Institute of Applied Culture and Arts for Children: "Environmental Literacy with Art"

Özkan Akman
Suleyman Demirel University, Turkiye, https://orcid.org/0000-0002-8264-3178

Hatice Evrim Tütünsatar
Isparta University of Applied Sciences, Turkiye, https://orcid.org/0000-0002-0712-3164

Serdar Yetişen
Isparta University of Applied Sciences, Turkiye, https://orcid.org/0000-0003-3951-5805

Abstract: In this study, it is aimed to gain the ability to transform what nature offers into a work of art by using traditional methods. The study has two main aims. Its first purpose is to present ways to transfer environmental literacy skills through art education, as a value that should be acquired at an early age. The second is to contribute to the development of hand skills, to gain creativity, to acquire individual skills and to develop basic social skills such as self-confidence, through artistic activities to be applied to the target audience. The participants of the research were carried out with 124 students studying in the 7th and 8th grades of Süleyman Demirel Secondary School located in Gonen District of Isparta. The analysis of the data was carried out using the SPSS 25.00 statistical program using descriptive statistics and simple correlation analysis. In the study, the application methods of traditional handicrafts were combined with materials obtained from nature for the purpose of the study. According to the results obtained; It has been observed that awareness about how nature is transformed into an art object through artistic activities. The activities within the scope of the study were planned as a result exhibition and a total of 13 activity titles under two categories, conceptual and artistic. In artistic activities, it is planned to carry out activities for the transformation of materials collected from nature by using the methods and techniques of traditional handicrafts. In addition to materials that can be collected from nature such as mud, stone and cones, art materials such as felt, wool, natural stone and similar art materials obtained from nature were used in the activities.

Keywords: Art, Literacy, Environment

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Introduction

In recent years, it is seen that environmental awareness and art intersect in art research and art productions. Artists focus on creating a perception towards the preservation of the ecological and environmental integrity of the world through their works. In the same way, in parallel with these ecological art productions, it is seen that art educators also attempt to create a theoretical structure by focusing on environmental issues in the context of ecology and sustainability. In this endeavour, advanced technological innovations and pedagogical design principles for creating active learning environments (inclusion of peer learning, peer feedback, collaborative learning) could play a major role (see Latifi & Noroozi, 2021; Latifi et al., 2020, 2021; Noroozi 2018, 2022; Noroozi et al., 2012; 2022; Valero Haro et al., 2019; 2022). These initiatives have taken their place in the literature with names such as "Community-based ecological art education" (Neperud, 1997), "Ecological art education" (Hollis, 1997) and "Environmental education through art" (Stankiewicz and Krug, 1997). It can be said that the environmental art movements that started at the end of the 1960s and the increase in interdisciplinary interactions in the curriculum on the basis of social constructivist approaches in education and sustainable development education underlie this orientation.

Nature, as it is commonly used, refers to the material world itself outside of us. This material world is independent of consciousness and exists outside of it. It is in a constant dynamism and change (Ulaş, 2002). In many sources, nature is defined as the environment that has not been altered by human hands and preserves its natural structure, as nature, or as the whole of things that exist spontaneously, as opposed to products of the human mind such as art and culture (Akalın et al. 2005). All these definitions exclude man according to nature and nature according to man, and make a distinction between what nature creates and what man builds against nature.

Suzi Gablik “Beliefs that are accepted in our culture, that the subject of art is purely aesthetic and that it can never change the world, are beliefs that reduce the creative thinking and action capacity of most artists. The critic Arthur C. Danto describes this situation as “the deprivation of rights of art”. Because the hidden constraints of an art-for-art philosophy that is morally neutral force artists to be marginalized into society. Has Modernism Failed to question this mythology for myself? I started with writing the text, and a lot has changed since then. Nature is falling apart, time is running out, and there is not much done.” (Gablik, 1998) He criticized this belief system and emphasized the role of art and the artist that needs to change.

Theoretical and practical research on sustainable development education in Turkey has increased in the last 10 years (Alkış, 2007; Öztürk Demirtaş, 2011; Kaya and Tomal, 2011, Tanrıverdi, 2009; Teksöz, Şahin, & Ertepınar, 2010). It is seen that these studies are focused on social studies, geography and teacher education and are mainly aimed at determining the level of awareness about curriculum review or sustainability. Therefore, it is clear that more focus should be placed on the practical approaches of sustainable development education in order to guide educators and arts educators.

The aim of this study is to convey environmental and climate sensitivity through art as a value that should be acquired at an early age. It is aimed to indirectly convey the causes and consequences of environmental and climate changes and consciousness through artistic activities. The expected effect of the project is to contribute to environmental literacy and environmental attitude skills. It is aimed to raise awareness about environmental pollution, the negative effects of climate changes on nature and human life, and sustainable living conditions.

Within the scope of the study, environmental pollution, climate change, biodiversity reduction problems were discussed. It was supported to raise awareness about the factors causing these problems and to be participants in the measures that can be taken at individual and social level and in the management of the change process. In line with these purposes, answers to the following sub-problems were sought:

1-Does the environmental behavior of the participants vary according to gender, class, socio-economic level, educational status of parents?

2- Do the participants' perceptions of the environment change according to gender, class level, socio-economic level, education level of parents?

3- Is there a relationship between environmental behavior and perception scale?

Method

This research was carried out using the survey technique, one of the quantitative research methods. Relational screening model was used in the research. The screening model provides a quantitative description of the universe through research on the sample selected from the determined population (Cresswell, 2012, p. 376). Correlational research tries to find out to what extent some type or types of relationship exist. In this approach, it is essential that the researcher does not affect the process except for the application of the tools necessary to collect the desired data (Büyüköztürk et al., 2018, p.16).

In studies using relational screening model, it is aimed to determine the relationship between two or more variables. The participants of the research were carried out with a total of 124 students, 53 girls and 71 boys, studying in the 7th and 8th grades in Gönen district of Isparta province. Environmental behavior scale (CLS) and environmental perception scale (CIAS) were used as data collection tools. Analysis of the data using spss 25.00 package program, independent t-test, anova and correlation analyzes were performed.

Results

When Table 1 is examined, it is understood that the environmental behaviors of the participants differ significantly in favor of men (t_{124}=-0.238, $p<0.05$) according to the gender variable. Accordingly, it can be said that the environmental behavior of boys is higher than that of girls.

Table 1. T-test results of participants' environmental behaviors by gender

Dimension	Gender	N	x̄	Ss	t	p
CLS	Girl	53	2,1748	17,35	,-0,238	,01
	Boy	71	2,2046	16.73		

When Table 2 is examined, the environmental behavior of the participants according to the class level was found to be F_{120}=0,71 p<0.05; It is understood that there is a statistically significant difference. Accordingly, according to the class level of the participants, it can be said that the 6th and 5th grade students have a higher environmental behavior level than the 7th and 8th grade students.

Table 2. ANOVA results of environmental behaviors by grade level

Dimension	Class Level	N	x̄	Ss	Sd	F	p	Significant Difference
CLS	5. class	22	2,23	17.01	3/120	0,71	.00*	Medium-Low High-Low
	6. class	34	2,28	16.80				
	7. class	42	1,19	17,53				
	8. class	26	2,02	16,32				

*$p<0.01$

When Table 3 is examined, it is seen that the environmental behaviors of the participants according to their socio-economic status were found to be F_{120}=2.46 p<0.05; It is understood that there is a statistically significant difference. According to this, it can be said that the environmental behavior of the participants, according to their socio-economic status, is higher for those with an income level of over 4500 TL compared to those with a lower income level.

Table 3. ANOVA results of environmental behaviors according to socio-economic level

Dimension	Socio-Economic Status	N	x̄	Ss	Sd	F	p	Significant Difference
CIAS	Below 2500 TL	38	0,05	17.01	3/120	2,46	.00*	Medium-Low High-Low
	Between 2500-4500 TL	50	2,14	16.80				
	Over 4500 TL	36	2,39	17.53				

*$p<0.01$

Table 4. ANOVA results of environmental behaviors according to maternal education level

Dimension	Mother Education Level	N	x̄	Ss	Sd	F	p	Significant Difference
CLS	Illiterate	20	2,23	17.01	3/120	1,38	.01*	Medium-Low High-Low
	Primary school	31	2,18	16.80				
	Hıgh School	58	2,22	15.01				
	University	13	1,9	13,44				
	Master- doctorate	2	1,5	17,1				

*$p<0.01$

When Table 4 is examined, the environmental behaviors of the participants were found to be F120=1.38 p<0.05; It is understood that there is a statistically significant difference. According to this, it can be said that the environmental behavior of the participants is higher than the ones with a lower education level compared to the mother's education level.

Table 5. ANOVA results of environmental behaviors according to father's education level

Dimension	Father Education Level	N	x̄	Ss	Sd	F	p	Significant Difference
CLS	Illiterate	1	2,23	17.01	3/120	1,38	.01*	Medium-Low High-Low
	Primary school	34	2,18	16.80				
	Hıgh School	43	2,22	15.01				
	University	34	1,9	13,44				
	Master- doctorate	12	1,5	17,1				

*$p<0.01$

When Table 5 is examined, the environmental behaviors of the participants were found to be F_{120}=1.38 p<0.05; It is understood that there is a statistically significant difference. According to this, it can be said that the environmental behavior of the participants is higher than the ones with a lower education level compared to the father's education level.

Table 6 T-test results of perceptions of the environment by gender

Dimension	Gender	N	x̄	Ss	t	p
CIAS	Girl	53	2,6532	14,43	-1,619	,10
	Boy	71	2,8558	16.49		

When Table 6 is examined, it is understood that the perceptions of the participants towards the environment differ significantly in favor of men (t_{120}=-1.619, p<0.05) according to the gender variable. Accordingly, it can be said that boys' perceptions of the environment are higher than girls.

Table 7. ANOVA results of their perceptions of the environment by grade level and level

Dimension	Class Level	N	x̄	Ss	Sd	F	p	Significant Difference
CIAS	5. sınıf	22	2,87	17.43	3/120	2.191	.00*	Medium-Low High-Low
	6. sınıf	34	2,97	14.56				
	7. sınıf	42	1,61	15,43				
	8. sınıf	26	2,65	16,49				

*$p<0.01$

When Table 7 is examined, according to the class level of the participants' perceptions of the environment, $F_{120}=2.191$ $p<0.05$; It is understood that there is a statistically significant difference. Accordingly, according to the class level of the participants, it can be said that the 6th and 5th grade students have higher environmental perception levels than the 7th and 8th grade students.

Table 8. The results of ANOVA results of perceptions of the environment according to socio-economic level.

Dimension	Socio-Economic Status	N	x̄	Ss	Sd	F	p	Significant Difference
CIAS	Below 2500 TL	38	2,69	16.21	3/120	4,63	.01	Medium-Low High-Low
	Between 2500-4500 TL	50	2,61	15.83				
	Over 4500 TL	36	3,05	17.94				

*$p<0.01$

When Table 8 is examined, according to the socio-economic status of the participants' perceptions of the environment, $F_{120}=4.63$ $p<0.05$; It is understood that there is a statistically significant difference. According to this, it can be said that the environmental perceptions of the participants according to their socio-economic status are higher than those whose income level is above 4500 TL compared to those with a lower income level.

Table 9. ANOVA results of environmental perceptions according to maternal education level

Dimension	Mother Education Level	N	x̄	Ss	Sd	F	p	Significant Difference
CIAS	Illiterate	20	2,75	15.13	3/120	2,491	.04	Medium-Low High-Low
	Primary school	31	2,96	14.46				
	Hıgh School	58	2,77	15.45				
	University	13	2,27	12,64				
	Master- doctorate	2	3,05	15,15				

*$p<0.01$

When Table 9 is examined, it is seen that the participants' perceptions of the environment according to the mother's education level were found to be F120=2.491 $p<0.05$; It is understood that there is a statistically

significant difference. According to this, it can be said that the perceptions of the participants towards the environment are higher than those with a lower education level compared to their mother's education level.

Table 10. ANOVA results of environmental perceptions according to father's education level

Dimension	Father Education Level	N	x̄	Ss	Sd	F	p	Significant Difference
CIAS	Illiterate	1	3,19	15.01	3/120	1,160	.332	
	Primary school	34	2,93	14.73				Medium-Low
	Hıgh School	43	2,76	16.18				High-Low
	University	34	2,69	14,54				
	Master- doctorate	12	2,49	15,3				

When Table 10 is examined, according to the father's education level of the participants' perceptions of the environment, F_{120}=1.160 p>0.05; It is understood that there is no statistically significant difference. According to this, it can be said that there is no difference in the perceptions of the participants towards the environment according to the father's education level, compared to the ones with a lower education level and those with a higher education level.

Table 11. Results of correlation analysis between environmental behavior and perception scale

Dimension	N	x̄	SD	p	CIAS	CLS
CIAS	124	2,19	0,68	,00		,521
CLS	124	2.76	0,69	,00	,521	

When Table 11 is examined, it is seen that there is a moderately significant positive correlation (p<0.05) between the participants' perceptions of the environment and their behaviors towards the environment.

Discussion, Conclusion and Recommendations

According to the results of the research, it was observed that the environmental behavior scale scores of the participants were significant in favor of girls according to gender. According to the class level of the participants, it can be said that the 6th and 5th grade students have a higher environmental behavior level than the 7th and 8th grade students. According to the socio-economic status of the participants, it can be said that those with an income level above 4500 TL have a higher level of environmental behavior than those with a lower income level. It can be said that the environmental behavior of the participants is higher than the ones with a lower education level compared to the mother's education level. It can be said that the environmental behavior of the participants is higher than the ones with a lower education level compared to the father's education level.

It can be said that the perceptions of the participants towards the environment are higher than the girls. According to the class level of the participants, it can be said that the 6th and 5th grade students have higher environmental perception levels than the 7th and 8th grade students. According to the socio-economic status of the participants, it can be said that those with an income level above 4500 TL have a higher level of perceptions towards the environment than those with a lower income level. It can be said that the perceptions of the participants towards the environment are higher for those with a lower education level than those with a higher education level. It can be said that there is no difference in the perceptions of the participants towards the environment compared to the father's education level, compared to the ones with a lower education level and those with a higher education level. It is seen that there is a moderately significant positive correlation between the participants' perceptions of the environment and their behaviors towards the environment.

With the curriculum renewed in 2004 in our country, environmental education has found a place in various disciplines. In addition, the Ministry of National Education [MEB] prepared an Elective Environmental Education Course curriculum for Secondary Schools in 2015. This program (MEB, 2015) is based on the principles of the 1977 Tbilisi Conference declaration and the prototype environmental education program for sustainable development education presented by UNESCO Environmental Education Unit in 1994. Many subjects within the scope of this prototype curriculum have been included in many courses, especially Science, Life Sciences and Social Studies courses, with an interdisciplinary approach.

Research and applications conducted by the TEMA foundation on the teaching of ecological literacy, with research aimed at increasing the awareness of the ecological footprint of students, which is one of the indicators of sustainable life in our country (Karakaş, Doğan, & Sarıkaya, 2016), have increased in recent years. In addition, TÜBİTAK supports science and society projects to make students aware of their negative effects on nature. The aim of these 4004 coded projects is to focus children on scientific issues through out-of-school activities and practices. Among these science and society projects are many projects that support ecology-based sustainable environmental education.

For example; All activities in the Ecology-Based Summer Camp Project, which was carried out in cooperation with Niğde University and TÜBİTAK in order to convey the love of nature and environmental awareness to the participants, included the students together with their teachers. In this interdisciplinary project, he took part in activities aimed at the integration of nature and art (Karataş and Aslan, 2012).

In this research, with the thought that sustainable development cannot be achieved without a sustainable environment, the curriculum is predominantly structured in the context of environment and nature. In order to lead students to contextual and intuitive thinking, nature and environment-based artist studies, the choice of natural and waste materials in production, and various application studies in nature are associated with issues such as intergenerational equality, recycling policies, use of water and land, consumption habits.

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