Int. J. Environ. Res., 1(4): 354-357, Autumn 2007
ISSN: 1735-6865

Understanding Environmental Education Curriculum by Secondary School Students

Shobeiri, S. M.[1*] and Prahallada, N. N. [2]

[1]Department of Education, University of Payam-e-Noor, Tehran, Iran
[2]Regional Institute of Education (NCERT), Mysore-570 006, Karnataka, India

Received 15 Jan. 2007; Revised 20 May 2007; Accepted 30 June 2007

ABSTRACT: This article emphasizes the findings of a survey conducted to find out the views of students on the Environmental Education (EE) in Iranian Secondary School (SS) curriculum. A total of six hundred students from forty secondary schools, randomly selected SS from five zones in Tehran City responded to the questionnaire. Two research questions were asked while two hypotheses were tested in this study. The important findings were that: students were not adequately aware of EE in the SS curriculum. No significant difference was found between the male and female students understanding of EE in the curriculum. There was however significant difference between the SS II (Tenth class) and SS III (Eleventh class) students understanding of EE in the curriculum. Based on the findings recommendations are offered to ensure effective and efficient integration of EE into the school curriculum.

Key words: Environmental Education, Secondary school, Curriculum

*Corresponding author: Email-sm_shobeiri@pnu.ac.ir

INTRODUCTION

The degradation of the environment constitutes a threat to human survival and man has been responsible for this concerted efforts to arrest the environmental degradation did not start until about three decades ago. In 1972, the international community worked out a global sensitization and management strategy in Stockholm. This consequently, resulted in the establishment of the United Nations Environmental Program (UNEP). This was followed by the Belgrade Chapter in 1975. The effort to include EE in the educational system came up after the Toblis Conference in 1976. The concerted effort of Iranian conservation production in 1978 gave an impetus to the infusion of some element of EE into the citizenship education curriculum. Attempts to integrate EE into the National Curriculum were intensified in the 1995 (Sadough 2002).

The National Workshop on the integration of EE gave an impetus to many research studies that emphasize the need for functional implementation of EE in the Secondary school curriculum (Naghizadeh, 2001). EE is designed to develop a citizenry that is aware of and concerted about the total environment and its associated problems and that has the knowledge, attitudes, motivation, commitments and skills to work individually and collectively towards solutions to current problems and prevention of newness (Sadough, 2002). The main objectives of EE therefore are to develop awareness, knowledge, attitudes, skills, evaluation ability and participation in environmental issues. It is however believed that this objective can not be realized by the government agencies and the promulgation of decrees alone; rather EE must be integrated into curriculum of schools (Karimi, 2001). Thus in 1995 the Iranian conservation foundation produced the Iranian conservation education strategy which served as a tool for preparation of the prototype EE curriculum later produced. It has also adopted the infusion approach as the curriculum approach through which EE would be introduced into the Iranian educational system at all levels (Toorani, 2003).

Every enlightened individual has realized that the EE should be a part of school curriculum. But, there seems to be some controversy over how and where to place EE in the current school curriculum (Badkobi 2001). Ever since, academic attention was drawn to the environmental crisis and the adoption of EE as strategy to combat it, considerable research has been conducted and essays written. However, most of studies carried out on EE in Iran have been done only in the area of curriculum analysis in order to find out their adequacies or otherwise for integration of EE into school subjects (Karimi, 2001). Little efforts have been directed at finding out the level of awareness and perceptions of environmental issues and EE among the educators and learners of the program. Therefore this study to find out how do students who are the end user of school curriculum perceive EE within existing school subjects, specifically it attempts to provide an answer to the following questions:

a)What is the distribution of students' first source of EE information?

b)Are the students adequately aware of EE in the secondary school?

Following hypotheses were formulated and tested to determine the understanding of students toward EE:

1) There will be no significant difference in the male and female student understands of EE in secondary school curriculum.
2) There will be no significant different in the SS II(Tenth class) and SS III(Eleventh class) student's understanding of EE in secondary school curriculum.

MATERIALS & METHODS

The population for the study consisted of all secondary schools student's in Tehran City.The sample for the study comprised six hundred secondary school students draw from forty secondary schools in Tehran City. Stratified random sampling method was used for the selection of the sample. The city was divided into five zones (north, south, west, east and center). Eight secondary schools from each zone randomly selected for the purpose of the study. Fifteen (15) students were drawn from each school. However, five hundred and fifty (550) students questionnaires were used for the computation since fifty (50) of the students' questionnaire were not properly completed.

Environmental Education Awareness and Attitude Questionnaire (EEAAQ) developed by the researcher were used to elicit information from the respondents. Each questionnaire has two sections. Section A seeks background information from the student's age, sex, class, academic qualification etc. Section B contains items, which focus on the research hypotheses and are directed at seeking information on awareness, knowledge and understanding.

The information extracted from the two sets of questionnaires was analyzed using the frequency counts, percentages, means, standard deviation and t test. To determine the lowers as well as the upper limit of the items, nominal values of 3, 2 and 1 respectively were assigned to the scale, Yes, No and Don't know. Then the sum of the nominal value was divided by N. Using the interval scale of 0.05, the upper limit was determined by adding 2.00 + 0.05 while the lower limit was determined by subtracting 2.00 – 0.05 = 1.95. Thus any response with a mean of 2.05 and above was regarded as positive while any below 2.05 was taken to be negative (Pashasharifi 1998).

RESULTS & DISCUSSION

Table 1 shows that majority of the students Forty three point six percent (43.6%) first source of EE was the mass media particularly the radio and television. Nineteen point three percent (19.3%) heard it first by reading the newspapers and magazines.

Table 1. Frequency and percentage distribution of students, first sources of EE

Source	F	%
Teachers / School	90	16.4
Mass Media / TV, Radio	240	43.6
Friends / Colleagues	54	9.8
Newspaper / Magazines	106	19.3
Seminars / Workshops	0	0
Others	60	10.9
Total	**550**	**100**

Students N = 550

The implication of this is that the non-formal source means was the first source of information to the students on EE. It also suggests that EE did not formally take off in school system. Eleven percent (11%) of the students indicated that they heard of it for the first time through the questionnaire. This suggests that only a few studies of this nature were conducted and workshops and seminars on EE were seldom organized for students in the city.

A Table 2 shows that the computed overall means score was 1.91, which is below the upper limit of 2.05 and thus a negative response. This implies that the students possessed low cognition about the EE in their curricula. An item by item analysis reveals that the mean scores of item (1), (3) and (7) were above the upper limit. While those of (2), (4), and (5) and (6) were below the lower limit. When the frequency counts of the students responses to each items were considered; It was discovered that the difference among those who responded "Don't know" to some items were either higher or equal to those who answered "Yes" and where "Yes" was higher then the differences, it was not to much.

The t test result (Table 3) indicated no significant difference between males and females. Since value of 0.139 was not significant. On the basis of this the null hypothesis was not found tenable, thereby indicating that understandings of males toward EE were not significantly different from their female counterparts. It further suggested that the level of awareness of the two groups was not likely to differ significantly on the issue under study.

The t value 1.70 was significant the null hypothesis was rejected, thereby suggesting that the SS II understandings toward EE were significantly different from SS III counterparts. It further suggested that the level of awareness of the two groups was likely to be different significantly on the issue under study. Thus the finding of the study was similar to the findings of Hosseini and Mahmodi (1999) who reported that there was no difference in the environmental knowledge and attitude of male and female students of the high school. With regard to their willingness to learn and participate in environment friendly programs organized by government and non-governmental organization (NGOs) their responses were in the affirmative. They also revealed their preference for an integrated or infusion approach to introducing EE into the school system. A close look at the individual items on the students' questionnaire showed that there was not conservation clubs in any of the schools (Table 4).

Table 2. Frequency and mean distribution of students awareness level of EE in some subjects

	Environmental Education is about	Yes (3)	No (2)	Don't know (1)	Mean Score N=550	S.D.
1.	Improving the quality of life	252	147	151	2.18	0.86
2.	Keeping our surroundings free of pollution	82	169	299	1.60	0.69
3.	Conserving the natural resources	193	215	142	2.09	0.79
4.	Knowing the sources of environmental problems and how to reduce them	187	131	232	1.91	0.87
5.	Knowledge about the protection of wild life	93	190	267	1.68	0.76
6.	EE will let us know the implication of our action on the environment and survival of life generally	91	222	237	1.73	0.74
7.	EE will change our slavery treatment of the environment	229	161	160	2.12	0.85
	Total	**1127**	**1235**	**1488**	**1.91**	**0.83**

Table 3. Test of significance difference in understandings of Male and Female Student's toward EE in Secondary School Curriculum

	N	X	SD	df	t	Tab
Male	285	2.25	10.08	548	0.139	1.645
Female	265	2.23	9.8			

Table 4. Test of significance difference in understandings of SS II and SS III students towards EE in Secondary School Curriculum

	N	X	S.D.	df	t	Sing
SS II	270	3.06	13.17	548	1.70	0.05
SS III	280	2.52	11.43			

CONCLUSION

It is concluded from this study that EE is a relatively new program in the educational system and the students are not adequately aware of it. The implication of this is that there is a need for the government as matter of urgency to make the teaching of EE in schools compulsory at all levels.

REFERENCES

Badkobi, A., Hadipour, M. and Pour ebrahimi, Sh., (2001). Assessment of Primary school teachers education condition in Tehran Municipality in Environmental subjects and the ways of elevating their knowledge, Sci. Quarter. J., **30**, 80.

Hosseini, A., and Mahmoodi, N., (1999). Environmental knowledge and attitude of some Iranian High School students. J. Edu. Plan. Admin., **24**, 52.

Iranian National Commission for UNESCO (1991). Environmental Education module for in-service training of science teachers and supervisors. Tehran, 25.

Karimi, D., (2001). A survey on environmental training needs for students, teachers and housewives. J. Edu. Plan. Tehran, **30**, 45.

Mehrmohammodi, M., (1993). A look at German Educational System and Comparison with the Iranian Educational System. The Iranian Ministry of Education, Tehran, 106-107.

Naghizadeh, M., (2001). Environmental training in achieving sustainable development. Department of the Environment, Tehran, 22-24.

National Council of Educational Research and Training (2001). Environmental Orientation to School Education, Delhi, 38-39.

Pashasharifi, H. and Talaghani, N., (1997). Research Methods in Education, Tehran, 246-249.

Sadough, M. B., (2002). Training Transformation Process, Department of the Environment, Tehran, 25-26.

Sanaye Goldooz, S., (2002) Training guidelines imperative for enhancing, Culture of environment, Sci. Quarter. J., Tehran, **40**: 79.

Toorani, H. and Karam-AD Dini, M., (2003). Environmental Training in Iran's Education System, Ministry of Education, Tehran, 46-48.