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# Opinions of Preservice Teachers about Teaching Environmental Pollution and Recycling Lessons with Creative Drama Method

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## ABSTRACT

The main objective of this research is to introduce the views of students about the effects of creative drama on "Environmental Pollution and Recycling". A case study from qualitative research patterns was adopted in the study. The study was carried out with 34 preservice class teachers studying in the Department of Primary School Education in Division of Basic Education of Kazım Karabekir Faculty of Education of Atatürk University in 2017-2018 academic year. The course is taught with a 90-minute workshop plan and the book named "Garbage and Recycle" of TUBITAK Popular Science Books. After the workshop has been implemented, the research data were collected through an open-ended interview form developed by the researcher and were evaluated by using content analysis from qualitative data analysis techniques. The results obtained from the data analysis show that teaching the lessons of environmental pollution and recycling to preservice teachers by using creative drama technique provides an easy learning and leading them to have consciousness and awareness concerning the subject; besides, the results indicates that the preservice teachers, when they become teachers, think to make use of creative drama technique for giving the lesson of environmental pollution and recycling. **Keywords:** Creative drama, environmental pollution, recycling, preservice teacher

# Öğretmen Adaylarının Çevre Kirliliği ve Geri Dönüşüm Konusunun Yaratıcı Drama Yöntemiyle İşlenişine İlişkin Görüşleri

#### ÖZET

Bu araştırmanın temel amacı "Çevre Kirliliği ve Geri Dönüşüm" konularının yaratıcı drama yöntemiyle işlenişinin etkilerine yönelik öğrenci görüşlerini ortaya koymaktır. Araştırmada nitel araştırma desenlerinden durum çalışması benimsenmiştir. Araştırma, 2017-2018 öğretim yılı güz döneminde Atatürk Üniversitesi Kazım Karabekir Eğitim Fakültesi Sınıf Eğitimi Bölümü'nde öğrenim gören ve Çevre Eğitimi dersini alan 34 sınıf öğretmeni adayı ile gerçekleştirilmiştir. Çevre eğitimi dersinde çevre kirliliği ve geri dönüşüm konusuna yönelik olarak hazırlanmış 90 dk'lık bir atölye planı ve TÜBİTAK Popüler Bilim Kitapları "Çöp ve Geri Dönüşüm kitabı eşliğinde ders işlenmiştir. Atölye çalışması uygulandıktan sonra araştırma verileri araştırmacı tarafından geliştirilen açık uçlu görüşme formu yoluyla toplanmış ve nitel veri analizi tekniklerinden içerik analizi kullanılarak değerlendirilmiştir. Veri analizinden elde edilen sonuçlar; öğretmen adaylarının çevre kirliliği ve geri dönüşüm konularının yaratıcı dramayla işlenmesinin kolay öğrenmeyi sağladığını ve konuya ilişkin bilinç ve farkındalık kazandıklarını; öğretmen olduklarında çevre kirliliği ve geri dönüşüm konularını işlerken yaratıcı dramayla üşlenmesinin kolay öğrenmeyi sağladığını ve konuya ilişkin bilinç ve farkındalık kazandıklarını; öğretmen olduklarında çevre kirliliği ve geri dönüşüm konularını işlerken yaratıcı dramayla işlenmesinin kolay öğrenmeyi sağladığını ve konuya ilişkin bilinç ve farkındalık kazandıklarını; öğretmen olduklarında çevre kirliliği ve geri dönüşüm konularını işlerken yaratıcı dramayla işlenmesinin kolay öğrenmeyi sağladığını ve konuya ilişkin bilinç ve farkındalık kazandıklarını; öğretmen olduklarında çevre kirliliği ve geri dönüşüm konularını işlerken yaratıcı dramayla işlenmesinin kolay öğrenmeyi ağladığını ve konuya ilişkin bilinç ve farkındalık kazandıklarını; öğretmen olduklarında çevre kirliliği ve geri dönüşüm konularını işlerken yaratıcı dramayla faydalanmayı düşündüklerini göstermektedir.

Anahtar Kelimeler: Yaratıcı drama, çevre kirliği, geri dönüşüm, öğretmen adayı

#### **INTRODUCTION**

Environmental pollution is seen as one of the biggest problems of the world we live in. Countries see education as a tool for solving these problems and aim to increase environmental consciousness of individuals by including environmental subjects in their curriculum. Herein, we see the importance of environmental education. The main goal in environmental education is to increase the awareness to protect and use the natural environment and to raise environmental consciousness in the individual (Başal, 2003). Raising this awareness and sensitive since early ages will be a vital step in order not to cause new problems but to solve environment problems. (Hungerfordand Volk, 1990; Gayford, 1996). This is only possible providing a quality education.

Today, environmental awareness recognizes living in a healthy environment as one of the basic human rights. For this purpose, informing teachers and students in the best way should be provided (Yılmaz, Morgil, Aktuğ&Göbekli, 2002). This can be achieved by providing qualified environmental education to students in primary, secondary and higher education levels (Yücel&Morgil, 1999). The training of the people who will bring fundamental solutions to the environmental problems will contribute to the elimination of environmental problems (Uzun and Sağlam, 2005). At this point, to provide environmental awareness to individuals and in order to make the consciousness gained permanent, attractive methods and techniques should be applied to the students by teachers in their courses.

In modern educational environments, teachers should give new knowledge to the students and reveal their interests, wishes and abilities in line with their developmental characteristics. They should also improve students' problem solving skills by making applications that enable them to establish cause and effect relationships. They should enable the students to express their feelings and thoughts in various ways. Moreover, they had better to help students gain high-level thinking skills by creating peer learning environments (Başcı and Gündoğdu, 2011). Teachers can provide these features and skills with teaching and learning environments enriched with different teaching methods and techniques. One of the methods we encounter in achieving this is creative drama. Creative drama is the expression and acting out of a life, an event, an idea, sometimes an abstract concept, or a behavior by individuals through the reorganization of old cognitive patterns by using theater or drama techniques such as improvisation, role playing, etc. in a group work, in theater play-like processes in which observation, experience, emotions and experiences are reviewed (San, 2002:81; San, 1999: 267). Creative drama enables individuals, by making them active, to discover their talents, to be self-confident, to make independent decisions and to be selfrespecting themselves. While contributing to the personal and social development of the individual, it also supports creativity and different thinking skills (Susar, Kırmızı, 2009). Okvuran (2002: 223) states that "Creative Drama can be applied to all educational levels and people of all ages. It can be integrated into the modern education system by breaking the dull patterns of education. It can create teachers and students who feel the need and excitement of self-improvement" (Akt. Adıgüzel, 2002:39-46). Creative drama in education enables any subject to be realized by starting from the experiences and knowledge of the group members (Adıgüzel, 2006). Creative drama, concretizating concepts and establishing relations between concepts in science education is an effective way providing an important and meaningful learning process. (Sağırlı and Gürdal, 2002). According to Gönen and Dalkılıç (1999) science education provided along with creative drama enables children:

- To perceive and define a problem,
- To store information that they learned and to use when necessary,
- To understand that when they use information which they learned in daily life, it facilitates adaptation to environment,

- To approach problems that they face with new choices and solutions, to seek realistic solutions for these problems,
- To state and to voice their thoughts, to share their information and thoughts,
- To criticize themselves, to carry out positive and negative evaluations,
- To direct certain goals and objectives, to correct their behaviors in line with these objectives,
- To support self inspect abilities.

The functionality and effectiveness of creative drama practices are directly proportionate to the quality of the education of preservice teachers (Başcı and Gündoğdu, 2011). In this context, it is of great importance for the preservice teachers studying in the faculty of education to take the course of environmental issues with creative drama, as an effective teaching method, in terms of the benefits mentioned above. The creative drama method is a tool that can be effective in including the student to the learning process and maximizing the student success by creating a rich learning environment based on experiences (Aykaç and Adıgüzel, 2011). In this respect, creative drama can be considered as an effective method in teaching environmental issues. In the research problem section, the effects of teaching Environmental Pollution and Recycling course with creative drama on the preservice teachers are examined.

# **Research Objective**

Creative drama is a method in which the student actively participates in the learning process and that brings the student's achievements and achievements to the highest level by creating a rich learning environment based on experiences (Susar and Kırmızı, 2009; Adıgüzel, 2006; Aykaç and Adıgüzel, 2011). From this point of view, it is aimed to determine the views of the students about the effects of "environmental pollution and recycling" on the way to teach to course by using creative drama.

For this purpose, the following questions were sought:

1. What are the opinions of preservice teachers about teaching environmental pollution and recycling lessons with creative drama?

2. What are the opinions of the preservice teachers about how they will teach the lessons of environmental pollution and recycling with creative drama method when they become teachers?

3. What are the awareness of preservice class teachers about environmental pollution and recycling?

# METHOD

## **Research Model**

Qualitative research methods provide the researcher with an in-depth examination of the meanings that people have for various experiences and how they interpret experiences and establish their worlds (Merriam, 2015). It is possible to define qualitative research as a research method which obtained by qualitative data collection methods such as survey data observation, interview and document analysis and enables the realization of perception and events in a natural environment with a realistic and holistic approach (Yıldırım and Şimşek, 2011). In this research, case study, which is one of the qualitative research patterns, was preferred. Case studies are based on an in-depth description and examination of a limited system in which a particular process or issue is addressed. The researchers apply to the case study method not to test a hypothesis, but to understand, explore and reach a comment (Merriam, 2015). The case studies should undoubtedly be carried out with quantitative and qualitative approach. The goal in both approaches is to reveal conclusions related to a certain

situation. The basic feature of qualitative study is to investigate one situation or one more than situations deeply. Thus, effects related to a situation (environment, individuals, events, processes etc.) are sought with a totalitarian approach and how they influence mentioned situation and how they are affected from the relevant situations is focused.

The main purpose of case studies is to describe in a detailed way and to investigate this situation deeply (McMillan, 2000). It is also used to define and to see details creating an event, to make possible explanations related to an event and to evaluate an event (Gall, Borg and Gall, 1996).

# Working Group

The study was carried out with 34 preservice class teachers studying in the Department of Primary School Education in Division of Basic Education of Kazım Karabekir Faculty of Education of Atatürk University in 2017-2018 academic year. The group to which the application is carried out is composed of students who have taken "Environment Education" and those who continue to take "Drama" course.

# **Data Collection Tools**

In data collection, semi-structured interview technique has been used. Since this interview technique is efficient in revealing opinions, experiences and emotions of individuals and communication is based on speaking which is the most common way, it is the most data collection type used in the qualitative research (Yıldırım and Şimşek, 2011). Interviews have been conducted with the aim of seeking different perspectives, perceptions and experiences of teacher candidates about the investigated situation deeply.

As a data collection tool in the study, the interview form, which was created by the researcher and consisting of 3 open-ended questions was used in order to examine the opinions of the preservice class teachers about the practice. Interview form is applied following discussing a subject with creative drama method. In the end of the study, following questions are asked to the students:

1. What do you think about discussing environmental pollutions and recycling with creative drama technique?

2. Will you discuss environmental pollution and recycling matters with creative drama technique when you become a teacher? Why?

3. What are advantages of this application for you?

# **Implementation Process**

90-minute workshop plan was prepared in the course of teaching environmental pollution and recycling subject with creative drama in the environmental education course. Workshop plan is attached (Appendix-1). Students were informed about the implementation process and the attitudes and behaviors expected from the students were explained. The study was carried out at Atatürk University Kazım Karabekir Faculty of Education drama class No. 405. In the course of the study, "Garbage and Recycling" (Turnbull, 2017) book of TUBITAK Popular Science Books was used.

### **Data Analysis**

When analyzing the data obtained with the interview technique, descriptive analysis and content analysis are used. According to Yıldırım and Şimşek (2011), direct quotations are commonly used in the descriptive analysis with the aim of reflecting opinions of interviews or observed individuals in a striking way. The goal of this type analysis is to provide readers findings in an edited and interpreted way. The data obtained with this objective are firstly

described in a systematic and open way. Then, these descriptions are explained and interpreted.

The descriptive analysis technique has been used in order to analyze the data obtained with the interview method in the study. In this study, separate interview forms are used for each teacher candidate and these forms are evaluated by checking one by one. In the end of the study, how to present the data is stated. A framework has been established in accordance with the purposes of the study for data analysis. The choices have been listed in line with the answers of the teachers by taking interview questions one by one. As a result of the evaluations, a coding key registration form was formed with the evaluation form where each question was written with the response options related to the question. In the end of these steps, categories covering investigation questions in interview coding key and answers of these questions are stated. The frequency of teachers' answers to created themes. Then, the data have been interpreted in line eith the study objectives. The quotations based on in the phase of interpretation are presented.

## RESULTS

The results were obtained by subjecting the interview forms, which are the data collection tools, to the content analysis. All students who completed the interview form were given codes from 1 to 34 and the results were tried to be supported descriptively by using direct quotations from students' expressions.

In the interview forms, the preservice class teachers were asked to reveal their opinions about the effects of using creative drama for environmental pollution and recycling course. Assessments of preservice teachers were analyzed and given in Table 1:

recycling lessons with creative arama		
	<b>Frequency</b> ( <b>f</b> )	
In the learning-teaching process		
Learning the subjects with fun	4	
Providing permanent learning	4	
Increase of interest for the course	5	
Providing easy learning	8	
Creating an active learning environment	5	
Providing learning by practicing and experiencing	3	
Raising awareness on the subject	8	
Increase the effectiveness of the course	1	
Enjoyableness of the course	5	
Supporting different intelligence areas	1	
In skill development		
Developing the focus on the course	2	
Developing the skill of empathy	1	
Gaining awareness of responsibility	1	
Providing creative and original thinking	3	
Developing communication skills	5	
Developing thinking skills	5	
Developing the ability to produce ideas	2	

**Table 1**.*Opinions of preservice teachers about teaching environmental pollution and recycling lessons with creative drama* 

\*The total of sources may be more than the number of participants since each teacher has stated different expressions in one more than categories/themes.

When the answers of the students are examined, it's seen that preservice teachers think that using creative drama in teaching environmental pollution and recycling courses have various benefits. It's seen that preservice teachers think that this will be useful in providing easy learning and gaining awareness about the matter.

A preservice teacher revealed the issue of awareness with the following statement: "We have realized that we were not aware of environmental pollution and recycling issue in fact, that we think we were aware of." Another preservice teacher stated that "Now we're aware that we need to be more sensitive to environmental problems."

The opinions of preservice teachers show that the way in which subjects are taught in this way leads to permanent learning. "...rather than being taught by the teacher in a uniform manner, the subject taught by this method becomes more fun and the students become more active by taking action. In this way, learning becomes more permanent..." Another teacher expressed his/her thoughts as follows: "... Concretization provides imagination because we can do things like dreaming, creating solutions and problem solving etc....." Another expression is as follows: "... it allows learning through a large number of sensory organs, by practicing and experiencing, as well as learning from a more active, memorable, fun and permanent way."

These expressions of the preservice teachers arise from the fact that creative drama practices were based on constructivism. Because, constructivism-based teaching methods make students active in the teaching process and prepares the environment for their own information configurations. Learning activities that students can actively participate in are among the prerequisites of providing permanent learning. The answers also show that preservice teachers had a lot of fun in practice. Thus, the preservice teacher expressed this situation in the following words: "… obviously, this course was the most efficient and fun course I have ever taken."

The preservice teachers think that taking the environmental pollution and recycling course accompanied with creative drama will lead easy learning. This idea was introduced by 8 preservice teachers. This situation is among the expected results of the lesson to get rid of the monotony and make the learning process enjoyable. Preservice teacher expressed his/her thoughts about how creative drama could have an impact on students' increasing interest in class: "...generally, the biggest problem during the course is the inattention of students and lack of motivation. This problem can be solved with drama studies..."

In addition, preservice teachers think that the teaching environmental courses by using creative drama techniques can be effective in developing some skills. "Creative drama supports many skills such as producing many ideas in a short time, brainstorming, ensuring communication with our friends, enhancing empathic thinking skills, and creativity..."

One of the points that preservice teachers consider in the interview forms is their opinions about whether they will benefit from creative drama when become teachers to deal with environmental pollution and recycling issues.

The answers of the preservice teachers in the interview form are analyzed and listed in Table 2:

when they become teachers in order to teach environmental pollution and recyc	ling issue
	Frequency
	( <b>f</b> )
XX/L T L	24

**Table 2.** The opinions of preservice teachers whether they will benefit from creative drama

When I become a teacher, I think to benefit from creative drama technique while I'm teaching the environmental pollution and recycling course. Because;		
Enables learning with fun.	2	

Enables learning with fun.	2
Increases students' interest and motivation.	2
Allows students to learn more easily.	1
Improves the effectiveness of the course.	4
Develops individual skills.(self-confidence, self-efficacy)	2
Provides lasting learning.	9
Supports high-level thinking skills.	5

Raises students' awareness.	3
Provides learning by practicing and experiencing.	6
Provides active participation.	2
Supports high-level thinking skills.	5

\*The total of sources may be more than the number of participants since each teacher has stated different expressions in one more than categories/themes.

When the given answers are examined, it's seen that all the preservice teachers are enthusiastic about using creative drama in teaching environmental pollution and recycling topic, when they become teacher in the future. The basic reason for the desire to benefit from such practices is the belief that such activities will provide permanent learning. While a teacher candidate has said about this situation that "I definitely do such a practice. Because it is more permanent to provide learning by practicing-experiencing or feeling for the purpose of feeling the events, showing mistakes in the classroom atmosphere, considering something much more and creating more awareness. After these practices, my students can provide permanent corrections in their daily lives". Another teacher candidate has voiced similar thoughts by saying that "I'm thinking of using. Because it will not be a permanent situation for the students when I give the lesson and pass on to another subject. But if they think about the situation themselves and distinguish right and wrong, this will be a more permanent form of learning. Also the lessons will be more fun and active…"

Teacher candidates think that discussing environment matter along with creative drama will be effective in developing superior thinking. About this matter, a teacher candidate has stated that "...I think about using it. Because the people I will give education can learn and comprehend better by means of practicing and experiencing. Students will first think about where the result is going and then discuss how to find a solution. In this way, students' advanced thinking skills will be improved."

Moreover, teacher candidates believe discussing environment pollution and recycling with creative drama will raise self-confidence and self-efficacy of the students. This thought has been expressed as "...I definitely apply. Because it will be easier for the student to understand and comprehend the subject. It improves students' self-confidence by helping them to unite. It develops their thinking skills. With this practice, additional skills are provided the students."

The answers of the preservice teachers in the interview form are analyzed and listed in Table 3:

	Frequenc (f)
What I have learned about environmental pollution and recycling:	
Gaining consciousness and awareness about environment	19
Actively using of recycle bins	2
Using recyclable materials	8
Importance of recycling bins for the environment	4
Gaining environmental awareness	9
Existence of recycling bins in many places	8
How environmental problems affect living things	3
How to get green areas from garbage fields	3

**Table 3**. What are the awareness of preservice class teachers about environmental pollution and recycling?

\* The total of sources may be more than the number of participants since each teacher has stated different expressions in one more than categories/themes.

Investigating the answers of the students, it is seen that teacher candidates express the importance of recycling bins for the environment and these bins should be placed around in daily living spaces. Besides, it is obvious that they raise awareness and sensitivity about environment and how environment problems influence living creatures. The students have voiced their thoughts in this direction as follows:

"...I saw that when a piece of paper drops out of my hands, they would accumulate and be a mountain and directly affect the environment I live in. I need to be more careful."

"...From now on, I will throw the garbage appropriately in the recycling bins..."

"I better understood what recycling bins do. I understood how important to throw the products such as plastic or glass into recycling bins correctly..."

"I have felt that environmental pollution has greatly reduced our habitat and I have seen it with this practice. I'm going to think about it once again, when I throw the trash in the environment..."

"There must be more recycling bins."

# **DISCUSSION AND CONCLUSION**

This research examined the opinions of preservice teachers on environmental pollution and recycling matters. When the results obtained from the interviews are examined, it is seen that preservice teachers have a positive attitude towards this practice. It was seen that the preservice teachers stated that they thought the lesson was fun and they enjoyed learning information through drama. This result has been observed in similar studies (Erdem, Kızılhan and Sarıçam, 2009; Yeler, 2018; Başcı and Gündoğdu, 2011; Özdemir, Akfırat and Adıgüzel, 2009). Furthermore, it coincides with the data of Ustündağ's (1998) study about the students who learned the course through drama.

Among the factors expressed by preservice teachers about the drama course, it was seen that creative drama has features to develop social skills and creativity by providing various features in the emotional and kinesthetic fields, besides developing the cognitive characteristics. These results coincide with the results of many studies (Okvuran, 2000; Ünal, 2004; Başcı and Gündoğdu, 2011; Morris, 2001; Freeman, 2000; Duatepe and Ubuz, 2010). When creative drama is used as a method in lessons, students learn both the subjects of the lesson effectively and participate in the basic studies of creative drama. In this way, they gain many skills such as working together, critical thinking and creativity which are the general aims of education.

The conducted application has transformed the monotonous, not interesting and boring classroom environment to an entertaining, interesting and participant lovely environment. Evaluating in this regard, classroom has become a pleasant environment for the students and this environment has provided them a permanent learning process. Discussing the subject along with the creative drama method has provided a better learning, understanding and raised awareness and sensitivity for environment pollution and recycling. Moreover, it has been determined that the interests and motivations of students have increased during learning process and they have become more enthusiastic for the courses.

Considering the results, it's seen that there is another result showing the fact that the preservice teachers think to use creative drama method in teaching environmental pollution and recycling topic in their classes, when they become a teacher. When the primary education curriculums of our country are examined, it can be seen that great importance is given to environmental education within the programs (Altın and Oruç, 2008). There are a wide range of environmental issues in the curriculum of Sciences, Life Sciences and Social Sciences (Alım, 2006). In addition, environmental outcomes are included in the courses of Religious Culture and Moral Knowledge and Visual Arts; and poetry and texts are included in Turkish

lessons (Aktepe and Temur, 2018). In addition, it is determined that the outcomes in the programs are prepared with the aim of gaining the understanding of protecting the environment we live in (Tanrıverdi, 2009). At this point, to provide the students these outcomes in a cognitive, affective and kinesthetic manner, it is important that teachers have these consciousness and awareness, and it is a great importance of providing the environmental issues by using creative drama and active learning atmospheres within the framework of constructivist education. The training of teachers having these skills is possible with the education given to the preservice teachers during the undergraduate study. For this reason, these practices should be included in order for students to learn and gain many skills in accordance with the purpose and content of the environmental education course by effective using of active teaching methods such as creative drama.

#### RECOMMENDATIONS

1. Different subjects related to environmental education can be processed by creative drama method.

3. In environmental education course, the effects of creative drama and other active teaching methods on environmental sensitivity can be investigated.

4. Teaching environmental pollution and recycling courses with creative drama can be carried out at the level of primary schools.

5. Effect size studies can be done by carrying out this study in different groups and periods using quantitative methods with experimental and control groups.

#### REFERENCES

- Adıgüzel, H.O. (2006). Concept, components and stages of creative drama. *Creative drama magazine*, 1(1), 14-27.
- Aktepe, V. & Temur, M. (2018). Environmental education in educational programs. R. Sever and E. Yalçınkaya (Ed.), *Environmental education* (s.129-162). Ankara: PegemA.
- Alım, M. (2006). Environmental education in Turkey in the European Union membership process and environmental education in primary schools. *Kastamonu Education Journal*, 14(2), 599-616.
- Altın, B. N. & Oruç, S. (2008). Use of outdoor sports in environmental education in childhood. *Çukurova* University Faculty of Education Journal, 3(35) .10-18.
- Aykaç, M. & Adıgüzel, Ö. (2011). The effect of using creative drama as a method in social studies lesson on student achievement. *Kastamonu Education Journal*, 19(1). 297-314.
- Başal, H. A. (2003). Applied environmental education in preschool education. New approaches in early childhood development and education. İstanbul: MORPA Cultural Publications.
- Başcı, Z. & Gündoğdu, K. (2011). The attitudes and opinions of prospective teachers related to dramacourses: The case of Atatürk University. *Elementary Education Online*, 10(2), 454-467.
- Erdem, A., Kızılhan, P. & Sarıçam, M. H. (2009). The differences between the opinions of the 5th grade students on the creative drama before and after the course organized according to creative drama techniques. Verbal notice presented in 18th National Congress of Educational Sciences. Ege University, 1-3 October, Izmir.
- Gall, M., Borg, W. & Gall, J. P. (1996). Educational research an introduction (6 th Edition). USA: Longman Publisher.
- Gayford, C. G. (2002). Environmental Literacy: Towards a Shared Understanding for Science Teachers. *Research in Science & Technological Education*, 20 (1), 99-110.
- Gönen, M., & Dalkılıç, N.U. (1999). Drama in children's education. Istanbul: MEB Publications.
- Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *The Journal of Environmental Education*, 21(3), 8-21.
- Freeman, G. D. (2000). *Effects of creative drama activities on third and fourth grade children*. Unpublished doctoral thesis. University of Mississippi, the USA. HMSO Drama from 5 to 16 (1989). Curriculum matters and HMI series.
- McMillan, J. H. (2000). Educational research. Fundamentals for the consumer (3rd Edition). New York: Longman.
- Merriam, S. B. (2015). *Qualitative research: a guide for design and practice* (S. Turan, Çev.). Ankara: Nobel Publishing. (Translation from 3rd Edition).
- Morris, R. V. (2001). Drama and authentic assessment in a social studies classroom. Social Studies, 92(1), 41-45.

- Okvuran, A. (2002). The Importance of Creative Drama Education in Creating Contemporary People and its Effects on Empathic Skills and Empathic Tendency Levels. Ankara: Ankara University Faculty of Educational Sciences Publications. Quoter: Adıgüzel. H.Ö. (2002). Creative drama / 1985-1995 / articles. (1st volume.). Ankara: Naturel Book Publishing.
- Okvuran, A. (2000). *Attitudes towards creative drama*. (Unpublished PhD Thesis). Ankara University Institute of Social Sciences, Ankara.
- Özdemir, P., Akfirat, N. & Adıgüzel, H. (2009). Nature education with science and creative drama. *Creative Drama Journal*, 4(7).
- Sağırlı, H. E. & Gürdal, A. (2002). Effect of drama technique on student attitude in science class. V. National Science and Mathematics Education Congress, Ankara.
- San, İ. (2002). Creative Drama-Its Educational Dimensions Creative Drama 1985-1995 Articles. Ömer Adıgüzel (Ed.), Ankara: Naturel Publications.
- San, İ. (1999). Past and Present of Creative Drama activities in Turkey, Republic and children. *II. National Children Culture Congress.* Ankara: Ankara University Child Culture Research and Application Center Publications.
- Susar, Kırmızı, F. (2009). The effect of creative writing based on creative drama method on the attitude towards writing in Turkish class. *Creative Drama Journal*, 4(7).
- Tanriverdi, B. (2009). Assessment of environmental programs in terms of sustainable environmental education, *Education and Science*, 34(151), 89-103.
- Turnbull, S. (2016). First reading: garbage and recycling (7th Edition). Ankara: TUBITAK Publications.
- Uzun, N., & Sağlam, N. (2005). The effect of socio-economic status on environmental awareness and environmental academic achievement. *Hacettepe University Faculty of Education Journal*, 29, 194-202.
- Ünal, E. (2004). The attitudes of senior students studying in the Classroom Teaching Department of Celal Bayar University Faculty of Education towards drama courses in primary education. *Trakya University Journal of Social Sciences*, 5 (2), 1-15.
- Üstündağ, T. (1998). The effect of the citizenship and human rights education course on the student attitudes towards class of creative drama in teaching and their scores. *Hacettepe University Faculty of Education Journal*, 14, 133-138.
- Yeler, M. (2018). Students' views on the effects of creative drama practices in human relations and, *Creative Drama Journal*, 13(2), 213-236.
- Yıldırım, A. and Şimşek H. (2011). *Qualitative research methods in the social sciences* (8<sup>th</sup> Edition). Ankara: Seçkin Publishing.
- Yılmaz, A., Morgil, I., Aktuğ, P., & Göbekli, I. (2002). Secondary and University Students' Knowledge on Environment, Concepts of Environment and Environmental Issues, *Hacettepe University Faculty of Education Journal*, 2, 156-162.
- Yücel, A. S., & Morgil, F. I. (1999). Development of Environmental Education. *Balikesir University, Journal of Institute of Science*, 1(1), 76-89.

#### **APPENDIX 1.**

Place: Atatürk University Kazım Karabekir Faculty of Education Drama Class

Workshop Topic: Environmental Pollution and Recycling

Group: 34 students

**Duration:** 90 minutes

**Outcomes:** Participates in children's book recognition activities called "Garbage and Recycling". Gain awareness about environmental pollution and recycling.

**Method-technique:** Creative drama, role playing, improvisation, acting of the leader-staying in character, still image, talking photo frame, instrumental music.

Materials used: Newspaper, garbage bag, environmental pollution pictures, pen, speaker, open-ended survey form, "First Reading Garbage and Recycling" book among TÜBİTAK Publications Popular Science Books Series.

#### PROCESS

#### A. WARMUP-PREPARATION

Activity: The activity, which starts intuitively with free walking in the area, continues with the instructions and music... (Starts in a house in the forest, streamside...) Then the music gets mixed up, the areas where the participants walk are narrowed (barrel-like object is used); places are replaced... (A stinking garbage dumb in the rain, picnic area, streamside near a factory, ...) The activity is ended by the inclusion of newspaper papers that come with wind sounds.

Activity: Choose a limited living space, a place for yourself, but don't tell us about these places. Get shaped as a person, an object or a substance in the living space you specify and think; when I approach you, say a word telling yourself as that person, object or substance...

Activity: Newspapers are still on the ground... Did we draw our places by paying attention to newspapers? In the place, are there any unnecessary or unimportant materials for us? What do we do with them? Which one of them do we throw...Here is a huge garbage dump; let's take the newspapers from the place for us now and for everything that is trivial, broken, spoiled or unused to us or our place... Who threw what? Let's express with, "For me, ...... was unnecessary, so I threw it away."

Activity: You will see photos scattered between garbage on the ground. These photographs are a photographer's work composition on a subject. Let's take a look at the photos and create 2 groups... You will need to reinterpret a photo frame into a group and create a new form by selecting 3 photos from each group and you will need vocalize your comments to photographer by using the photo language...

Mid-term evaluation: What did we do? Where did we walk? Did walking with music affected us and the place we dreamed of? Did we feel our space getting narrower? Where did we draw our lines? Were the images we see in the photographs close to real life? What did we pay attention to when choosing still images? What didn't we pick and why?

#### **B. VISUAL IMAGERY**

Activity: Let's create 2 groups... Walk with music; was it the same music while tearing the papers? Then it's time to collect these garbage... Each group will fill newspapers in their garbage bag; groups may interfere with each other but no physical contact, intervene in newspapers. People holding garbage bags will always change and stand still; garbage collectors will be moving... The game will be over when music stops.

Activity: Which pollution did we remove by collecting newspapers? Now it's time to look at the photos on the ground... Let's not break the groups; they will animate the environmental pollution in one of the 3 photos they have selected now or selected from the previous activity by their own fiction, according to the dramatic situations behind the photos, and they will eliminate environmental pollution...

Activity: The information about the process of garbage is given in the circle. Well, we collected the garbage, we collected this garbage in certain areas, after a certain time we have turned these areas into park areas... Are all substances disposed of? Or does every substance decompose within the same period? Do they decompose in the nature? What happens? Which substances are recycled?

Activity: Let's create 4 groups and use the newspapers and body of the participants in the recycling triangle. The cases in which the actions on directive papers are accompanied by music-motion are displayed continuously by 4 groups as to create "garbage-action and recycling-product". Seen recycles are tried to guess by groups.

Mid-term evaluation: We've recycled a lot of waste and garbage. Well, are everything recycled? What do you think happens to greeneries? Are the greeneries recycled? Do we throw the greeneries or grasses to the garbage? What is decomposition?

#### C. ASSESSMENT

Activity (Appendix): Let's count up to 3-5 and create groups. Now I want you to prepare an introductory poster with an impressive slogan for my book, taking into account all the activities we have done. The winner of the poster contest has not changed for years; let's see, can you replace the award-winning poster?

Activity: Would you like to look through the Workshop Window? Preservice teachers are asked to write their ideas about the workshop and the process and the workshop is terminated after photo shooting.