



Environmental Issues and Critical Perspectives Mentioned at Public Service Announcements which are Prepared by Primary School Pre-Service Teachers*

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ABSTRACT

The aim of this study is to determine how primary school pre-service teachers approach environmental issues via public service announcements and their opinions on them. This study was conducted with case survey model. The study group consisted of 34 primary school pre-service teachers. Data were gathered via public service announcements which are prepared by primary school pre-service teachers and structured interview form. For the analysis of the data, descriptive and content analysis was used. It is determined that pre-service teachers addressed mostly environmental issues about wastes. Primary school pre-service teachers' opinion is it is more effective to raise awareness if individuals see their behaviors' negative effects and its results on environment on public service announcements. Content which is not definitive does not make sense to primary school pre-service teachers. They appreciate more if the content is more emotional and unique. For this reason, in environmental education, it can be recommended that environmental issues should be reviewed with their different aspects during environmental education. Also it can be recommended that there should be different perspectives about this matter and environmental issues should be associated with real life at environmental education.

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Keywords:

environmental education, environmental issues, public service announcements, primary school pre-service teachers.

1. Introduction

In our day, the rapid increase of population, non-sustainable consumption habits, toxic wastes released on environment due to industrialization, any human activity in correlation with developing technology causing environmental issues. These issues can see both nationwide and worldwide thus their effects lead to increase interest in environmental issues. In order to prevent or manage environmental issues, environmental education is important. Environmental education was firstly appeared on education as a specific area at 70s, which is an era of increased environmental issues and efforts for solving them can be seen at this era. People realized that they are reason for environmental issues but they can be the solution for this situation. Thus environmental education became more important. In order to achieve that goal of the environmental education is determined as creating behavioral, cognitive and affective changes in students (Ozdemir, 2007). Hill (2006) described the environmental education as a tool for aiding individuals in order to develop their skills, tendencies and ecological comprehension. With these skills and knowledge, it is aimed to protect and boost the environment (Desjean-Perrotta, Moseley and Cantu, 2008). Environmental education has attainments which is about training individuals who has information about biophysical environment and issues about it, and also who are willing to create solutions about these issues (Stapp, Bennett, Bryan, Fulton,

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MacGregor, Nowak, Swan, Wall and Havlick, 1969). At Belgrade Charter, these aspects of environment were also mentioned. At this charter, goals of the environmental education determined as; train individuals globally who have an awareness of environment and environmental issues, who have an interest to those issues, and also willing and commitment to participate in the efforts of making solutions for environmental issues (United Nations Educational, Scientific and Cultural Organization- United Nations Environment Programme, 1976). At Tbilisi Declaration it is mentioned that it is necessary to be an active participant in the efforts for solving environmental issues (Tbilisi Declaration, 1978). Vaughan, Gack, Solorazano and Ray (2003), evaluated the environmental education as a constant learning process. Also added that individuals should have an awareness for their surroundings and they should increase their knowledge, skills, values and experiences on solving environmental issues for current and future generations. Magnus, Martinez and Pedauye (1997), reviewed environmental education on the aspects of; evaluation of environmental issues, determination of issues, and creation of solutions which are applicable. And also mentioned that the ultimate goal of environmental education is to create individuals who have an environment friendly behavior. Zsóka, Szerényi, Széchy and Kocsis (2013) mentioned that it is hard to train students in order to become self-motivated, conscious and determined individuals, and this is the major challenge of environmental education. They also emphasized that the sustainable future is possible via achieving ultimate goal of environmental education. When the goals of environmental education are reviewed, developing and awareness of environment and its issues is primarily expected from individuals. After that creating a solution and acting upon on these solutions were expected.

On environmental education, educators who have an awareness about sustainability, understanding of the interdisciplinary and globalized nature of environmental issues, and also who uses different methods of education have an important impact (Pérez-Rodríguez, Varela-Losada, Álvarez-Lires and Vega-Marcote, 2017). At his point, teachers who will raise the future generations have an important role on environmental education. Thus pre-service teachers should get a comprehensive education about environmental education. Within this context pre-service teachers are expected to be aware of environmental issues and their causes, their effects and their solutions. And they are also expected to have an appropriate environmental behavior. As future teachers, it can be said that having these skills is important for pre-service teachers on the subject of environmental education.

Research made with in consideration of pre-service teachers position on environmental education according to different samples, parameters and disciplines. On these researches, pre-service teachers' knowledge, attitude, behavior and awareness about environment (Yumusak, Sargin, Baltaci and Kelani, 2016), their knowledge, attitude and behavior about environment (Esa, 2010), their knowledge and attitude about environment (Alim, 2013; Taylor, Doff, Jenkins and Kennelly, 2007; Vlaardingerbroek and Taylor, 2007), their attitude about environment (Bozdemir and Faiz, 2018; Guven, 2013; Kahyaoglu, Daban and Yangin, 2008; Koc and Kuvac, 2016; Ozsoy, Ozsoy and Kuruyur, 2011), their awareness and knowledge about environment (Tal, 2010), their comprehension of environmental issues (Arik and Yilmaz, 2017; Cimen and Yilmaz, 2014; Fettahlioglu, 2018; Khalid, 2003; Ozata Yucel and Ozkan, 2016; Ozata Yucel and Ozkan, 2018; Oztas and Kalipci, 2009) are reviewed. Also there are studies on environmental literacy in literature (e.g. Dada, Eames, and Calder, 2017; Goldman, Yavetz, and Pe'er, 2014; Ogunyemi and Ifegbesan, 2011; Surmeli, 2013; Tuncer, Tekkaya, Sungur, Cakiroglu, Ertepinar and Kaplowitz, 2009; Yavetz, Goldman and Pe'er, 2009). When this studies are reviewed, it can be said that pre-service teachers have a positive attitude towards environment, they have a tendency to behave sensible about environment (Alim, 2013; Ozsoy, Ozsoy and Kuruyur, 2011; Taylor, Doff, Jenkins and Kennelly, 2007; Vlaardingerbroek and Taylor, 2007; Yumusak, Sargin, Baltaci and Kelani, 2016) but have a hard time about acting on it and also they have a lack of knowledge about some concepts (Esa, 2010; Urey, Colak, Bozdemir Yuzbasioglu and Kaymakci, 2020; Yumusak, Sargin, Baltaci and Kelani, 2016). In studies which reviewers the pre-service teachers' comprehension about environmental issues showed that their knowledge about pollution is not advanced (Arik and Yilmaz, 2017), they see environmental issues as pollution (Ozata Yucel and Ozkan, 2016, 2018), and with the increased level of environment literacy, pre-service teachers' comprehension about environmental issues (Fettahlioglu, 2018).

As it can be seen in studies, pre-service teacher's comprehension about environmental issues have a lack of knowledge, awareness, comprehension about environment and environmental issues. These deficiencies will

affect the teaching-learning processes of environmental education. When importance of primary school on developing knowledge, skill and behavior, primary school pre-service teachers' deficiencies about these subjects will reduce the effectiveness of environmental education. When the regarding grade levels are considered, primary school teachers have more responsibility. Because effects of environmental education solely based on the age it starts (Grodzińska-Jurczak, Stepska, Nieszporek and Bryda, 2006). It is recommended that children should start learning about earth at early ages (Palmer, 1995; Wilson, 1996). Interaction with environment boosts the learning, for this reason educators are expected to create more comprehensive setups for students (Wilson, 1996). Quality of environmental education is determined by teachers' awareness of environment protection, environmental issues and environmental education (Than, 2001), their environmental interactions, environmental values, and their skill of environmental education (Lang, 1999). These qualities will reflect primary school pre-service teachers' future career. If this reflection turns out to be a positive one, this will result in students who are sensible about environment.

Besides developing awareness, responsible environmental attitude and behavior, environmental education also has a purpose of enabling new skill sets. These skills were mentioned at Tbilisi Declaration and they were: critical thinking, problem solving and decision making skills (Tbilisi Declaration, 1978). Rider (2005) described the environmental education content as critical thinking, systems thinking, regionalism, participatory education, informal influences. Stevenson (2007), said that environmental education also includes critical thinking about environmental situations. Thus it can be seen that during an comprehensive environmental education, it is aimed that an array of skills should be developed. Among these skill sets, critical thinking is more prominent.

Primary school pre-service teachers are expected to be able to teach awareness of environmental issues, environmental consciousness, positive environmental attitude and behavior along with to be able to make students gain new skill sets –especially critical thinking-. For developing those qualifications at pre-service teachers, environmental education course at primary school teaching bachelor programme, have a substantial role. In order to achieve this, at freshmen year, pre-service teachers should be tasked with duties which allows them to use their skills and courses should be structured around these criteria can be a positive contribution to environmental education. Also with these tasks, revealing pre-service teachers' opinion's about environmental issues is important. For this reason, public service announcements are seen important because of having an informative and deductive aspect (Radio and Television Supreme Council, 2012), having a convincing effect on target audience (Dogu Oztürk, 2020), having a script, structure, being able to raise awareness and also because they can provide a platform which allows to conduct the information via visual and vocal channels.

In this day and age, teachers are expected to use interactive approaches. In order to develop this skill they should experience practices at department of education. During the process of creating a public service announcement, pre-service teachers, will have a chance to share their perspective of environmental issues along with they will be a part of an interactive activity. Also creating public service announcement videos, can create new and exciting opportunities (Hoban, Loughran and Nielsen, 2011). For this reason, at this study, pre-service teachers were asked to create public service announcements, thus environmental issues which they want to raise awareness of and how they handle them can be determined. At the end of the process, with public service announcements' reviews were being done by pre-service teachers, opportunity of sharing their opinions about environmental issues via example practices was created. Thus this will enable primary school teacher pre-service teachers to practice their critical thinking skills. Thus, it is thought that the primary school pre-service teachers will reveal their critical perspectives. Identifying these points of view may guide the creation of instructional designs which draw attention to environmental issues and raise awareness within the scope of environmental education in higher education. It was aimed to determine which environmental issues were mentioned, how they were managed, and also to reveal pre-service teachers' opinions of public service announcements. For this purpose, in this study answers to the following questions were sought.

1) What are the environmental issues in the public service announcements prepared by primary school pre-service teachers?

2) What constitutes the content of public service announcements prepared by primary school pre-service teachers?

3) What are the opinions of the primary school pre-service teachers regarding the public service announcements prepared by their friends?

2. Method

2.1. Research Design

In this study, it was aimed to determine the situation of primary school pre-service teachers to address environmental issues in the task of preparing public service announcements and to examine the reflections of their critical perspectives by providing an opportunity to express their views on these public service announcements. For this purpose, in accordance with the nature of the problem, the research was carried out by survey method based on determination of situation from qualitative perspective. This study was carried out by using case survey model, which is one of the descriptive research methods, as it was tried to reveal the current situation, as it was expressed about its effectiveness in obtaining detailed and life like information (Karasar, 2002).

2.2. Study Group

The study group consisted of 34 first grade primary school pre-service teachers in 2019-2020 academic year at a university located in the Western Black Sea Region in Turkey. In the study, the participants were selected by criterion sampling method. Criterion sampling is the sampling method in which participants are selected based on predefined criteria (Patton, 1997). When Primary School Teaching Curriculum is examined, it is seen that the environmental education course which is about environment and environmental issues is in the first grade. This study focused on the concepts of environment and environmental issues. Since the current status of primary school pre-service teachers wanted to be determined before entering the learning environment, the study group was formed by first grade students.

2.3. Data Gathering Tool

In the research, the data were collected through the public service announcements prepared by primary school pre-service teachers and their answers to the interview form for these public service announcements. Within the context of the study, the guidelines for preparing public service announcements and interview questions have been investigated in the relevant literature and the validity has been approved by three experts in terms suitability for the purpose, representation of the feature to be measured and grammar.

2.4. Process

In the research, the students were asked, "You want to raise awareness about an environmental issue and prepare a public service announcement for it. Which environmental issue do you address? How do you address this environmental issue in the public service announcement?" In the study, primary school pre-service teachers were asked to form groups with their friends who they would like to work with in preparing public service announcements. After that students:

- Identified an environmental issue and made research on it.
- Reviewed the previously made public service announcements.
- They prepared the script, structure and slogans of public service announcements.
- They shot the public service announcements.

After the preparation of public service announcements, each announcement was watched by pre-service teachers. They answered the questions in the interview form about public service announcements. Interview form included the following questions:

- Is the public service announcement you watched attention gathering? Please explain.
- Did the public service announcement you watched create awareness of the environmental issue it addresses? Please explain.
- What are your thoughts on the message of the public service announcement that you watched?
- Which public service has affected you? Please explain why?

2.5. Data Analysis

Descriptive and content analysis methods were used in the analysis of the data gathered in the research.

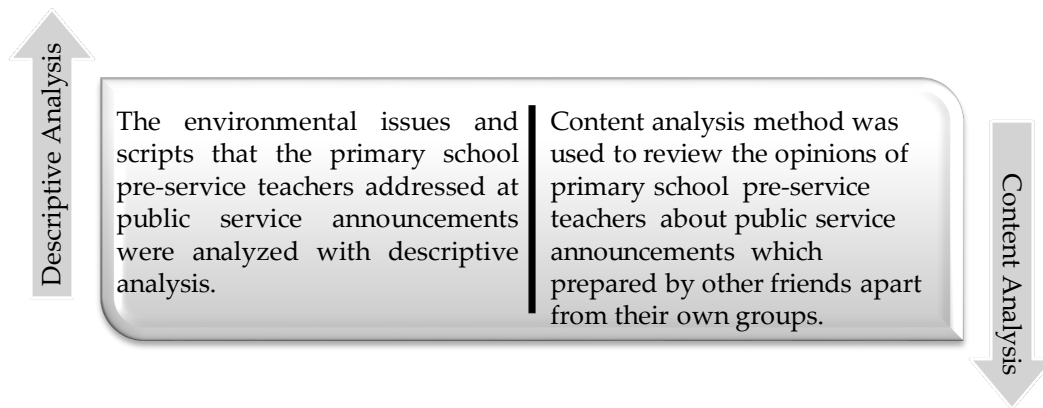


Figure 1. Analysis of Data

In the descriptive analysis, frequency values related to environmental issues which were addressed at the public service announcements that prepared by primary school pre-service teachers. Scripts in public service announcements were also covered within the context of these environmental issues. In the content analysis, the opinions of the primary school pre-service teachers towards the public service announcement that they watched were evaluated and themes were created. Necessary analyzes were done by the researcher during the data analysis process. Later, the findings were examined by an independent researcher. Consensus and disagreements were identified. In cases where there is an opinion difference, discussions were made. Necessary adjustments have been made and compatibility between researchers was calculated with the reliability formula created by Miles and Huberman (1994). Compatibility between researchers was calculated as 82%.

3. Findings

Findings related to the environmental issues that the primary school pre-service teachers wanted to create awareness, their approach on these issues and their opinions on public service announcements are included in this section. The first problem of the study is about the environmental problems in the public service announcements prepared by the primary school pre-service teachers for environmental issues. The environmental issues that primary school pre-service teachers want to create awareness in public service announcements are presented in Table 1.

Table 1. Environmental issues in public service announcements prepared by primary school pre-service teachers

Public service announcement	Environmental issue
1	Waste/Soil pollution
2	Waste/Soil pollution, Deforestation
3	Noise pollution
4	Waste/Soil pollution, Waste/Water pollution
5	Wastes
6	Wastes, Air pollution
7	Endangered animals
8	Waste/Water Pollution
9	Wastes

When the Table 1 is examined, it was determined that, first public service announcement is about waste/soil pollution, second public service announcement is about waste/soil pollution and deforestation, third public service announcement is about noise pollution, fourth public service announcement is about waste/soil pollution, waste/water pollution, fifth public service announcement is about wastes, sixth fifth public service announcement is about wastes, air pollution, seventh public service announcement is about endangered

animals, eighth public service announcement is about waste/water pollution, ninth public service announcement is about wastes.

The second problem of the research is about the contents of the public service announcements created by the primary school pre-service teachers. Accordingly, the scripts created by primary school pre-service teachers include the contents of the public service announcements regarding environmental issues, were given at Table 2.

Table 2. Scripts of public service announcements prepared by primary school pre-service teachers

Public service announcement	Script
1	In a park in the city center with green areas, there is an image of people who continue to litter especially in a pile of packaging waste. After that, in a natural environment image, "Environment is not a heritage, it is a temporary asset that will be transferred to future generations", "He/she who ill-treats environment, will not have a bright future" sentences were voiced.
2	A person who takes notes on a paper in a green area with trees throws the papers to the ground instead of throwing them in the trashcan. People passing through that area have warned the person who uses the paper unnecessarily and throws it in the ground. They stated that due to his/her behavior the trees will need be to cut. Then he/she threw the papers in the trashcan. Then "If we recycle and not waste material in vain, the trees that provide nature and balance will not be cut and you will live longer." sentences were voiced.
3	It was shot in an area with heavy traffic in the city center, with lots of horn sounds. Two people were having a hard time hearing each other from this noise. Then the scene has changed and two different people complained about noise pollution (from its psychological effects). Later, a transition was made to a natural scene with bird chirps. "Every day, if we lived with the sounds of birds and the sounds of nature, instead of horns and traffic sounds, we would be more healthy as individuals and a more harmonious society." sentences were voiced.
4	It started with the images of a soil and a water stream passing through the city center where there is waste. "Every drop that has been contaminated means the tears of children. If the soil gets contaminated the first living beings to cease existence are humans. Environment is not an inheritance it is a temporary asset which will be transferred to future generations. Efforts should be made together for clean environment." sentences were voiced. A person passing by the trash cans threw the trash on the floor instead of throwing it in the trash cans. A confused person took this garbage and put it in the trashcan. A region was shot in the city center. "No to concrete, yes to green" sentence was voiced.
5	Students waiting for the class left their glasses and bottles of beverages on the table in the school garden. Then one person put them in the recycling can by separating them as paper and plastic.
6	University students who smoke in the school canteen caused air pollution. At the same time, they threw the glasses of tea to the ground, instead of trashcan. "Clean people, clean environment" sentence was voiced. Recycling and what can be produced with recycling was shown.
7	The image started in 2137. A child, looking at past photos on her mother's phone, was surprised to see some photos. She saw various animals on her mother's lap in the photos. She resembles them to her toys. When she wanted to see these animals alive her mother, took her to the zoo. Here, only the models of these animals have remained. "As our waste spreads around the world, our animals die one by one. But we continue to increase our waste and consume plastic. So will these wastes can replace animals? Will the models of our animals we put instead of the real ones satisfy you? In order to have dignity in the perspective of our children and animals, let us try to reduce the plastic waste we create and throw the waste into the trashcan. Everything is for future, everything is for earth." sentences were voiced.
8	A dirty water flowing from the tap was seen. A pool is considered as the sea with wastes were cleaned and the water flowing from the tap has become clean. "Water is life." sentence was voiced.
9	The students left the bottle of and seeds on the table where they sat in the school yard. These images were being focused. "As long as we preserve the nature, nature preserves us. Tomorrow's nature is created from today. Environment is not an inheritance it is a temporary asset which will be transferred to future generations. Please let's take care of our environment and keep it clean." sentences were shown in the video as script.

The third problem of the study is about the opinions of the primary school pre-service teachers regarding the public service announcements prepared by their friends. The opinions of the primary school pre-service

teachers were reviewed under the topics of attracting attention, creating awareness, message that was addressed and the most influential public service announcement. The opinions of the primary school pre-service teachers about whether the public service announcements they watched are gathering attention are shown in Table 3.

Table 3. Public service announcements' attention gathering levels

Public service announcement number	Yes								No					
	Includes real life events	Behaviors damaging environment	Can see the effect of behavior	Slogan/Message	Originality	Includes details	Emotional aspects	Does not include reason	Not original	Does not include details	Public service announcement elements	Does not include real life events	Does not include solutions	Does not include reason
	f	f	f	f	f	f	f	f	f	f	f	f	f	f
1	3	1	3	6	-	-	-	1	7	4	-	2	1	2
2	2	4	10	6	1	4	-	3	-	1	-	-	-	-
3	10	7	-	-	6	1	1	3	1	-	-	1	-	-
4	3	2	1	-	-	9	-	-	2	12	-	-	-	1
5	4	14	-	1	2	-	-	4	3	1	-	-	-	1
6	17	3	1	1	2	1	1	2	2	1	-	-	-	-
7	-	6	16	1	5	-	1	1	-	-	-	-	-	-
8	4	4	9	2	-	-	1	2	-	4	1	-	1	1
9	3	3	2	-	-	-	-	1	12	2	3	-	-	4
Total	46	44	42	17	16	15	4	17	27	25	4	3	2	9

Explanations of primary school pre-service teachers on public spots which they find attention gathering were examined. In this explanation, reasons for public service announcement attention gathering by primary school pre-service teachers were; including real life events (f=46), including damaging behaviors toward environment (f=44), including the end result of a behavior (f=42), liked the slogan/message of the announcements (f=17), being original (f=16), including details (f=15) and including emotional aspects (f=4). There are also explanations which described the content as attention gathering but these explanations were made without any reason (f = 17). There are also public service announcements that primary school pre-service teachers do not qualify as attention gathering. When these explanations were reviewed, it can be seen that the reasons for not finding as attention gathering were; not being original (f=27), not including details (f=25), having a lack of public service announcement elements (f=4), not including real life events (f=3), not including solutions (f=2). It is also present in this section that primary school pre-service teachers do not give reason for their opinions stating that they do not find public service announcement as attention gathering.

The opinions of the primary school pre-service teachers regarding the awareness creating status of the public service announcements they watched are shown at Table 4.

Explanations of primary school pre-service teachers about public service announcements which they think create awareness were examined. Based on these explanations, reasons for teacher primary school pre-service teachers to find public service announcements as successful at creating awareness were; including behaviors that have a negative effect on environment (f=118), being able to see the result of behavior (f=28), being informative (f=15), including real life events (f=15), including environmental effects (f=9), heeding (f=9), being original (f=6), future of environment (f=3). There are also explanations which described the content as attention gathering but these explanations were made without any reason (f = 4). There are also public service announcements that primary school pre-service teachers do not qualify as successful at creating awareness. When these explanations were reviewed, it can be seen that the reasons for not finding as awareness creating were; not being able to include details (f=47), not being original (f=4), not being able to see the results of the behavior (f=2). It is also present in this section that primary school pre-service teachers do not give reason for their opinions stating that they do not find public service announcement as successful at creating awareness (f=11). The opinions of the primary school pre-service teachers regarding the messages that addressed in the public service announcements are shown in Table 5.

Table 4. Awareness creating status of public service announcements prepared by primary school pre-service teachers

Public service announcement number	Yes										No			
	Behaviors which have a negative effect on environment	Can see the effect of behavior	Gives information	Includes real life events	Impact	Heeding	Originality	Future of environment	Does not includes reason	Does not includes details	Is not original	Can not see the effect of behavior	Does not includes reason	
	f	f	f	f	f	f	f	f	f	f	f	f	f	
1	7	1	-	1	3	1	-	3	-	9	2	1	2	
2	20	1	4	1	3	-	-	-	1	1	0	0	0	
3	6	5	-	4	-	6	-	-	1	6	1	1	0	
4	9	3	2	3	1	-	1	-	-	9	1	0	1	
5	20	-	1	4	-	-	-	-	2	2	0	0	1	
6	20	-	6	1	-	-	-	-	-	2	0	0	2	
7	11	14	1	-	-	-	4	-	-	0	0	0	0	
8	17	3	-	-	1	2	-	-	-	3	0	0	3	
9	8	1	1	1	1	-	1	-	-	15	0	0	2	
Total	118	28	15	15	9	9	6	3	4	47	4	2	11	

Table 5. Opinions of the primary school pre-service teachers regarding the messages that addressed in the public service announcements

Public service announcement number	Protection of environment	Future of environment	Recycling	Increasing the impact of message	Multiple environmental issues	Seeing the result of behavior	Reducing/preventing	Making it noticeable	Emotional aspects	Warning	Irrelevant answer
	f	f	f	f	f	f	f	f	f	f	f
1	11	17	-	-	-	-	-	-	-	-	2
2	24	4	-	-	-	-	-	-	-	3	-
3	-	-	-	-	-	-	11	9	7	-	3
4	11	-	-	-	19	-	-	-	-	-	-
5	10	-	17	3	-	-	-	-	-	-	-
6	14	-	11	4	-	-	-	-	-	-	2
7	1	11	-	1	-	17	-	-	-	-	-
8	24	-	-	5	-	-	-	-	-	-	-
9	20	2	-	8	-	-	-	-	-	-	-
Total	115	34	28	21	19	17	11	9	7	3	7

Primary school pre-service teachers' explanations regarding the messages addressed at public service announcements were examined. Primary school pre-service teachers stated that the first public service announcement included messages about the future of the environment and environmental protection. They stated that the second service announcement included messages about the future of the environment and the warning of people who have harmful behaviors towards the environment. They stated that the third service announcement included messages about the reduction / prevention, awareness and emotional aspects. They stated that the fourth service announcement included messages about the protection of environment and multiple environmental issues. They stated that the fifth, sixth and ninth service announcements included messages about the recycling. They stated that the seventh service announcement included messages about the future of the environment and seeing the result of the behavior. They stated that the eighth service

announcement included messages about the protection of the environment. Some pre-service teachers expressed the impact of the messages of fifth, sixth, seventh, eighth and ninth announcement should be increased. Also they gave irrelevant answers about first, third and sixth public service announcements' messages. Public service announcements which affected the primary school pre-service teachers and pre-service teachers' opinions about them are shown at Table 6.

Table 6. Public service announcements which affected the primary school pre-service teachers and pre-service teachers' opinions about them

Public service announcement number	Emotional aspect	Instructive aspect	Original content	Other living beings	Relevance to real life	Structure	Total
	f	f	f	f	f	f	f
1	-	-	-	-	-	-	-
2	1	-	-	-	-	-	1
3	-	1	-	-	-	-	1
4	-	1	-	-	-	-	1
5	-	-	-	-	-	-	-
6	-	2	-	-	3	-	5
7	6	2	6	5	1	3	23
8	2	-	-	-	-	1	3
9	-	-	-	-	-	-	-
Total	9	6	6	5	4	4	34

When we reviewed the public service announcements created by primary school pre-service teachers, it can be said that first, fifth and ninth public service announcements did not get liked by any of the participants. When the numbers of likes that announcements get reviewed, it is seen that highest number of likes belong to seventh announcement (f=23), then sixth (f=5), eighth (f=3), meanwhile the least number of likes belong to second (f=1), third (f=1) and fourth (f=1) announcements. Highest contributor to getting likes is determined as having emotional aspects (f=9). Other contributors were having instructive aspects (f=6), having original content (f=6), including other living beings (f=5), being relative to real life (f=4), and structure (f=4).

4. Discussion, Conclusion and Recommendations

When the environmental issues that the primary school pre-service teachers addressed and wanted to create awareness public service announcements were examined, it can be seen that wastes were the general focus point. They also wanted to draw attention to the soil and water pollution caused by these wastes. There were also public service announcement about noise pollution, irregular urbanization and endangered animals. In the study by Ozata Yucel and Ozkan (2016), primary school pre-service teachers also stated that the air pollution, soil pollution, water or sea pollution, noise pollution, irregular urbanization as environmental issues. In addition, global warming was one of the issues stated by pre-service teachers. Dogan and Simsar (2019) also achieved similar results in their studies, and in study, preschool pre-service teachers expressed global warming as the biggest global environmental issue and then stated air, water and soil pollution followed suit. In addition, preschool pre-service teachers stated that chemical wastes' release to nature and various animal species disappearance as another global environmental issue. Yilmaz and Gultekin (2012), in their study, determined that primary school pre-service teachers mentioned that water pollution, global warming and air pollution in the first three places within the topic of possible environmental issues in the future. When the issues discussed in the current study were analyzed, it can be seen that primary school pre-service teachers generally get their ideas from the environmental issues that they can observe in their close environment. But, in the literature, it has been observed that they have not made any attempts at public service announcements regarding the concept of global warming which is a very popular topic in written, visual and social media in recent years, and it has not been observed they did not prepared any activities to remind this issue (Dispensa and Brulle, 2003). Di Francesco and Young (2011), stated the deficiencies of these visuals in their research, in which they examined the visuals in the news about global warming in the media. They stated that even though polar bears, deserted soils, melting glaciers, were used as visuals were used,

they were not effective on individuals. Because people cannot visualize the potential effects and results of the global warming. Besides, they cannot associate the abstract language used with daily life. In this regard, it can be said that primary school pre-service teachers did not address the topic of global warming in the public service announcements they prepared because of the fact that they could not associate with their own lives even though it being a very popular topic in the media. In the study conducted by Fettahlioglu (2018) with pre-service teachers, it can be seen that although pre-service teachers are more likely to show interest in the environmental issues which they can associate with their lives or close surroundings and they are not likely to show interest environmental issues which are global issues but do not have an immediate impact on their close surroundings. In the literature, in the studies conducted on different levels of work groups there are also statements about participants show more interest in the environmental issues which they can observe in their close surroundings (e.g., Alerby, 2000; Artun and Okur, 2015; Yardimci and Bagci Kilic, 2010). In the public service announcement which is about endangered animals, although this issue was not observed directly, usage of cows, cats, etc. in the video can be associated to the close surroundings of the pre-service teachers. Because in the video animals which we encounter in daily life was used as endangered species.

When the contents of the public service announcements prepared by primary school pre-service teachers were examined, it was stated in the first video regarding the soil pollution caused by the wastes that the environment is an asset that will be left to future generations. In the fourth video, which was about water pollution due to wastes, it was stated that every drop that has been contaminated means the tears of children. The emphasis about future was also made in the seventh public service announcement which is about extinct creatures. In these contents, environmental issues were approached by drawing attention to future generations. The concept of sustainable development (World Commission on Environment and Development, 1987) defined as “meeting the needs of future generations as well as needs of today” also appears. It can be said that primary school pre-service teachers have awareness about this concept, even though they did not make any statements regarding sustainable development. It is thought that this awareness will be reflected on both their own lives and future learning environments. In this context, this feature in regards to environmental education can contribute to environmental sustainability. Because environmental education is seen as an important way of ensuring environmental sustainability (Taylor, Doff, Jenkins, and Kennelly, 2007). Another awareness which can contribute to the quality of environmental education is about noise pollution. In the content of the third public service announcement which is about noise pollution, emphasis has been made that this environmental issue has psychological effects. Similar to the results in this study, Oztas and Kalipci (2009) stated that pre-service teachers have knowledge about that sound pollution may cause psychological, physiological and social problems.

In the second public service announcement which is about soil pollution caused by wastes, it was stated that if these wastes - especially papers - were not thrown into the environment, trees will not be cut, the natural balance will not deteriorate and thus people will live longer. In the fourth service announcement which is about soil pollution, it was stated that if the soil gets polluted, people will be the first ones to be effected. It has been stated in the public service announcement which is about noise pollution, that individuals will be healthier if the noise pollution is prevented. When the contents were examined, it can be seen that positive effects of protecting the environment on human life was emphasized. According to this human-centered perspective, the environment is evaluated in according to the opportunities it provides to people (Thompson and Barton, 1994) and human interests are supported (MacKinnon and Fiala, 2014). In this case, an understanding of the environment, which takes the human as the focus point, was observed in the primary school pre-service teachers. In the eighth video which is about water pollution, it was stated that water is important for all living beings. In here, an environment centered understanding can be seen. It can be said that pre-service teachers have environmental centered perspectives along with more prominent human centered understanding. In literature there are studies that expresses pre-service teachers have both environments centered and human centered understandings (Bozdemir and Faiz, 2018; Desjean-Perrotta, Moseley and Cantu 2008; Erten and Aydogdu, 2011).

It can be seen that pre-service teachers addressed that the wastes should not be thrown in to environment, they should put in the recycling bins. Also information about positive effects of recycling was given. Thus it can be said that, pre-service teachers have an awareness and knowledge about recycling. In literature, it can

be seen that in the studies which regard to environment and environmental issues, pre-service teachers emphasized the recycling concept (e.g., Aslan Efe and Baran, 2017; Hirca and Simsek, 2013; Ozmen and Ozdemir, 2016; Sever, 2013). Recycling is not only seen as separation of wastes, also its contributions to society, country and the environment were also addressed by primary school pre-service teachers. This shows that positive steps had been taken by pre-service teachers in order to gain appropriate behavior about conservative energy usage and pollution prevention.

In this study, primary school pre-service teachers stated that the public service announcements which they qualified as attention gathering, contained real life experiences, harmful behaviors towards environment, results of the behavior, emotional aspects, likable slogan / message, originality, detailed information. When the most expressed reasons were examined, primary school pre-service teachers find public service announcements as attention gathering if they are able to see the effects, results and real life associations of the environmental issue. This result can also be explained by the statement that the potential effects of an environmental issue does not affect individuals if their results are not seen and there is no association with daily life in Di Francesco and Young's research (2011). The primary school pre-service teachers stated the reasons of not qualifying public service announcements as attention gathering are; not being original, being superficial, lack of sound in the video, not being associated with real life events and not offering a solution to the issue. Thus it can be seen that, primary school pre-service teachers want originality and a different perspective in addressing environmental issues. They stated that it does not gather attention when the environmental issue is addressed in an ordinary way. For this reason, when it is desired to draw attention to environmental issues in departments of education, it can be said that more creative instructional design will net more effective results. In literature, the usage of out-of-school learning in environmental education and activities (Kiyici, Yigit, and Darcin, 2014; Ozdemir, 2010), usage of current events (Gokce, 2009), having learning environments supported by various activities have positive effects on the environment (Cabuk, and Cabuk, 2017; Guzelyurt and Ozkan, 2017; Keles, Uzun and Varnaci Uzun, 2010). The primary school pre-service teachers stated that if public service announcement addressed the environmental issues in a superficial way and if it does not offer a solution, it is qualified as non-attention gathering. In this case, it can be said that primary school pre-service teachers want to see the various aspects of the environmental issue. This result is similar to the statements of pre-service teachers which they expressed that they want to see the effects and results of environmental issues. Opinions that the public service announcement is not attention gathering because it does not include any association with real life, are correlates with the results of Di Francesco and Young's (2011) studies which expressed if there is no association with real life an environmental issue will not effect individuals.

There are statements by pre-service teachers that the absence of a sound element in the public service announcement will impact the attention gathering capability of announcement negatively. In this regard, presentation of information in environmental education in different ways can be seen. Including different ways of presentations of information in learning environments helps students understand the concepts more easily (Schontz, 2002; Schnotz and Bannert, 2003). At the same time, in an enriched learning environment which includes the presentation of information in different ways, each display makes it easier for the students to make their learning as a more complete experience (Kurnaz and Yuzbasioglu, 2013). Thus, it can be said that these display types can be used effectively in environmental education both in attracting attention and in understanding and constructing information.

In this research, whether or not the public service announcements about environmental issues create awareness among primary school pre-service teachers were examined. Pre-service teachers who qualified the announcements as successful at creating awareness, stated the reasons for this are; including harmful behaviors towards environment, being able to see the result of the behavior, being informative, including real life events, including environmental impacts, heeding, being original, including information about future of the environment. Thus pre-service teachers stated that if the public service announcement includes the effect of the behavior on the environment, results of the environmental issue, and real life events it can be qualified as successful at creating awareness as in attention gathering. It can be said that they want to see tangible situations in environmental issues. In addition, pre-service teachers stated that the presence of informative aspects in the public service announcements will create awareness. It can be said that the importance of acquiring information about environment and environmental issues in the environmental

education process can be seen at this point. Primary school pre-service teachers, who qualified the public service announcements as not successful at creating awareness stated the reasons for this as; not elaborating, not including details, not being original, and not being able to see the results of the behavior. Pre-service teachers stated that contents which are not addressed in different ways and not original, fails to create awareness. It can be said that original learning designs will be more effective in creating awareness about environmental issues in departments of education.

When the opinions of pre-service teachers on the messages of the public service announcements were examined, it was determined that they had a general idea about the announcements' messages. However, it was determined that there was confusion about the messages in the public service announcements which addresses multiple environmental issues. Primary school pre-service teachers also have criticisms about the way messages are given in public service announcements and their structure. These criticisms were mostly towards the ninth public service announcement. This public service announcement included only people who throw garbage in the environment and the wastes they leave behind. Causes, effects, results, preventive measures, etc. did not covered in this public service announcement. Thus, it seems difficult to fully understand the message. With this information it can be said that it is necessary to make associations while addressing the environmental issues, and every concept and message should be addressed with clarity. In this regard, there may be a meaningful environmental education process and the messages we want to give in our target audience can create a response.

When the primary school pre-service teachers' explanations about their favorite public service announcements were examined, it was seen that they liked the public service announcement which was about endangered animals most. They stated the reasons for liking it as having emotional aspects, being original, and including animals. In public service announcements, emotions are used to increase the effectiveness of the message and also in efforts to changing behavior. Using fears also contributes to increasing its effectiveness (Dogu Ozturk, 2020). In this case, it can be said that the public service announcement which is about the extinction of the animals that they can see in their daily life, increases its effectiveness through fears. Among the reasons for liking originality, also shows the positive effects different perspectives and unusual activities in the environmental education process. The inclusion of animals in the seventh public service announcement and it being the most liked announcement shows not human centered perspective. It can be said that non human centered perspectives can be present in announcement that gathers attention, creates awareness and conveys the message to the target audience correctly. With having these kind of content, pre-service teachers can be thought about non-human centered perspective about environment and also about environment as a concept which have its own value regardless of humans (MacKinnon and Fiala, 2014).

According to these results, it can be suggested to focus on all aspects such as sources, causes, effects, and results of environmental issues in creating a learning design for environmental issues in the environmental education process. In this design, it can be started with the environmental issues that the target audience regards as tangible and relate to their own lives. In addition, considering the original contents about environmental issues affecting pre-service teachers, environmental education courses can be conducted with interactive activities which have different perspectives, informal learning environments and which makes students active.

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