

The Study of University Students' Awareness and Attitude Towards Environmental Education in Northern Cyprus

Övsün Akkor^{1*}, Şerife Gündüz¹

¹ Near East University, N.Cyprus

Received 12 August 2017 • Revised 25 October 2017 • Accepted 13 December 2017

ABSTRACT

This research has been conducted to detect the attitude and behavior levels of university students in Northern Cyprus about environmental education. The research population consists of the university students in Northern Cyprus, while the sample consists of 175 university students in Northern Cyprus in the same year. The "environmental awareness scale" and "environmental attitude scale" was administered to the participants as data collection tools. The answers that the students gave have been analyzed quantitatively. It has been found that female students have higher environmental attitudes and they are more sensitive to the environment than male students.

Keywords: environment, environmental awareness, environmental attitude, environmental education

INTRODUCTION

The environment can be described as the outer environment where all living things maintain their lifetime relationships. The environment consists of viable and non-viable factors. The viable factors of the environment are human beings, plants, animals and microorganisms. Non-viable factors are both natural and human-made resources and assets such as air, water, soil, landforms, buildings and bridges (Başal, 2003).

The environment is the integration of physical, chemical and biotic factors that have influence on the lives of living organisms in a particular habitat. In summary, it includes all the factors that have effect on the life of organisms (Yücel, 2006).

The environment represents different meanings about whether or not to be a subject of human activities. Yücel separated the environment into two parts consisting of the physical and social environment. The environment in which living things sustain their lives and perceive physically their existence, features and characters is called the physical environment. The physical environment is divided into two, the natural environment (mountains, sea, lakes, etc.) and the artificial environment (city, town, dam, etc.). The environment, the formation of which human beings do not have any effect on is called the natural environment, while the one that has changed according to the needs of human beings is called the artificial environment (Yücel, 2006).

The environmental awareness is the reaction that an individual or society faces environmental problems with the acts and thoughts for the protection of the environment in parallel with the development of environmental problems against the problems affecting them. Environmental awareness has emotional and behavioral dimensions. In other words, environmental awareness consists of the thoughts including decisions, principles and interpretations about the environment, behaviors that are the transfer of such thoughts to life and several feelings regarding all these.

Environmental awareness is an important condition for studies preventing the environmental pollution and environmental friendly attitudes but it is not sufficient. All of society should be included. According to Wong (2010), people's environmental awareness is the perception representing the sum of the changes in environmental and socio-economic dimensions of a nation in a given space and time. The resolution of the problems is difficult unless individuals and families participate and wrong habits are changed. People who have

Contribution of this paper to the literature

- The levels of environmental attitude and behavior of the university students who were studying in Northern Cyprus were not at the expected level.
- Certain precautions are advised in the paper to improve the current level.
- There is statistically significant difference between the grade levels of the students and they are known to be environment friendly by their friends.

environmental awareness are the ones who select the least negative way and method to the environment while producing or consuming in daily life (Erkal et.al, 2001).

Environmental education is a way of teaching how to protect the environment which we live in, and its importance through systematic and scientific ways (Kabaş, 2004; Külköylüoğlu, 2000). As Özden (2008) notes formal environmental education should be started from preschool and continued up to university also, the lessons about environmental science and environmental issues should be thought from beginning elementary school up to university. Non-formal environmental education on the other hand involves all educational processes conducted outside of school. It is directed to all age groups, especially mature people who have finished their studies. (Wojcik, 2004).

Doğan (2000) makes an assessment about the environmental education to be an eternal process in which individuals and societies acquire awareness about sustainable development through knowledge, values, abilities and experiences, and obtain the determination to act in order to resolve the current and future environmental problems. Environmental education is the process to make the thoughts comprehensible and verify the values in order to develop important attitudes and abilities so as to understand and accept the relationship among environmental education, humans, culture and the biophysical environment. Another definition of environmental education is the helping process that other people to acquire appropriate behaviors and skills to understand and protect the relations and interactions between their cultural and biological environments (Kabaş, 2004).

The individuals that have had environmental education are supposed to have the properties that are indicated below under the natural, social, value and action content titles when compared to the individuals not involved in environmental education (Keleş, 2007).

In the light of the information mentioned above, it has been targeted in the research to determine the environmental education, attitude and behavior levels of the university students with help of a questionnaire and to increase the environmental awareness of the students through environmental education support.

MATERIAL AND METHODS

Model of the Research

In this section of the study descriptions about the model, sampling, data collection tool, implementation of data collection tool and data analysis of the research about "the investigation of the attitude and behavior levels of environmental education, university students studying in Northern Cyprus" are included.

Universe and Exemplary/Research Group

The universe of this research is formed by the university students in Northern Cyprus. As for the sample of this research, it included 175 university students studying in the 2014-2015 academic period.

Data Collection Tool and/or Techniques

In this study, the "Environmental Awareness Scale" and "Environmental Attitude Scale" were administered to the participants as data collection tools (Give the tool in the appendix). The data collection tool which was developed by the researcher was based on the literature (theses, articles, announcement, scientific research, and so on). The subject was investigated in order to initially create the main structure of the research, the objectives of the research and the conceptual structure and main framework of the data collection tool were then created.

Analysis of the Data

The answers that the students gave to the data collection tool have been analyzed in quantitatively. The information that was obtained from the questionnaires was analyzed using the SPSS 20.0 program. In determining whether university students in Northern Cyprus differed according to gender or not about the environment, environmental education and environmental awareness the unrelated t-test was used, while in determining

Table 1. The relation between the ages of the students and whether they received environmental course before (chi-square test)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,054 ^a	1	,008		
Continuity Correction ^b	6,196	1	,013		
Likelihood Ratio	6,992	1	,008		
Fisher's Exact Test				,012	,007
Linear-by-Linear Association	7,013	1	,008		
N of Valid Cases	174				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 22,03 b. Computed only for a 2x2 table1.

Table 2. T-test results of environmental attitudes of the students according to the gender variant (n=173)

Gender	n	(x)	s	p
Female	100	2.6876	.3547	.001
Male	73	2.5051	.3801	

Table 3. The results of environmental attitudes of the students according to age (n=173)

Age	n	(x)	s	p
Female	102	2.5597	.3812	.040
Male	71	2.6793	.36462	

whether they differed according to the education of their parents an Anova, Chi-square test was used. In order to investigate the behaviors of the students with regard to their efficiency about environmental education the frequency and percentages have been used.

FINDINGS

The findings obtained as a result of the research are given in tables and explained in this section. Some comments are made by taking into consideration whether or not the attitudes and behaviors of the students towards the environment differed (see [Table 1](#)).

There is no relationship between age and whether an environmental course was taken before. There is a relationship between age and whether an environmental course was taken before. As $p=0.008 < \alpha=0.05$, H_0 is rejected. There is a relation between the ages of the students and whether they received environmental course or not before. Namely, their ages had an effect on getting environmental course (see [Table 2](#)).

There is no significant relationship between the gender and environmental attitudes of the students. There is a significant relationship between the gender and environmental attitudes of the students. As $p=0.001 < \alpha=0.05$, H_0 is rejected. There is a significant relationship between the gender and environmental attitudes of the students. According to the independent exemplary t-test, there is a significant relationship between the gender and environmental attitudes of the students. Even though the environmental attitudes of both male and female students are found to be high in both groups, the scores of female students are found to be significantly higher than male students. Because the average of female students (2.6876) is found to be higher, it differs from male students significantly (see [Table 3](#)).

There is no significant relationship between the age and environmental attitudes of the students. There is a significant relationship between the age and environmental attitudes of the students. As $p=0.04 < \alpha=0.05$, H_0 is rejected. There is a significant relationship between the age and environmental attitudes of the students. This result means that there is a significant relationship between the age and environmental attitudes of the students. Even though the environmental attitudes of the students are found to be high in both groups, the scores of the 23 years and above students are found to be significantly higher than 22 years and below students. Because the average of 23 years and above students (2.6793) is found to be higher, it differs from 22 years and below students significantly (see [Table 4](#)).

Table 4. ANOVA Results with respect to the regional population where the environmentally conscious students live (n=167)

Population	n	(x)	s	p
below 500	5	3,0387	.37020	0,038<0,05
between 500-2000	6	2,9428	.56716	
between 2000-5000	14	2,8620	.27610	
between 5000-10000	13	2,5147	.65170	
between 10000-20000	18	2,9226	.28783	
between 20000-50000	22	2,7456	.37181	
over 50000	89	2,8773	.36546	

Table 5. The results that the students warn without any hesitation those who damage to the environment with respect to age (n=171)

Age	n	(x)	s	p
22 years and under	100	2.19	1.187	.049
23 years and above	71	2.58	1.359	

Table 6. The results that the students are known to be environment friendly by their friends with respect to gender (n=166)

Gender	n	(x)	s	p
Female	93	2.29	1.109	.024
Male	73	2.70	1.198	

Table 7. ANOVA results that the students are known to be environment friendly by their friends with respect to grade level (n=166)

Class Levels	n	(x)	s	p
1. Grade	35	1.97	.985	0.028<0.05
2. Grade	67	2.67	1.120	
3. Grade	40	2.58	1.174	
4. Grade	24	2.42	1.283	

It has been observed that there is a significant difference among the environmental consciousness scores of the students in relation to the regional population where they live. Gunduz et al. (2016) had similar findings about the environmental consciousness in Lefka region of Cyprus too. This finding can be interpreted that there is a significant relationship between the environmental consciousness and the population of region that students live. The environmental attitudes of the students show differences between those having a population of 5000-10000 in the region and those having a population over 50000. The environmental attitude of the region having the highest average which is over 50000 is higher than other regions (see [Table 5](#)).

There is no significant relationship between the age of the students and those damage to the environment that they warn without any hesitation. There is a significant relationship between the age of the students and those who damage to the environment that they warn without any hesitation. As $p=0.049 < \alpha=0.05$, H_0 is rejected. There is a significant relationship between the age of the students and those who damage the environment that they warn without any hesitation. There is a significant relationship between the age of the students and those who damage the environment that they warn without any hesitation. That the students who are 23 years and above, having the highest average warn those who damage the environment is higher than the students to be 22 years and below (see [Table 6](#)).

There is no significant relationship between the gender of the students and that they are known to be environment friendly by their friends. There is a significant relationship between the gender of the students and that they are known to be environmentally friendly by their friends. As $p=0.024 < \alpha=0.05$, H_0 is rejected. There is a significant relationship between the gender of the students and that they are known to be environmentally friendly by their friends. There is a significant relationship between the gender of the students and that they are known to be environmentally friendly by their friends. There are differences between the environmental consciousness of male and female students. Male students with an average of 2.70 are known to be more sensitive to the environment by their friends than female students (see [Table 7](#)).

There is statistically significant difference between the grade levels of the students and that they are known to be environmentally friendly by their friends. This finding can be interpreted that there is a significant relationship between the environmental attitudes and grade levels of the students. There is a significant relationship with regard to being in 1 and 2 classes of the students to be known environment friendly by their friends. The students in class 2 with an average of 2.67 are known to be more sensitive to the environment by their friends than class 1 students.

DISCUSSION AND CONCLUSION

The following results are obtained as a consequence of this research:

There is a relationship between the ages of the students and whether or not they studied an environmental course before. According to the independent exemplary t-test results, while there is a significant difference of the attitudes of university students towards the environment, there has been no significant difference on their behaviors. Except this, a significant relationship between the gender of the students and that they are known to be environment friendly by their friends has been found. Even though the scores of environmental attitudes of both male and female students are found to be high in both groups, the scores of female students are found to be significantly higher than male students. The fact that similar results have been obtained in many studies that have been conducted with university students (Altın, 2001; Çabuk & Karacaoğlu, 2003; Erol, 2005; Yılmaz et al., 2002) indicates that increasing the environmental awareness among our students in our country should be carried out more effectively.

It has been observed that there is a significant difference among the environmental consciousness scores of the students in relation to the regional population where they live. This finding can be interpreted that there is a significant relationship between the environmental consciousness and the population of region that students live. The environmental attitudes of the students show differences between those having a population of 5000-10000 in the region and those having a population over 50000. The environmental attitude of the region having the highest average which is over 50000 is higher than other regions.

It has been observed that there is a significant difference statistically that the students warn those who damage the environment depending on the income of the family. This finding can be interpreted that there is a significant relationship between the incomes of the students' families and that they warn those who damage the environment with no hesitation. Atasoy (2005) and Kesicioğlu and Alisinanoğlu (2009) could not find out in their study a significant difference between the economic levels regarding attitudes towards the environment. There seems to be a similarity between their studies and this.

There is a statistically significant difference between the grade levels of the students and that they are known to be environmentally friendly by their friends. This finding can be interpreted that there is a significant relationship between the environmental attitudes and grade levels of the students. There is a significant relationship with regard to being in classes 1 and 2 of the students to be known environmentally friendly by their friends. The students in class 2 with an average of 2.67 are known to be more sensitive to the environment by their friends than class 1 students. Deniz and Genç (2007), Sağır et al. (2008), Çeken (2009) have detected in their studies that there is a significant difference between classes in terms of attitude towards the environment. The results of this study are parallel with the results of these studies.

As a consequence, we can come to a conclusion that the levels of environmental attitude and behavior of the university students who are studying in Northern Cyprus are not at the expected level. The following suggestions are included by examining the results of the research:

By taking into consideration the relationship between the attitudes and behaviors of the students towards the environment, precautions for increasing their success level should be taken. Among these precautions, the ones to increase the interest and motivation of the students should be considered. For example, a natural watching trip implementation to be carried out by being integrated with nature could be beneficial on this matter.

It has been indicated that the attitudes of the university students towards the environment are influenced by familial factors. For this reason, cooperation with families should be encouraged in environmental education studies, and the participation of families to these studies should be encouraged.

It can be foreseen that important steps can be taken not only in problems relating to the attitudes and behaviors towards the environment but also in resolving the complications and discrepancies that are encountered in the application of the principles and objectives indicated in the Constitutional Law and Basic Law of National Education.

Instead of focusing on the concern of the students with regard to future environmental problems, the importance of the individual studies should be pointed out for the resolution of the environmental problems, and the students should be encouraged in this direction.

Individual efforts should be considered to be important by explaining to the students that the environmental problems come out of several activities of people and so they will be terminated by several human activities.

In order to make the attitude and behavior of an individual towards the environment a lifestyle until university the education to be given should begin from the pre-school and should be sustainable and applicable to the environmental conditions where he/she lives.

REFERENCES

- Altın, M. (2001). *Environmental education in biology teacher candidates* (Master Thesis). Gazi University, Institute of Education Science, Ankara.
- Atasoy, E. (2005). *Education for the environment: A study on environmental attitudes and environmental knowledge of primary school students* (Master Thesis). Uludağ University, Institute of Social Sciences, Bursa.
- Başal, H. A. (2003). Applied environmental education in preschool education. *New Approaches in Development and Education*. Istanbul: Morpa Publications.
- Çabuk, B., & Karacaoğlu, C. (2003). Investigation of environmental sensitivities of university students. *Ankara University, Journal of Educational Sciences*, 36(1-2), 189-198.
- Çeken, R. (2009). Training in science and technology education at the age and perception level is important in terms of individual and social development. *Journal of Education Science*, 110(10), 40-43.
- Deniş, H., & Genç, H. (2007). Comparisons of environmental attitudes of students with and without environmental cognition. *Mehmet Akif Ersoy University, Journal of Education Science*, 13, 20-26.
- Doğan, M. (2000). The importance of environmental education with teacher education. II. *National Teacher Training Symposium Proclamations*, May 10-12, Çanakkale Sekiz Eylül University, Faculty of Education, Çanakkale.
- Erol, G. H. (2005). *Attitudes of secondary school students towards environmental and environmental problems* (Unpublished Master Thesis). Pamukkale University, Institute of Science, Denizli.
- Gündüz, Ş., Erbulut, C., Öznacar, B., & Baştaş, M. (2016). Determination of consciousness and awareness of the public in Lefka about the Cyprus Mining Corporation (CMC). *Eurasia J Math, Sci Technol Educ*, 12(4), 783-792. doi:10.12973/eurasia.2016.1256a
- Kabaş, D. (2004). *Women's knowledge about environmental problems and environmental education* (Master Thesis). Gazi University, Institute of Educational Sciences, Ankara.
- Keleş, Ö. (2007). *Implementation and evaluation of ecological foot permission as an environmental education tool for sustainable living* (Doctoral Thesis). Gazi University, Institute of Education Science, Ankara.
- Kesicioğlu, O. S., & Alisinanoglu, F. (2009). 60-72 Monthly children's attitudes towards the environment are examined in terms of various variables. *Ahi Eoran University, Journal of Education Science*, 10(3), 37-48.
- Külköylüoğlu, O. (2000). Structural elements and goals in environmental education, symposium on ecology and environmental problems. V. *International Symposium on Education*, Ankara.
- Özden, M. (2008). Environmental awareness and attitudes of student teachers: An empirical research. *International research in geographical and environmental education*, 17(1), 40-55. doi:10.2167/irgee227.0
- Sağır, Ş. U., Aslan, O., & Cansaran, A. (2008). Adaptation of environmental attitude scale and determination of environmental attitudes of primary school students. *Selcuk University Ahmet Keleşoğlu, Journal of Education Science*, 25, 283 -295.
- Şafak G., & Erkal, S. (2001). Sustainable development and environmental awareness building. *Socioeconomics*, 1/110107, 145-158.
- Wójcik, A. M. (2004). Informal environmental education in Poland. *International Research in Geographical & Environmental Education*, 13(3), 291-298. doi:10.1080/10382040408668525
- Wong, K. K. (2010). Environmental awareness, governance and public participation: public perception perspectives. *International Journal of Environmental Studies*, 67(2), 169-181. doi:10.1080/00207231003683424
- Yılmaz, A., Morgil, İ., Aktuğ, P., & Göbekli, İ. (2002). Knowledge and suggestions about environment, environmental concepts and problems of secondary and university students. *Hacettepe University, Journal of Education*, 22, 156-162.
- Yücel, E. (2006). Living and Environment. Retrieved on 15 March 2014 from www.aof.edu.tr/kitap/IOLTP/2281/unite05.pdf

<http://www.ejmste.com>