

Environmental Consciousness and Education Levels of Elementary Grade 4. and Grade 5. Students In Turkish Republic Of Northern Cyprus

Şerife GÜNDÜZ*

Suggested Citation:

Gündüz, Ş. (2013). Environmental consciousness and education levels of elementary grade 4. and grade 5. students in Turkish Republic of Northern Cyprus. *Egitim Arastirmalari-Eurasian Journal of Educational Research.* 53/A, 313-326.

Abstract

Problem Statement: During the last century, negative impacts of humanity caused irreversible damages on the environment and environmentalists agree that environmental education must start from primary schools. Moreover, the environmental consciousness and education levels of the elementary school students in unknown in Turkish Republic of Northern Cyprus.

Purpose of the Study: The purpose of this investigation is to determine the environmental knowledge, consciousness levels and perceives of class 4 and class 5 elementary school students in Turkish Republic of Northern Cyprus.

Method: Quantitative research method was applied to collect information where enough time was given to students to answer the questionnaires. To identify the target group and their attitudes; frequencies and percentages were used, to determine the relationships between 2 variables; unrelated t-test and to determine the relationships between 2+ variables; Duncan (5%) after ANOVA were used.

Findings and Results: Results indicated that environmental consciousness level of students is high ($X = 3,97 \Rightarrow \% 79,40$). When the points belonging to the environmental attitude are compared with respect to gender, a significant difference between genders determined at 3 issues out of 25. At the points that have significant differences among them, females answered more consciously at one of them, and males answered more consciously at two of them. When the general average of all points are evaluated, consciousness level of females is found as 3,98 and consciousness level of males is to be 3,95. "Grade" group can be seen as an important demographic characteristic that significant differences are present in this kind of knowledge and consciousness researches. It is observed that 5th

*Assis. Prof. Dr., Near East University, Faculty of Education, serife2001@yahoo.com

grade students' consciousness levels are seen as higher ($3,98 > 3,94$) obviously.

Conclusions and Recommendations: Results indicated that 4th and 5th grade students have high environmental knowledge and consciousness levels. It means that environmental consciousness levels of students increased in TRNC since 2000. This is because of the studies about environmental education in TRNC recently. The results obtained in this study have shown that there is no significant difference in students' environmental knowledge and environmental consciousness in terms of gender and grades in TRNC. It is highly important to continue such studies to determine the deficiencies in student's knowledge and class syllabus. On the other hand, it is important to determine the environmental consciousness levels of teachers model the correlation among students and teacher's environmental consciousness levels.

Keywords: Primary school, environmental education, environmental consciousness, environmental knowledge ve environmental attitude scale

Environment is the name given to the media that biotic and abiotic factors needed for living creatures are found together. Most of the people forget that they are a part of "living creatures" classification and assume that environmental problems are insignificant issues. Such an assumption is not only wrong but also dangerous that can cause irreversible environmental disasters on Earth. Misuse/Overuse of nature and natural resources and corruption of natural environment caused by the contamination of air, water and soil, which are the basic physical components of the nature, are called environmental problems (Guler and Cobanoglu, 1997). Any interference in ecosystem should be done with caution. Having a livable world and avoiding poverty in a country depend on accepting their natural resources as the basis of their development (Çepel, 1998). In today's world, people are aware of the environmental problems they have. In a research held in Turkish Republic of Northern Cyprus with 409 participants, 26% of the participants ranked environmental problems as second among the world's basic problems.

Nowadays in the context of environmental problems, industrialization, development, unlimited consumption, production, and sense of economy of the modern society are criticized. Environmentalists agree that industrialization have negative impact on environment, and economic growth also contribute to destruction of natural environment (Macdonald, 1995). Yıldız et al. (2000) collected environmental problems under five topics: (1) population growth arrest, (2) sustainable usage of natural resources, (3) legal arrangement of social outcomes, (4) protection of biological diversity and (5) emphasis on environmental education.

In the history of education, it is hard to find any "unique" education for environment until 1970s. Origin of environmental education is based on the awareness of negative impacts of humanity on environment. One of the first and most valid definitions is the one made by International Union for Conservation of

Nature (IUCN) in 1970: Environmental education is the recognition period of concepts and values needed to develop skills and behaviors required for the understanding of the relationship between mankind, culture of mankind and their bio-physical environment and its importance. Environmental education is also an issue that needs decision making in cases that involves environmental quality and implementation on self-expression (IUCN, 1970).

Conservation of nature, protection of life quality and conditions form the essentials of environmentalism. The interest on those issues extends over the end of 19th century. In other words, it starts with Haeckel (1866). Contamination of Earth ecosystem as a whole, extinction of some living things, decrease of natural resources, starvation in third world countries etc. are some examples of ecological problems. According to that, humankind is cutting his own throat. Protection of this depends on the wise use of environment or, in other words, environmental consciousness and conscious environmentalism act as a product of it. Consequently this awareness, directs individuals towards the nature instead of making them against (Spurgeon, 1997). Environmental education has purposes in cognitive and affective fields. While cognitive purposes include making individuals environment literate, affective fields' purposes made up of environment and values and attitudes against environmental problems (Tosunoğlu, 1993).

Target audiences in environmental education are; preschool children, primary, secondary, high school, university students, parents, teachers, technical environment stuff, in-service training, education of public and education of directors. Education programs varies among the target audiences (Nazlıoğlu, 1993). Environmental education starts within child's family and vicinity. Home education forms the basis of child's future cognitive, affective, psychomotor and moral behaviors. Corporately preschool institutions have important functions on building the basis of environmental consciousness or formation of morality.

Environmental education is an interdisciplinary working field that targets to improve responsive and informed citizenship about natural or manmade environments. Environmental education is a process that information, knowledge, attitudes, skills, action and motivation have important role on providing environmentally reliable behavior actualization (Erjem, 2005). Gunduz et al. (2009) in their collected work in Turkish Republic of Northern Cyprus reported that present environment syllabus in TRNC was affected by English Rule (1896-1959) and independent period (1960-1974), and all environmental education should be given with all other syllabus in order to have a more reliable syllabus. Environmental education should aim the development of investigation, problem solving and decision making of humans (Mrazek, 1993). Environmental education is an interdisciplinary field that consists of earth sciences such as biology, chemistry and geology and social sciences such as economy, politics and ethics and it combines the ideas such as how nature works and how connected the objects in nature to each other (Cobb, 1998).

In the light of this information, this study aims to determine environmental consciousness and environmental information of 4th and 5th grade of primary school students in Turkish Republic of Northern Cyprus. Obtained findings are expected to light the way for determining present situation and for studies about the syllabus.

Method

Research Design

This study is done by using quantitative research method and survey model. Questionnaires that developed and used as an information gathering tool, are filled by students by giving them enough time. These questionnaires cover questions about student's knowledge about environment, their attitude on environment and their behaviors for the protection of environment.

Research Sample

Primary school students in TRNC are the population in this study. Sample group is the 4th and 5th grades of Ozgurluk Ilkokulu (OI) and Aydinkoy Ilkokulu (AI) in Guzelyurt, 9 Eylul Ilkokulu (9EI) in Lefkosa and Karsiyaka Merkez Ilkokulu (KMI) and 23 Nisan Ilkokulu (23NI) in Girne in 2009-2010 academic year. Number of 4th grade students is 121 and number of 5th grade students is 179 in the sample group. 149 (49,7%) of 300 participant students are female and 151 (%50,3) of them are male. According to this, distribution of 4th and 5th grade students by their number, schools and genders is given in Table 1.

Table1

Demographical Properties of Students Participated in Survey

School	Frequency				
	Male	Female	4 th Grade	5 th Grade	Total
AI	16	14	16	14	30
OI	45	45	46	44	90
9EI	34	26	30	30	60
KMI	26	34	29	31	60
23NI	30	30	0	60	60
Total	151	149	121	179	300

Research Instrument and Procedure

In this study, environment information test prepared for primary school students is used as data gathering tool. Environment information test is prepared for 4th and 5th grades students in accordance with the topics covered in science, life studies and social studies classes in a proper way of their cognitive level. Environment information test consisting of 3 demographical (gender, grade and school) and 39

determinative questions is used as the data gathering tool in this study. For the determination of environment-intended attitudes, responses to the 25 questions developed on the basis of previous resources, are determined by a five point Likert-type scale. In the evaluation of scale, scores for answers are set as; for positive points (23 points) strongly agree 5, agree 4, neither agree nor disagree 3, disagree 2, totally disagree 1 and for negative points (2 points); totally disagree 5, totally agree 1. Other 14 questions are prepared based on experts' opinions and considering the topics in the syllabus, as containing 1 correct and 3 false answer in order to determine environmental knowledge.

Factor and reliability analysis are made with SPSS 13,0 program after applying the pre-study of the prepared scale to a sampling group of 60 students. Points that have a point factor rate less than 0,300 are omitted and total point number is decreased to 25+14. After making required regulations, questionnaire is applied to 300 individuals studying in Turkish Republic of Northern Cyprus primary schools. Environmental education test is answered by students in lecture period, in the second semester of 2009-2010 academic year. Enough time is given to students to answer questions. Importance of the issue is explained to the students to prevent answering questions without reading.

Data Analysis

Data gathered by survey method are compared depending on students' grades (4th and 5th), their gender and their schools. Generalization is made by analyzing the data gathered from selected group (Gall et al.). Answers given by students to each question are analyzed by quantitative method. Data obtained by the question form analyzed in computer environment with SPSS 13.0 program. Frequency and percentage distributions is used for the identification of target group and attitudes, t-test is used for 2 independent variables in the determination of the significance of the difference between groups and for 2+ independent variables Duncan (%5) test is used after ANOVA.

Validity study of the developed scale is done both as structure and content validity. As a part content validity, determination of whether the points in the scale are sufficient in quantity and quality or not, are done considering experts opinion and, according to this, regulations are applied. Structure validity explains results and what results are linked to. In the research of structure validity of a prepared scale Kaiser-Mayer-Olkin (KMO) and Barlett test results must be significant and high (Büyüköztürk, 2002). KMO sample measurement sufficiency value is found as 0,763. These results show the applicability of factor analysis and the high correlation between the points. While analyzing the factor analysis results, it is seen that common factor variances that take part in the environment attitude scale differs between 0,697 and 0,911. According to those results, it can be said that common factor variances of the points have high value.

When the explained total variance values are investigated, it is observed that 46 points (variables) analyzed are gathered under 15 factors with eigenvalue greater than 1. Whole scale explains 65,629% of the variance. Variance explained by 1st factor

in the scale is 12,042%, contribution of 2nd and 3rd factors is determined as 8,306 and 8,055 respectively, and contribution of the other factor is not much. As a result of this, scale is considered as 3 factors. Reorganized scale is applied to 300 person sample. Cronbach alpha coefficient related with environment attitude scale is found to be $\alpha=0,714$. The scale prepared according to the reliability coefficient (0,714) obtained in the study, can be evaluated as a scale that has high reliability on education and social studies (Gall et al. 2003).

Results

Environment-Intended Attitudes of Primary School Students

In the evaluation of student's environment-intended attitudes, descriptive and procedural statistics techniques are used. When the average of all environment attitude scores of the sample is evaluated, the highest attitude average belongs to the issues related to the lights left turned on needlessly (Point 1, $X=4,58$). Paying attention to the environmental damage of the purchased goods is the issue that has the lowest attitude average (Point 17, $X=2,77$). High level attitude value of the points with public credit has been seen indication of high environmental level. The average of all points have been determined as 3,97(79,40%).

When the points belonging to the environmental attitude are compared with respect to gender, a significant difference between genders at M.1, M.6 and M.17 is observed. At the points that have significant differences among them, females answered more consciously at one of them, and males answered more consciously at two of them. About turning off the lights left turned on at home or school, males' answers (4,68) compared to females' answers (4,48) has shown that they have more consciousness ($P=0,045$). Although there is a significant difference between genders, both males and females' answers are high. Female students (4,24) concern more than male students (3,95) about the reluctance of the government executives about environment ($P=0,020$). The reason for that is the nature of males is less anxious than females. In spite of that, low consciousness of both two groups indicates that students are lack of enough education on this topic. When the general average of all points are evaluated, consciousness level of females is found as 3,98 and consciousness level of males is to be 3,95. This result shows similarity with the results of the study performed by Aslan et al. (2008). Although no significant difference between male and female students' attitudes is observed at the end of this study, ratio of females determined as little higher than males' ratio. Even both studies did not show the opposite of the studies that supports there is a significant difference between females and males, it shows this situation is not valid for primary school students.

"Grade" group can be seen as an important demographic characteristic that significant differences are present in this kind of knowledge and consciousness researches. However, closeness of those groups (4th and 5th grades) and formation of research group among children are some of the important reasons that can decrease

such differences. As in the comparison between genders, in question 6th and 17th it is determined that there are significant variations in grade groups. Besides the gender differences, in question 9 it is determined that there are differences among grades. When the general average is analyzed, it can be seen that 5th grade students have higher attitude averages than the 4th grades. On the contrary, the difference among groups is not statistically significant. It is observed that 5th grade students have higher consciousness level (4,23) as in the general average ($P=0,012$), when the answer to the question of I would be sad because of the reluctance of the government executives about environment is evaluated. It is also observed that 4th grade students (4,13) are more conscious ($P=0,024$) than 5th grade students(3,80), when the answer to the question of I don't set fire in forest or picnic area is analyzed. Again, it is observed that 4th grade students (3,01) pay attention more than 5th grade students (2,61) to environmental damage of the purchased goods ($P=0,041$). Although in these two questions, consciousness of 4th grade students have higher levels, in general average, 5th grade students' consciousness levels are seen as higher ($3,98>3,94$) obviously.

Since the research group is consisted of little children, it is justifiable to say that there are no significant differences between gender and grade groups. Since the knowledge and consciousness levels of younger age children are being newly developed, as long as there is no difference in their education, probability to observe a difference in groups, such as gender difference, is very low.

Yet, it is inevitable not to observe significant differences among groups if education opportunities such as schools, educators, student profiles, regional factors etc. show differences. The results of this research are fitting in this concept and significant differences are observed between school groups. According to the research, only 6 among 25 attitude scales did not show a significant difference (Table 2.). When the average of the answers given to these attitude points is evaluated, it is seen that highest consciousness level belongs to 9EI with 4,18, and AI 4,07, 23NI 4,04, OI 3,95 and KMI 3,67 followed respectively. Even there is no big difference between first 4 schools, consciousness levels of some schools are seen as higher in some questions. However, KMI because of its socioeconomic status and effect of the education level remained behind significantly in terms of environmental consciousness when compared with other schools.

Table 2

Comparison of Primary School Students' Environment Attitudes, according to points and schools

Attitude Scale Questions	X						Sig. (%5)
	Overa ll	AI	OI	9EI	KMI	23NI	
T.1.I turn off lights left turned on needlessly at home or school	4,58	4,80	4,67	4,72	4,12	4,67	0,000*
T.2.I do not purchase food products harming health or environment when I do shopping from markets	4,21	4,30	4,19	4,36	3,78	4,45	0,010*
T.3.I tell my parents not to buy hormone injected vegetables and fruits	3,85	3,83	3,98	4,12	3,71	3,53	0,089
T.4.I will buy environment-friendly car in the future	3,85	3,87	3,54	4,10	3,93	3,97	0,101
T.5.I warn my parents to choose less energy consuming lamp and electronic devices for our home	4,06	4,20	3,92	4,27	3,76	4,28	0,018*
T.6.I become sad when government executives stay reluctant about environmental problems	4,10	4,07	4,08	4,55	3,63	4,15	0,000*
T.7.I throw my trashes to anywhere compulsorily in places such as picnic area, beach, forest where I cannot find trash bin (NEGATIVE)	3,88	4,30	4,16	4,25	2,72	4,00	0,000*
T.8.I think there should be more green area and flowers in my neighborhood	4,29	4,30	4,53	4,58	3,59	4,33	0,000*
T.9.I do not set fire in forests or picnic areas	3,93	4,00	4,02	4,31	3,83	3,50	0,010*
T.10.I use water and electricity economically at home ad school	4,39	4,63	4,46	4,68	3,58	4,71	0,000*
T.11.I feel sorry for starving or injured homeless dogs at street	4,35	4,27	4,48	4,48	3,83	4,55	0,000*
T.12.I become sad for dog, camel and rooster fights and bear dancing	3,92	2,87	3,94	4,54	3,75	3,97	0,000*
T.13.It makes me happy to feed and secure plants and animals	4,29	4,63	4,29	4,46	3,76	4,45	0,000*
T.14.Firms testing food material, medicines and weapons on animals must be banned	4,34	4,10	4,31	4,57	4,18	4,41	0,235
T.15.It makes me happy and take care of animals such as cats, dogs, and birds at home	4,49	4,50	4,67	4,73	3,82	4,67	0,000*
T.16.I think water and electricity should be utilized economically in all houses and businesses	4,31	4,60	4,18	4,55	3,88	4,52	0,001*
T.17.I care about environmental damage of the goods I buy	2,77	4,37	2,84	1,88	3,70	1,82	0,000*
T.18.Heating should be provided through natural gas instead of firewood or coal at homes	3,33	3,53	2,93	3,70	3,59	3,18	0,005*
T.19.I do not think erosion and forest fires can cause serious environmental problems in my country	3,45	3,10	3,51	3,42	3,73	3,30	0,405
T.20.I do not think that enough plantation is being done at burned, dried and cut forests	3,38	2,97	3,37	3,27	3,59	3,53	0,240
T.21.I think individuals sometimes use cars needlessly and consume energy irresponsibly	3,91	4,10	3,76	3,77	3,81	4,28	0,087

Table 2 continue...

T.22. I concern in terms of environment about nuclear power station which is planned to be established in our country in the future	3,79	4,03	3,52	4,22	3,63	3,81	0,004*
T.23. Rash consuming of energy sources in Cyprus makes me concern about our future	4,17	4,45	3,92	4,43	3,91	4,39	0,001*
T.24. There are enough animals in Cyprus, so I do not concern about the extinction of some species (NEGATIVE)	3,52	3,79	3,42	4,17	2,48	3,93	0,000*
T.25. Working of some factories with environmentally harmful energy makes me concern	4,09	4,03	3,94	4,37	3,65	4,49	0,000*
Overall Mean	3,97	4,07	3,95	4,18	3,68	4,04	0,000*

Environmental Knowledge of Primary School Students

While the least right answer percentage belongs to the question "When all plant species extinct as a result of a climate change, which of the followings does not occur?" with 34,60%, highest percentage of right answers belongs to "Which of the followings is the habitat of camels?" with 78,30%.

It is observed that there is no significant statistical difference when knowledge questions are compared depending on grades, except 1st and 9th questions (Table 3). First question is "In your opinion, for who do environmental problems cause danger or threat?". 4th grade students answered correctly with 55,50%, and 5th grade students answered correctly with 71,30% to this question. It is a normal result that answers to this question show such a distribution as it is structurally more difficult than other questions. Another question that answers shows difference among grades is "which of the followings is the result of environmental pollution?", and this question is rather difficult since the choices are similar to each other. As a result, they have shown us that they are also well informed like 5th grade students and a difference of 55,80% - 44-90% among grades is determined.

As can be followed from Table 3, in only 3 among 14 knowledge questions there is no statistically significant difference between schools. These questions are subjects about air pollution, natural disaster and flora. The answers given to knowledge questions indicate that Karsiyakaİllkokulu has a lower environmental knowledge as well as environmental consciousness. Correct answer percentage among other schools varies between 60-80%, while in this school this percentage is about 25-35%, indicating that knowledge level of this school is very low.

Table 3

T-Test or ANOVA Results Regarding Point Comparisons of Environmental Knowledge among Gender, Grade and Schools

Environmental Consciousness Questions	T-test		ANOVA Sig. (%5)
	Gender	Grade	
B.1. In your opinion, for who do environmental problems cause danger or threat?	0,747	0,006*	0,000*
B.2. Which of the following animals is vertebrate?	0,163	0,132	0,000*
B.3. Which of the followings cannot be shown as environment problems threatening to our worlds' future?	0,606	0,249	0,005*
B.4. Which of the following air pollutions is not human-made?	0,821	0,229	0,107
B.5. Which of the followings is not a natural disaster?	0,914	0,789	0,118
B.6. When all plant species extinct as a result of a climate change, which of the followings does not occur?	0,536	0,479	0,000*
B.7. Which of the followings is the habitat of camels?	0,062	0,708	0,000*
B.8. Which of the followings is a living thing?	0,807	0,181	0,000*
B.9. Which of the followings is a result of environmental pollution?	0,883	0,001*	0,000*
B.10. Which of the followings is a result of the increase of the rate of poisonous gases in air?	0,292	0,674	0,004*
B.11. Which of the following stems from unconscious hunting?	0,683	0,142	0,006*
B.12. Which of the followings is a plant under protection?	0,302	0,685	0,003*
B.13. Which of the followings is not a factor annihilating the flora?	0,483	0,119	0,378
B.14. Which of the followings is a result of establishment of cities and industrial organizations on fertile lands?	0,693	0,204	0,000*

Discussion and Conclusion

In general, points having high attitude values indicate that environmental level is high. Average of all points is determined as 3,97 (79,40%). This value shows similarity with the study with an average of 82,03%, done by Aslan et al. (2008) in Amasya with 7th and 8th grade students. The 79,40% average attained in this study is significantly greater than the 70,84% average of public's environmental consciousness score obtained by Yilmaz (2009) in Edirne. When points belonging to environmental attitude are compared with respect to gender, only 3 points among 25 have shown significant difference between genders. When general averages of all points are analysed, females' consciousness levels determined as 3,98 (79,60%), and males' consciousness levels determined as 3,95 (79,00%). This result shows similarities with the study of Aslan et al. (2008) which did not determine any statistical significant difference between the environment-intended attitudes of students as well as studies of Yilmaz et al. (2004) and Erol& Gezer (2006).

As in the points about environmental attitude, none of the 14 points about environmental has shown significant difference among genders. 5th grades has shown a higher attitude average ($X=3,987$) than 4th grades ($X=3,943$) when general average is evaluated. Although there is no statistical difference among averages, an increase in attitudes of primary school students in higher grades is observed. This result shows similarity with studies of Yilmaz et al. (2004) and Aslan et al. (2008); however, it shows differences with results of the studies of Alp et al. (2006). These results show similarities with studies of Bonnett& Williams (1998). In that study, attitudes of 5th and 6th grade students towards environment and nature are

investigated and the results of that study indicated that students at this age has positive attitudes towards environment, limits and dilemmas about the issue can be fixed and developed through education.

According to the research, only 6 among 25 attitude scales did not show a significant difference. When the average of the answers given to these attitude points is evaluated, it is seen that highest consciousness level belongs to 9 Eylül İlkokulu with 4,18, and Aydinköy İlkokulu 4,07, 23 Nisan İlkokulu 4,04, Özgürlik İlkokulu 3,95 and Karşıyaka Merkez İlkokulu 3,67 followed respectively. One of the reasons for the difference between schools might be students' and regions' sociocultural structures. Kilbourne et al. (2001), made a research on environmental attitude scores of students in United States of America, England and Denmark Universities and stated that the differences between scores can be explained by different sociocultural structures of countries. Although there is no significant sociocultural difference among the groups in this study as in the study of Kilbourne et al. (2001), it is a fact that students of Karsiyaka Merkez İlkokulu are different than other primary school students since they live in an environment of different sociocultural structure. The students in this school live in poorer and more difficult life standards when compared with other school students.

Even though the difference in top 4 schools is not huge, in some questions consciousness levels of some schools appeared as higher. However, Karsiyaka Merkez İlkokulu, because of its socioeconomic status and effect of the education level, remained behind significantly in terms of environmental consciousness when compared with other schools. The answers given to knowledge questions indicate that Karsiyaka İlkokulu has a lower environmental knowledge as well as environmental consciousness. Correct answer percentage among other schools varies between 60-80%, while in this school this percentage is about 25-35%, indicating that knowledge level of this school is very low. The reason is the difference in education. Especially, on the issues concerning human beings' future, TRNC National Education Ministry should take immediate precautions and implement regulations to provide standards in environmental education and to increase level of education in schools falling behind standards. Determination of significant differences among schools also has shown the necessity not to omit attitude and behaviour aspects in course schedules, as shown by Pooley& O'Connor (2000). Providing environmental information in course schedules is not sufficient for a successful environmental education. Aim in environmental education, as mention by Pooley& O'Connor (2000), should not be predominantly providing information, but giving priorities to attitude and behaviour aspects of education programs to raise environment-friendly individuals.

The results indicated that 4th and 5th grade students have high environmental knowledge and consciousness levels. These results do not match up with the results obtained by Akiş (2000) of the study done 10 years ago in TRNC, which states that "participants defining themselves as environmentally responsible but in daily life almost do not show any effort to protect the environment". It can be said that the reason for this is the studies about environmental education in TRNC recently. The results obtained in this study have shown that there is no significant difference in students' environmental knowledge and environmental consciousness in terms of gender and grades in TRNC. It is highly important to continue such studies to determine the deficiencies in student's knowledge and class syllabus. On the other hand, it is important to determine the environmental consciousness levels of teachers model the correlation among students and teacher's environmental consciousness levels.

References

- Akiş, S. (2000). Environmental education in TRNC. *Journal of Near East University*, 1, TRNC.
- Alp, E., Ertepınar, H., Tekkaya C., & Yilmaz, A. (2006). A statistical analysis of children's environmental knowledge and attitudes in Turkey. *International Research in Geographical and Environmental Education*, 15 (3), 210-223.
- Aslan, O., Sagiri, S.U., & Cansaran, A. (2008). Çevre tutum ölçeği uyarlanması ve ilköğretim öğrencilerinin çevre tutumlarının belirlenmesi [Primary school students' environmental attitudes scale]. *Selçuk Üniversitesi Ahmet Keleşoğlu Eğitim Fakültesi Dergisi*, 25, 283-295.
- Büyüköztürk, Ş. (2002). *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni SPSS uygulamaları ve yorum* [Handbook of the data analysis for the social sciences: Statistics, research design, SPSS practices and interpretations]. Ankara: PegemA Yayınları.
- Cobb, T.B. (1998). On the miscibility of science and environmental education. *Journal of Environmental Education*, 29 (4), 5-10.
- Cepel, N. (1998). Erosion and environmental education. *Method and Special Topics in International Participation III*. ENV-KOR Publishing, Izmir.
- Erjem, Y. (2005). Çevre Sorunları Karşısında Çevre Eğitimi ve Sosyolojik Boyutu [Environmental education and sociological dimension toward environmental problems]. 1. Ulusal Erciyes Çevre Sempozyumu, 23-25 October 2003, Erciyes, Kayseri.
- Gall, D. M., Gall, P. J. and Borg W. R. (2003). *Educational research an introduction*, (7th ed.) Boston. 309: Pearson Education Inc.
- Guler, Ç., & Çobanoglu, Z. (1997). *Toprak kirliliği*. [Soil pollution]. Temel sağlık hizmetleri genel müdürlüğü yayınları, Ankara.
- Gündüz, Ş., Birol, C., Bekiroğulları, Z., Seniz, S., & Dağlı, G., (2008). Needs and trends of environmental education in cyprus. *Strategies for Policy in Science and Education*, 16(1), 68-72.
- Haeckel, E. (1866). Generelle morphologie der organismen: allgemeine Grundzüge der organischen Formen-Wissenschaft, mechanisch begründet durch die von C. Darwin reformierte Decendenz-Theorie, Berlin.
- IUCN, (1970). *International working meeting on environmental education in the school curriculum*. Final Report, Gland, Switzerland.
- Kilbourne, W.E., Beckman, S.C, Lewis, A., & Dam, Y.V. (2001). A multinational examination of the dominant social paradigm in environmental attitudes of university students. *Environment & Behavior*, 33(2), 209-229.
- Mrazek, R. (1993). Alternative paradigms in environmental education research. Monographs in environmental education and environmental studies. *North American Association for Environmental Education*, 2, 7-28.
- Nazlioğlu, M.D. (1993). Çevre eğitiminin önemi. Çevre üzerine [The importance of environmental education on the Environment] Ankara: Türkiye Çevre Sorunları Vakfı Yayımları.
- Pooley, J.A., & O'Connor M. (2000). Enviromental education and attitudes. *Environment & Behavior*, 32 (5), 711-724.
- Spurgeon, R. (1998). *Ekoloji*. [Ecology]. Popular Science Books TUBITAK, Ankara.

- Tosunoğlu, C. (1993). *A study on the dimensions and determinants of a numerantal attitude*. Middle East Technical University, Unpublished Master's Thesis, Ankara.
- Yıldız, K., Sipahioglu, S., & Yilmaz, M. (2000). *Çevre eğitimi*. [Environmental Education]. Anı Yayıncılık, Ankara.
- Yilmaz, O., Boone, W. J., & Anderson, H.O. (2004). Views of elementary and middle school Turkish students towards environmental issues. *International Journal of Science Education*, 26 (12), 1527-1546.
- Yilmaz, R. (2009). Determination of edirne environmental awareness and socio-economic effects of the properties. *Journal of the Faculty of Agriculture, Tekirdag Yilmaz*, 6 (1), 79 -92.

Kuzey Kıbrıs Türk Cumhuriyeti'ndeki İlkokul 4. ve 5. Sınıf Öğrencilerinin Çevre Bilinç ve Eğitim Düzeyleri

Atif:

Gündüz, Ş. (2013). Environmental consciousness and education levels of elementary grade 4. and grade 5. students in Turkish Republic of Northern Cyprus. *Egitim Arastirmalari-Eurasian Journal of Educational Research*. 53/A, 313-326.

Özet

Problem Durumu: Son yıllarda insanoğlunun olumsuz etkileri neticesinde çevre problemlerinde önemli artışlar görülmektedir. Spurgeon (1997) insanoğlunun yaptığı uygulamalar ile "kendi boğazını kestiğini" bildirmiştir. Son yıllarda, nüfus artışı ile insanoğlunun artan istekleri birleşmiş, bu isteklerin karşılanabilmesi için de doğal denge içerisindeki kaynaklar aşırı şekilde kullanılmaya başlanmış ve bunun neticesinde de çevre problemlerinde önemli artışlar gelişmiştir. Bu nedenle, çevre problemlerinin önlenmesi ve yaşanabilir bir dünyaya sahip olmak için sorunun kaynağı olan insanoğluna yönelik ve çevre eğitimine önem verilmelidir. Çevre eğitiminde başarıya ulaşabilmek için, eğitimin ilkokul yıllarında başlaması gerekmektedir. Mevcut koşullarda Kuzey Kıbrıs Türk Cumhuriyeti'ndeki ilkokul öğrencilerinin çevre bilinç ve eğitim düzeylerinin bilinmemektedir.

Çalışmanın Amacı: Bu çalışmada, Kuzey Kıbrıs Türk Cumhuriyeti'ndeki ilkokul 4. ve 5. sınıf öğrencilerinin çevre bilinç ve eğitim düzeylerinin belirlenmesi amaçlanmıştır.

Araştırmanın Yöntemi: Çalışmanın amacıyla ulaşabilmek için nice çözümleme yöntemi olarak anket kullanılmıştır. Literatür taraması sonrasında KKTC koşullarına göre yeniden organize edilen çevre bilinç ve bilgi tarama listesi öncelikle 60 öğrenciden oluşan bir örnek gruba uygulanmıştır. Elde edilen bu ilk bulgular faktör analizine tabi tutulmuş ve düzeltmeler neticeinde araştırma örnekleme uygulanmıştır. Araştırmanın örneklemini Güzelyurt'da bulunan Özgürlik İlkokulu (Ol) ve Aydinköy İlkokulu (Al), Lefkoşa'da bulunan 9 Eylül İlkokulu (9EI) ve Girne'de bulunan Karşıyaka Merkez İlkokulu (KMI) ile 23 Nisan İlkokulu (23NI)'nda 2009-2010 akademik yılında 4. ve 5. sınıfta okuyan öğrenciler oluşturmaktadır. Toplam 300 kişiden oluşan örneklemin 121'i 4'üncü sınıf, 179'u ise 5'inci sınıfıtır. Yine aynı grubun %50,3'ü bayan, %49,7'si ise erkektir. Örneklemin verdikleri cevaplar arasında cinsiyet ve sınıf değişkenine göre fark olup olmadığı t-testi ile, 2'den fazla değişkenin bulunduğu okul faktörü için ise ANOVA sonrasında Duncan çoklu testi ile %5 önem düzeyine göre belirlenmiştir.

Araştırmmanın Bulguları: Elde edilen sonuçlara göre tüm örneklemين çevre bilinç düzeyi yüksektir ($X = 3,97 \Rightarrow \% 79,40$). Öğrencilerin çevresel tutum sorularına verdikleri cevapların cinsiyet değişkenine göre karşılaştırılması yapıldığı zaman toplam 25 sorudan sadece 3 soruda farklılık tesbit edilmiştir. Bu soruların birinde bayanların, ikisinde ise erkeklerin puanları daha yüksek olarak belirlenmiştir. Tüm soruların puanları incelendiği zaman ise bayanların puanı 5 üzerinden 3,98, erkeklerin puanı ise 3,95 olarak belirlenmiştir. İki grup arasında istatistikci açıdan anlamlı bir fark görülmemektedir. "Sınıf" grubu hem çevre bilgisi ve hem de çevre bilinç düzeyi bakımından aralarında fark tesbit edilmesi muhtemel bir demografik özelliktir. Buna karşın, araştırma grubunun puanları sınıf değişkenine göre anlamlı farklılık göstermemiştir. Elde edilen sonuçlara göre 5. sınıf öğrencilerinin puanları 4. sınıf öğrencilerinden biraz yüksektir ($3,98 > 3,94$). Örneklemi verdiği cevaplar neticesinde elde edilen sonuçlara göre, toplam 25 tutum ölçünginde sadece 6 soruda okullar arasında anlamlı farklılık görülmemiştir. Araştırma grubunun çevre tutum puanları okullara göre incelendiği zaman ise dört okulun puanı birbirine yakın olmuş, Karşıyaka Merkez İlkokulu'unun puanı ise önemli düzeyde düşük olarak belirlenmiştir. Okullara göre puanlar şöyle belirlenmiştir: 9 Eylül İlkokulu 4,18, Aydınlık İlkokulu 4,07, 23 Nisan İlkokulu 4,04, Özgürlik İlkokulu 3,95 ve Karşıyaka Merkez İlkokulu 3,67. En yüksek puanın elde edildiği ilk 4 okulun öğrencilerinin verdiği cevaplar arasında büyük farklılıklar görülmektedir, özellikle Karşıyaka Merkez İlkokulunun cevapları önemli derecede farklı olarak belirlenmiştir. Bunun en önemli nedeni, Karşıyaka Merkez İlkokulunun sosyoekonomik durumunun zayıf olmasıdır. Diğer okulların çevre ile ilgili bilgi sorulara verdikleri doğru yanıtlar % 60 ile % 80 arasında değişirken, Karşıyaka Merkez İlkokulu'nun doğru yanıtları %25 ile %30 arasında değişmiştir. Bu bilgiler neticesinde Kuzey Kıbrıs Türk Cumhuriyeti, Milli Eğitim Bakanlığı farklı okullar için farklı uygulamalar geliştirmelidir.

Araştırmının Sonuçları ve Öneriler: Elde edilen sonuçlar doğrultusunda Kuzey Kıbrıs Türk Cumhuriyeti'ndeki 4. ve 5. sınıf öğrencilerinin çevre bilgi ve bilinç puanlarının yüksek olduğu belirlenmiştir. Bu sonuç, Akiş (2000) tarafından yaklaşık 10 yıl önce yapılan çalışmanın sonuçlarının aksi yöndedir. Buna göre, 2000 yılından günümüze ülkedeki çevre bilinç düzeyinin yükseldiği söyleyebilir. Bunun başlıca nedenleri, son yıllarda ülkede çevre eğitimi konusunda yapılan çalışmalar, Avrupa Birliği uyum yasaları çerçevesinde yapılan düzenlemeler ve çevrenin kötü kullanılmasının doğurduğu olumsuz sonuçların herkes tarafından farkedilmeye başlamasıdır. Elde edilen sonuçlar ayrıca, cinsiyet ve sınıf değişkenine göre çevre bilgisi ve bilinç düzeylerinin KKTC'deki ilköğretim 4. ve 5. sınıflarında eğitim gören öğrenciler arasında farklılık göstermediğini ortaya koymaktadır. Bu sonuçlar doğrultusunda, benzer çalışmalarla devam edilerek öğrencilerin bilgi düzeyleri ile okul müfredatlarındaki eksikliklerin belirlenmesi gerektiği ön plana çıkmaktadır. Bunun yanında, öğrencilerle birlikte öğretmenlerin de çevre bilinci düzeylerinin belirlenmesi ve öğrenciler ile öğretmenler arasında çevre bilinci yönünden korelasyon çalışmaları yapılması faydalı olacaktır. Bu çalışmada okullar arasında görülen farklılıklar da dikkate alınarak yeni geliştirilecek eğitim planlamalarında farklı bölgelerdeki sosyoekonomik durumların da dikkate alınması faydalı olacaktır.

Anahtar Kelimeler: ilkokul, çevre eğitimi, çevre bilinci, çevresel bilgi ve çevre tutum ölçügi