International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211
Volume 9, Issue 6, June -2021, Impact Factor: 7.429, Available online at: www.ijaresm.com

Special Education Teachers' Attitudes towards the Environment

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ABSTRACT

The aim of this study is to determine the attitudes of special education teacher candidates, who have great responsibilities in terms of environmental education, towards the environment and to compare these attitudes according to various variables. For this purpose, a 4-point Likert-type Environmental Attitude Scale consisting of 35 items was used as a data collection tool. The study group of the research consists of 120 special education teacher candidates. Whether the prospective teachers' attitudes towards the environment show a significant difference in terms of the independent variables of the research was investigated using the t-test for bivariate features and the ANOVA test for features with more than two. The results of the research show that the attitudes of teacher candidates towards the environment increase as age and class level increase, but there is no statistically significant difference between teacher candidates in terms of these variables.

Keywords: Special, Education, Environment, Attitude, Teacher Candidates.

INTRODUCTION

Research on the environment has shown that the basis of environmental problems is the negative behaviour of individuals towards the environment. Therefore, the primary goal of effective environmental education is to change the behaviour of individuals towards the environment in the desired direction [1-2]. Attitudes, which are considered the most important factor in shaping the behaviours of individuals, have an important place in achieving this goal. Attitudes, which are defined as positive or negative evaluations of individuals about other people, events or objects in social psychology, allow individuals to predict their behaviour and create changes in the desired direction [3-5].

Ajzen and Fishbein (1977) argue that these two concepts should be measured and evaluated together, based on the idea that behaviours can be predicted or explained based on attitudes [6]. In addition, evaluations regarding the relationship between attitude and behaviour should be carried out on subjects and concepts at the same level. Pieters (1989) mentions two limitations regarding measurements and evaluations in this regard. The first of these is that the measurement times for attitudes and behaviours should be close to each other [7]. Accordingly, the longer the time between attitude and behaviour measurements, the higher the probability that the attitudes intended to be measured for the determined behaviour will change under the influence of various factors. Second, since attitudes are only one of the factors that affect behaviour, errors may occur in the process of finding the attitude-behaviour relationship. As a result, although other factors such as social rules, acquired behaviours and immediate effects affect the individual's behaviour formation process, attitudes lie at the heart of this process. Other factors intervene between the intention to act and the process of performing the behaviour[8].

Various approaches have been put forward regarding the factors affecting the formation and shaping of attitudes towards the environment. Among these, the psychosocial approach, which includes factors such as attitude, personal responsibility and control mechanism, comes to the fore. According to this approach, attitudes are important in terms of feelings about general ecological and environmental events, feelings and concerns about some environmental problems, and active participation in the solution of environmental problems. Personal responsibility provides participation in private or general environmental issues by making individuals feel obligated to solve environmental issues[9-10]. The control mechanism is that individuals are aware of their own competencies in performing positive behaviour towards the environment. Based on this, Peer, Goldman, and Yavetz (2007) stated that individuals' attitudes, personal responsibility and control mechanisms should be developed in order to ensure environmental awareness and active participation in environmental issues[11].

As with the psychosocial approach, attitudes towards the environment are also affected by variables such as age, gender,

and socioeconomic status. Schools are of vital importance in terms of developing attitudes towards the environment, both because they are directly related to these variables and because they are the most effective education units starting from primary school. For this reason, teacher proficiency is one of the indispensable elements of the educational environment in environmental education, as in all levels of education. This situation reveals the importance of teachers who have positive attitudes towards the environment and can perform responsible behaviours for a healthy and effective environmental education[12]. Therefore, studies on the attitudes of teachers and teacher candidates who have an important role in effective environmental education towards the environment and the factors affecting these attitudes will make significant contributions to the field. From this point of view, the aim of this study is to determine the attitudes of special education teacher candidates towards the environment, who have great responsibilities in terms of environmental education.

METHODS

Model

This study, which was conducted to determine the attitudes of special education teacher candidates towards the environment and to determine whether these attitudes are different according to gender, age and class variables, is a Descriptive Single Survey Model.

Study Group

The study group of the research consists of a total of 120 special education teacher candidates (90 girls, 30 boys) studying at a state university in Turkey in the fall semester of the 2014-2015 academic year. The distribution of these students, who make up the study group, according to their grade level and age is presented in Table 1 and Table 2, respectively.

Table. 1: Distribution of Teacher Candidates According to Gender and Class Levels

		Class								Total	
		1		2		3		4			
		f	%	F	%	f	%	f	%	f	%
Gender	G	20	17,6	16	12,7	18	14,1	26	16,9	90	75
	B	7	3,5	9	6,3	6	1,4	8	2,1	30	25
Total		30	21,1	27	19,0	22	15,5	27	19,0	120	100.0

Table 2:Distribution of Teacher Candidates According to Ages

Yaş	17	18	19	20	21	22	23	24	25	26	Toplam
f	2	12	22	27	16	18	9	7	6	1	120
%	1,4	8,5	15,5	23,9	11,3	19,7	9,9	4,9	4,2	0,7	100

Data Collection Tools

In this study, a scale developed by Ugulu et al. (2013) was used to determine the attitudes of pre-service biology teachers towards the environment [4]. As a result of the validity and reliability analyzes performed on the scale for this study, it was seen that the scale had 4 sub-dimensions. Considering the results obtained from the pre-service teachers in the study group, the consistency between the items for these four dimensions was re-examined and the Cronbach's alpha reliability coefficient of the "environmental awareness" sub-dimension (15 items) was 0.81, and the reliability of the "attitude towards re-acquisition" sub-dimension (8 items). coefficient of 0.75, the reliability coefficient of the "environmental awareness and behaviour" sub-dimension (7 items) was 0.74, and the reliability coefficient of the "attitude towards recycling" sub-dimension (5 items) was 0.66. As a result of the reliability studies on the whole scale, Cronbach's alpha reliability coefficient of the scale was determined as 0.85. In the scale consisting of 35 items, participants are asked to evaluate themselves on a 4-point Likert-type scale ranging from "1 = disagree" to "4 = agree". In addition, in the personal information form part of the test, there are questions about the independent variables of the research such as the name, surname, age, gender and class of the participants.

Data Analysis

The data obtained from the scale of attitude towards the environment were transferred to the computer environment and analyzed with the SPSS 24.00 package program. Whether the prospective teachers' attitudes towards the environment show a significant difference in terms of the independent variables of the research was investigated using the t-test for bivariate features and the ANOVA (One-Way Analysis of Variance) test for features with more than two variables. If there was a

significant difference between the groups as a result of the ANOVA test, the source of the difference was determined by the Scheffe test.

RESULTS

The highest score that special education teacher candidates can get from the 4-point Likert-type EAS consisting of 35 items was evaluated as 140, and as a result of the analysis, the average attitude score of the study group consisting of 120 teacher candidates was found to be 105.46 (Table 3).

Special Education Teacher candidates average 48.15 out of 15 items in the "Environmental awareness" dimension, one of the EAS sub-scales; The average of 8 items in the "Attitude toward recovery" dimension was 26.53; They scored an average of 12.03 from 5 items in the "Attitude toward recycling" dimension and 18.75 points from 7 items in the "Environmental consciousness and behaviour" dimension (Table 3). When these values are examined, pre-service teachers achieved the highest attitude score in the "Environmental awareness" sub-dimension, and they reached a positive attitude percentage of 85% in the "Attitude towards re-acquisition" sub-dimension.

Table 3: Environmental Attitudes of Teacher Candidates

Sub-dimensions	N	Item number	Mean	SS	Max	Min
Environmental awareness	120	15	48,15	4,79	58	35
Attitude toward recovery	120	8	26,53	2,75	30	22
Attitude toward recycling	120	5	12,03	2,38	18	5
Environmental consciousness and behavior	120	7	18,75	2,87	26	12
Total	120	35	105,46	9,69	137	85

When the averages of pre-service teachers' attitudes towards the environment are evaluated according to their grade levels, it is seen that the mean of the candidates studying in the 1st and 2nd grades is below the general average (X= 105.46), and the attitude scores of the candidates studying in the 3rd and 4th grades (X3=105.95, X4=107.29) is above the general average (Table 4). On the other hand, when the scores of attitudes towards the environment are evaluated according to the age variable, it is seen that the scores of attitudes towards the environment increase as the age of the teacher candidates increases (Table 5).

Table. 4: Environmental Attitude Levels According to Gender and Class Levels

		Class											
		1			2			3			4		
		N	X	SS	N	X	SS	N	X	SS	N	X	SS
Gender	**G**	20	103,60	7,4	16	104,5	8,4	18	108,49	8,0	26	111,58	9,6
	B	7	101,90	6,5	9	101,1	14,4	6	102,00	4,2	8	104,00	13,0
Total		27	102,15	7,2	25	103,7	10,5	24	105,95	7,8	24	107,29	10,7

Table. 5: Environmental Attitude Levels According to Ages

Age	N	X	SS
17-19	36	103,56	8,62
20-22	61	104,98	9,66
23-26	23	106,24	10,25

The t-Test results, which were conducted to compare the environmental attitude scores of special education teacher candidates according to the data obtained from the EAS, according to gender, showed that there was no statistically significant difference between the candidates in terms of this variable (p>0.05) (Table 6).

Table. 6: t-Test Analysis of EAS According to Gender

Gender	N	X	SS	sd	p
G	90	106,31	7,32	119	0,136
B	30	103,72	6,05		

One-way ANOVA was applied to test the difference between the mean scores of special education teacher candidates regarding their attitudes towards the environment according to grade level. The results of the analysis show that there is no statistically significant difference between the classes in terms of attitude towards the environment (p>0.05) (Table 7).

Table 7: ANOVA Analysis of EAS Scores According to Class Levels

Source	Sum of Squares	df	Mean Square	F	P	Sig.
Between Groups	12121,709	119	136,149	1,789	,148	-
Within Groups	503,241	1	253,132			
Total	12507,973	121				

One-way ANOVA was applied to test the difference between the mean scores of special education teacher candidates' environmental attitude scores according to age level. Analysis results show that there is no statistically significant difference between age groups in terms of attitude towards the environment (p>0.05) (Table 8).

Table 8: ANOVA Analysis of EAS Scores According to Age Levels

Source	Sum of Squares	df	Mean Square	F	P	Sig.
Between Groups	119,709	119	91,149	1,865	,169	-
Within Groups	333,241	1	165,160			
Total	12507,973	121				

DISCUSSION

In the study, it was aimed to determine the attitudes of special education teacher candidates towards the environment and to compare these attitudes according to variables such as education level, gender and age. For this purpose, a 4-point Likert-type Attitude Towards Environment Scale consisting of 35 items developed by Ugulu et al. (2013) was used as a data collection tool [4]. According to the results of the research, when the mean attitudes of the pre-service teachers towards the environment are evaluated according to their grade levels, it is seen that the attitude scores of the pre-service teachers studying in the 3rd and 4th grades are slightly higher than the averages of the candidates studying in the 1st and 2nd grades. However, when the scores of attitudes towards the environment are evaluated according to the age variable, it is seen that the scores of attitudes towards the environment increase as the age of the teacher candidates increases.

As a result of the statistical comparison of the attitude scores of the teacher candidates who make up the research group according to the independent variables of the research, it was concluded that the difference between the averages was not significant (p>0.05). This situation can be explained by the fact that there has not been enough development to make a statistically significant difference in the attitudes of special education teacher candidates towards the environment during their undergraduate education.

Sama (2003) in his study investigating pre-service teachers' attitudes towards the environment, found that there was no statistically significant difference between students studying in the first and last year of different departments[13]. Deniş and Genç (2007) found that there was no statistically significant difference between the first-year students who did not take the course and the third-year students who took the course in their study in which they compared the attitudes of primary

school teachers who took and did not take environmental science courses[14]. The results of the mentioned studies coincide with the results of this study. On the other hand, Ek, Kılıç, Öğdüm, Duzgun, and Şeker (2009) found a statistically significant difference in favour of senior students in their study on the environmental attitudes of university students studying in different departments[15].

The findings of Özmen, Çetinkaya, and Nehir (2005) researching university students' attitudes towards environmental problems show that environmental attitudes are directly proportional to age[16]. Similarly, according to the research findings of Ek, Kılıç, Öğdüm, Düzgün, and Şeker (2009), the attitudes of students aged 21 and over towards the environment are higher and statistically significant than the attitudes of students aged 20 and younger. The findings of the studies given in terms of the age variable do not overlap with the findings of this study[15]. On the other hand, according to the results of Özdemir, Yıldız, Ocaktan, and Sarışen (2004) research on the environmental awareness of medical school students, the attitude towards the environment does not show a statistically significant difference according to the age variable[17]. Unlike these findings, Koval and Mertig (2002) found in their study that the general environmental attitudes of young people were higher than those of the elderly[18].

It has become a necessity to raise environmentally sensitive individuals in order to ensure that future generations live in a healthier and safer environment. However, in studies conducted in this field, it has been concluded that environmental education is not effective at the desired level at all educational levels and it is insufficient to create desired behaviours towards the environment. For this reason, studies on attitudes and behaviours towards the environment are becoming increasingly important. It is thought that the study carried out for this purpose will be useful for new studies.

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