

A Study on Environmental Ethics and Participation in Environmental Activities among Higher Secondary Students

Mathivanan, K*, Dr.G. Pazhanivelu**

* Ph.D Scholar, Department of Education, Tamil University, Thanjavur

** Assistant Professor, Department of Education, Tamil University, Thanjavur

Abstract- The present study is aimed to find out the correlation between environmental ethics and participation in environmental activities among higher secondary students. Environmental Ethics Scale was constructed and validated by Dr. Haseen Taj(2001). The Participation in Environmental Activities Scale for higher secondary students was constructed and validated by the investigator (2009), 1000 higher secondary students studying in Virudhachalam Educational District were selected as sample through random sampling technique. Normative survey method is used in the study. The major findings indicate, the higher secondary students have high environmental ethics, higher level of participation in environmental activities and there is significant relationship between environmental ethics and participation in environmental activities of higher secondary students.

Index Terms- Environmental Ethics, Participation in Environmental Activities – Random Sample, Gender, Location of the school, Subject group, and Type of management.

I. INTRODUCTION

Environmental ethics has given a new dimension to the conservation of natural resources and it is one of the major concerns of mankind. It is the discipline in philosophy that studies the moral relationship of human beings to, and also the value and moral status of the environment and its nonhuman contents. It is the examination and discussion of people's obligations towards the environment. It brings about the fact that all the life forms on Earth have a right to live. To take part in an environmental organization or voluntarily involve in various environmental activities is known as participation in environmental activities. We explore whether environmental motivation affects environmental behavior by focusing on volunteering. The environmental motivation has a strong impact on individuals' voluntary engagement in environmental organizations. A higher level of environmental motivation due to higher environmental ethics may lead to higher level of participation in environmental activities. To achieve the participation of the community, environmental ethics must be provided to the entire community through environmental education.

II. STATEMENT OF THE PROBLEM

The problem for the present study is entitled as, "A study on environmental ethics and participation in environmental activities among higher secondary students".

III. OBJECTIVES OF THE STUDY

1. To study the level of environmental ethics of higher secondary students.
2. To study the level of participation in environmental activities of higher secondary students.
3. To study the significance of the difference in respect of higher secondary students' environmental ethics if any between the sub samples with regard to
 - a. Gender
 - b. Location of the school
 - c. Subject group
 - d. Type of management
4. To study the significance of the difference in respect of higher secondary students' participation in environmental activities if any between the sub samples with regard to
 - a. Gender
 - b. Location of the school
 - c. Subject group
 - d. Type of management
5. To study the significant relationship if any between environmental ethics and participation in environmental activities of higher secondary students.

IV. HYPOTHESES OF THE STUDY

1. The level of environmental ethics of higher secondary students is low.
2. The level of participation in environmental activities of higher secondary students is low.
3. There is no significant difference in the environmental ethics of higher secondary students between the following sub samples
 - a. Gender

- b. Location of the school
 - c. Subject group
 - d. Type of management
4. There is no significant difference in the participation in environmental activities of higher secondary students between the following sub samples
- a. Gender
 - b. Location of the school
 - c. Subject group
 - d. Type of management
5. There is no significant relationship between environmental ethics and participation in environmental activities of higher secondary students.

V. METHODOLOGY

Normative Survey Method has been used in the study.

Tools used

1. Environmental ethics Scale constructed and validated by **Dr. Haseen Taj(2001)**.
2. Participation in environmental activities Scale for higher secondary students was constructed and validated by the investigator (2009).

Sample of the study

Using random selection, 1000 Higher secondary students from virudachalam educational district were selected for the present study.

Statistical technique used

Differential analysis

Table 2. Significance difference in the sub-samples of Higher Secondary Students’ environmental ethics and participation in environmental activities – Gender and Location of the school

Variables	N	Environmental ethics				Participation in environmental activities				
		Mean	SD	t-value	Sig*	Mean	SD	t-value	Sig*	
Gender	Male	497	107.47	12.80	0.80	NS	29.99	5.48	0.53	NS
	Female	503	108.10	12.02			29.80	5.59		
Location of the school	Urban	467	107.37	12.39	1.00	NS	29.42	5.46	2.57	S
	Rural	533	108.16	12.43			30.31	5.57		

*Significant at 0.05 level, NS - Not significant, S – Significant

VII. ENVIRONMENTAL ETHICS

In order to check the null hypothesis with respect to gender, the t- test was employed. The mean of male higher secondary students(N=497) is found to be 107.47 with a SD of 12.80. The mean of female higher secondary students(N=503) is found to be

Descriptive analysis, Differential analysis and Correlation analysis were used in the present study to test the hypotheses and interpret the data.

VI. STATISTICAL ANALYSIS AND INTERPRETATION OF DATA

Descriptive analysis

Table 1. Mean and Standard Deviation of environmental ethics and participation in environmental activities scores of the entire sample

Variables	N	Mean	SD
Environmental ethics	1000	107.79	12.41
Participation in environmental activities	1000	29.89	5.53

It could be observed from the table 1. that mean and standard deviation values of higher secondary students environmental ethics of the entire sample is found to be 107.79 and 12.41 respectively . The mean value of the entire sample is higher than the mid value 67.5. Therefore, it is found that the higher secondary students have high environmental ethics. The hypothesis no.1 is rejected. The calculated mean and standard deviation values of higher secondary students participation in environmental activities of the entire sample is found to be 29.89 and 5.53 respectively . The mean value of the entire sample is higher than the mid value 18. Therefore, it is found that the higher secondary students have higher level of participation in environmental activities. The hypothesis no. 2 is rejected.

108.10 with a SD of 12.02. The computed t value is 0.80 which is not significant at 0.05 level. Since the calculated t- value is lesser than the tabulated t- value, the hypothesis no.3(a) is accepted.

In order to check the null hypothesis with respect to location of the school, the t- test was employed. The mean of urban school higher secondary students(N=467) is found to be

107.37 with a SD of 12.39. The mean of rural school higher secondary students(N=533) is found to be 108.16 with a SD of 12.43. The computed t value is 1.00 which is not significant at 0.05 level. Since the calculated t- value is lesser than the tabulated t- value, the hypothesis 3(b) is accepted.

Participation in environmental activities

In order to check the null hypothesis with respect to gender, the t- test was employed. The mean of male higher secondary students(N=497) is found to be 29.99 with a SD of 5.48. The mean of female higher secondary students(N=503) is found to be 29.80 with a SD of 5.59. The computed t value is 0.53 which is

not significant at 0.05 level. Since the calculated t- value is lesser than the tabulated t- value, the hypothesis 4(a) is accepted.

In order to check the null hypothesis with respect to location of the school, the t- test was employed. The mean of urban school higher secondary students(N=467) is found to be 29.42 with a SD of 5.46. The mean of rural school higher secondary students(N=533) is found to be 30.31 with a SD of 5.57. The computed t value is 2.57 which is significant at 0.05 level. Since the calculated t- value is greater than the tabulated t- value, the hypothesis 4(b) is rejected.

Table 3. Significance difference in the sub-samples of Higher Secondary Students’ environmental ethics – Subject group and Type of management

Variables	Sources of variation	Sum of squares	df	Mean square	F Value	Level of significance
Subject group	Between groups	22.53	2	11.26	0.07	Not Significant at 0.05 level
	Within groups	153871.4	997	154.33		
	Total	153893.9	999			
Type of management	Between groups	1467.47	2	733.74	4.80	Significant at 0.01 level
	Within groups	152426.4	997	152.89		
	Total	153893.9	999			

In order to check the null hypothesis with respect to subject group, the F test was made. The F value is found to be 0.07 which is not significant at 0.05 level for (2, 997) dfs. It denotes that there is no significant difference among the higher secondary students who belongs to different subject group with respect to their environmental ethics. The null hypothesis 3(c) is accepted. In order to check the null hypothesis with respect to the type of management, the F test was made. The F value is found to be

4.80 which is significant at 0.01 level for (2, 997) dfs. It denotes that there is no significant difference among the higher secondary students who belongs to different type of management with respect to their environmental ethics. The null hypothesis 3(d) is rejected.

Table 4. Significance difference in the sub-samples of Higher Secondary Students’ participation in environmental activities – Subject group and Type of management

Variable	Sources of variation	Sum of squares	df	Mean square	F Value	Level of significance
Subject group	Between groups	96.94	2	48.47	1.59	Not Significant at 0.05 level
	Within groups	30459.82	997	30.551		
	Total	30556.76	999			
Type of management	Between groups	404.53	2	202.27	6.69	Significant at 0.01 level
	Within groups	30152.23	997	30.24		
	Total	30556.76	999			

In order to check the null hypothesis with respect to subject group, the F test was made. The F value is found to be 1.59

which is not significant at 0.05 level for (2, 997) dfs. It denotes that there is no significant difference among the higher secondary

students who belongs to different subject group with respect to their participation in environmental activities. The null hypothesis 4(c) is accepted.

In order to check the null hypothesis with respect to the type of management, the F test was made. The F value is found to be 6.69 which is significant at 0.01 level for (2, 997) dfs. It denotes that there is significant difference among the higher secondary students who belongs to different type of management with respect to their participation in environmental activities. The null hypothesis 4(d) is rejected

Correlation analysis

Table 5. Correlation co-efficient between Environmental ethics and participation in environmental activities of higher secondary students

Variables	N	'r' Value	Inference
Environmental ethics	1000	0.587	Significant 0.01 level
Participation in environmental activities			

The correlation co-efficient (r) between environmental ethics and participation in environmental activities is found to be 0.587 for the sample of 1000 of higher secondary students. It is higher than the table value of 0.081 at 0.01 level. It is concluded that there is significant relationship between environmental ethics and participation in environmental activities of higher secondary students. Hence the null hypothesis 5 is rejected.

VIII. MAJOR FINDINGS OF THE STUDY

1. The higher secondary students have high environmental ethics.
2. The higher secondary students have higher level of participation in environmental activities.
3. The male and female higher secondary students do not differ significantly with respect to their environmental ethics.
4. The urban and rural school higher secondary students do not differ significantly in their environmental ethics.
5. There is no significant difference among the higher secondary students who belongs to different subject group with respect to their environmental ethics.
6. There is significant difference among the higher secondary students who belongs to different type of school management with respect to their environmental ethics.

7. The male and female higher secondary students do not differ significantly in their participation in environmental activities.
8. The urban and rural school higher secondary students differ significantly in their participation in environmental activities.
9. There is no significant difference among the higher secondary students who belongs to different subject group with respect to their participation in environmental activities.
10. There is significant difference among the higher secondary students who belongs to different type of school management with respect to their participation in environmental activities.
11. There is significant relationship between environmental ethics and participation in environmental activities of higher secondary students.

REFERENCES

- [1] Alli, J., Ganapathy, s. and Muthumanickam, R. "An Analysis of the Environmental Participation of Municipal Employees", International Journal of Current Research, vol.3, Issue,9, 2011 pp.144-146.
- [2] Bryan, Norton , "Environmental Ethics and Weak Anthropocentrism". Environmental Ethics Vol.6, 1984, pp131-148.
- [3] Obusegen Akinbote, "The Study on Student Knowledge Towards Pollution". The Social Science Medwell Journals, 2(3), 2007, pp.283-286.
- [4] Prayoon Wongchantra and Prasart Nuangchalerm, "Effects of Environmental Ethics Infusion Instruction on Knowledge and Ethics of Undergraduate Students". Research Journal of Environmental Sciences, , 2011, 5: 77-81.
- [5] Quinn, Courtney., Burbach, Mark E., Matkin, Gina S., Flores, Kevin, "Critical Thinking for Natural Resource, Agricultural, and Environmental Ethics Education". A Journal of Natural Resources and Life Sciences Education, 38, 2009, pp 221-227.
- [6] Robert E. Goodin, "International Ethics and the Environmental Crisis", Ethics & International Affairs, Volume 4, Issue 1, 1990, pp 91-105.
- [7] Said,AiniMat; Yahaya,Nurizan; Ahmadun, Fakhru'l-Razi. "Environmental Comprehension and Participation of Malaysian Secondary School Students", Environmental Education Research, 13(1), 2007, pp.17-31.
- [8] Shari L. Britner , "Environmental Ethics in Middle School Students: Analysis of the Moral Orientation of Student Responses to Environment Dilemmas, Online Research in Middle Level Education", Research Journal of Environmental Sciences, 2002, 5: 77-81.

AUTHORS

First Author – Mathivanan, K, Ph.D Scholar, Department of Education, Tamil University, Thanjavur
Second Author – Dr.G. Pazhanivelu, Assistant Professor, Department of Education, Tamil University, Thanjavur
Correspondence Author – K. Mathivanan, +91 9486918476, email: globe722011@yahoo.com