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## STUDY RELATIONSHIP BETWEEN ENVIRONMENTAL ATTITUDE AND ENVIRONMENTAL EDUCATION AMONG SECONDARY STUDENTS OF ICSE BOARD.

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### Abstract

*Environmental attitudes can be defined as a collection of beliefs, affects and behavioral intention a person holds regarding environmentally related activities or issues. In the case of exploring individual's environmentally responsible behavior it was found that environmental education inevitably plays an important part in providing support to the widespread concern about environmental sustainability and its entire ramification. Environment Attitude scale & achievement test for environment studies on the sample for the present study comprises of 450 secondary students of ICSE board who have studied environmental education till class X. It was found that environmental attitude is positively related to achievement in environmental education among all the students of ICSE board. In boys with increased level of achievement i.e. from low to average and average to high, there is significant increase in the development of positive environmental attitude. In girls, it was seen that as compared to low achievers, average and high achievers have more positive environmental attitude. Thus it can be concluded that environmental education in students of ICSE board till class X only also helps in enhancing environmental attitude of students.*

**Keywords:** Environmental attitude, Environmental education, Secondary students

### INTRODUCTION

Environment attitudes is one of the most widely studied constructs in the study of human interaction nowadays. It can be defined as a collection of beliefs, affects and behavioral intention a person holds regarding environmentally related activities or issues. In the case of exploring individual's environmentally responsible behavior it was found that environmental education inevitably plays an important part in providing support to the widespread concern about environmental sustainability and its entire ramification. As a result of environmental degradation the global concern about sustainability arose among teenagers which can be further provoked by giving environmental education because our action depends on the knowledge of the working of nature, on positive attitudes towards nature and its problems, and an external regulation, education is seen as the key to "saving the world".

### REVIEW OF RELATED LITERATURE

Pandey White Vicky Steecklin (2008) in their study 'Nurturing children's Biophilia : Development, Appropriate Environmental education for young children' revealed that to be effective children's environmental education needs to be designed to match children's developmental needs, interest, abilities and learning styles, best learning occurs with hands on, interactive play and self discovery. Direct sensory experience is good as compared to conceptual generalization.

Sunita Bhalla Mehan (2007) in her study on 'Enhancing environmental awareness of school children' concluded that inquiry training model of teaching has affected students most. The concept attainment model has its place in increasing the environmental awareness of elementary students. Students taught by traditional model have not shown any significant gain regarding environmental awareness.

Anna Vitto and others (2003) in his study 'who is responsible for development', attitudes to environmental challenges: evaluated that there is high correlation between environmental responsibility and environment values among 9th grade students, which support environmental education in schools. Rejection of environmental problems develop negative attitude towards environment.

Legault and Pelletier (2000) has worked on the "Impact of environmental education program on Students and Parents attitudes, motivation and behaviour", whose results indicated that at the end of school year,



children who were part of EEP group engaged in ecological behaviour less for extrinsic motives than did children who were part of a control group. Parents of EEP children were more dissatisfied with local environmental conditions than other.

The above studies revealed that environmental education plays effective role in developing positive attitude towards environment. Along with that it was also seen that different teaching methods of environmental education show different impact on environmental attitude of children.

### **OBJECTIVES OF THE STUDY**

1. To find out the relationship between achievement in environmental education and environmental attitude among secondary students of ISCE board.
2. To find out whether students with different levels of achievement in environmental education differ from one another on environmental attitude.

### **HYPOTHESES OF THE STUDY**

1. There exist no significant relationship between achievement in environmental education and environmental attitude among secondary students of ISCE board.
2. Students of ISCE board differing with respect to achievement in environmental education do not differ from one another on environmental attitude.

### **METHODOLOGY**

#### *Sample of the Study:*

The sample for the present study comprises of 450 secondary students of ISCE board who have studied environmental education till class X.

#### *Tools Used:*

##### *Environment Attitude Scale:*

Environment Attitude scale prepared by K.S. Misra was used to measure the environmental attitude of students. The researcher administered the tools on 110 students in try-out stage. Split-half reliability coefficient was found to be 0.53. Face validity has been found by asking experts related to the field of education.

##### *Achievement test for Environment studies:*

The researcher has prepared the achievement test for environment studies. The basis of items prepared for the achievement tests were the contents present in class IX and X syllabus of environmental studies. Altogether 175 statements were prepared but only 40 were present in the final form of tool. The tool was administrated on 360 students in try-out stage. Discrimination Index (DI) and Difficulty value (DV) was taken out for each item. Test-retest reliability was 0.4526.

##### *Statistical Techniques Used:*

Product Moment Co-efficient of Correlation has been computed to find out the relationship between environmental attitude and achievement in environmental education among secondary students of ISCE board. One way ANOVA followed by multiple range tests have been used for finding out whether students with low, moderate and high level of achievement in environmental education differ from one another on environmental attitude



## ANALYSIS AND INTERPRETATION OF THE DATA

Table1. Correlation between Environmental Attitude and Achievement in Environmental Education among Secondary Level Students of ICSE Board

Si.No.	Groups	N	Values of correlation
1.	Male students of ICSE Board	232	0.555*
2.	Female students of ICSE Board	177	0.185*

Values of correlation between environmental attitude achievement in environmental education for male and female students of ICSE board are 0.555 and 0.185 respectively and both are significant at 0.05 level. So the null hypothesis stand rejected at 0.05 levels. It means that environmental attitude is positively related to achievement in environmental education among male and female students of ICSE board.

Table 2. Summary of Results of ANOVA Showing Differences in Environmental Attitude of Male Students of ICSE Board with Low, Average and High Achievement in Environmental Studies

Source	Df	Sum of squares	Mean square	F-ratio
Between groups	2	7697.22	3848.61	41.75*
within groups	229	21112.2	92.193	

\* denotes statistically significant difference

Table.2 shows that the value of F-ratio (= 41.75) is significant at 0.05 level, so the null hypothesis is rejected. It shows that male students of ICSE board with different levels of achievement, differs from one another on environmental attitude. Further analysis was done using multiple range test, show in Table 3.

Table 3. Results of Multiple Range Test Showing Difference in Environmental Attitude among Male Students of ICSE Board with Low, Average and High Achievement in Environmental Studies

Si. No.	Achievement	Mean	Group compared	Difference between means
1	low	85.913	1-2	*-14.0641
2	average	99.9771	1-3	*-20.5613
3	high	106.474	2-3	*-6.49726

\* denotes statistically significant difference.

Table3 Shows that mean scores of environmental attitude scores of male students with low, average and high achievement are 85.913, 99.777 and 106.474 respectively. Significant paired comparisons show that as compared to male students of ICSE board with low achievement, those with moderate and high achievement have better environmental attitude. Furthermore students with high achievement have more environmental attitude as compared to those with average achievement in environmental studies.

In case of female students of ICSE board too, on the basis of Mean  $\pm$  ISD three groups were formed. ANOVA was used for comparing environmental attitude among female students ICSE board with low, average and high achievement in environmental studies. Results have been shown in Table 4.

Table 4. Summary of Results of ANOVA Showing Differences in Environmental Attitude of Female Students of ICSE Board with Low, Average and High Achievement

Source	df	Sum of squares	Mean square	F-ratio
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Between groups	2	1892.2	946.101	5.41*
within groups	174	30419.5	174.825	

\* denotes statistically significant difference

Table 4 shows that female students of ICSE board have the value of F-ratio which is significant at 0.05 level, so the null hypothesis is rejected. It means that female students of ICSE board with high, low and med. achievement differ from one another on environment attitude. Further analysis was done using multiple range tests.

Table 5. Results of Multiple Range Tests Showing Difference in Environmental Attitude among Female Students of ICSE Board with Low, Average and High Achievement in Environmental Studies

Group	achievement	Mean	group compared	Difference between means
1	Low	89.6667	1-2	*-10.1259
2	average	99.7926	1-3	*-12.5
3	High	102.167	2-3	-2.37407

\* denotes statistically significant difference.

Table 5 Shows that mean scores of environmental attitude scores of female students of ICSE board. Significant paired comparisons show that as compared to female students of ICSE board with low achievement, those with average and high achievement have better environmental attitude. On comparing female students of ICSE board with average and high achievement, no difference in their environmental attitude has been found statistically.

## FINDINGS OF THE STUDY

Values of correlation show that environmental attitude is positively related to achievement in environmental education among all the students of ICSE board.

Results of ANOVA show that secondary level students being either male or female, belonging to group of low, average and high level of achievement in environmental studies, which proves that study of environmental education helps in the development of environmental attitude among children. Results of multiple range tests further show that, in boys with increased level of achievement i.e. from low to average and average to high, there is significant increase in the development of positive environmental attitude. In girls, it was seen that as compared to low achievers, average and high achievers have more positive environmental attitude. Unlike boys where high achievers have more positive environmental attitude than average achievers, average and high achievers girls have similar level of environmental attitude.

Results of ANOVA show that, both male and female students of ICSE board belonging to low, moderate and high group of achievement level differ from one another on environmental attitude. It means that all the students of ICSE board belonging to low, average and high achievement level exhibit variation in their environment attitude.

Male students of ICSE board with average and high achievement exhibit more positive environmental attitude, than those with low achievement. High achievers have greatest environmental attitude as compared to average achievers. In case of female students of ICSE board, no difference in environmental attitude was found between average and high achievers but as compared to low achievers, those females with average and high achievement have more positive environment attitude. It means that except for

Females with average and high achievement which exhibit similar environmental attitude, all other groups of males and females of ICSE board show more positive environmental attitude with increasing level of achievement. This it can be concluded that environmental education in students of ICSE board helps in enhancing environmental attitude of students.





These findings can be supported by the study of Sarah (2007) in which it was revealed that though environmental education help both boys and girls to develop interest in environmental issues, but there is significant difference in boys and girls attitude due to environmental education. Jennifer Elezabeth Dubley (2003) also found that male learners show more significant change than females, when participated in place-based environmental education programs. The reason may be that girls being more, responsible, sensitive and caring citizen, they are more aware regarding academics; therefore there seems little difference in the environmental attitude of girls belonging to average and high level of achievement.

## REFERENCES

- Grobe, A. (1995). A structural model of environmental attitudes and behavior, *Journal of Environmental Psychology*, Vol. 15, No. 3, 209-220.
- Gupta, S.P. (2009). *Modern Measurement and Evaluation* published by Sharda Pustak Bhawan, Allahabad
- Hess-Quimbita, Grace & Paul, Michael. (1996). Assessing an Environmental Attitude Development Model: Factors Influencing the Environmental Attitudes of College students, Paper present at the American Educational Research Association, New York, April 8-12.
- Kaiser, F.G. T Fuhler, U. (1999). Environmental attitude and ecological behavior. *Journal of Environmental Psychology*, 27(3), 242-251.
- Milfont, Tauario L. and Duckitt John (2004). The structure of Environmental Attitudes : A first and second order confirmatory factor analysis. *Science Direct-Journal of Environmental psychology*, Vol. 24, Issue 3, Sept. 2004, 289-303.
- Uitto Anna & et.al (2004). Who is responsible for sustainable development? Attitudes to environmental challenges A survey of Finish 9<sup>th</sup> grade school students. Ph.D. department of applied sciences of Education, University of Helsinki, Finland.

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