



Examination of Teachers' Views on Environment in Terms of Anthropocentric and Ecocentric Environmental Approach

Öğretmenlerin Çevreye İlişkin Görüşlerinin Antroposentrik ve Ekosentrik Çevre Yaklaşımı Açısından İncelenmesi

Arefe YURTTAŞ¹
Eda ERDAŞ KARTAL²

Geliş Tarihi: 06.12.2021

doi: 10.38089/iperj.2022.90
Kabul Tarihi: 07.03.2022

Yayınlanma Tarihi: 29.03.2022

Abstract: The aim of this research is to examine primary school teachers' views on the environment in terms of human-centered (anthropocentric) and environment-centered (ecocentric) environmental approaches. The research was carried out with the case study design, which is one of the qualitative research designs. The study group of the research consisted of 27 primary school teachers from various primary schools. A semi-structured interview form developed by the researchers was used as a data collection tool. The content analysis method was used to analyze the data. As a result of the research, it was found that most of the teachers expressed their views about the reasons for the protection of the environment, the most valuable thing in the environment, the reason for the environment's existence, the importance of recycling, the depletion of natural resources, and the preference for economical products based on a human-centered environmental approach. The researchers found that the teachers generally reported their views about the rights of living beings, the consequences of population growth, and the effects of forest destruction based on an environment-centered environmental approach. As a result, it has been suggested that a qualified environmental education that will enable them to adopt an environmentally centered approach should be given to teachers during in-service training and to pre-service teachers during the undergraduate education process.

Keywords: Environmental education, environmental ethics, primary school teachers

Özet: Bu araştırmanın amacı, sınıf öğretmenlerinin çevreye ilişkin görüşlerini insan merkezli (antroposentrik) ve çevre merkezli (ekosentrik) çevre yaklaşımları açısından incelemektir. Araştırma, nitel araştırma desenlerinden biri olan durum çalışması deseniyle gerçekleştirilmiştir. Araştırmanın çalışma grubunu çeşitli ilköğretim okullarından 27 sınıf öğretmeni oluşturmuştur. Veri toplama aracı olarak araştırmacılar tarafından geliştirilen yarı yapılandırılmış görüşme formu kullanılmıştır. Verilerin çözümlemesinde içerik analizi yöntemi kullanılmıştır. Araştırma sonucunda öğretmenlerin çoğunun çevrenin korunmasının gerekçeleri, çevredeki en değerli şey, çevrenin varlık nedeni, geri dönüşümün önemi, doğal kaynakların tükenmesi, ekonomik ürünlerin tercih edilmesi konularında insan merkezli çevre yaklaşımına dayalı görüş bildirdikleri tespit edilmiştir. Araştırmacılar, öğretmenlerin genel olarak canlıların hakları, nüfus artışının sonuçları ve orman tahribatının etkileri hakkında çevre merkezli bir çevre yaklaşımına dayalı görüş bildirdiklerini bulmuşlardır. Sonuç olarak öğretmenlere hizmet içi eğitimde, öğretmen adaylarına ise lisans eğitim sürecinde çevre merkezli bir yaklaşımı benimsemelerini sağlayacak nitelikli bir çevre eğitimi verilmesi önerilmiştir.

Anahtar Kelimeler: Çevre eğitimi, çevre etiği, sınıf öğretmenleri

¹Dr., Ministry of Interior, Kastamonu University, Turkey, arefeyurttas@gmail.com, <https://orcid.org/0000-0001-5379-368X>

²Asist. Prof. Dr., Kastamonu University, Turkey, erdaseda@gmail.com, <https://orcid.org/0000-0002-1568-827X>

Introduction

The developments and changes that took place in the 21st century, where science and technology developed rapidly and global changes, urbanization, and industrialization were experienced intensely, brought along various problems. One of these problems is undoubtedly environmental problems. Distorted urbanization, drying up and polluted water resources, diminishing biodiversity, destroyed environment, consumed natural resources, increased traffic density, fertile farmland filled with residential or industrial facilities, increased pollution, climate changes, global warming, and melting of polar glaciers are some of these environmental problems (Efe, 1999). In our age, one of the important causes of environmental problems is the changes in the lifestyles of societies with industrialization (Guha, 2000). It can be said that environmental problems actually started with the transition of human beings to settled life and continued to increase until today. Before the settled life, the environment was used by people only to meet their basic needs, but with the transition to sedentary life, the excessive consumption that started with urbanization and then social and economic organization and the effort of humans to dominate the universe led to the emergence of various environmental problems (Özdemir, 2016). The activities carried out to meet the needs of people negatively affect the environment in many ways and cause environmental problems to increase (Sönmez, 2018). The pollution of the environment by people in a careless way, the killing of plants and animals can be caused by people seeing the environment and animals as objects (Bülbül, 2013). In other words, the problem of how much people value the environment lies on the basis of human-induced environmental problems.

The activity of valuing something or a situation is defined as ethics. In the background of every choice, there is a value judgment that directs it (Özdemir, 2016). While the concept of ethics was mostly limited to the provisions regulating social life until the 1960s, it gained a new dimension to include human and environmental relations since the 1960s, when environmental awareness began to increase, and a new ethical approach, called environmental ethics, emerged (Özdemir, 2016). Approaches examining the relationship between human and environment are handled with an approach called environmental ethics within moral philosophy (Karakaya and Çobanoğlu, 2012). Environmental ethics is all of the behaviors and values that aim to ensure the continuity of the ecological balance and to be respectful to the environment (Karakoç, 2004). Behind people's behaviors and preferences, there are various value judgments that guide them. Environmental ethics is also the value judgments that people have towards the environment that lie behind their environmental attitudes and behaviors (Özdemir, 2016). In this context, it can be said that people's attitudes and behaviors towards the environment are affected by their ethical approaches towards the environment (Benton and Benton, 2006; Erten and Aydoğdu, 2011). There are two basic environmental ethics approaches: anthropocentrism (human-centered) and ecocentrism (environment-centered) (Kortenkamp and Moore, 2001). The human-centered (anthropocentric) approach asserts that all beings in the universe exist to serve people and that there is an entity above nature by placing humans at the center (Erten, 2007). According to MacKinnon and Fiala (2014), the anthropocentric approach holds that the environment may be protected as long as human interests are respected. In other words, the environment should be valued and protected as long as animals and plants benefit people in terms of nutrition, protection, and health, according to the anthropocentric approach. If a bacterium is required for the continuation of human existence, other living creatures may be of secondary value under the anthropocentric approach (Wilkinson, 2002). All elements other than people are considered instrumental in this approach, and humans have no responsibility for the environment (Özdemir, 1998; cited in Kayaer, 2013). The ecocentric approach, which stands against the human-centered (anthropocentric) approach, advocates the protection of all living and non-living beings in the environment. The environment-centered approach considers the whole nature as a whole by taking it into its field of interest (Keleş and Ertan, 2002). Individuals with ecocentric thinking think that they have the same right to live on the universe as other living things in the environment. According to them, non-human beings were not only put at the service of humanity. For example, in the ecocentric understanding of the environment, burning of forests is not only about the destruction of the oxygen source of humans, but also the extinction of other living things such as animals living there (Kortenkamp and Moore, 2001).

The gradual increase in environmental problems, and as a result, the threat to the quality of life of human beings, has led humanity to seek the causes and solutions of environmental problems (Çepel, 1983). Many international agreements have been signed and various strategies have been developed to stop the increasing course of environmental problems and to eliminate their negative effects. However, these efforts did not help enough to solve environmental problems. The failure of many national and international agreements, policies, and strategies to solve environmental problems is attributed to the decision taken with a human-centered approach (Kırkıpınar-Özsoy and Çini, 2020). Again, according to the studies in the literature, the human-centered (anthropocentric) approach, which puts people in the center and argues that other beings in the universe are for the existence of human beings, does not fully reflect environmentalism, on the contrary, it is argued that the reason for the increase in environmental problems lies in the idea that people are the owner of nature (Kayaer, 2013). In the eco-centered approach, which is based on the principle of holism, it is argued that every entity has a relationship with each other. The whole consists of parts that make up it, and each part is valuable, and the deficiency of each part affects the whole. In this context, each part of the ecosystem must be in a harmony (Kırkıpınar-Özsoy and Çini, 2020). Human being should not consider himself superior to the environment, but should consider himself only a part of this system and treat other elements in the universe with respect. Individuals who adopt this way of thinking are those who adopt an ecocentric approach that defends environmental ethics. In order to protect the environment and ensure its sustainability, it is important that individuals in the society are raised to adopt an environmentally centered approach. A qualified environmental education can enable the individual to have information about the environment and environmental problems, to find effective solutions to environmental problems when necessary, and to comprehend sustainable development for a sustainable life (Kasalak, Yurcu and Akıncı 2018). Environmental education, which is based on an environmentally centered approach, can facilitate the training of individuals who adopt an environmentally centered approach. In this respect, it is thought that it is important to present a qualified environmental education to individuals and to prepare the content of environmental education based on an environment-centered approach.

39

Environmental education is a lifelong learning process that aims to convey a livable world to future generations, creates environmental awareness in individuals, and aims to acquire knowledge, skills, values, attitudes and behaviors that will enable them to solve environmental problems (Vaughan, Gack, Solorazano, and Ray, 2003). In order to solve environmental problems, it is necessary to increase the number of individuals who receive environmental education from an early age (Gülay-Ogelman, 2012) because the awareness of individuals about the environment and environmental problems begins to form from the primary school age (Uyanık, 2017). However, most of the children living in the city today spend most of their time indoors with technological tools such as computers, tablets and phones. This situation causes children to grow up without knowing the natural life (Başal, 2015). Those who are responsible for providing effective and environmentally centered environmental education to children, especially those living in city centers, are parents in the family and teachers in the school. Teachers are role models especially for young students (Demir and Köse, 2016). The attitudes, approaches and behaviors of teachers towards the environment shape the attitudes, approaches and behaviors of students towards the environment (Güştâ-Şahin and Doğu, 2018). For this reason, it is important for teachers to be individuals who have adopted an environmentally centered approach. Determining the necessity of in-service training support to be given to teachers in this regard requires first of all to reveal the current profile of teachers' environmental approaches.

When the literature is examined, there are many studies investigating the attitudes, interest, sensitivity, behavior and awareness levels of individuals towards the environment. In one of these studies, Casey and Scott (2006) evaluated environmental anxiety and behavior levels of 292 participants across Australia and found that female gender, better education, and being older were associated with reporting higher levels of ecocentric concern for the environment and more ecological behavior in terms of sociodemographic variables. Atlı et al. (2015) aimed to reveal the relationship between secondary and high school students' ecocentric, anthropocentric and antipathic attitudes towards the environment and their academic achievements. As a result of the study, a low and positive relationship was found between the academic achievement of secondary school students in Science and Social Studies courses and their ecocentric attitude scores, and a negative significant relationship

was found between their antipathic attitude scores towards the environment. There was no significant relationship between anthropocentric attitude scores and academic achievement scores in the aforementioned courses. A low-level positive correlation was found between the ecocentric attitude scores of high school students and their academic achievement scores in Geography course. A low-level negative correlation was found between students' antipathic attitude scores towards the environment and their academic achievement scores in Biology, Chemistry and Geography courses. There was no significant relationship between students' anthropocentric attitude scores and academic achievement scores in the aforementioned courses. No significant relationship was found between students' ecocentric, anthropocentric and antipathic attitudes towards the environment and their academic achievement scores in Physics and Health Sciences. In another study, Alpak-Tunç and Yenice (2017) examined pre-service science teachers' ethical approaches towards the environment and their attitudes towards sustainable environment. As a result of the study, it was revealed that pre-service science teachers generally have an ecocentric attitude and their attitudes towards sustainable environment are at a positive level. In addition, they found that as the ecocentric and anthropocentric attitude scores of the pre-service science teachers towards the environment increased, their scores on the sustainable environment also increased, whereas their scores on the sustainable environment decreased as their antipathic attitude towards the environment scores increased. Bozdemir and Faiz (2018) determined the anthropocentric, ecocentric and antipathic attitudes of pre-service teachers towards the environment and examined them in terms of some variables. As a result of their research, they revealed that ecocentric attitudes favor female students and antipathic attitudes favor male students. They found that as the grade level increased, ecocentric attitude scores increased and antipathic attitude scores decreased. They found a significant difference in the antipathic attitude scores of pre-service teachers in favor of pre-service teachers studying in Social Studies Education. Yurttas and Çağlar (2019) examined the environmental attitudes of 300 public employees and they revealed that employees have more ecocentric attitudes. Karakuş and Çimen (2020) in their study, in which they examined the ethical attitudes of pre-service teachers towards the environment, revealed that the scores of the pre-service teachers from the ecocentric point of view were higher descriptively. They determined that the ecocentric, anthropocentric and total scores of the pre-service teachers differ significantly according to the variables of taking environmental lessons, club membership related to the environment, anxiety status, watching documentary, departments and family income status.

40

Although there are many studies on this issue, studies on the real understanding underlying these tendencies of individuals towards the environment are limited (Karakuş and Çimen, 2020). In addition, although there are quantitative (Karahan, 2009; Erten and Aydoğdu, 2011; Bozdemir and Faiz, 2018; Kasalak, Yurcu and Akıncı, 2018; Yurttas and Çağlar, 2019) and mixed-method studies (Erdaş-Kartal ve Mesci, 2022) on the environmental approaches of individuals at the national level, no qualitative research has been found. In this respect, it is thought that the research will contribute to the literature. The purpose of this research is to examine the views of primary school teachers towards the environment in terms of human-centered and environment-centered approaches. In this context, answers to the following questions were sought in the study:

1. What are the teachers' views on the protection of the environment?
2. What are teachers' views on the rights of the living beings in the environment?
3. What are teachers' views on the most valuable thing in the environment?
4. What are teachers' views on the environment's existence?
5. What are the teachers' views on the impact of the increasing population on the environment?
6. What are the teachers' views on the importance of recycling?
7. What are the teachers' views on the effects of deforestation?
8. What are the teachers' views on the effects of depletion of natural resources?
9. What are teachers' views on the reasons for preferring economical products?

Method

Research Design

The primary school teachers' views on environment were investigated in this study in terms of human-centered and environment-centered approaches. The case study design was used in the study. Case study is a qualitative approach in which researchers collect detailed and in-depth information about real life, a current situation or situations (Creswell, 2013). In this study, case study design was used because it was aimed to determine the views of teachers about environment in detail through interviews.

Study Group

The study group of this study consists of 27 primary school teachers who work in various primary schools in an Anatolian city at Turkey throughout the 2020-2021 academic year. While determining the study group, the maximum variation sampling method, one of the sampling types, was used. This method is used to bring together different perspectives on the problem and to try to find out whether there are common facts among various situations and to reveal the different dimensions of the problem (Creswell, 2013). In this context, while determining the study group, it was tried to choose teachers of different genders, different ages, working in different regions and having a variety of teaching experience. Table 1 lists the characteristics of the teachers.

Table 1. Characteristics of teachers

Variable	Category	f	Participant
Gender	Famale	15	T2, T3, T5, T6, T7, T8, T9, T10, T11, T12, T13, T21, T22, T23, T27
	Male	12	T1, T4, T14, T15, T16, T17, T18, T19, T20, T24, T25, T26
Age	25-30	4	T1, T2, T18, T19
	31-35	6	T3, T16, T17, T23, T24, T25
	36-40	7	T5, T9, T11, T12, T13, T21, T27
	41-45	3	T6, T7, T8
	46-50	4	T4, T10, T22, T26
	51-55	2	T14, T20
Where he/she works	56-60	1	T15
	Village	5	T4, T8, T17, T18, T19
	District	4	T1, T2, T3, T5
	City Center	18	T6, T7, T9, T10, T11, T12, T13, T14, T15, T16, T20, T21, T22, T23, T24, T25, T26, T27
Professional experience	5-10	7	T1, T2, T3, T17, T18, T19, T25,
	11-15	8	T5, T8, T12, T13, T16, T21, T23, T24,
	16-20	3	T9, T11, T27
	21-25	5	T6, T7, T10, T22, T26
	26-30	1	T20,
	Over 30	3	T4, T14, T15

N: 27

Data Collection Tool

A semi-structured interview form prepared by the researchers was used as a data collection tool. Semi-structured interviews are open-ended and fixed questions that allow participants to express their thoughts in their own sentences (Merriam, 2013). While developing the data collection tool, first of all, an in-depth literature review was conducted (Erten, 2007; Gagnon-Thompson and Baton, 1994; Gürbüzöglü-Yalmacı, 2015; Kılıç and Girgin, 2019; Özdemir, 2012) and then the opinions of three field experts working in the field of qualitative research and environmental education were sought. Before the data collection tool was finalized, a pilot interview was conducted with three teachers and the questions that were not understood were revised. The interview form consists of 14 open-ended questions. 5 of these questions are about the demographic characteristics of the teachers, and 9 of them are about determining the views of the teachers towards the environment. Interviews were held outside of class hours in a quiet environment where the teachers could feel comfortable, by making an appointment with the teachers on appropriate days and times. Before the interview process, the participants were informed about the purpose of the research and permission was obtained to record audio during the interview process. Each interview with the teachers lasted approximately 60 minutes.

Analysis of Data

The content analysis method was used to analyze the research data. The purpose of content analysis is to provide a meaningful description of research data. As a result, the data is first classified as meaningfully, and then comparable codes are grouped together under the same subject. The produced themes and codes are then grouped and reinterpreted in an understandable manner (Yıldırım and Şimşek, 2016). The data was first transcribed and analyzed by two researcher who are also field experts. The transcribed data were first carefully read and the common views in the text were coded as meaningful wholes. Then, categories that can express the generated codes as a whole, and themes above the categories were created (Patton, 2014). In order to increase the internal validity (credibility) of the findings to be obtained, two researchers worked together during data collection and analysis. A semi-structured interview form was used to collect deeply focused data, and the data collection process was continued until the data reached the saturation point. In order to ensure the external validity (transferability) of the research, the maximum diversity method was used in the selection of the study group and direct quotations were made from the participants while presenting the findings. In order to increase the internal reliability (consistency) of the research, the opinions of 3 field experts with qualitative research experience were consulted about the analysis results. The role of researchers in ensuring external reliability (confirmability) is important, and the data source must be defined in detail to increase external reliability (Merriam, 2018). In order to increase the external reliability, information about the sample from which the data were collected is presented. The researchers conducting this research are field experts in environmental education, and they have knowledge and experience in conducting qualitative research.

Results

Teachers' Views on the Reasons for Protection of The Environment

42

The analysis of findings of the teachers' views on the reasons for protection of the environment are given in Table 2.

Table 2. Teachers' views on the reasons for protection of the environment

Categories	Codes	Teachers	f	%
Environment-Centered Approach	Nature love	T3	1	2.7
	Environmental awareness	T3, T5, T21, T27	4	10.8
	Negative human activities	T8	1	2.7
	Civic duty	T3, T6	2	5.4
	Destruction of the environment	T23	1	2.7
	Other living things	T17, T23, T26	3	8.1
Total			12	32.4
Human-Centered Approach	A livable world	T2, T4, T7, T13, T15, T22, T24, T25	8	21.6
	Continuation of human life	T9, T12, T16, T17, T18	5	13.5
	Future generations	T1, T4, T10, T11, T14, T17, T20	7	19
	Sustainability of natural resources	T12, T19, T20, T23, T25	5	13.5
Total			25	67.6

The majority of teachers (67.6%) explain their views on the reasons for protecting the environment that aligned with the human-centered environmental approach (Table 2). The following are the views of some teachers who shared their thoughts on environmental protection using an eco-centered approach:

T6 *"I think this situation is a necessity. Conservation of environment is a duty of servitude, humanity, and citizenship."*

T26 *"I am in favor of the absolute protection of environment, which is the most important habitat of all living things."*

Some teachers explain the rationale for the protection of the environment with expressions suitable for both the human-centered environmental approach and the environment-centered environmental approach. T17, one of the teachers who has this view, states:

T17 *“Environment is our life, the more we protect it, the more we protect our life. Of course, it is an indispensable necessity not only for our life, but also for our future, for every human and every living thing that will come after us.”*

Environment should be maintained for a more livable world, according to the majority of teachers (21.6 %) who expressed an opinion based on a human-centered approach. T2, one of the teachers who believes this way, has the following view:

T2 *“We have to protect environment and keep it clean for a more livable world”.*

Some teachers, who take a human-centered environmental approach to their education, believe that the environment should be protected for future generations. T4 expresses his/her thoughts in the following manner:

T4 *“Environment should be protected and its balance should not be disturbed in order to leave a beautiful environment, a healthy life, and a livable world to future generations”.*

According to some of the teachers who shared their views using the human-centered environmental approach, the environment must be protected in order for life to continue. Some of the teachers who believe this way have expressed their views as follows:

T12 *“Environment and life are one whole. If we cannot protect environment, life is in danger. We meet the oxygen, water, and food we need with environment, so we must protect environment.”*

T16 *“People meet almost all of their physical requirements from environment. If we do not protect the environment we live in, we humans will come out of this situation the most harmful.”*

From these statements, it is understood that the view that environment should be protected for the interests of people is dominant among teachers.

Teachers’ Views on the Rights of Living Beings in The Environment

43

The analysis of findings of the teachers' views on the rights of the beings in the environment are given in Table 3.

Table 3. Teachers’ views on the rights of living beings in the environment

Categories	Codes	Teachers	f	%
Environment-Centered Approach	All living beings have rights	T5, T6, T8, T11, T12, T14, T15, T17, T18, T19, T20, T21, T22, T25	14	53.9
Total			14	53.9
Human-Centered Approach	All living beings have rights	T4, T9, T13, T16, T23, T24, T26	7	26.9
	Inanimate beings exist to serve living things.	T3, T7	2	7.7
	All living beings exist to serve humanity.	T1, T7, T27	3	11.5
Total			12	46.1

Although the majority of the teachers (53.9%) expressed ideas consistent with an eco-centered environmental approach, the difference between the frequencies of opinions suitable for these two approaches is quite small (Table 3). Some teachers that believe in an eco-centered approach to the rights of living and non-living beings in the environment, often emphasize that all living and non-living beings have rights. The teachers, according to these statements, do not rely the existence of inanimate beings' rights on human interests, and they claim that every living being has a special right in the natural balance. One of these teacher statements are as follows:

T8 *“I think that both living and non-living things have rights. Air, soil, are lifeless, but we have to protect them. They need protection.”*

Most of the teachers (26.9%) who stated an opinion regarding the rights of beings in the environment based on a human-centered perspective emphasize that all beings in environment have rights, but they also consider human interests in their statements. T13, for example, highlights in his/her statement that, while all living and non-living things in the environment have rights, this right arises from the fact that it serves to meet human requirements such as pencils.

T13 *“The homeland of inanimate objects is environment. This shows that both of them have rights. For example, in order to make a pen, a tree is needed.”*

Inanimate beings exist to serve living beings, according to some of the teachers who stated an opinion based on a human-centered approach to the rights of the beings in the environment. All beings exist to serve people, according to some of the teachers who stated an opinion based on a human-centered approach. Other beings' rights do not exist until they protect human interests, according to this idea. Some of the teachers who think this way have made the following statements:

T1 *“Everything exists to serve people. But that doesn't mean that we don't care about them.”*

T3 *“I think that most inanimate objects exist to serve living beings”.*

Teachers' Views on What Is the Most Valuable Thing in the Environment

The analysis of findings of the teachers' views on what is the most valuable thing in the environment are given in Table 4.

Table 4. Teachers' views on what is the most valuable thing in the environment

Categories	Codes	Teachers	f	%
Environment-Centered Approach	All living beings	T6, T10, T11, T14, T15, T27	6	21.4
	Bees	T13, T16	2	7.1
	Plants	T18	1	3.6
Total			9	32.1
Human-Centered Approach	Humans	T1, T3, T4, T5, T7, T8, T9, T12, T19, T21, T24, T26	12	42.8
	Plants	T17, T20, T22, T23, T25	5	17.8
	Animals	T17, T22	2	7.1
Total			19	67.9

The majority of teachers (67.9%) express an opinion on the most valuable thing in the environment that is in line with the human-centered environmental approach (Table 4). All living beings are valuable, according to the majority of teachers (21.4%) who expressed an opinion in line with the eco-centered approach about what is the most valuable thing in the environment. These teachers do not base their beliefs on human interests, but rather on the fact that in a natural balance, each being is important due to its unique characteristics. These teachers see every living thing in the world as a part of the whole and do not believe that one is superior to another.

T10 *“People, animals, and plants. So everything that is alive is valuable to me.”*

T11 *“Although human seems to come first when living beings in the environment are listed, the value of human actually depends on the continuation of other living things. I think all living beings gain value when they are together.”*

The importance of different living beings other than humans, according to some of the teachers, arises from their significant contributions to the environment. T16, one of the teachers who believe this way, has the following opinion:

T16 *“I think it would be wrong to talk about the concept of the most valuable thing. Since every living being has a place in the cycle of the environment. However, the most important thing here may be the bee, if it should be said. As they have a great role in the reproduction of plants and ensuring the cycle.”*

Plants are the most valuable thing in the environment, according to only one of the teachers who stated an opinion in accordance with the eco-centered approach to this topic:

T18 *“They are plants. Since they do not feed ready-made like other living things. In addition, they have many benefits to the environment.”*

The majority of teachers (42.8%) who express an opinion on this subject that is in accordance with the human-centered environmental approach believe that human beings are the most valuable thing in the environment. The following are the statements of some of the teachers who have this opinion.

T1 *“Human is the most valuable creature. Because it is for human beings that others are valuable.”*

T3 *“The most valuable thing for me is human”.*

The importance of these living things stems from their service to humans, according to the teachers, who believe that plants or animals are the most valuable things in the environment. The following are statements made by some of the teachers who expressed their opinions in this manner:

T17 *“I can say plants and animals. Since these two are essential. Humans can survive as long as these two living beings continue to live.”*

T20 *“Trees... Because trees affect human life.”*

Teachers' Views on the Reason for the Existence of The Environment

The analysis of findings of the teachers' views about the reason for the existence of the environment are given in Table 5.

Table 5. Teachers' views on the reason for the existence of the environment

Categories	Codes	Teachers	f	%
Environment-Centered Approach	Balance of the world	T10, T14, T26	3	10.4
	Continuation of life	T11, T19, T20, T25	4	13.7
	Needs of living things	T16, T19, T25	3	10.4
Total			10	34.5
Human-Centered Approach	Human needs	T1, T3, T5, T7, T8, T17, T22, T23, T27	9	31
	Continuation of human life	T2, T3, T4, T6, T9, T13, T15, T17, T18, T21	10	34.5
Total			19	65.5

The majority of teachers (65.5%) expressed human-centered opinions on the reason for existence of the environment (Table 5). The majority of the teachers (13.7 %) who expressed an opinion on the reason for the existence of the environment in accordance with the eco-centered approach emphasize that environment exists to ensure the continuance of life. The following are some of these teachers' statements:

T19 *“The reason for the existence of the environment is to provide the opportunity to live for all kinds of living things such as humans, plants and animals. To host them is to provide their food, to ensure that the air they breathe is clean, that is, to keep them alive.”*

T20 *“The reason for the existence of the environment is living things. Because without environment, there is no continuity of life.”*

Some of the teachers (10.4%) who stated an opinion on the reason for the existence of the environment in accordance with the eco-centered approach believe that environment exists to meet the needs of living things. T16, one of these teachers, has the following opinion:

T16 *“We can briefly say that it is to meet the needs of living things.”*

Some of the teachers (10.4%) who expressed an opinion on the reason for the existence of the environment in accordance with the eco-centered approach believe that the environment exists to keep the world in balance. T10, one of the teachers who has this view, stated the following:

T10 *“In order for the balance in the world to be maintained, the beings in the environment must exist.”*

Some teachers (31%) who believe in a human-centered environmental approach to the reason for the existence of the environment believe that the environment exists to meet human needs, while another third (34.5%) believes that the environment exists to maintain the continuance of human life. Environment, they believe, is the place where people's demands for air, food, and other necessities are met, and that is why it exists. The following are statements made by some of the teachers who expressed their opinions in this manner:

T4 *“It was created so that people, who are the most valuable creatures that Allah has created, can meet everything they need in order to continue their lives in the false world.”*

T9 *“Environment provides the continuation and sustainability of human life.”*

Teachers' Views on the Effect of Increasing Population on The Environment

The analysis of findings of the teachers' views on the effect of the increasing population on the environment are given in Table 6.

Table 6. Teachers' views on the effect of increasing population on the environment

Categories	Codes	Teachers	f	%
Environment-Centered Approach	Pollution	T1, T3, T9, T21, T27	5	15.1
	Environmental destruction	T1, T3, T4, T5, T7, T8, T9, T10, T11, T12, T14, T16, T18, T19, T22, T23, T24, T25, T27	19	57.6
	Disruption of the natural balance	T4, T15	2	6.1
	Extinction of living things	T4, T12	2	6.1
Total			28	84.9
Human-centered Approach	Depletion of natural resources	T2, T6, T25	3	9,1
	Negative impact on life	T20	1	3
	Drought	T17	1	3
Total			5	15.1

The majority of teachers (84.9%) expressed an opinion on the impact of population growth on the environment that was consistent with an eco-centered environmental approach (Table 6). The majority of these teachers (57.6%) believe that an increased population leads to more environmental destruction. Teachers T19 and T22, who believe that increasing population leads to environmental destruction, have the following opinions:

T19 *"The increasing population, of course, negatively affects the environment. People are starting to move to new places and the need for food increases and the need for consumables increases. To meet all of these, environment is harmed. "*

T22 *"The increasing population is killing environment to open up a living space."*

Some of the teachers (15.1%) who expressed an opinion on the impact of increasing population on environment in accordance with the environment-centered approach indicated that the increase in population caused pollution. Some of the teachers who believe this way have expressed their thoughts as follows:

T3 *"Environmental pollution, and a lot of unconscious people."*

T21 *"Environment gets polluted."*

Some of the teachers who expressed an opinion on this subject that was in keeping with the environment-centered approach argued that population growth led the natural balance to worsen and the extinction of living things. T4, one of the teachers who believe this way, has the following opinion:

T4 *"As the population increases, the balance of the environment deteriorates more. Natural environments are destroyed. Other living things in the environment are destroyed. As the greed and desires of human beings increase, what they do is harming environment more and more every day."*

Teachers who express their views on the impact of population growth on the environment based on a human-centered environmental approach emphasize that population growth will result in a loss in natural resources per capita, affecting human life. These statements indicate that teachers view the impact of the increasing population on the environment as requiring them to share the benefits that environment gives with new individuals. According to this understanding, the increasing population reduces the amount of each person benefiting from environment. Some of the teachers who believe this way have made the following statements:

T2 *"Sharing everything in the environment and the decrease in oxygen, water, and electricity for a person affects me. "*

T6 *"As a matter of fact, we have more impact on the environment. In this context, each individual has to fulfill his/her duty. Sharing the available resources with more people affects the amount of resources available to me. "*

Teachers' Views on the Importance of Recycling

The analysis of findings of the teachers' views on the importance of recycling are given in Table 7.

Table 7. Teachers' views on the importance of recycling

Categories	Codes	Teachers	f	%
Environment-Centered Approach	Reduction of damage to environment	T1, T3, T5, T7, T10, T12, T13, T14, T16, T17	10	32.3
	Protection of living things	T17	1	3.2
	Prevention of environmental pollution	T20, T21, T26	3	9.7
Total			14	45.2
Human-Centered Approach	Protection of natural resources	T2, T9, T11, T15, T25, T26	6	19.3
	Contribution to the country's economy	T6, T8, T15, T26, T27	5	16.1
	Clean environment for the future	T4, T10, T18	3	9.7
	Control of increased consumption	T19, T22, T23, T24	3	9.7
Total			17	54.8

Most teachers (54.8%), indicated an opinion on the significance of recycling that aligned with the human-centered environmental approach (Table 7). The majority of teachers (32.3%) who believe this subject is ecologically focused think that recycling minimizes environmental damage:

T1 *"Thanks to recycling, harmful petroleum products take less place in the environment."*

T14 *"Contributes to the protection of the environment."*

Recycling avoids environmental pollution, according to some of the teachers (9.7%) who expressed a view on this subject in accordance with the environment-centered environmental approach. T20, one of the teachers who thinks like this, makes the following statement:

T20 *"Recycling is very vital in terms of not polluting the environment. This issue should be given immediate attention. Since both environment and resources are rapidly disappearing."*

The majority of teachers (19.3%) who expressed an opinion on the value of recycling that aligned with the human-centered environmental approach claimed that recycling protects resources essential to human life. Environment and resources, according to these teachers, should be protected for the sake of human life. Recycling activities make the most significant contribution to this. That is why it is critical to recycle. T15, one of the teachers who believes in this way, has the following opinion:

T15 *"Recycling not only is a material resource, but also contributes to the protection of the environment, which is necessary for our lives."*

Recycling contributes to the country's economy, according to some teachers (16.1%) who expressed an opinion in line with the human-centered environmental approach on this subject. T8, one of the teachers who thinks this way, expresses as:

T8 *"We may have a chance to recycle waste materials in various ways as it contributes to the national economy."*

Some of the teachers (9.7%) who expressed an opinion on the importance of recycling in line with the human-centered environmental approach believe that recycling is important to leave a clean environment for future generations, while others (9.7%) think that recycling is important to control increased human consumption. Some of the teachers who believe this way have expressed their thoughts as follows:

T4 *"Recycling is really important. Without recycling, it is not possible to transfer the universe we live on to the future in a clean and healthy way."*

T19 *"Recycling is the easiest and most beneficial method for me against the increasing consumption of people. While it takes decades for a forest to form, recycling can begin immediately. It is easier for this to become a habit than to make thousands of forests."*

Teachers' Views on the Effects of Deforestation

The analysis of results of the teachers' views on the effects of deforestation are given in Table 8.

Table 8. Teachers' Views on the Effects of Deforestation

Categories	Codes	Teachers	f	%
Environment-Centered Approach	Destruction of the natural environment	T3, T4, T9, T17, T20	5	8.9
	Extinction of living things	T4, T6, T9, T11, T13, T17, T18, T19, T23	9	16.1
	Air Pollution	T4, T6, T11, T19, T23	5	8.9
	Aridity	T3, T4	2	3.6
	Climate change	T3, T11, T15, T16, T22, T27	6	10.7
	Destruction of live nests	T3, T11, T13, T17, T18, T23, T25, T26	8	14.3
Total			35	62.5
Human-Centered Approach	Air Pollution	T21, T24, T25, T26	4	7.1
	Aridity	T14, T15, T20	3	5.4
	Drouth	T1, T10, T11, T14, T15	5	8.9
	Global warming	T1, T2, T20	3	5.4
	Erosion	T10, T11, T14, T26	4	7.1
	Negative impact on life	T7, T12	2	3.6
Total			21	37.5

The majority of teachers (62.5%) stated an opinion on the effects of deforestation that was consistent with the eco-centered environmental approach (Table 8). The majority of teachers who are concerned about the environment emphasize that deforestation will result in the extinction of living things (16.1%) or the destruction of their nests (14.3%). Some of the teachers who believe this way have made the following statements:

T18 *"I think it means the disappearance of clean air, oxygen, and all living things, big and small, living in forests."*

T23 *"The disappearance of forests means the disappearance of all living things step by step. Pollution of the air means the destruction of the balance of the environment, the destruction of the habitat of many living things".*

48

Some of the teachers who are concerned about the environmental consequences of deforestation (10.7%) believe that deforestation would result in climate change. T27, one of the teachers who shares this opinion, states that:

T27 *"Deforestation affects all living things by causing climate change."*

Some of the teachers who are concerned about the environmental effects of deforestation believe that it would result in drought (3.6%) or air pollution (8.9%). T4, one of the teachers who believes this way, has the following opinion:

T4 *"The results of forests destroyed as of unconscious cutting to make agricultural land, drought, causes polluted air and destruction of natural beauties. The result is the extinction of many living species."*

Since teachers who expressed opinions about the effects of deforestation in accordance with the human-centered environmental approach interpreted common themes such as drought and air pollution as negatively affecting human interests, their opinions were coded under the human-centered approach category. Teachers attribute the negative impacts of deforestation to the clean air, water, and food supply that are required for human life for various reasons. Some of the teachers who believe this way have made the following statements:

T14 *"It has bad effects on people such as desertification, erosion, decrease in precipitation, and destruction of water resources."*

T25 *"As a result of unconscious destruction of forests, fires and destruction of plantations, both the oxygen necessary for human life and the shelter needs of animals are negatively affected."*

Some of the teachers that share an opinion on the effects of deforestation that is in line with the human-centered environmental approach emphasize that deforestation will cause drought (8.9%) or erosion (7.1%). T10, one of these teachers, shares his/her thoughts in the following way:

T10 *"It has a great effect on people. The biggest effect is the lack of rain and the resulting water shortage and landslides."*

Some of the teachers who express an opinion on the effects of forest destruction that is in line with the human-centered environmental approach emphasize that forest destruction would cause global warming (5.4 %) or will negatively affect human life (3.6%). The following are some of these teachers' viewpoints:

T1 *"It is closely related to people being dehydrated and being affected by global warming."*

T7 *"The destruction of forests affects people."*

Teachers' Views on the Effects of Depletion of Natural Resources

The analysis of results of the teachers' views on the effects of the depletion of natural resources are given in Table 9.

Table 9. Teachers' views on the effects of depletion of natural resources

Categories	Codes	Teachers	f	%
Environment-Centered Approach	Soil loss	T11	1	2.3
	Air Pollution	T11	1	2.3
	Drought	T11	1	2.3
	Disruption of ecological balance	T10, T19	2	4.5
	Decreased biodiversity	T6, T17, T19, T20, T23, T25	6	13.6
	Negative impact on life	T6, T11, T17, T19, T23	5	11.4
Total			16	36.4
Human-Centered Approach	Famine	T1, T9, T20	3	6.8
	Drought	T1, T4, T10, T27	4	9.1
	Epidemic diseases	T1, T5, T13	3	6.8
	End of human life	T2, T7, T9, T12	4	9.1
	Next generation	T3, T21	2	4.5
	Natural disasters	T5	1	2.3
	Economic and political problems	T15, T16, T18, T22, T25, T26	6	13.6
	Falling of living standards	T4, T8, T13, T21, T24	5	11.4
Total			28	63.6

The majority of teachers (63.6%) stated an opinion on the effects of natural resource depletion in accordance with the human-centered environmental approach (Table 9). Since some teachers analyze this problem with an environment-centered perspective and others with a human-centered approach, the drought code is in both groups.

It is seen that most of the teachers who express an opinion on the destruction of natural resources according to the eco-centered approach emphasize that the destruction of natural resources will cause a decrease in biodiversity (13.6%) or a negative effect on life (11.4%). According to these statements, teachers associate the consequences of the depletion of natural resources with the endangerment of the life of all living things in the environment. The statements of some of the teachers who believe in this way are as follows:

T17 *"It may have effects that can lead to more damage, decrease or even extinction of living life day by day."*

T23 *"If natural resources are depleted, the quality of life, diversity and productivity of living things are doomed to disappear."*

According to the eco-centered approach, two of the teachers (4.5%) who expressed an opinion on the destruction of natural resources believe that the destruction of natural resources will lead the ecological balance to worsen. T19, one of the teachers who believes this way, has the following opinion:

T19 *"As natural resources are depleted, the resources that living things need are depleted. Both water and food are running out. Their extinction means the extinction of living things. The ecological balance is disrupted"*.

T11, who adopted an environment-centered approach to this issue, highlights that the deterioration of natural resources will result in soil erosion, air pollution, and drought:

T11 *"The life of all living things is negatively affected. It also causes the destruction of resources such as water, soil and oxygen."*

The majority of the teachers (13.6%) who stated an opinion regarding the effects of natural resource destruction based on a human-centered environmental approach underlined that natural resource destruction will cause economic and political problems. Some of the teachers who believe this way have made the following statements:

T14 *“Depletion of natural resources brings foreign dependency and impoverishment.”*

T15 *“Natural resources are not inexhaustible. When it is exhausted, it has impacts such as foreign dependency and expensiveness.”*

According to the human-centered approach, some of the teachers (11.4 %) who expressed an opinion on the destruction of natural resources believe that the destruction of natural resources will lower human living standards. T4, one of the teachers who believes this way, has the following opinion:

T4 *“As natural resources are depleted, a more difficult life for human beings awaits us. I think the biggest problem of the future will be water shortage.”*

On the other hand, according to the human-centered perspective, some of the teachers who stated their views on the loss of natural resources emphasize that the destruction of natural resources will result in difficulties such as famine, drought, and epidemics. Some of the teachers who believe this way have made the following statements:

T1 *“Famine, drought, epidemic, etc.”*

T13 *“If the water runs out, epidemics begin. If the electricity runs out, life comes to a standstill. If natural gas runs out, industries stop. In short, if the natural resources run out, the impact will be very strong.”*

Some of the teachers, who are more human-centered in their approach to this subject, indicate possible wars and economic crises between world states as possible outcomes of natural resource depletion.

Teachers' Views on Reasons for Preferring Economical Products

The analysis of results of the teachers' views on the reasons for preferring economical products are given in Table 10.

Table 10. Teachers' views on the reasons for preferring economical products

Categories	Codes	Teachers	f	%
Environment-Centered Approach	Raising peoples' awareness	T1, T13	2	7.1
	Protecting environment	T3, T8, T19, T26, T27	5	17.9
Total			7	25
Human-Centered Approach	Saving	T2, T4, T6, T12, T23, T24	6	21.4
	Protecting resources	T4, T10, T14, T16, T20, T25	6	21.4
	Reducing foreign dependency	T4	1	3.6
	Future Generations	T4, T18	2	7.1
	Civic duty	T5, T9, T21, T22	4	14.3
Total	Raising peoples' awareness	T15, T17	2	7.1
Total			21	75

It is seen that teachers mostly (75%) expressed their opinions in line with the human-centered environmental approach about the reasons for preferring economical products (Table 10). Some teachers (17.9%) who expressed their opinions on this subject in accordance with the environmentally centered approach emphasized that they preferred to save products to protect the environment, while others (7.1%) emphasized that they preferred to raise public awareness about the protection of the environment:

T1 *“Campaigns should be made for those who direct people to save from substances harmful to the environment. People should be made more aware. Public spots etc. advertisements should be encouraged. That's why I prefer economical products.”*

T26 *“I care about eco-friendly products such as recycling, renewable energy sources, etc., since they cause less harm to the environment.”*

The majority of teachers who expressed an opinion in line with the human-centered approach regarding the reasons for selecting economical products claim that they prefer these products to save money (21.4%) and to preserve the resources that people need (21.4%). Teachers explain the reasons for preferring economical products by associating them with resource conservation, waste reduction through saving, and thus the enhancement of the lives of future human beings, according to these statements. According to them, the use of economical products is mostly related to economic concerns about resource management. The statements of some teachers who think in this way are as follows:

T10 *“I think that economical products should be preferred. Since the resources necessary for human life are not unlimited, they can be exhausted.”*

T20 *“Saving products prevent the rapid depletion of resources by enabling more efficient usage of resources necessary for human life.”*

T23 *“Absolutely, economical products should be preferred. Today, production or consumption, which is done brutally and most of it is unnecessary, shows a reduction in this way. This is very vital for humanity.”*

Some teachers (14.3%), who believe that the reasons for preferring economical products are human-centered, emphasize that this is a civic duty. T5, one of the teachers who believes this way, has the following opinion:

T5 *“This is our responsibility both to myself and to our country.”*

Some of the teachers who expressed an opinion on this subject that was in line with the human-centered approach stated that they prefer economical products to reduce foreign dependency or to transfer them to future generations without wasting existing resources.

T4 *“I prefer the use of economical products in order to contribute to our economy and budget. We should use our resources consciously so that they can be passed on to future generations. We should save so that we can get rid of foreign dependency.”*

Conclusion and Recommendations

It can be said that the teachers who took part in the study on the reasons for environmental protection generally agreed with the human-centered approach. Environment, according to the teachers who expressed their views on the subject, is required for the continuance of human life in a better environment, the survival of the human species, and the preservation of natural resources. Natural resource sustainability is critical for ensuring the continuation of human life. These statements by the teachers indicate that they only regard environmental protection to be vital for the protection of human interests. Thompson (2000) emphasizes that environmental behaviors are appropriate in line with human interests in the human-centered approach, which may be classified into two groups: self-centered (egocentric) and society-centered (homocentric). The environment should be maintained because of the benefits it provides to humanity, according to human-oriented environmentalists (Dunlap and Van Liere, 1978). Environmental pollution, for example, should be avoided for the sake of human health, and natural resources should be protected to ensure that future generations do not run out of energy (Karahan, 2009). It is seen that some of the teachers participating in the research base the reason for the protection of the environment on the necessity of the existence of other living things. It can be claimed that teachers who explain the reasons for the protection of the environment in this way adopt an environmentally centered approach. The environment-centered approach also attributes a meaning to non-human living things and objects such as rivers and mountains in the ecosystem. According to the environment-centered approach, everything in environment should be valuable and protected according to its own situation (Des Jardins, 2006; cited in Birden, 2016).

Teachers in the study mostly express their opinions on the rights of the living beings in the environment in accordance with an environment-centered approach. The number of teachers who express opinions based on an environmental perspective is slightly greater than the number of teachers who express opinions based on a human perspective. All living and non-living beings in the environment, according to the teachers who stated their opinions based on an environment-centered approach, have rights and should be protected. According to them, non-human living things in the environment and inanimate beings such as soil and air exist as a whole. To them, non-human living things in the environment and inanimate beings such as soil and air exist as a whole. The environment-centered approach regards the environment as a whole, both living and non-living, and emphasizes that the absence of each entity may lead to the destruction of this unity (Kayaer, 2013; Yıldırım and Çobanoğlu, 2009). Teachers who express their opinions based on a human-centered approach state that living and non-living things exist to serve people. According to them, all beings have rights, but these rights stem from serving human interests.

According to the findings, the majority of teachers believe that humans are the most valued thing in the environment. Teachers that share this opinion stress that other beings are placed at the service of humanity. In other words, the existence of humans determines the value of other things. Teachers who share their thoughts in this manner are known to use a human-centered approach. Teachers, who

express an opinion based on an eco-centered approach about the most valuable thing in the environment, emphasize that all living things are valuable. They believe that no living thing is superior to another. One of the teachers even claims that the value of humans is determined by the value of other living things. Teachers that support an eco-centered approach to this subject believe that when all living things are together, they gain significance. Erdaş-Kartal and Mesci (2020) found that the majority of lecturers have a protective attitude toward the environment in their study, which examined the attitudes of academic staff working at a university. Human beings do not have a better feature than other living things in the environment, according to the lecturers who took part in the study. All living things in the environment, including humans, have equal value. The conclusions of this study differ from those of Erdaş-Kartal and Mesci's study (2020). It is thought that this situation might be because of the fact that the academic studies of some of the academic staff participating in the research is related to environmental education and that the education level of the lecturers, in general, is more advanced than the teachers.

The majority of teachers, according to the results, base the existence of the environment on human needs and the continuity of human life. This situation demonstrates how teachers evaluate the reason for environment's existence from a human-centered approach. Humans are the most valuable being, according to the human-oriented environmental approach, and other living or non-living beings are required for humanity's benefit. As a result, it is essential that the ecosystem function well and that it benefits people. In other words, environment and all systems in environment exist for the benefit of humanity (Armstrong and Botzler, 1993; Kortenkamp and Moore, 2001; cited in Erciş and Türk, 2016). Some of the teachers in the research consider the existence of the environment necessary for the balance of the world, the continuation of life, and its needs. According to them, the environment exists because of the necessity for all living things to have a habitat. It is found that the teachers who expressed their opinions in this direction expressed their opinions in accordance with the environment-centered approach. According to the environment-centered approach, the environment is necessary for the continuity of all living and non-living beings (Özdemir, 2016).

Based on an environment-centered approach, the majority of the teachers explained the effects of the increasing population as an increase in pollution, destruction of the environment, deterioration of the natural balance, and extinction of living creatures in the study. Teachers emphasize that as the population grows, so does people's irresponsible behavior. In other words, they believe that the need for food will increase as the population grows and that the destruction of the environment would increase as new settlements are constructed. These teachers explain the effects of population growth by emphasizing the environment rather than the people. Increasing the number of people who think this way can help reduce human's environmental impact. According to Özgür (2017), as the human population grows, the rate of human-centered environmental changes increases at a faster rate than in the past century. This emphasis corresponds to the teachers' viewpoint of population growth as a threat to the environment. On the other hand, some teachers evaluate the negative effects of population growth in the focus of human interests. According to them, a rising population will result in a loss in natural resources, resulting in resource scarcity for humans. Furthermore, an increase in population will have negative consequences, such as increased drought. On the other hand, as the population grows, existing resources will be spread more widely, reducing the number of natural resources available per capita. It is seen that teachers, who evaluate the effects of the increasing population in the direction of the benefit of humanity, express opinions based on a human-centered approach. Yurttaş and Çağlar (2019) concluded that public employees' environment-centered opinions were higher after analyzing their attitudes in terms of sustainable environment. In one of the articles of the scale used by the researchers to determine the attitudes of public employees towards the environment, there is a statement that the ever-increasing population causes the destruction of natural areas. It has been found that the majority of public employees agree with this statement, that is, they consider population growth as a threat to natural areas. These results are similar to the findings of our study.

The majority of the teachers express an opinion on the necessity of recycling that is in line with the human-centered approach. Recycling, they claim, is critical for preserving natural resources used for human benefit, contributing to the country's economy, reducing consumption, and leaving a clean environment for future generations. Recycling is important for some teachers in terms of decreasing

environmental damage, protecting living things, and preventing pollution. It is assumed that these teachers, in contrast to the human-centered approach, have adopted an environmental-centered perspective on the importance of recycling.

In the research, the majority of the teachers explained the effects of the destruction of forests as the destruction of the natural environment, extinction of living things, air pollution, drought, climate change, and deterioration of the nests of living things. Teachers evaluate the impacts of deforestation on the environment and all living and non-living beings in it, rather than on humans. In this regard, it can be considered that these teachers have adopted an environmentally conscious approach. Some of the teachers evaluate forest destruction in terms of possible harm to humanity. According to them, if forests are destroyed, the clean air that humans require would be polluted, and situations that will negatively impact human life, such as drought, famine, global warming, and erosion, will occur. In this regard, it can be considered that these teachers have adopted a human-centered approach.

According to the findings of the study, the majority of teachers define the effects of natural resource depletion as famine, drought, epidemic diseases, the end of life, natural disasters, a decrease in living standards, economic and political difficulties that affect humanity. This teacher's point of view is related to materialism. Individuals only use products, services, experiences, and relationships for themselves, according to materialism (Shrum et al. 2012; cited in Saraç and Sarıkaya, 2020). It is understood that these teachers have adopted a human-centered approach to the effects of depletion of natural resources. Saraç and Sarıkaya (2020) found that pre-service teachers made statements reflecting the human-centered environmental approach, such as "natural resources are important to meet human needs" and "people need the environment for their own quality of life," in their action research on environmental identity with pre-service teachers. The results of the researchers in this field are consistent with the results of our research. Some of the teachers explain the effects of depletion of natural resources as soil loss, air pollution, drought, deterioration of ecological balance, and decrease in biodiversity, in accordance with the environment-centered approach.

53

The majority of the teachers in the research mentioned saving, protecting resources, minimizing foreign dependency, future generations, and civic duty as reasons for choosing economical products. They claim that by selecting cost-effective items, resources will be consumed less, allowing future generations to meet their natural resource needs. Furthermore, these teachers believe that the preference for economic products is vital in terms of contributing to the country's economy. Teachers who express their opinions in this regard are thought to prefer economical products that are based on a human-centered environmental approach. Some of the teachers emphasize that choosing economic products is a way to protect the environment. According to them, choosing economic products has a negative impact on the environment. A few of the teachers believe that people should be made aware of their preference for economic products. They claim that by doing so, harmful substances will be avoided, and the demand to save products that are less destructive to environment and the environment will rise. It is understood that these teachers have adopted an environmentally centered approach in choosing economical products. This result of the research supports the findings that people's approach to the environment affects their behavior towards the environment (Atasoy and Ertürk, 2008).

In conclusion, the findings show that most primary school teachers participated to this study adopt a human-centered approach to issues concerning the environment. This study is limited to the opinions of teachers who participated in the study from only one city. The researchers' recommendations are as follows, based on their findings:

- The results of this study and similar studies should be shared with the teachers participating in the research, and these teachers should be made aware that they will take themselves as role models in the attitudes and behaviors of their young students towards the environment and that the attitudes and behaviors of children at this age will embody their future behaviors.
- Teachers should receive extensive environmental education during in-service training and pre-service teachers should receive that education during their undergraduate education, allowing them to adopt an eco-centered approach to the environment.

References

- Armstrong, S. J. & Botzler, R. G. (1993). Environmental ethics. *Divergence and Convergence*, New York.
- Atasoy E. & Ertürk H. (2008). İlköğretim öğrencilerinin çevresel tutum ve çevre bilgisi üzerine bir alan araştırması. *Erzincan Eğitim Fakültesi Dergisi*, 10(1), 105-122.
- Başal, H. A. (2015). *Okul öncesi ve ilköğretim çocukları için uygulamalı çevre eğitimi*. Ankara: Nobel Akademik Yayıncılık.
- Benton R., & Benton C. (2006). Why teach environmental ethics? Because we already do. Clare Palmer (Edt.). *Teaching environmental ethics* (p. 77-92). Netherlands: Koninklijke Brill NV.
- Birden, B. (2016). Çevre etiğinde bireyin ahlaki sorumluluğuna kısa bir bakış. *Türkiye Biyoetik Dergisi*, 3(1), 4-14.
- Bozdemir, H. & Faiz, M. (2018). Ecocentric, anthropocentric and antipathetic attitudes of teacher candidates towards the environment. *Sakarya University Journal of Education*, 8(1), 61-75.
- Bülbül, S. (2013). *Fen bilgisi öğretmen adaylarının çevre etiği algıları üzerine bir araştırma*, Yüksek Lisans Tezi, Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü. Ankara.
- Creswell, J. W. (2013). *Nitel araştırma yöntemleri: Beş yaklaşıma göre nitel araştırma ve araştırma deseni*. M. Bütün and S. B. Demir (Çev. Ed.). Ankara: Siyasal Kitabevi.
- Çepel, N. (1983). *Genel ekoloji*. İstanbul Ün. Orman Fak. Yayınları: 3155/352.
- Demir, E. & Köse, M. (2016). Öğretmenlerin rol modelliği hakkında öğretmen görüşleri. *Akademik Bakış Dergisi*, 53, 38-57.
- Dunlap, R. E. & Van Liere, K. D. (1978), The new environmental paradigm. *The Journal of Environmental Education*, 9(4), 10-19.
- Efe, R. (1999). Çevre sorunlarının çözümünde coğrafyanın rolü. *Marmara Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 11, 81-85.
- Erciş, A. & Türk, B. (2016). Etik çerçevesinde tüketim, tüketici ve çevre: ekolojik okuryazarlığın moderatör rolü. *Çukurova Üniversitesi İİBF Dergisi*, 20(2), 1-24.
- Erdaş Kartal, E. & Mesci, G. (2022). Öğretim elemanlarının çevreye karşı tutumları: Bir Q metot çalışması. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 37(1), 140-154.
- Erten, S. (2007). Ekosentrik, antroposentrik ve çevreye yönelik tutum ölçeğinin türkçeye uyarlama çalışması. *Eğitim Araştırmaları Dergisi*, 28, 67-74.
- Erten, S. & Aydoğdu, G. (2011). The ecocentric, anthropocentric and antipathetic attitudes toward environment in Turkish and Azerbaijani students. *Hacettepe University Journal of Education*, 41, 158-169.
- Gagnon Thompson, S. C., & Barton, M. A. (1994). Ecocentric and anthropocentric attitudes toward the environment. *Journal of Environmental Psychology*, 14 (2), 149-157.
- Guha, R. (2000). *The unquiet woods: ecological change and peasant resistance in the Himalaya*. University of California Press.
- Gülşay-Ogelmen, H.(2012). Teaching preschool children about nature: A Project to provide soil education for children in Turkey. *Early Childhood Education Journal*, 40, 177-185.
- Gürbüzöğlü Yalmanlı, S. (2015). Çevreye yönelik etik tutum ölçeğinin geliştirilmesi: Geçerlik güvenilirlik çalışması. *Turkish Journal of Education*, 4(2), 29-40.
- Güştâ Şahin, H. & Doğu, S. (2018). Okul öncesi öğretmen adaylarının çevre sorunlarına ilişkin tutum ve davranışlarının incelenmesi. *İlköğretim Online*, 17(3), 1402-1416.
- Karahan, G. (2009), *Hemşirelik öğrencilerinin ekosentrik, antroposentrik ve çevreye yönelik antipatik tutumları*, Yüksek Lisans Tezi, İstanbul Üniversitesi, İstanbul.
- Karakaya, Ç. & Çobanoğlu O. E. (2012). İnsanı merkeze alan (antroposentrik) ve almayan (nonantroposentrik) yaklaşımlara göre eğitim fakültesi son sınıf öğrencilerinin çevreye yönelik bakış açıları. *Türk Fen Eğitimi Dergisi*, 9(3), 23-35.
- Karakuş, G. & Çimen, O. (2020). Öğretmen adaylarının çevre sorunlarına yönelik etik yaklaşımlarının incelenmesi. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, 40(2), 411-435.
- Karakoç, A. G. (2004), Çevre sorunlarına etik yaklaşım, (Ed: Marin, Mehmet C. ve Uğur Yıldırım), *Çevre sorunlarına çağdaş yaklaşımlar*, Beta Yayınları, Yayın No: 1483, İstanbul.
- Kasalak, M. A., Yurcu, G. & Akıncı, Z. (2018). Üniversite öğrencilerinin ekosentrik, antroposentrik ve çevreye

- yönelik antipatik tutumlarının değerlendirilmesi: Akdeniz üniversitesi iibf örneği. *Journal of Tourism Intelligence and Smartness*, 1(2), 24-33.
- Kayaer, M. (2013). Çevre ve etik yaklaşımlar. *Siyaset, Ekonomi ve Yönetim Araştırmaları Dergisi*, 1(2), 63-76.
- Keleş, R. & Ertan B. (2002). *Çevre hukukuna giriş*, Ankara: İmge Kitapevi
- Kılıç, Ç. & Girgin, S. (2019). 2-ÇDM (İki faktörlü çevresel değer modeli) tutum ölçeğinin Türkçe'ye uyarlanması. *JRES*, 6(1), 38-56.
- Kırkıpınar Özsoy, N. & Çini, P. (2020). Antroposentrik küresel çevre politikalarının ekosentrik çevre etiği görüşü çerçevesinde değerlendirilmesi. *Alternatif Politika*, 12(1), 20-49.
- Kortenkamp, K. V. & Moore, C. F. (2001), Ecocentrism and anthropocentrism: Moral reasoning about ecological commons dilemmas. *Journal of Environmental Psychology*, 21(3), 261-272.
- MacKinnon, B. & Fiala, A. (2014). *Ethics: theory and contemporary issues*. Nelson Education.
- Merriam, S. B. (2013). *Nitel araştırma: Desen ve uygulama için bir rehber* (S.Turan, Çev. Ed.). Ankara: Nobel Yayıncılık.
- Özdemir, O. (2012). The environmentalism of university students: their ethical attitudes toward the environment. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 43, 373-385.
- Özdemir, O. (2016). *Ekolojik okuryazarlık ve çevre eğitimi*. Pegem Akademi, Ankara.
- Özgür, M. E. (2017). Nüfus dinamikleri, çevre ve sürdürülebilirlik. *Coğrafi Bilimler Dergisi*, 15(1), 1-26.
- Patton, M. Q. (2014). *Nitel araştırma ve değerlendirme yöntemleri*. (M. Bütün & B. Demir, Çev.). Pegem Akademi, Ankara.
- Saraç, E. & Sarıkaya, R. (2020). Sınıf öğretmeni adaylarının çevre kimlikleri ve çevreye yönelik materyalist eğilimleri: Ahlaki muhakeme temelli çevre eğitimi. *Eğitimde Nitel Araştırmalar Dergisi – Journal of Qualitative Research in Education*, 8(3), 950-979.
- Sönmez, D. (2018). The necessity of environmental ethics for university students: evaluation of works on the subject in Turkey. *International Journal of Education Science and Technology*, 4(1), 18-27.
- Thompson, I. H. (2000). Aesthetic, social and ecological values in landscapearchitecture. A discourse analysis. *Ethics, Place and Environment*, 3(3), 269-287.
- Uyanık, G. (2017). İlkokul öğrencilerinin çevre kirliliğine ilişkin görüşleri. *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*, 14(1), 1574-1600.
- Wilkinson, D. (2002), *Environment and law*, Routledge, New York.
- Vaughan, C., Gack, J., Solorazano, H., & Ray, R. (2003). The effect of environmental education on schoolchildren, their parents, and community members: A study of intergenerational and intercommunity learning. *The Journal of Environmental Education*, 34(3), 12-21.
- Yıldırım A.E. & Çobanoğlu N. (2009). Biyoetik bir miras: geleneksel yerleşim biçimlerinde biyoetik değerler. *Ankara Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 1(1), 97-126.
- Yıldırım, A. & Şimşek H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri*. Seçkin Yayıncılık, Ankara.
- Yurttaş, A. & Çağlar, A. (2019). The attitudes of governmental official in terms of sustainable environment. *International Electronic Journal of Environmental Education*, 9(2), 142-156.

This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

