

ENVIRONMENTAL EDUCATION AT THE SPECIAL SCHOOL: OPINIONS OF SPECIAL EDUCATION TEACHERS

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ABSTRACT

This investigation, conducted in Greece, inquired 80 special education teachers on their opinions on whether they feel ready to teach Environmental Education (EE) to pupils with disabilities, whether instruction of EE is possible in special or in regular education classes and whether EE is beneficial to people with disabilities, by delivering a structured questionnaire. The questionnaire had a section with closed-type questions on demographic data (sex, age, educational background, further training in special education, years of service, location of school) and the three above mentioned sections, in sum 15 questions, on EE and pupils with disabilities. The results showed that educators in general do not feel particularly prepared and ready to teach EE to pupils with disabilities, since they do not have either the appropriate training or sufficient knowledge on how to teach EE to children with disabilities and for this it is necessary to receive further training on activities which provide ideas for planning such a course as well as on the various disabilities.

Keywords: Environmental Education, teachers' opinions, children with disabilities.

INTRODUCTION

Despite the thirty years presence of Environmental Education (EE), its nature and goals are not distinctively understood by teachers, school principals, supervisors, community leaders and even by EE teachers themselves [1-2]. Diverse studies have shown that EE has little priority in schools and in continuing education programs for teachers [3]. More specifically, time spent on teaching EE is limited and its effect is barely visible to the naked eye [4-5]. The most common cause of failure of school

programs on EE is the unsuitable further training of teachers [6]. Studies conducted in Greece (E.U.) [7-9] concluded that the factors which hinder the inclusion of EE in educational programming are the debarring of EE from school courses, the lack of an integrated educational plan, the lack of sufficient planning, the lack of a long-term continuing education of teachers in environmental issues, the lack of personal and material motives for teachers, the lack of networking for exchanging information among teachers who are interested in EE and, finally, the lack of a central guiding instrument. In addition, other results [10] showed that the most important teaching problems reported by public school teachers were the insufficient emphasis of teacher-training programs on environmental issues, the lack of appropriate preparation time, the insufficient funding, the inadequate access to educational sources to facilitate the application of EE in school courses and the lack of familiarization with effective EE activities. A national review of 294 High Schools in England and Wales [11] pinpointed as the major obstacles the lack of time, the lack of appropriate sources, the absence of suitable training of teachers and the absence of experience or motivation among teachers. The fundamental factors which lead to the difficulties of EE are: a) the false perception of EE in educators (teachers, administrators and supervisors), b) the weak philosophical basis and the irresolute goals of schools, c) the lack of coordination of EE programs among teachers and d) the disparities between teachers and administrators [12]. Finally, a number of factors which put an end to the effective incorporation of EE in the educational programs of teachers are reported [13]. These factors include the time barriers of personnel and sources, alongside with the lack of experience and of expert opinion among personnel regarding the goals, the substance and the methodology of EE. Consequently, the issues confronting EE today are as important as the deficiency in the quality of further education of teachers. The

larger part of training is unofficial and the majority of state agents give little priority to intra-officious training [14]. Professional training, when it is institutionalized and incorporated in a holistic manner, can encourage and potentiate the position of EE in the classroom.

Recent studies have supported the obvious conclusion that the time which teachers devote to instruction on the environment, increases proportionally to the further training they receive on issues of EE [15-16]. The development of impressive packages of EE activities was an easy task, as it was their distribution to participating teachers, but a recent study showed that this type of inclusion of EE in schools did not prove particularly successful [17]. Several bureaucratic problems, in addition to the uncertainty that teachers feel regarding their background knowledge on environmental issues, the lack of appropriate educational material –either for themselves or for the pupils- as well as the problem of the strict school schedule, have most of them postponing the application of EE [18]. Most teachers who feel devoted towards EE develop educational material based on their personal experiences and ideas. They employ material which is available in school libraries, books available in the market, videos and other sources of information covering current issues [19]. The limitations and difficulties which teachers confront in applying EE programs were classified into three categories: 1) practical issues, such as limitations placed on time, programming and materials, 2) conceptual issues, such as the confusion among the investigators over the nature of EE, and 3) concerns relating to whether teachers feel that they have permission to conduct EE activities[20].

There is plenty of evidence showing that the main barrier for EE is the practices many teachers follow in the classroom, emphasizing the traditional methods and ignoring the “transformation of values and social change” accompanying EE [21].

Schools can improve their performance on EE by working with all members of the school communities [22]. Furthermore, EE is better developed in primary schools than in school of secondary education [23]. Actually, there is discord between the theory of school curriculum for the development of EE and what occurs in school reality [24]. Finally, the school curriculum on EE and its instruction should reinforce the grasp of the historical evolution, the causes and the extent of the environmental crisis. Moreover, the content of EE should take in account the educational practices of the various approaches in EE [25].

The aim of this investigation was to examine the opinions of primary and secondary special education teachers regarding the instruction of EE to children and adolescents with disabilities.

METHOD

Participants

The subjects of this investigation were special education teachers of primary and secondary education, men and mostly women, thirty to sixty years of age, of various specializations. Eighty participants provided the responses which constituted the final sample, of who 77.5% were women and 22.5% men. The age-distribution of the participants were 35% between 31 to 40 years of age, followed by 31% between 41 to 50 years of age. The ages up to 50 years represented the 91.3% of the teachers sampled.

Regarding the participants' educational background 49.4% reported graduates of early childhood education, followed by 10% graduates of school of philosophy and another 10% graduates of agricultural school. Regarding their time in service, 35.5%

of them have been working between 11 to 25 years, followed by 30% with 4 to 10 years in service.

As for the location of the participants' employment, 78.2% were employed in urban schools while 21.8% in rural schools. Finally, regarding their further training on special education, 25% of the sample responded positively. As for their previous experience with people with disabilities in family, working or domestic environment 38.8% of them reported positively. Table 1 lists the distribution of percentages of the general and the demographic characteristics of the participants.

Table 1

The distribution of frequencies and percentages of the participants' general and demographic characteristics.

Demographic Characteristics				
	Categories	Number	%	
SEX	Man	18	22,5	
	Woman	62	77,5	
AGE	22-30	20	25,0	
	31-40	28	35,0	
	41-50	25	31,3	
	51-60	7	8,8	
UNIVERISTY	School of Education	39	49,4	
	School of Philosophy	8	10,1	
	Computer Science, Finance	6	7,6	
	Mathematics, Natural Sciences (Chemistry, Biology)	4	5,1	
	Agricultural School	8	10,1	
	Physical Education School	6	7,6	
	School of Fine Arts	2	2,5	

	School of Social Studies	5	6,3
	School of Theology	1	1,3
FURTHER TRAINING ON SPECIAL EDUCATION	Yes	20	25,0
	No	60	75,0
TIME IN SERVICE	0-3	19	23,8
	4-10	24	30,0
	11-25	28	35,0
	25+	9	11,3
LOCATION OF EMPLOYMENT	Urban	61	78,2
	Rural	17	21,8
PREVIOUS EXPERIENCE WITH PEOPLE WITH DISABILITIES IN FAMILY, WORKING OR FAMILIAL ENVIRONMENT	No	31	38,8
	Yes	49	61,3

Materials

The collection of data was done with the use of a questionnaire for the following reasons:

- A) With the present investigation we attempted to make a first record of an existing situation.
- B) We could thus quickly collect relevant information.
- C) The participants were able to express their opinions with the help of a questionnaire.

The questionnaire used consisted of questions in 4 unities:

- A) Demographic data (first unit)

B) Positions and opinions relating to the teaching of EE to children with disabilities (second, third and fourth unit)

Specifically:

A) Demographic data

The demographic data collected were the following:

- Sex
- Age
- Educational background
- Further education in special education
- Years of service
- School location
- Experience with people with disabilities

The sum of these questions were of the closed type.

B) EE and pupils with disabilities

This unit contained questions that examine the opinions of teachers relating to the teaching of EE to children with disabilities. In sum, 15 questions were used divided in 3 subunits.

These subunits were:

- 1) Preparation of teachers for EE instruction to pupils with disabilities (6 questions).
- 2) Teacher opinions on the feasibility of EE as a course in special education schools and institutions (5 questions).

- 3) The opinions of teachers on the possible benefits from EE instruction to pupils with disabilities (4 questions).

In the above questions closed type answers were used in a 5 grade likert scale, where 1 represented and 5 complete agreement, with the value 3 representing the median of this scale which corresponded to the choice 'I am not sure'.

Procedure

The collection of the questionnaires lasted two months. Eighty questionnaires were completed. The questionnaire given to special education teachers to answer was divided in three parts (the above mentioned 3 subunits). The first part had to do with the teachers and their opinions regarding whether they feel ready to teach EE to people with disabilities, the second part related to whether instruction of EE is possible in special or in regular education classes and the third part regarded to whether EE is beneficial to people with special needs.

RESULTS

In general, the questionnaire appeared to be comprehensible to the teachers and their answers to relate to our investigative questions. For every subunit of questions a validity coefficient is calculated.

Validity of questions of subunit A:

The validity coefficient Cronbach $\alpha=0.730$ is high, since coefficient values above 0.7 are valid. This means that the sum of questions can be utilized. Removal of question "6. The teaching of EE to pupils with disabilities outside the classroom means more work for me" further increases validity.

Validity of questions of subunit B:

The validity coefficient Cronbach $\alpha=0.520$ is medium. The validity improves with the removal of question “3. Pupils with disabilities need one-to-one (individualized) instruction, in order to successfully participate in EE activities”.

Validity of questions of subunit C:

The validity coefficient Cronbach $\alpha=0.599$ is high. The validity improves with the removal of question “1. Through EE instruction the pupil with disability will further develop his/hers knowledge matter”, hence the validity coefficient is high.

The distribution of frequencies and percentages of the variables in the questionnaire are presented initially, alongside with the presentation of the placement and distribution measures (means and standard deviations) of the variables based on the 5 degree scale of the instrument. The presentation is conducted per subunit of variables on the base of the instrument’s grouping. Supporting graphs are presented alongside, as well as, the trust range of the means.

Following, the correlations between the questionnaire’s variables and the demographic characteristics of the sample of the present study were examined. In the case of compound variables, the examination concerned the mean values and a t-test was applied for independent samples in the subgroups, which are created from the variables of demographic and general characteristics of the sampled subjects in the case of 2 subgroups and with an ANOVA variance analysis in the case of more than 2 subgroups. In this last case, a multiple comparisons table of mean values follows. The probability level used was $p=0.05$. The analysis of the sample was conducted with the Statistical Package for Social Sciences (SPSS 21).

Educator preparation for teaching EE to pupils with disabilities – preparation and needs

As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.

To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.

To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.

To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.

To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.

Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me.

Table 2 looks at the answers of special education teachers relating to their opinions on the possible preparation which must be realized in order to teach EE to pupils with disabilities. As mentioned previously, a 5 degree scale was used, where high values denote agreement with the presented question, low values disagreement and the value 3 being the middle of the scale. Comparative tables of distribution of percentages and of position measures and spread with supporting graphs follow.

Examining the answers of educators regarding their opinions on the possible preparation they must have in order to teach EE to pupils with disabilities we found the following results:

Table 2

Mean values and spread of grades on the likert scale of the opinions on preparation for teaching EE to pupils with disabilities for the sampled group.

	N	Min	Max	Mean	SE
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	80	1	5	3,25	1,196
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	80	1	5	4,15	,995
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	80	1	5	3,00	1,147
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	80	1	5	4,16	,987
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	80	1	5	4,21	,910
Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	80	1	5	3,69	1,098
Valid N (listwise)	80				

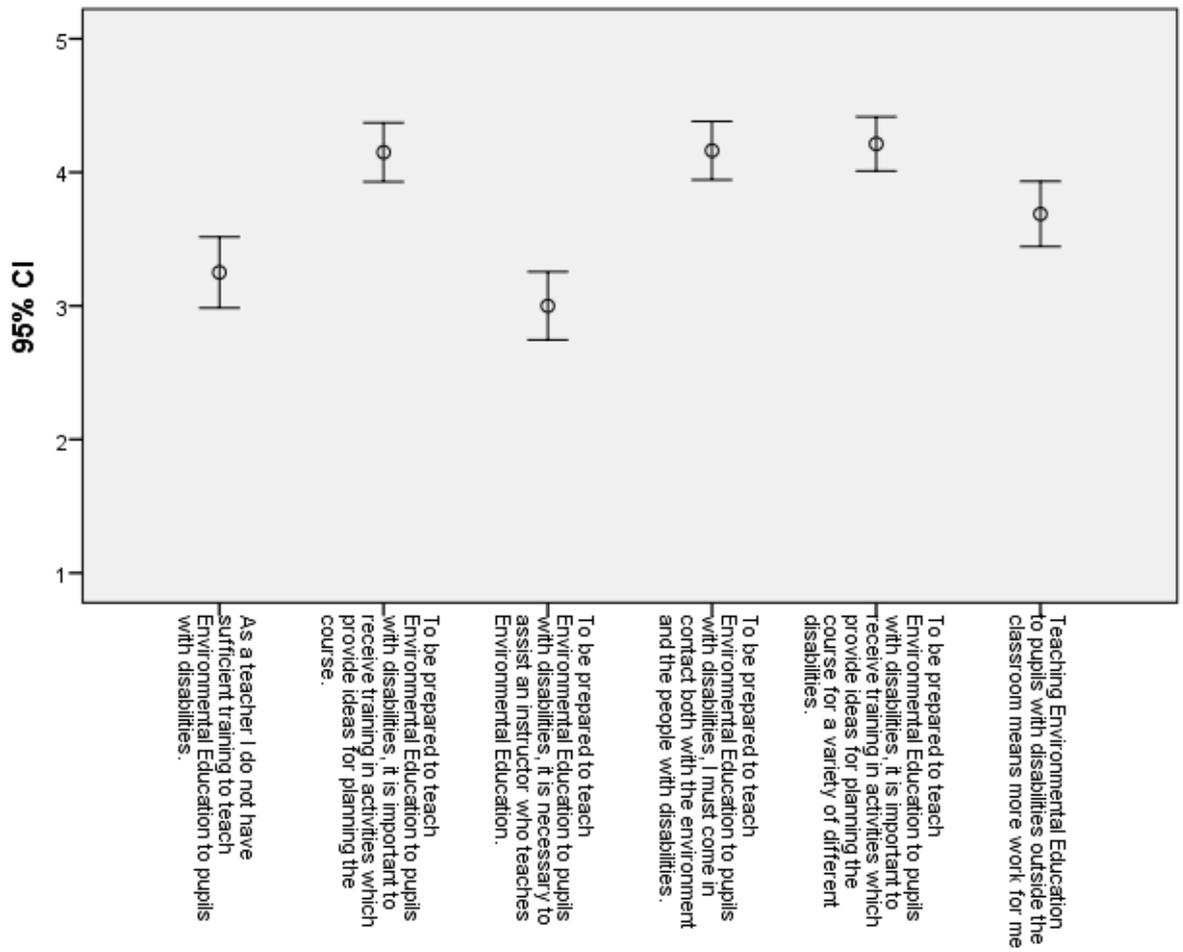


Fig. 1. Comparison of mean values of grades on the likert scale within a 95% confidence interval on preparation for teaching EE to pupils with disabilities for the sampled group.

Table 3

Distribution of percentages of responses on preparation for teaching EE to pupils with disabilities for the sampled group.

	complete disagree ment	disagree ment	'I am not sure'	agree ment	complete agree ment
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	10,0	17,5	23,8	35,0	13,8
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	2,5	7,5	5,0	42,5	42,5
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	7,5	35,0	15,0	35,0	7,5
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	3,8	3,8	7,5	42,5	42,5
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	3,8	1,3	6,3	47,5	41,3
Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	2,5	17,5	12,5	43,8	23,8

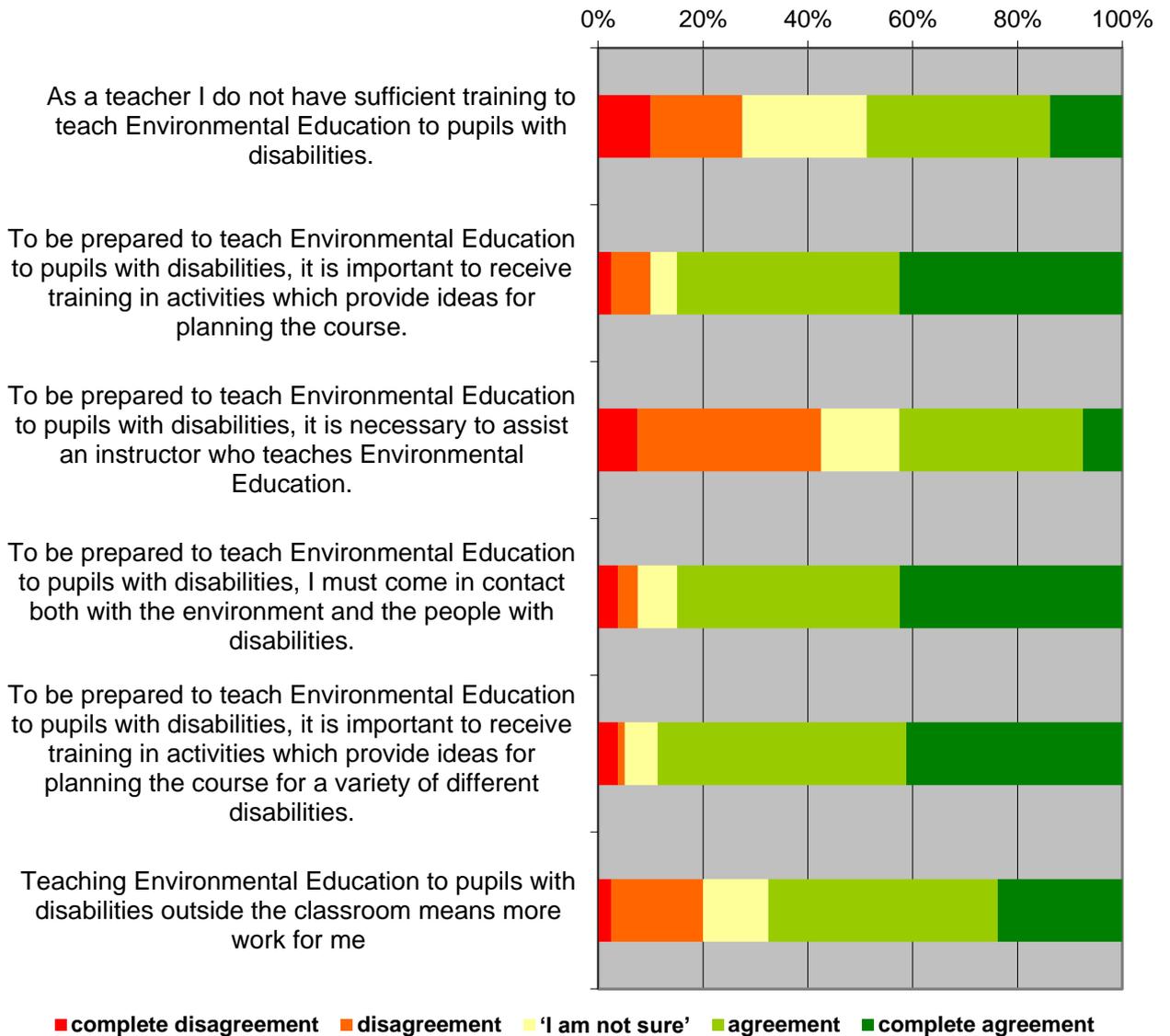


Figure Caption

Fig. 2. Comparative bar graphs of distribution of responses on preparation for teaching EE to pupils with disabilities for the sampled group.

The following cases show low mean value which is placed on the median position of the scale:

3. To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.

1. As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.

Consequently, the present preparedness for teaching on behalf of the teachers, as the acquisition of experience by taking the place of assistant of another educator, are found in median position and with general tendency that denotes the choice “I am not certain”. More specifically, the median position of the mean value, in the case of acquisition of experience, results not from the high concentration of response to the choice “I am not certain” but from the equally distributed responses between opposite choices. As a result, the sample appears divided between the choices “Agree” / “Agree absolutely” and “Disagree”/ “Disagree absolutely”, which shows the fission of opinions to two opposing sides as for the specific means of preparation.

The sum of the remaining questions show higher mean value therefore the sample agrees with the formulated opinions. Thus, there is a high degree of agreement concerning the additional work which EE requires for pupils with disabilities. At the same time, still, there is high and yet higher degree of agreement for the following statements:

2. To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.

4. To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.

5. To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.

This fact highlights the need of existence of preparation as very important at the level of EE course but also at the level of familiarization with the group of pupils and the methodologies which will cover the needs of every disability.

The opinions of the educator on the feasibility of teaching of EE as a course in special education schools and in institutions

Environmental Education should not be taught as a course in special education schools and in institutions.

Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.

Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.

Environmental Education as a course is taught only outside the classroom.

Pupils with disabilities should be taught only in the regular class.

Examining the responses of teachers concerning their opinions on the feasibility of EE instruction to pupils with disabilities we found the following results:

Table 4

Mean values and spread of grades on the likert scale of the opinions on the feasibility of teaching of EE as a course in special education schools and in institutions for the sampled group.

	N	Min	Max	Mean	SE
Environmental Education should not be taught as a course in special education schools and in institutions.	79	1	5	1,73	,873
Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	80	1	5	2,63	1,072
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	80	1	5	2,90	1,086
Environmental Education as a course is taught only outside the classroom.	80	1	5	2,21	,852
Pupils with disabilities should be taught only in the regular class.	80	1	4	1,74	,742
Valid N (listwise)	79				

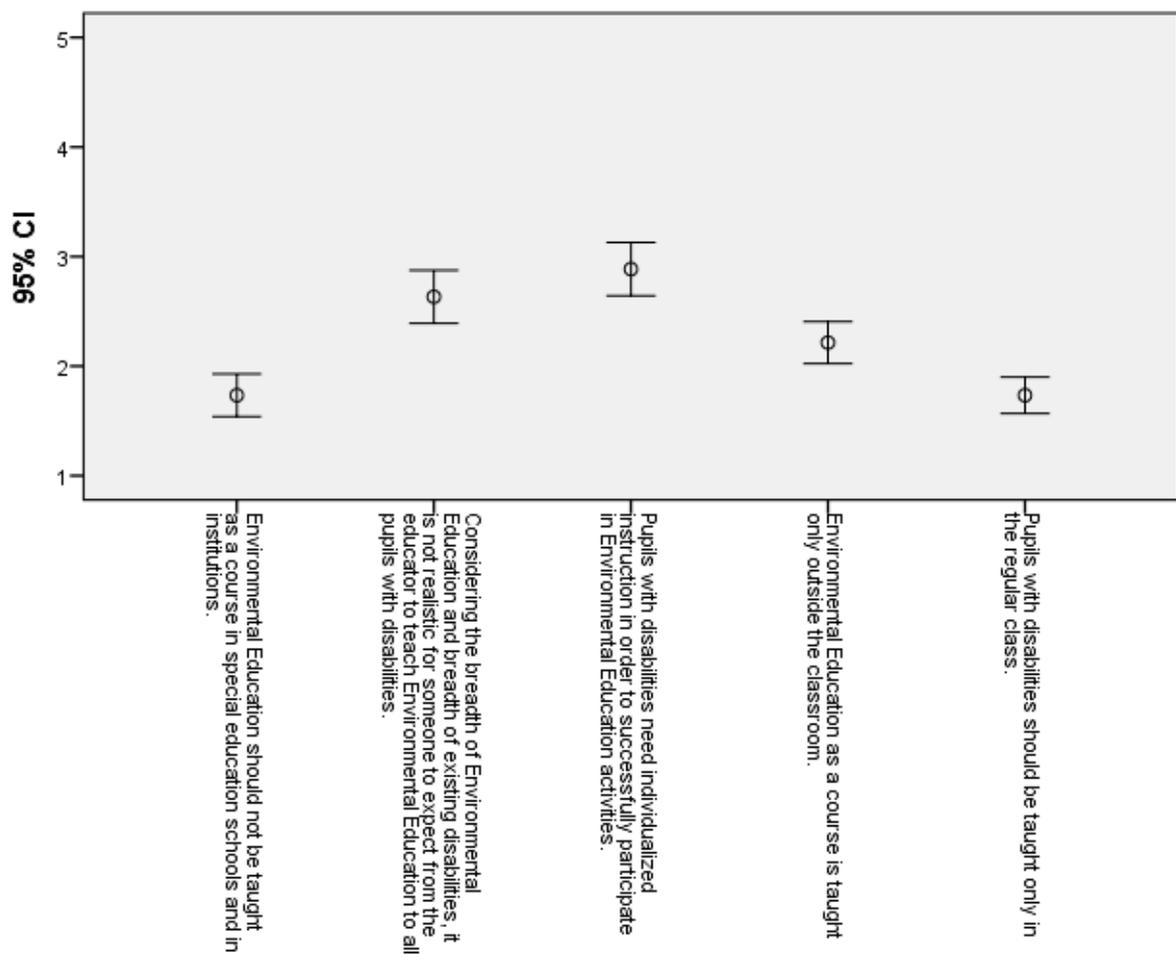


Figure Caption

Fig. 3. Comparison of mean values of grades on the likert scale within a 95% trust range of the opinions on the feasibility of teaching of EE as a course in special education schools and in institutions for the sampled group.

Table 5

Distribution of percentages of responses of the opinions on the feasibility of teaching of EE as a course in special education schools and in institutions for the sampled group.

	complete disagree- ment	disagree- ment	'I am not sure'	agreement	complete agreement
Environmental Education should not be taught as a course in special education schools and in institutions.	46,8	39,2	8,9	3,8	1,3
Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	11,3	42,5	25,0	15,0	6,3
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	8,8	31,3	27,5	26,3	6,3
Environmental Education as a course is taught only outside the classroom.	15,0	60,0	15,0	8,8	1,3
Pupils with disabilities should be taught only in the regular class.	40,0	50,0	6,3	3,8	

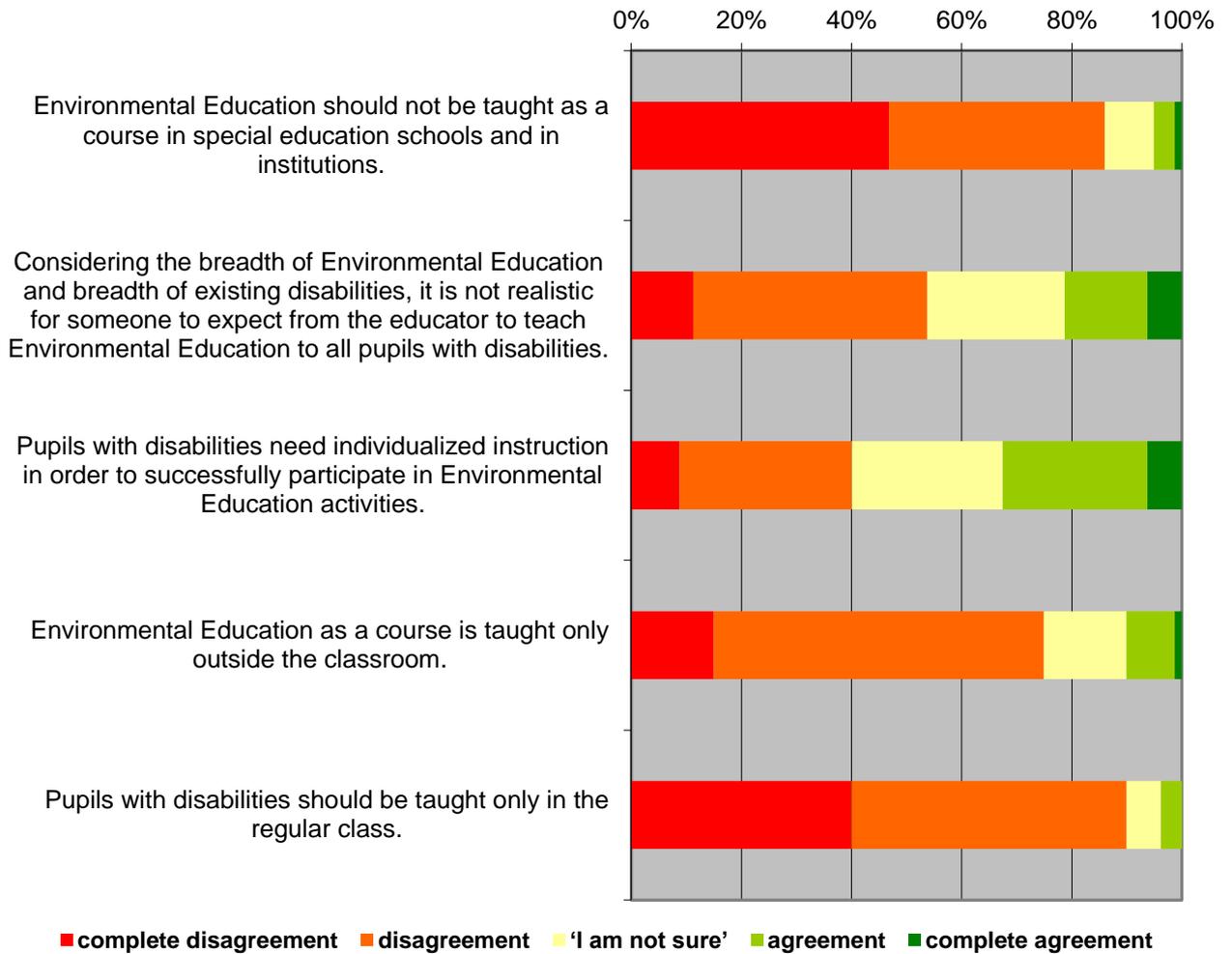


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Fig. 4. Comparative bar graphs of distribution of responses of the opinions on the feasibility of teaching of EE as a course in special education schools and in institutions for the sampled group.

In relation to the statement supporting that EE should not be taught to people with disability, the agreement degree is very low ($\mu=1.73$) and results from 86% of the participants sample who declared that they absolutely or to some degree disagree with the above statement. Consequently, the above opinion is rejected by educators as only 5.1% of them agrees. Similarly rejected is the opinion that pupils with disabilities should be taught only in the regular class. Disagreement with the specific

statement delivered the 90% of the teachers of the sample, without an opinion appeared the 6.3% and only the 3.8% agreed. Alongside, from negative to median (not certain) is the position of the teachers of the sample and for the sum of the remaining statements of the subunit. Low evaluation appears also for the position that EE should be taught only outside the classroom. Only the 10% of teachers is in agreement with this statement, while the 75% disagrees in general or absolutely with this proclivity.

Relating to the possibility of the educator to teach EE to all pupils with disabilities and this to be realistic for every kind of disability, it appears that the position of the majority of teachers is to reject this statement, as the 53.8% disagrees with the unreality of instruction and consequently has the opinion that something of this sort is realistic, while the remaining percentage is formed by the 25% of teachers who have no opinion and only the 21.3% who agree with the stated position. Finally, more median ($\mu=2.9$) is the evaluation of the declaration “3. Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities” where opinions are divided with a tendency towards disagreement.

The opinions of the educators on the possible benefits from EE instruction to pupils with disabilities

Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.

The instruction of Environmental Education will help the pupils with disabilities in their socialization.

The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.

Environmental Education will help the pupils' with disabilities vocational rehabilitation.

Examining the responses of teachers in relation to their opinions on the benefits of EE instruction to pupils with disabilities we found the following results:

Table 6

Mean values and spread of grades on the likert scale of the opinions on the benefits of EE instruction to pupils with disabilities for the sampled group.

	N	Min	Max	Mean	SE
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	80	2	5	4,18	,689
The instruction of Environmental Education will help the pupils with disabilities in their socialization	80	1	5	4,40	,686
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	80	1	5	4,41	,669
Environmental Education will help the pupils' with disabilities vocational rehabilitation	80	1	5	2,99	,834
Valid N (listwise)	80				

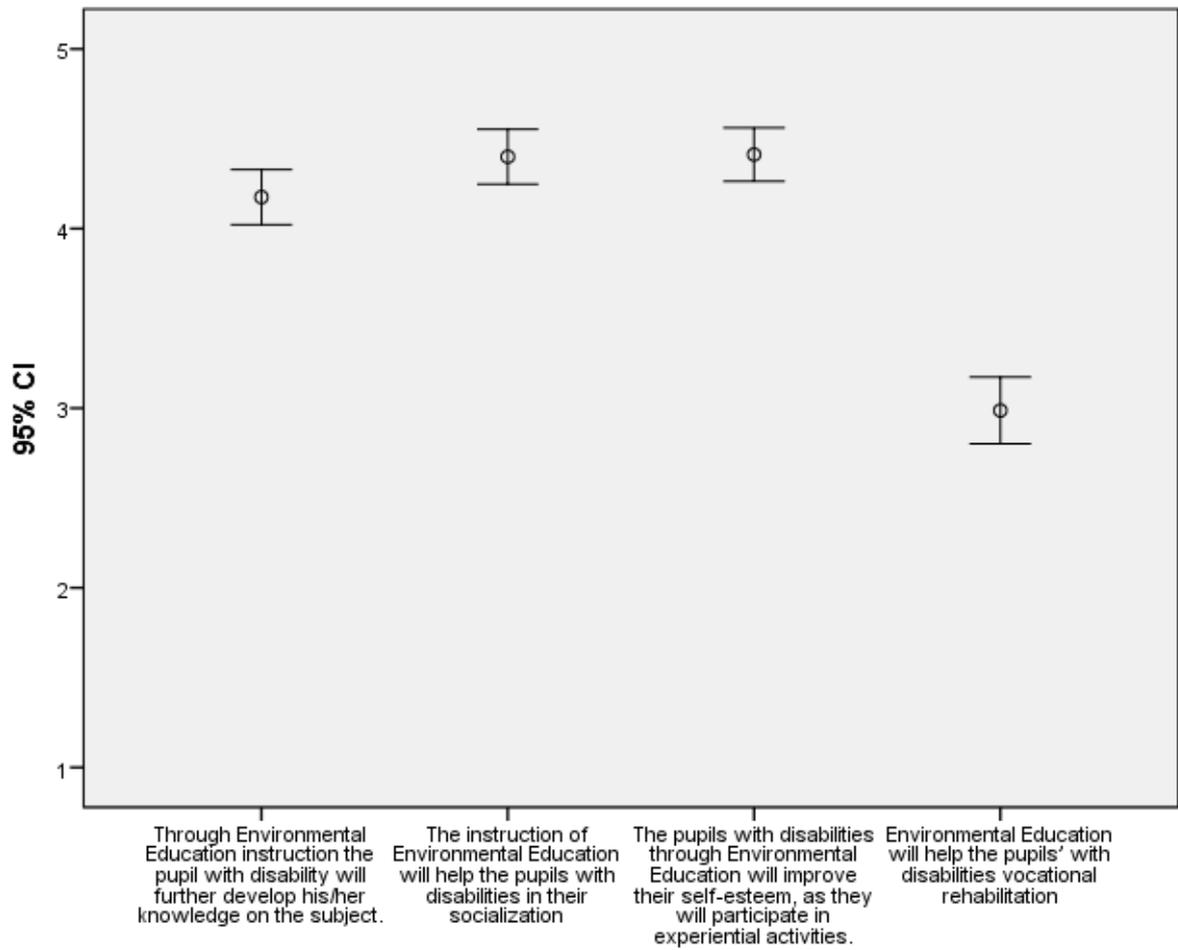


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Fig. 5. Comparison of mean values of grades on the likert scale within a 95% trust range of the opinions on the possible benefits from EE instruction to pupils with disabilities for the sampled group.

Table 7

Distribution of percentages of responses of the opinions on the benefits of EE instruction to pupils with disabilities for the sampled group.

	complete disagree- ment	disagree- ment	'I am not sure'	agree- ment	complete agree- ment
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.		2,5	8,8	57,5	31,3
The instruction of Environmental Education will help the pupils with disabilities in their socialization	1,3		3,8	47,5	47,5
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	1,3		2,5	48,8	47,5
Environmental Education will help the pupils' with disabilities vocational rehabilitation	2,5	21,3	57,5	12,5	6,3

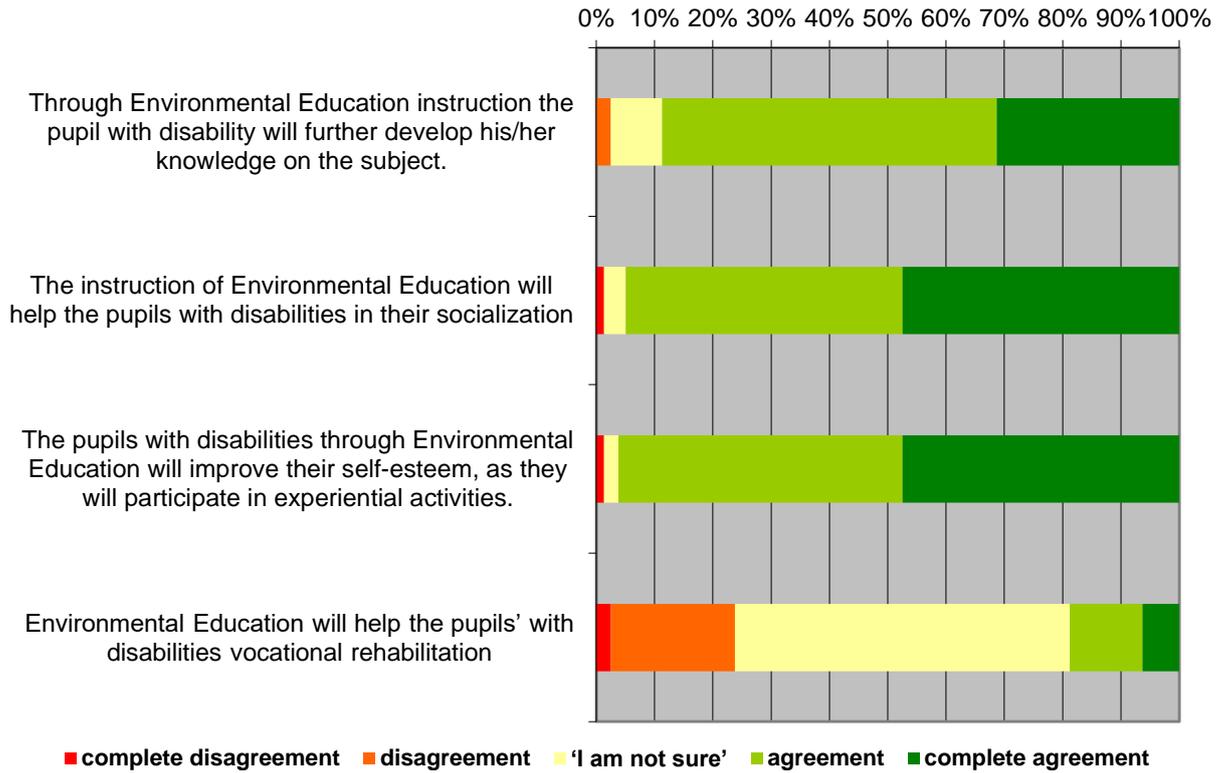


Figure Caption

Fig. 6. Comparative bar graphs of distribution of responses of the opinions on the possible benefits from EE instruction to pupils with disabilities for the sampled group.

In relation with the evaluation of the benefits in the areas of development of knowledge on the subject, support of socialization and improvement of self-esteem it is apparent that the position of teachers of the sample is absolutely positive, as the mean agreement values are very high and over 4 in the 5-degree scale, with the summed percentages of disagreement being smaller than 2.5%. On the contrary, the mean evaluation value on the assistance of EE in vocational rehabilitation is median. The middle position of teacher results from a high percentage of responses (57%) in which appear the choice “I am not certain” and which denotes the inability of the

sampled persons to evaluate a possible positive influence on vocational rehabilitation of the pupils in the future.

Examination of questions per demographic characteristic of the sample

In order to detect possible dependency of the questions with the demographic data of the participants an examination of mean values is applied with the following results:

Table 8

Examination of mean values of responses per sex by application of t-test for the sampled group.

	sex	N	MEAN	SE	t	df	p
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	man	18	3,06	1,392	-,782	78	,437
	woman	62	3,31	1,139			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	man	18	4,11	1,278	-,187	78	,852
	woman	62	4,16	,909			
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	man	18	2,83	1,150	-,698	78	,487
	woman	62	3,05	1,151			
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	man	18	4,17	1,043	,020	78	,984
	woman	62	4,16	,978			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	man	18	3,83	1,200	-2,049	78	,044
	woman	62	4,32	,785			

Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	man	18	3,67	1,138	-,091	78	,928
	woman	62	3,69	1,095			
Environmental Education should not be taught as a course in special education schools and in institutions.	man	18	1,72	1,127	-,066	77	,948
	woman	61	1,74	,794			
Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	man	18	2,56	1,247	-,310	78	,757
	woman	62	2,65	1,026			
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	man	18	2,89	1,231	-,049	78	,961
	woman	62	2,90	1,051			
Environmental Education as a course is taught only outside the classroom.	man	18	2,17	,924	-,258	78	,797
	woman	62	2,23	,838			
Pupils with disabilities should be taught only in the regular class.	man	18	1,56	,856	-1,185	78	,240
	woman	62	1,79	,704			
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	man	18	4,22	,428	,328	78	,744
	woman	62	4,16	,751			
The instruction of Environmental Education will help the pupils with disabilities in their socialization	man	18	4,33	,970	-,466	78	,643
	woman	62	4,42	,588			
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	man	18	4,06	,938	-2,668	78	,009
	woman	62	4,52	,535			
Environmental Education will help the pupils' with disabilities vocational rehabilitation	man	18	2,89	,832	-,567	78	,572
	woman	62	3,02	,839			

As concerns the sex, statistically important dependency results with the evaluation of opinions:

5. To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities. ($t(78)=-2.049$, $p=0.044<0.05$). The difference is found in the higher mean evaluation value and therefore agreement with the stated need in the case of women as opposed to men who show smaller mean value which is classified in moderate position.

3. The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities. ($t(78)=2.668$, $p=0.009<0.05$). Although both sexes evaluate the above statement with values which denote agreement with the stated opinion, the difference is found in the higher mean agreement value in the case of women as opposed to men.

In all other questions of the questionnaire there is no statistically important differentiation found in the opinions of the sexes.

Table 9

Examination of mean values of responses per participant age group by application of t-test for the sampled group.

	Age	N	Mean	SE	df	F	p
	22-30	20	3,60	1,095	2	1,187	,311
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	31-40	28	3,21	1,134	70		
	41-50	25	3,08	1,222	72		
	Total	73	3,27	1,158			

To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	22-30	20	4,45	,510	2	1,022	,365
	31-40	28	4,14	,970	70		
	41-50	25	4,08	1,077	72		
	Total	73	4,21	,912			
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	22-30	20	2,95	,999	2	1,109	,336
	31-40	28	3,29	1,117	70		
	41-50	25	2,84	1,248	72		
	Total	73	3,04	1,136			
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	22-30	20	4,45	,605	2	1,056	,353
	31-40	28	4,18	,772	70		
	41-50	25	4,08	1,115	72		
	Total	73	4,22	,870			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	22-30	20	4,45	,605	2	1,287	,283
	31-40	28	4,25	,799	70		
	41-50	25	4,04	1,060	72		
	Total	73	4,23	,858			
Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	22-30	20	3,70	1,031	2	,196	,823
	31-40	28	3,75	1,005	70		
	41-50	25	3,88	1,013	72		
	Total	73	3,78	1,003			
Environmental Education should not be taught as a course in special education schools and in institutions.	22-30	20	1,85	1,089	2	,208	,812
	31-40	27	1,70	,823	69		
	41-50	25	1,84	,800	71		
	Total	72	1,79	,887			
Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	22-30	20	2,95	1,099	2	1,139	,326
	31-40	28	2,50	1,000	70		
	41-50	25	2,64	,995	72		
	Total	73	2,67	1,028			
Pupils with disabilities need individualized	22-30	20	3,20	,894	2	,571	,568

instruction in order to successfully participate in Environmental Education activities.	31-40	28	2,89	,956	70		
	41-50	25	2,92	1,256	72		
	Total	73	2,99	1,047			
Environmental Education as a course is taught only outside the classroom.	31-40	28	2,32	,723	70		
	41-50	25	2,28	,843	72		
	Total	73	2,25	,830			
Pupils with disabilities should be taught only in the regular class.	31-40	28	1,89	,832	70		
	41-50	25	1,68	,627	72		
	Total	73	1,78	,750			
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	31-40	28	3,96	,693	70		
	41-50	25	4,24	,436	72		
	Total	73	4,14	,694			
The instruction of Environmental Education will help the pupils with disabilities in their socialization	31-40	28	4,46	,508	70		
	41-50	25	4,52	,510	72		
	Total	73	4,42	,575			
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	31-40	28	4,57	,504	70		
	41-50	25	4,28	,614	72		
	Total	73	4,45	,554			
Environmental Education will help the pupils' with disabilities vocational rehabilitation	31-40	28	3,04	,962	70		
	41-50	25	2,96	,790	72		
	Total	73	3,00	,799			

In all questions of the questionnaire there is no statistically important differentiation per age group found in the opinions of teachers.

Table 10

Examination of mean values of responses per department/ school graduated by application of t-test for the sampled group.

	Graduate of university department	N	MEA	SE	t	df	P
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	Early Childhood/Primary/Special Ed.	39	3,36	1,224	,969	77	,336
	Other	40	3,10	1,150			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	Early Childhood/Primary/Special Ed.	39	4,18	1,023	,240	77	,811
	Other	40	4,13	,992			
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	Early Childhood/Primary/Special Ed.	39	2,72	1,169	-2,102	77	,039
	Other	40	3,25	1,080			
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	Early Childhood/Primary/Special Ed.	39	4,23	,667	,371	77	,712
	Other	40	4,15	1,189			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	Early Childhood/Primary/Special Ed.	39	4,05	1,025	-1,468	77	,146
	Other	40	4,35	,770			
Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	Early Childhood/Primary/Special Ed.	39	3,72	1,025	,375	77	,708
	Other	40	3,63	1,170			
Environmental Education should not be taught as a course in special education schools and in institutions.	Early Childhood/Primary/Special Ed.	39	1,62	,711	-1,163	76	,248
	Other	39	1,85	1,014			

Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	Early Childhood/Primary/Special Ed.	39	2,54	,969	-,566	77	,573
	Other	40	2,68	1,163			
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	Early Childhood/Primary/Special Ed.	39	3,00	1,100	,920	77	,361
	Other	40	2,78	1,074			
Environmental Education as a course is taught only outside the classroom.	Early Childhood/Primary/Special Ed.	39	2,13	,767	-,763	77	,448
	Other	40	2,28	,933			
Pupils with disabilities should be taught only in the regular class.	Early Childhood/Primary/Special Ed.	39	1,64	,811	-1,097	77	,276
	Other	40	1,83	,675			
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	Early Childhood/Primary/Special Ed.	39	4,13	,732	-,618	77	,539
	Other	40	4,23	,660			
The instruction of Environmental Education will help the pupils with disabilities in their socialization	Early Childhood/Primary/Special Ed.	39	4,49	,556	1,214	77	,228
	Other	40	4,30	,791			
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	Early Childhood/Primary/Special Ed.	39	4,46	,555	,737	77	,463
	Other	40	4,35	,770			
Environmental Education will help the pupils' with disabilities vocational rehabilitation	Early Childhood/Primary/Special Ed.	39	2,87	,732	-,980	77	,330
	Other	40	3,05	,876			

Graduating schools were grouped either kindergarten and primary regular and special education departments or other. In regard of school of graduation statistically important dependency results with the evaluation of opinions:

3. To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education. ($t(78)=-2.102$, $p=0.039<0.05$). The difference is found and the higher mean evaluation value and

therefore agreement as for the above need in the case of graduates of others schools excepting kindergarten and primary regular and special education departments. In all other questions of the questionnaire there is no statistically important differentiation found as for the school of graduation.

Further training in Special Education

Table 11

Examination of mean values of responses per participants' further training in special education by application of t-test for the sampled group.

	Further training in Special Education	N	MEA	SE	t	df	p
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	yes	20	3,25	1,333	,000	78	1,000
	no	60	3,25	1,159			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	yes	20	4,20	1,105	,258	78	,797
	no	60	4,13	,965			
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	yes	20	3,25	1,293	1,127	78	,263
	no	60	2,92	1,094			
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	yes	20	4,40	,995	1,248	78	,216
	no	60	4,08	,979			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	yes	20	4,25	,967	,212	78	,833
	no	60	4,20	,898			
Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	yes	20	3,80	1,056	,527	78	,600
	no	60	3,65	1,117			
Environmental Education should not be taught as a course in special education schools and in institutions.	yes	19	1,63	,895	-,585	77	,560
	no	60	1,77	,871			
Considering the breadth of Environmental Education and breadth of	yes	20	2,60	1,188	-,120	78	,905

existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	60	2,63	1,041			
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	yes	20	3,20	1,399	1,436	78	,155
	no	60	2,80	,953			
Environmental Education as a course is taught only outside the classroom.	yes	20	2,20	,951	-,075	78	,940
	no	60	2,22	,825			
Pupils with disabilities should be taught only in the regular class.	yes	20	1,70	,923	-,259	78	,796
	no	60	1,75	,680			
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	yes	20	4,35	,745	1,317	78	,192
	no	60	4,12	,666			
The instruction of Environmental Education will help the pupils with disabilities in their socialization	yes	20	4,35	,745	-,374	78	,709
	no	60	4,42	,671			
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	yes	20	4,35	,587	-,480	78	,633
	no	60	4,43	,698			
Environmental Education will help the pupils' with disabilities vocational rehabilitation	yes	20	3,05	,686	,385	78	,701
	no	60	2,97	,882			

There was no case of statistically important differentiation on whether or not the teachers received further training in special education for all questions of the questionnaire.

Table 12

Examination of mean values of responses per group of years of service by application of ANOVA.

	Years of service	N	Mean	SE	df	F	p
	0-3	19	3,32	1,108	2	1,537	,222
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	4-10	24	3,58	1,060	68		
	11-25	28	3,00	1,361	70		
	Total	71	3,28	1,209			
	0-3	19	4,32	,478	2	1,352	,266
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	4-10	24	4,33	,963	68		
	11-25	28	3,93	1,245	70		
	Total	71	4,17	1,000			
	0-3	19	3,00	1,000	2	,419	,659
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	4-10	24	3,21	1,179	68		
	11-25	28	2,93	1,152	70		
	Total	71	3,04	1,114			
	0-3	19	4,42	,607	2	,839	,437
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	4-10	24	4,25	,794	68		
	11-25	28	4,07	1,152	70		
	Total	71	4,23	,913			
	0-3	19	4,37	,597	2	2,910	,061
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	4-10	24	4,42	,654	68		
	11-25	28	3,86	1,239	70		
	Total	71	4,18	,946			
	0-3	19	3,68	1,003	2	1,901	,157
Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	4-10	24	3,54	1,103	68		
	11-25	28	4,07	,940	70		
	Total	71	3,79	1,027			
Environmental Education should not be taught as a course in special education schools and in institutions.	0-3	19	1,79	1,134	2	,000	1,000
	4-10	23	1,78	,850	67		

	11-25	28	1,79	,787	69		
	Total	70	1,79	,899			
Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	0-3	19	2,74	1,147	2	,041	,960
	4-10	24	2,67	,917	68		
	11-25	28	2,75	1,206	70		
	Total	71	2,72	1,085			
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	0-3	19	3,16	,958	2	,742	,480
	4-10	24	2,96	1,042	68		
	11-25	28	2,79	1,067	70		
	Total	71	2,94	1,027			
Environmental Education as a course is taught only outside the classroom.	0-3	19	2,00	,882	2	,754	,474
	4-10	24	2,25	,676	68		
	11-25	28	2,29	,897	70		
	Total	71	2,20	,821			
Pupils with disabilities should be taught only in the regular class.	0-3	19	1,84	,688	2	,298	,744
	4-10	24	1,79	,779	68		
	11-25	28	1,68	,772	70		
	Total	71	1,76	,746			
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	0-3	19	4,11	,875	2	,823	,444
	4-10	24	4,04	,806	68		
	11-25	28	4,29	,460	70		
	Total	71	4,15	,710			
The instruction of Environmental Education will help the pupils with disabilities in their socialization	0-3	19	4,21	,631	2	,778	,463
	4-10	24	4,42	,584	68		
	11-25	28	4,46	,838	70		
	Total	71	4,38	,704			
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	0-3	19	4,47	,513	2	1,288	,283
	4-10	24	4,54	,588	68		
	11-25	28	4,25	,844	70		

	Total	71	4,41	,688			
	0-3	19	2,84	,688	2	,536	,587
Environmental Education will help the pupils' with disabilities vocational rehabilitation	4-10	24	3,04	,690	68		
	11-25	28	3,11	1,100	70		
	Total	71	3,01	,870			

There was no case of statistically important differentiation as for the years of service group in the opinions of teachers on the questions of the questionnaire.

Table 13

Examination of mean values of responses per location of school unit by application of t-test for the sampled group.

	School Location	N	MEA	SE	t	df	p
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	urban	61	3,20	1,181	-,470	76	,640
	Non urban	17	3,35	1,320			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	urban	61	4,13	1,008	-,375	76	,709
	Non urban	17	4,24	1,033			
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	urban	61	2,97	1,169	-,474	76	,637
	Non urban	17	3,12	1,111			
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	urban	61	4,13	,991	-,380	76	,705
	Non urban	17	4,24	1,033			
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	urban	61	4,15	,946	-1,052	76	,296
	Non urban	17	4,41	,795			
Teaching Environmental Education to pupils with disabilities	urban	61	3,66	1,167	-,360	76	,720

outside the classroom means more work for me	Non urban	17	3,76	,831			
Environmental Education should not be taught as a course in special education schools and in institutions.	urban	60	1,73	,841	-,129	75	,898
	Non urban	17	1,76	1,033			
Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	urban	61	2,66	1,109	,029	76	,977
	Non urban	17	2,65	,931			
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	urban	61	2,82	1,103	-1,392	76	,168
	Non urban	17	3,24	1,033			
Environmental Education as a course is taught only outside the classroom.	urban	61	2,23	,864	,227	76	,821
	Non urban	17	2,18	,809			
Pupils with disabilities should be taught only in the regular class.	urban	61	1,69	,765	-,941	76	,350
	Non urban	17	1,88	,697			
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	urban	61	4,18	,742	,644	76	,521
	Non urban	17	4,06	,429			
The instruction of Environmental Education will help the pupils with disabilities in their socialization	urban	61	4,43	,718	,395	76	,694
	Non urban	17	4,35	,493			
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	urban	61	4,39	,714	-,416	76	,679
	Non urban	17	4,47	,514			
Environmental Education will help the pupils' with disabilities vocational rehabilitation	urban	61	3,07	,873	1,567	76	,121
	Non urban	17	2,71	,686			

There was no case of statistically important differentiation as for the location of school unit of the teachers on the questions of the questionnaire.

Previous experience with disabilities

Table 14

Examination of mean values of responses per presence or absence of previous experience with disabilities by application of t-test for the sampled group.

Previous experience with disabilities		N	MEA	SE	t	df	p																																																																																												
		N																																																																																																	
As a teacher I do not have sufficient training to teach Environmental Education to pupils with disabilities.	no	31	3,42	,992	1,007	78	,317																																																																																												
	yes	49	3,14	1,307				To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	no	31	4,45	,723	2,209	78	,030	yes	49	3,96	1,098	To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	no	31	3,29	1,131	1,827	78	,072	yes	49	2,82	1,131	To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	no	31	4,42	,672	1,882	78	,064	yes	49	4,00	1,118	To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	no	31	4,39	,667	1,373	78	,174	yes	49	4,10	1,026	Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	no	31	3,90	,790	1,407	78	,163	yes	49	3,55	1,243	Environmental Education should not be taught as a course in special education schools and in institutions.	no	31	1,81	,833	,589	77	,558	yes	48	1,69	,903	Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730	yes	49	2,59	1,098	Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course.	no	31	4,45	,723	2,209	78	,030																																																																																												
	yes	49	3,96	1,098				To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	no	31	3,29	1,131	1,827	78	,072	yes	49	2,82	1,131	To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	no	31	4,42	,672	1,882	78	,064	yes	49	4,00	1,118	To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	no	31	4,39	,667	1,373	78	,174	yes	49	4,10	1,026	Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	no	31	3,90	,790	1,407	78	,163	yes	49	3,55	1,243	Environmental Education should not be taught as a course in special education schools and in institutions.	no	31	1,81	,833	,589	77	,558	yes	48	1,69	,903	Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730	yes	49	2,59	1,098	Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983	yes	49	2,90	1,026								
To be prepared to teach Environmental Education to pupils with disabilities, it is necessary to assist an instructor who teaches Environmental Education.	no	31	3,29	1,131	1,827	78	,072																																																																																												
	yes	49	2,82	1,131				To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	no	31	4,42	,672	1,882	78	,064	yes	49	4,00	1,118	To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	no	31	4,39	,667	1,373	78	,174	yes	49	4,10	1,026	Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	no	31	3,90	,790	1,407	78	,163	yes	49	3,55	1,243	Environmental Education should not be taught as a course in special education schools and in institutions.	no	31	1,81	,833	,589	77	,558	yes	48	1,69	,903	Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730	yes	49	2,59	1,098	Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983	yes	49	2,90	1,026																				
To be prepared to teach Environmental Education to pupils with disabilities, I must come in contact both with the environment and the people with disabilities.	no	31	4,42	,672	1,882	78	,064																																																																																												
	yes	49	4,00	1,118				To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	no	31	4,39	,667	1,373	78	,174	yes	49	4,10	1,026	Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	no	31	3,90	,790	1,407	78	,163	yes	49	3,55	1,243	Environmental Education should not be taught as a course in special education schools and in institutions.	no	31	1,81	,833	,589	77	,558	yes	48	1,69	,903	Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730	yes	49	2,59	1,098	Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983	yes	49	2,90	1,026																																
To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course for a variety of different disabilities.	no	31	4,39	,667	1,373	78	,174																																																																																												
	yes	49	4,10	1,026				Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	no	31	3,90	,790	1,407	78	,163	yes	49	3,55	1,243	Environmental Education should not be taught as a course in special education schools and in institutions.	no	31	1,81	,833	,589	77	,558	yes	48	1,69	,903	Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730	yes	49	2,59	1,098	Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983	yes	49	2,90	1,026																																												
Teaching Environmental Education to pupils with disabilities outside the classroom means more work for me	no	31	3,90	,790	1,407	78	,163																																																																																												
	yes	49	3,55	1,243				Environmental Education should not be taught as a course in special education schools and in institutions.	no	31	1,81	,833	,589	77	,558	yes	48	1,69	,903	Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730	yes	49	2,59	1,098	Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983	yes	49	2,90	1,026																																																								
Environmental Education should not be taught as a course in special education schools and in institutions.	no	31	1,81	,833	,589	77	,558																																																																																												
	yes	48	1,69	,903				Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730	yes	49	2,59	1,098	Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983	yes	49	2,90	1,026																																																																				
Considering the breadth of Environmental Education and breadth of existing disabilities, it is not realistic for someone to expect from the educator to teach Environmental Education to all pupils with disabilities.	no	31	2,68	1,045	,346	78	,730																																																																																												
	yes	49	2,59	1,098				Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983	yes	49	2,90	1,026																																																																																
Pupils with disabilities need individualized instruction in order to successfully participate in Environmental Education activities.	no	31	2,90	1,193	,021	78	,983																																																																																												
	yes	49	2,90	1,026																																																																																															

Environmental Education as a course is taught only outside the classroom.	no	31	2,42	,923	1,749	78	,084
	yes	49	2,08	,786			
Pupils with disabilities should be taught only in the regular class.	no	31	1,77	,762	,350	78	,727
	yes	49	1,71	,736			
Through Environmental Education instruction the pupil with disability will further develop his/her knowledge on the subject.	no	31	4,06	,629	-1,142	78	,257
	yes	49	4,24	,723			
The instruction of Environmental Education will help the pupils with disabilities in their socialization	no	31	4,35	,551	-,466	78	,643
	yes	49	4,43	,764			
The pupils with disabilities through Environmental Education will improve their self-esteem, as they will participate in experiential activities.	no	31	4,35	,551	-,610	78	,543
	yes	49	4,45	,738			
Environmental Education will help the pupils' with disabilities vocational rehabilitation	no	31	2,87	,922	-,994	78	,323
	yes	49	3,06	,775			

In regard of the presence of previous experience with disabilities statistically important dependence results for the following opinions:

2. To be prepared to teach Environmental Education to pupils with disabilities, it is important to receive training in activities which provide ideas for planning the course. ($t(78)=2.209$, $p=0.03<0.05$). Although both subgroups of participants evaluate the above statement with values which denote their agreement with the need, the difference is found in the higher mean agreement value in the case of the participants who declared that they have no prior experience with disabilities. A statistically important differentiation in the opinions of teachers has not been found for the remaining questions on the questionnaire.

Discussion

The present study is in agreement with Simmons [26] study in that the most important considerations for the realization of EE by teachers are the self-confidence of the teacher, his or her interest and the difficulty of instruction of EE to pupils. The findings of the present questionnaire given to special education teachers and professors showed that educators in general do not feel particularly prepared and ready to teach EE to children with disabilities, since they do not have either the appropriate training or sufficient knowledge on how to teach EE to children with special needs and for this it is necessary to receive further training on activities which provide ideas for planning such a course, as well as, on different disabilities.

Concerning matters of further training, the general conclusion drawn from the questionnaire is that most educators, although they have gone through seminars relating to special education as well as EE, they are not properly equipped during their training in order for them to be able to apply EE programs to children with disabilities. Alongside, teachers regard that teaching people with handicaps EE will mean more work for them.

Since there is no common policy concerning EE in most special schools, application of environmental programs becomes difficult. Special schools themselves should encourage teachers to develop such initiatives. An additional reason for introducing EE programs in special schools is that a number of studies have reported on the value of application of basic science programs grounded on laboratory work to empower the development of basic skills in children with disabilities. The areas of skills found to be affected by the activities of these programs are the IQ, the forms of speech, the reading ability, the mathematical concepts, the numerical skills, the

listening skills, the visual perception, the logical reasoning and the scientific procedures. In addition, children who use science programs based on laboratory work have shown improvements in their general knowledge, in social studies, in interest levels and in attitudes [27]. Likewise, there is evidence which claim that science activities are of value in the education of the culturally disadvantaged or handicapped children [28]. Special education school advisors, directors of education, school principals, specialists on issues concerning EE who can provide advice when needed, school affiliates who have a consulting role and psychologists should have greater knowledge of environmental programs and of how these can be applied to children with disabilities. In general, better training and more incentives are required for teachers of EE.

In Greece the educational system responded promptly to the need for EE, but the lack relative research can limit the functionality of EE programs in Greece. In one study, 686 pupils of fifth and sixth Grades of primary schools were examined for their knowledge on the environment, in order to develop a data base that will allow for effective planning in EE. These results showed that the children's knowledge on the environment is influenced by their immediate experiences, as well as, by the context of school books [9].

Important conclusions were drawn from one study relative to the beliefs, the skills and the planned practice of 34 general education and 23 special education teachers, who have not yet worked on planning and adapting programs, in order to include pupils with mental retardation in the classroom. This study showed that special education teachers evaluated their beliefs, their skills and their planned practice substantially higher than those of their colleagues in general education. It also showed that all participants evaluated their beliefs and planned practices substantially

higher than their skills [29]. Finally, the evaluations of teachers in general education were much lower than those in special education on skills and closer in the area of beliefs. It turns out then that special education teachers are more sensitized and more skilled from general education teachers in planning and adapting programs to pupils with mental retardation. Therefore, EE programs can be realized in special schools after specific and methodic educational policy.

CONCLUSIONS

The gap between EE and special education requires urgent solution. In planning for EE to be realized by special education teachers with children with disabilities, we present the following proposals which will help diminish or even abrogate the gap between application of EE and children with special needs. In order to obtain the successful application of EE with children with disabilities, teachers, who beyond presenters of courses are role models for children, need to be fully equipped with the appropriate knowledge, the appropriate attitude and the time for the planning of the course. Administrators who work with the teachers must support the forwarding of EE to people in disadvantage or at least should not raise barriers. All players should purvey fully, so as to provide support to special education teachers who will realize EE programs.

In this study special education teachers suggested that the lack of background in EE and the conviction that EE is not easily realized for children with a variety of disabilities are the primary reasons that prevent the application of EE for the specific populations. Therefore, we suggest that more opportunities should be provided to special education teachers to participate in additional continuing education programs

on EE. Furthermore, it would be beneficial to expand teaching of the principles of EE to all teachers and not only to teachers of the natural sciences.

As a whole, further training programs for teachers can be developed by specialists in EE, who will be employed by the Department of Education. In this case, the first duty is the formulation of a comprehensive continuing education plan for teachers, which must include the clear formulation of goals, the temporal sequence, the development of printed and other material which will provide information as well as the methodology and the involvement of teachers of all levels and all specializations [30].

In reality the current EE practices in formal education vary substantially in quantity and quality from country to country and from school to school. For the strengthening of EE in our schools, educators must gain the self-confidence and the willingness to incorporate EE programs in their classrooms. With further training on EE, educators can acquire awareness of teaching strategies for the attainment of the cognitive, the emotional and the behavioral goals of EE. Instruction should be able to provide pupils with the ability to make informed decisions, and a constructive approach seems beneficial for the strengthening of these skills [31].

Furthermore, the ideal of environmental justice is a key-idea that we need to consolidate in our educational thought and practice [32]. Finally, a displacement has been observed from the instruction of “correct” proclivities and “correct” behavior to focusing on skills which are necessary to pupils, so that they become able to discuss on an issue in a critical manner and to reason and formulate their own opinion [33]. Ecological education and field training, instruction on sustainability and global education, and other “educations” aim at the responsibility of the citizen in

democratic societies. It is a necessity that the peaceful response towards humanity and nature should be included under the same language umbrella of EE [34].

In sum, the general feature that has been emphasized in the literature is that educators in the best situations teach few satisfactory courses in EE. Consequently, the inference drawn is that there is still much to do if instructors on the environment hope to see EE become a priority in formal education [35].

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