out-of-class activities exactly as lessons. Although the result is that the participation will be high, it is understood from here that a nature event must be very well-planned to give the expected results.

The most important step in this direction should be to change the perspectives of the students. Therefore, before students are included in place-based education practices, pre-notifications should be made, things to pay attention to in the activities should be explained in detail and most importantly it should be emphasized that these activities are held as a part of the lessons. In research like Akkaya Yılmaz and Karakuş (2018), Rote, Schroeder ve D'augustino (2015), Evans and Kılınc (2013), Kalafat (2018), Smith (2002), Santelmann, Gosnell & Meyers (2011), PEEC (2010) and many other researches, which used place-based education as a teaching method, it can be seen that after the activities, students course achievements and their interest in the course have increased. According to Smith (2002), what makes place-based education valuable is that it helps students connect with where they live and the people they live with. These studies have revealed that place-based education can help students' in this matter. In addition, in the question about the schoolyard in this section, it is seen that the students could not go outside of the general recommendations and could not customize the environment that should be unique to them. However, during their time at school, they are closest to nature in the school gardens, for this reason, it is important in terms of learning about the nature (Benkowitz & Köhler, 2019). This study was carried out in an environment where students are close to nature. A benchmark can be achieved by making it in larger cities.

CONCLUSION

When we look at the results of this study, it can be said that students' interest increases as their knowledge of their close environment increases. Although the place where they live is close to nature, the presence of phones and computers can take students away from nature. This distancing can lead to the loss of interest in nature and the severing of close ties with their environment and the place where they live. From the data, it turns out that students do not consider out-of-school activities as lessons. But as we know from studies Out-of-school learning environments and educational field trips lead to a more interesting and intriguing learning environment for the students (Balkan Kiyıcı & Yavuz Topaloğlu, 2016). This tells us that the perspectives of the students in science classes are wrong. However, their interest in out-of-school activities shows us that this situation can be easily corrected. However, when we look at the studies, we see that there are very few trips related to environmental education (Derman & Gurbuz, 2018). Carrying out more out-of-school activities and increasing place-based educational practices will both increase students' interest in science and increase their knowledge of their close surroundings. In this way, it is possible to raise people who will deal more closely with environmental problems and act more sensitively.

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