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CHANGES IN THE ENVIRONMENTAL PERCEPTION, ATTITUDE AND BEHAVIOUR OF PARTICIPANTS AT THE END OF *NATURE* TRAINING PROJECTS

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Abstract

The most effective precautions to prevent environmental problems comprise the society's willingness to save the environment, more than the politics set by the authorities. In this context, nature training projects offer great facilities for individuals by supplying the deficiencies for nature and environment in formal training programs and in means of gaining environment-friendly individuals to the society. *"The Nature Training Projects at Natural Protected Areas in Isparta "* which has been considered by these means, has realized between the years 2007 and 2010 with eleven periods, each period lasting for a week. At the end of the projects applied, a total of 247 teachers and teacher candidates from various branches have been given the *"Nature Training Certificate".* These projects have contributed in great means to the awareness and knowledge concerning nature as well as positive environmental perceptions, attitudes and behavior on teachers and teacher candidates. In this context, the main aim of the study was presented experiences and advantages gained via the scope of these projects.

Key words: natural protected area, nature protection, nature training projects, Turkey

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1. Introduction

After realizing that human was the actual cause or major actor regarding environmental issues, it was considered that the first thing to do was to change the behavior of human (Doğan, 1997). Admittedly that it is necessary to develop knowledge, skills, positive attitudes toward the nature, and responsible behavior (Alkan et al., 2010; Bartosh, 2003; Brezuleanu et al, 2013).

It is, however, impossible to solve such problems by disregarding human-nature relationships and by considering them simply as technical phenomena. Also it is insufficient or useless on solving the problems with approaches based of prohibitions (shallow environmentalism), or approaches that do not care about participation and that do not focus sufficiently on formal education (Tlert, 1998).

Formal environmental education affects attitudes positively toward the nature and environment (Acury, 1990; Bradley et al., 1999; Falk, 2005; Fegebank, 1990; Gayford, 1996; Phenice and Griffore, 2003; Thoe and Lin, 2006). However, the formal education programs, especially in developing countries that are inadequate for dealing with nature-environmental issues, leave the gaining training individuals that are aware and cautious towards nature to chance. In studies of Soran et al. (2000), Yılmaz et al. (2002), and in many more studies applied in developing countries such as Turkey draw attention to the lack of environment education given.

Teachers name various reasons for the lack of environmental education in their classrooms. Lack of

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time and money for training, lack of support and other curriculum pressures are only some of them (Bartosh, 2003).

It is also known that many actors, who are supposed to take active roles in protecting nature (*eg.* teachers), are also weak in their specialties and knowledge of field techniques (Moseley et al., 2002). Such situation leads any seminar, program or project realized besides school education and which can be integrated with formal education to gain great importance. The education of the instructors/teachers is considered to be a great facility as the potential of the multiplier effect is rather high.

The protection of land with resource values developed into national parks, nature parks and wildlife by praising them with characteristic features like the Ramsar areas, constitutes an important part of the studies protecting nature. However, the current researches applied have detected that such experiences are not sufficient alone and that whatever is required to change the perception and attitude of people towards nature as desired should be constituted (Alkan and Korkmaz, 2009; Alkan et al., 2010; Eker and Çoban, 2010; Noughton-Treves et al., 2005). Thus, by such means, the nature protecting activities have been among the popular studies that have drawn attraction in the recent years. On the other hand, the protected nature areas offer great facilities for environmental or nature training activities.

The main approaches identified in the works mentioned above are in consensus that the objective of nature and environment educations is to develop the system of scientific knowledge and a positive attitude towards the environment (Bartosh, 2003). With this study the experiences and advantageous gained through the studies present to share the activities applied in 11 educational periods each lasting for a week and within the scope of 3 nature training projects.

The main purposes of the projects are (1) to take the matter of Isparta Natural Protected Areas within the scope of a training program with the contribution of participants specialized in the fields and those from universities, (2) to teach the participants the language of nature by providing them information related to nature, the ecosystem, the biologic varieties which will provide them the understanding of what they see and experience in nature, (3) to provide the participants to "view" nature and the capability to "show nature", (4) to provide teachers the authority and power to affect their students and those in their society by having them gain the informational supplies related to nature, and (5) to contribute to the environment and nature training by developing interdisciplinary and complementary formats that improve the scope of vision towards the nature training.

Thus we do believe that this project realized with 227 participants and specialized instructors have produced many answers to the question inquiring *"how should good nature training be?"*

2. Short presentation of the projects

The natural protected areas in the Turkey have been arranged as to The World Conservation Union (IUCN) categories and international agreements. In this context, they are categorized and titled as *National Park, Nature Park, Nature Conservation Area* and *Nature Monument* in National Park Law, Protection Forest in Forest Law, National Park before National Park Law has come into force in Forest law, *Wildlife Protection Area, Wildlife Improvement Area*, *Game Sheltering Area* and *Game Reproduction Station* in Land Hunting Law and *Special Environmental Protection Region* in Environment Law (Alkan, 2009; Dikyar and Kiriş, 2005).

The Nature Training Projects at Natural Protected Areas in Isparta (IDE) constitute of three projects called as ***IDE-1***, ***IDE-2*** and ***IDE-3***. The projects have been realized in 11 educational periods each that last for a week in Isparta city of Turkey. Total of 227 people have been awarded with the "Nature Training Certificate."

In order to increase the potential advantages of the projects and usage of the beneficial information gained via the projects teachers of science, biology and geography or teacher candidates from those branches have been chosen as target group. This has provided an important contribution to the project by creating multiplier effect. Additionally, a small amount of participants that possess leadership of scouting were accepted to the study. With foresee of training of trainers the detected target group in such a training project supported by Scientific Technological Research Council of Turkey (TUBITAK), constitutes a first in our country.

Nature/environment education is the study of the relationships and interactions between natural and human systems. It is interdisciplinary, combining aspects of natural sciences such as ecology and geography with aspects of social sciences such as public science, economics, law, etc. The training project's context being prepared with a wide scope of participants and it continuously being revised would also be rather beneficial. It is hands-on, student-centered, inquiry-driven, and relevant to students' everyday lives. In this context, the model used in the training was as "Wonder!", "Learn!" and "Apply!" The training was realized with a little theoretical format and generally by experiencing nature based on observations (visual-application) and in an interactive style. The lessons generally aimed to provide direct real experience with nature because the best way to change the behaviors is to lead by example on nature (Ballantyne and Packer, 2002; Benedict, 1991; Dresner and Gill, 1994; Farmer, et al., 2007; Palmberg and Kuru, 2000).

Many protected areas at Isparta Region such as Kovada Lake National Park, Kızıldağ National Park, Beyşehir Lake National Park, Gölcük Nature Park, Kasnak Oak Nature Protecting Area, Yazılı Kanyon Nature Park, Kovada Stream Arboretum and Lake Eğirdir were benefitted from for the training

activities applied within the project. In a weeks training duration, participants slept in tents for 2-3 days (camping) and all of their needs including feeding and drinking were made provided by themselves as integrated with nature. Many activities were given place in the training such as surviving, first-aid techniques, setting camp sites, usage of equipment, benefitting from observation tools, recording techniques, photograph and video recording, natural collection techniques, nature games, nature walks, wild life observations (wild goats, bird sighting, vegetation observations and etc.), sky observation, geological observations, ecological observations, rural society and local settlers' observation, landscape and visual values, nature walks and many more alike (IDE-1, 2007; IDE-2, 2008; IDE-3, 2010; Oğurlu et al., 2010). All other details related to the project can be reached from its web site (http://ide.sdu.edu.tr) in process since the year 2007.

3. Methodology

The material of this study constitutes form the questionnaire and interview studies applied with the participants and the project documents. Three different questionnaires were realized within the study constituting from the questionnaire applied to the participants at the beginning of the training (pre-assessment), the questionnaire applied at the end of the training (final assessment) and the observation survey.

The purpose of the first questionnaire applied to the participant teachers and teacher candidates was to detect the perception and the current thoughts over nature training, the factors that incited them to participate within the project, their expectations and the level of their current information over the subject. The second questionnaire was applied to detect any changes in the level of the participants' information, to detect whether the context of the project, the instructors, the applied fields and etc. were considered as sufficient by the participants and to detect other related aspects due to the project. These studies also provided a facility of realizing revisions requires for the following education periods.

The first and the second questionnaires were applied 203 participants within the scope IDE-1, 2 and 3 projects as you can see Table 1. The questionnaire applied to the participants were handed to them after providing the participants with the information related to the study and were collected the next day. The third questionnaire applied, which aimed to gain feedback and observation of the advantages gained through the project, was realized in an electronic environment in 2011 April and May when all the training periods were completed. As for the difficulty of realizing the questionnaire to the whole of the participants, this study has realized sampling and the sample size was evaluated as 68 with the application of the formula stated below (Karasar, 1994):

$$SS = \frac{Z^2 x(p) x(1-p)}{C^2} \quad (1)$$

where: *SS* = sample size, *Z* = Z value (e.g. 1.96 for 95%confidence level), *p* = percentage picking a choose, expressed as decimal (0.5 used for sample size needed), *C=confidence interval, expressed as decimal* (e.g., 0.01=+/- 10)

Table 1. IDE Projects, terms and questionnaires numbers

Project names	***Project terms***	***Questionnaire numbers***
IDE-1	July 2007	20
	September 2007	22
	February 2008	25
IDE-2	May 2008	22
	June 2008	20
	August 2008	22
	October 2008*	-
IDE-3	July 2010	17
	August 2010	14
	September 2010	20
	October 2010	21
Total		203

** The lack of the questionnaire applied to the participants at the end of the training period within the scope of IDE-2 October 2008 though it was applied at the beginning of the study*

In all the questionnaires applied, there were questions with multiple choices, some graded questions and only a few open ended questions. The scale used in the graded questions was a four point Likert-type scales (Kaya and Firat 2011). In order to test the reliability of the test the Cronbach's alpha (α) coefficient (the alpha method) was used. The Cronbach's alpha value was calculated as 0.896 ($0.80 < \alpha < 1.00$: High Reliability) and the reliability of the test was detected to of high value.

In the assessments applied, the Statistical Package for the Social Sciences (SPSS) 17.0 and the Mc excel software programs were used; the results related to the study were sometimes presented with their relationship among their frequencies, priorities and varieties according to the questions applied and the features of the scales used. The cross-table and the chi-square analysis were benefitted from for the detection of differences among the variables at the beginning and at the end of the period and for the detection of the relationships among variables.

4. Results and discussion

4.1. The profiles of participants

A percent of 52.7 of the participants involved in the study constituted of females while 47.3% were male. The rate of the married participants was 24.6%. The age distribution of the participants involved in the study is as shown in Table 2. A percent of 23.6 of the participants were from teachers, 17.2% were geography teachers, 28.1% were biology teachers, 21.2% were science teachers and 9.9% of the

teachers were from other various branches such as art, social sciences and etc.

A percent of 26.6 of the participants had expressed that they had previously attended a training course, a seminar and etc. other organizations related with nature. The rate of the participants who had expressed that they had realized an activity related to the protection of natural resources so far is 28.1%.

Table 2. The age frequencies of the participants*

Frequency (%)	***Age groups***				
	18-25	26-33	34-41	42-49	>50
	49.3	31.0	15.3	3.9	0.5

**from the first questionnaire*

4.2. The considerations of the participants for the nature-environment education given at schools

The opinions of the participants about the sufficiency of nature-environment education at schools are as shown in Table 3.

Table 3. The assessments of participants about the sufficiency*

Sufficiency of nature/environment education	***Frequency (%)***
Sufficient	1.5
Insufficient	95.6
Neutral	2.9
Total	100

**from the first questionnaire*

According to the results, 96% of the participants express that the environment education given at pre-school, primary, secondary schools, high school and at universities is not sufficient and thus parallel to such situation the deficiency unfortunately does not contribute for environment friendly individuals to be raised.

The participants point to the importance of the revision to be applied to long term educational programs while with the short and mid-term formal educations applied, they believe that voluntary individuals can be encouraged and supported to take action in the field. Thus, they accept such training programs, which they consider to be important tools, to supply for the deficiency seen in the nature-environment education programs currently.

Teachers are the most important factors in the education and teaching process. Therefore, all teachers no matter in which field or at what profession shall all be educated and aware of the environmental factors. Teachers are always in the need of consultancy and other sources and material required in environmental education (Arslan, 1997). From such a point on, all of the participants have assessed the situation of teachers being appointed to such application as a marking decision. TUBITAK, The Ministry of Environment and Forest, The Ministry of National Education and other institutions like universities have participated in the nature training project and have contributed to the development of teachers, deeply affect their point of view and increase their levels of awareness. Therefore, it would be beneficial to continue with more of the support provided (Güler, 2009; Özdemir and Yapıcı, 2010).

4.3. The factors that affected participants' decisions in taking place in nature trainings

Some suggestions were offered to the participants to determine which factors and aspects had lead them to participate in the nature training project and they were asked to grade these suggestions according to their priorities and their importance (Table 4).

Table 4. The aspects of participants taking place in the IDE Projects and their priorities*

Potential Aspects	***Options** (%)***				***Priority of options***
	1	2	3	4	
To learn about the environment of plant and animal entities live in	0.5	0.5	15.7	83.3	0,104
To provide the facility to teach their students about nature with more detail	1.5	2.5	9.4	86.6	0,104
To gain more detailed information about wild and fauna animals	-	3.0	22.6	74.4	0,102
To gain more information about flora, types of plants and trees	-	3.5	23.6	72.9	0,101
To get the chance to meet new people and especially nature lovers and scientists	0.5	4.4	23.2	71.9	0,100
The thought of seeing new places	1.5	4.9	23.2	70.4	0,099
To get the chance to learn more about farmers living in nature and to gain more detailed information about the interaction of human and nature	-	6.9	34.0	59.1	0,096
To learn more detailed information about landscape and visual values	0.5	11.8	42.4	45.3	0,091
Offering a great chance to spend free times	26.1	20.7	30.0	23.2	0,068
The training program applied without any fee	19.2	31.5	31.5	17.8	0,068
The thought that it would be a great chance to rest the tiredness of the whole year	23.7	31.0	26.6	18.7	0,067

** From the first questionnaire; **1: Not important at all, 2: A little important, 3: Important, 4: Very important*

As can be seen in Table 3, while aspects like "a great chance to spend free times" and the fact of that *"the training program applied without any fee"* were of less interest, the aspects that came up to be the most favorable were *"To learn about the environment of plant and animal entities live in"* and *"To provide the facility to teach their students about nature with more detail."* Similar detections were also realized in other studies as well. For instance according to Güler (2009) participants generally take place in such training programs to gain more information about nature and to be able to transfer their experiences others. Such situation provides a guide for the following trainings to be realized along with the other related aspects.

4.4. The difference of informational levels from the beginning of the nature training to the end, its permanence and spreading effect

It was an expected situation of the increase of information about nature and environment, the positive manner in the attitude and behaviors of the participants and the permanency of the experiences gained. From such point by means of the questionnaires applied at the beginning and at the end of the training and the observations applied it was detected the changes occurred in the levels of information of the participiants and whether they use the information effectively and permanently in their life after graduating the nature training course. The change of levels of information about the project of the participants can be seen in Table 5. As it can be seen in the Table, the participants were asked to grade their levels of information from various subjects all gathered under a total of 11 main titles as 1: I have no idea, 2: I know a little about it, 3: I merely know about it, 4: I know very well.

The participants had already had some ideas about the suggestions offered to them about nature at the beginning of the training. The main purpose of their participation to the training was to increase the amount of knowledge they already had. Similar results were also displayed by Brody and Hall (2002) and Güler (2009). While there was a major increase in the frequency of grades 3 and 4 at the end of the training, the frequency of grades 1 and 2 were decreased. In order to test whether such findings were meaningful, the chi-square test was applied to the first titles of the test and meaningful relationships were found. With a brief explanation, the projects realized by IDE had contributed to increase of the participants' level of knowledge over nature. Similar results as the increase of knowledge was also pointed out with great attention in the studies realized by Güler (2009) and Keles et al. (2010). The inquiry applied to test whether this information remained permanent was inspected in the third questionnaire.

Table 5. The differences of information from the beginning of the IDE Projects to the end and their meanings*

Subjects	***Time to questionnaire***	***Options** (%)***				***Chi Square*** (X^2)	***P***
		1	**2**	**3**	**4**		
The concept of forest and Turkey's forests	The end of the project	1.0▼	8.4 ▼	67.0▲	23.6▲	40.904	**0.000*****
	Before the project	2.5	38.8	55.7	3.0		
The concept of natural protected area and Turkey's natural protected areas	The end of the project	1.0▼	11.8▼	65.5▲	21.7▲	19.520	**0.021*****
	Before the project	9.9	43.8	44.3	2.0		
The concept of nature park and Turkey's nature parks	The end of the project	0.5▼	19.2▼	59.6▲	20.7▲	29.184	**0.001*****
	Before the project	12.8	52.2	34.0	1.0		
The concept of national park and Turkey's national parks	The end of the project	1.0▼	14.3▼	57.1▲	27.6▲	23.262	**0.006*****
	Before the project	7.9	51.2	36.5	4.4		
The concept of wildlife and fauna- wild animals	The end of the project	1.5▼	20.2▼	61.1▲	17.2▲	23.070	**0.006*****
	Before the project	20.7	46.8	28.1	4.4		
Environmental Geology and Geological structures	The end of the project	3.4▼	30.0▼	50.2▲	16.4▲	31.425	**0.000*****
	Before the project	23.2	47.3	25.6	3.9		
The concept of botanic, plants, plant species	The end of the project	1.0▼	16.7▼	65.0▲	17.3▲	31.860	**0.000*****
	Before the project	5.9	48.8	42.3	3.0		
Local people who live at forest village and human and environmental interaction	The end of the project	2.0▼	7.9▼	53.2▲	36.9▲	24.654	**0.003*****
	Before the project	3.4	37.4	45.8	13.4		
Ecological observations and comments	The end of the project	2.0▼	16.3▼	58.1▲	23.6▲	29.874	**0.000*****
	Before the project	14.3	37.9	40.9	6.9		
The concept of climate and the effect of forests on climate	The end of the project	1.0▼	14.2▼	48.8	36.0▲	63.619	**0.000*****
	Before the project	4.4	35.0	48.8	11.8		
Landscape and visual values	The end of the project	4.4▼	33.5▼	46.3▲	15.8▲	14.591	0.103
	Before the project	26.1	50.7	20.2	3.0		

** From first and second survey, **1: I don't know, 2: I know a little, 3: I know moderate, 4: I know very well; *** P<0,05,* ▼**:** *Decrease;* ▲ *Increase*

Though it was possible to apply the first two questionnaires to the whole of the participants the third questionnaire application realized made it obligatory to exemplify the observation results!

The perception and attitude of the participants' considering the necessity of the training later turned into behaviors after the project completed. In fact, 98.5% of the participants have expressed that they had informed their friends, colleagues and students about the nature trainings and that they had encouraged them to participate as well. 47.1% of the participants had replied by saying yes to the question of "Had any of your friends/students or colleagues participated in a nature training program on your advice?" while 14.7% said 'no' and 38.2% answered saying 'I don't know.'

One of the other purposes of the Project was to establish other nature based projects, seminar and other activities due to the advantages gained by the participants encouraging more will and ability. Therefore, 63.2% of the participants have answered the question "Have you contributed for the establishment of another activity related with nature and nature training?" (Table 6).

Table 6. Contributions to nature trainings after the project applied*

Contributions	*Frequency (%)*
Activities for my students	42.6
Activities for society	19.1
Activities for to gather with students and society	1.5
I could not contribution	36.8
Total	100.0

** From the third questionnaire*

It is very important of the teachers to share with their students, families, colleagues and others around them about what they have gained throughout the whole of the nature training (Güler, 2009). With the project realized and applied, the materials required for the teachers to benefit from were provided to them. Relatively, 91.2% of the participants have answered the question "Do you benefit from and use the information, documents and material you have gained within the scope of the project?" by replying 'yes'. 96.5% of the participants have affirmed that they have shared their experiences and examples they have gained within the scope of the project with their colleagues.

According to the inquiry applied related to the activities mostly pleased to be developed by the participants which were games and drama, 48.6% of the participants have expressed that they have repeated the nature games and the drama with their students they had learned during the training program.

Another aspect which was put forward in the project was the presentation of the protected natural areas, initially those in our region, and establishing an active community that would contribute to the protection process. This is because it is rather quite well known that the protection of natural areas by providing them a statue like a national park is not sufficient for such areas to be under protection (Alkan, 2009; Alkan et al., 2009; Yaşar and Seremet, 2008). According to the results gained via the application of the third questionnaire some of the thoughts and behaviors of the participants about the protection of areas and nature are presented in Table 7.

As can be seen from the table, almost all of the participants have stated that the protected areas were more advantageous for the training project compared to other areas. According to the results from the first and the second questionnaire 31.5% of the participants have stated that they had previously seen the protected areas determined as practice areas for the project. When the participants were asked to compare their points of views for the protected areas at the beginning of the project with the ones at the end of the application, they expressed that they had been able to notice the flora, fauna, geologic structure, the ecosystem, the rural societies, the landscape value and many other features as resources at the beginning of the training and therefore thought that these areas were simply any ordinary areas.

According to the results of the researchers applied, the most favorable aspect that lead the participants to take place in such a training program came out to be the factor "meeting new people and especially nature lovers and scientists" (Table 4). Therefore, the relationships that are to continue between the staff and other participants seem to be of great importance. The results that have been reached by these means are shown in Table 8.

Table 7. Opinions concerning the protected areas *

Questions	*Frequency (%)*	
	Yes	*No*
Do you agree with the idea that projects and courses about the protection of national parks, nature parks and other areas is more advantageous compared to other fields?	97.1	2.9
Have you visited any protected area in your own region or at any other region after the completion of the project?	73.5	26.5
Are there any places that you cannot forget during the training program and that you would like to visit it again some other time?	100	-
Did you advise your friends about seeing the training areas?	97.1	2.9

** From the third questionnaire applied*

When the participants were asked as "Would you like to come together again with the project team?" 95.6% of the participants answered with a certainly yes. The fact of that the instructors spending their whole time with the participants during the project application at camp sites provided a team spirit and a strong interaction. The main issue of the success of the project remaining permanent is due to whether they bare a wide scope of affect. This situation has always been one of the factors that were intended to take its place in the first row in all IDE projects applied. Not only a single period of the project realized took place but also the first, second and third application took place as well. The studies that are continued to be applied aim for institutionalizing, trade marking and producing new projects. Within the scope mentioned, the web site of the project remains with great importance. The web site, which was initially established with IDE-1 and continued to serve online with required updates applied, is http://ide.sdu.edu.tr. It has been used and still is being used to inform the society about the activities realized within the scope of the project, a connection where new applications are to be realized and a contact address where accepted persons will be announced. It was 5196 persons who visited the web site only during the term of IDE-3 (between the dates 14.06.2010 and 04.05.2011). This web site also aims to continue being in contact with its participants. The frequency of the visits of the participants to the web site is shown in Table 9.

Table 8. The continuity situation of the communication*

Communication status	***Frequency (%)***
Most of project team and trainers	1.5
Only a few of the project team and trainers	1.5
Most of term friends	1.5
Only a few of the term friends	39.6
Most of trainer and term friends	29.4
Only a few of the trainer and term friends	26.5
Total	100.0

** From the third questionnaire applied*

Table 9. The frequency of the visits to web sites of the participants*

Frequency of visits	***%***
At least once a week	7.4
At least once a month	11.8
I have visited as irregular	60.3
I have not ever visited	20.6
Total	100.0

** From the third questionnaire*

4.5. The efficiency of the ide projects from the participants' point of view

Some information related to the project is presented in the introduction. You can visit http://ide.sdu.edu.tr for more detailed information.

According to the results from the first and the second questionnaire, a wide scope of participation, the project crew and the context of the project determined by the instructors were greatly favored by the participants (Table 10).

The context of the training project was determined by the project staff and the instructors with a wide scope of participants and was continuously revised with the feedback gained from the participants. Together with the fact that the participants considering the context of the training to be efficient they also believe that it would be beneficial to add a little more cultural and historical aspects to the context. It is very clear that including socio-cultural and historical values within the applications of the training program would provide a positive development in the attitude and behaviors of students towards nature instead of the attitude and behaviors expected from applications that are generally realized theoretically (Demirkaya, 2006; Köktürk, 2003).

Once again, as can be seen in Table 10, approximately 91% of the participants consider that the instructors as efficient. The remaining 9% of the participants have expressed that the instructors should approach the subjects in a rather more simple way; especially enabling the subject to be transferred at a level targeting primary school students.

It is not possible for a nature training that remains with conceptual presentations to reach its aims in means of constituting an intended behavior. Therefore, the information gained via complementary support of environment training applied in nature and on land applications to establish behavioral changes towards nature and remain for good (Bartosh, 2003; Bogner, 1998; Erten, 2005; Farmer et al., 2007; Kostova and Atasoy, 2008; Güler, 2009). The participants who study on the issues need to apply practice on flora, fauna, and ecosystems and initially on local societies. Thus, on land applications are of great importance for such training. Almost 90% of the participants of the IDE projects have found the land applications to be efficient. In a total of 11 periods of training each lasting for a week, at least 2 or 3 days of the week, according to the weather conditions, were realized on camp sites and participants slept over in tents. During the camps, all necessities of the participants, including feeding and drinking were tried to be provided from nature. By such means, almost all of the participants had expressed themselves to be pleased from the camps realized and that such application should be realized in all training projects.

Within the scope of the project, the weakest success was with the games. Though the participants played many games like the Meeting in Nature Game, The Matching Game, Hug your Tree, Live Television-IDE TV, the level of satisfaction by the participants were lower compared to the other applications. Therefore, a drama expert was included in the project crew after the first project applied.

Table 10. The efficiency of the training project by some means*

Indicators	*Options (%)*	
	Sufficient	*Insufficient*
The appropriateness and efficiency of the training program context	86.2	13.8
The appropriateness and efficiency of the instructors	90.6	9.4
The sufficiency of the land applications	89.7	10.3
The efficiency of the visual material offered	88.7	11.3
The efficiency of the games that took place in the program	58.6	41.4

** From the second questionnaires*

Table 11. Aspects related to the situation of the expectations met*

Questions	*Options** (%)*			
	1	2	3	4
Did the training project meet your expectations?	-	2.0	29.0	69.0
Has this project changed your view and level of information towards nature?	-	6.4	40.4	53.2

** From the second questionnaire*

***1: Didn't satisfy, 2: Satisfied a little, 3: Satisfied at a mid-level, 4: Completely Satisfied*

In open ended questions, the participants had assessed nature walks, bird sighting, village interviews, nature photography, first aid under various conditions and etc. to be successful and offered advices that they were considered as unique activities and that they should be extended by their means.

Together with the aspects stated above that would help in the assessment of the project efficiency; the participants were asked questions like "Did the training project meet your expectations?" "Has this project changed your view and level of information towards nature?" While 69% of the participants expressed that they were satisfied, 29% of them replied expressing a mid-level of satisfaction and 2% of the participants expressed that they were a little satisfied by means of their expectations being met (Table 11).

5. Conclusions

Based on the results of IDE projects that were completed in 11 training courses lasted for 4 years the following points can be stated:

It has been an appropriate decision to choose participants from the teachers as the target group. Owing to the fact that preferring them, firstly, it has been contributed to their environmental perception and behavior positively. Secondly, they were able to affect their students by sharing the experiences and knowledge gained in the training course. For the reason preferring the teachers have served do increase the common impact for the project after the activities of the training course. The obtained positive effects with the project could be measured later by questionnaires as a stead gain of the training.

Participants, *i.e.* teachers were considered as critical component of learning - teaching process for activities planned for the training course. Since they would require some consultant and materials for the nature at their schools or offices later, they were offered all chance of facilities such as meet scientists and nature friends by the trainers during the activities. This ensured both cooperation and monitoring the participants after the training projects.

The fact that the participants were chosen for performance distinctive criteria such as their capabilities for disseminating the results of the project, their willingness and sense of curiosity rather than physical criteria such as their ages, sexuality, etc. In this way, it was enabled to accelerate an increase on the level of knowledge relating participants and to assure its permanence by gaining knowledge transformed in behavior.

Naturally, the participants have a particular level of knowledge about nature for all time. Even so it was required to choose teachers, as participants to training programme, among that were equal or close in levels of knowledge about nature as to realize a high efficiency of the programme. As for choosing teachers from diverse branches it caused some difficulties or problems early on in terms of speaking the same language. However, this has leaded to arriving different point of views about nature and enabling to share the ideas later on. Considering of this phenomenon with establishing the candidates for a training program may be useful in planning new projects.

There were two major ones that stood out among factors which affected teacher's decisions about participating: The first one was to see and learn wild plants and animals in their natural habitats and second one was a desire to share the knowledge attained during the program with their own students in schools. In addition to other reasons for participating in the program were to take an opportunity to make new friends, to meet some fresh faces especially scientists and nature lovers or villagers that live intimately with nature and to visit interesting places and especially ones which have high quality landscape areas. These findings about the reasons with participating may be instructive in establishing content for nature training project to be planned. On the other hand after completing the training programs of the IDE projects it appeared that contents of a program must be determined by a well-

attended expert team and it should be revised continuously.

During the term of the nature training, participants camped out for two or three days per activity term. On evaluating the result for camping activities, it can state that any activity carried out in field or natural areas, facilitates transforming knowledge learned in classes into behavior. Therefore this kind of activities which enabling the participant to embrace the nature may proposed for future training projects.

Some of the NPAs in Isparta city were defined as application areas of the projects and it was received a logistical support from park authorities for training course. This enabled to offer the contents of the projects through the NPAs's rich sources of value as well as suitable camping sites. Most of the participants have stated that they perceived the NPAs as if a rural living laboratory during the training exercises. This showed that NPAs provide some considerable opportunities for training. On the other hand, the training activities carried out in NPAs served to promote them country-wide by means of participants from all over Turkey. Therefore there has been no wasted the support from NPAs's authorities to the projects.

Since regarding nature as simply a biological or ecological existence was not an appropriate description, culture and human factor concerning NPAs were considered in the project area. Therefore as employed trainers for natural sciences, social issues and relating trainers included in the project to obtain a multidisciplinary approach to nature education. This also required all trainers to be together with participant in the field or nature during the training program. According to the feedback from the trainers the fact that being continuously together with their instructor ensure the occurring of both a genuine sharing medium and getting information at an effective level. Besides, being together has allowed a flexible scheme for nature activities to all trainers and participants.

Questionnaires from initial periods of the projects have shown that participants have considered dramas insufficient. By that reason, more experts for dramas have included in the program.

Finally, IDE projects (http://ide.sdu.edu.tr) have increased the knowledge and nature sympathy of the participants intended for nature and have provided support for such information to transform into behavior permanently. Though the teachers were chosen from different branches and though they had some difficulties in sharing their experiences each other at initial periods of the projects this has provided, on the other hand, diversity in options and point of views towards nature and nature training. The model with the active learning method called as: "Wonder! Learn! and Apply!" which was detected to make more effective of some features of participants such as the awareness, perceptions, attitudes and behaviors, towards nature. The fact that the offered activities of the projects would lead an increase of knowledge about nature and environment was an expected situation. Furthermore, based on the interviews, it has been gratifyingly seen that participants have subsequently shared their experiences from the nature training with their students at their school.

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