An investigation into the attitude of secondary school students towards environmental education in Purulia District of West Bengal, India

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Now-a-days, we are facing so many problems such as physical, psychological, social, economical, spiritual, political etc. Added to this in the new millennium the environmental crisis has become another important factor which has made every one in the world to think its gravity. In the circumstance, Environmental Education (EE) plays an important role for creating awareness among the students. Environmental education is an integral process which deals with man’s interrelationship with his natural and man-made surrounding’s including the relation of population growth, pollution resources allocation and depletion, conservation, technology and urban and rural planning to the total human environment. In the present study the investigators made an attempt to study the attitude of secondary school students towards environmental education in Purulia district of West Bengal. One hundred and fifty students (both Boy and Girl) reading in classes IX and X were taken as representative sample of the whole population. An attitude scale was used for collecting the data. The means of both groups were tested for significance of difference by using CR test. The differences in the groups were statistically significant and the attitude of secondary school students was satisfactory or average towards environmental education.

Key words: Attitude, Environment, Environmental Education.

INTRODUCTION

“Education is the manifestation of divine perfection that is already in man.” – Swami Vivekananda; perfection in every sphere of life of an individual. Education is a broad term that can have many meanings, but it is generally defined as the process of learning and acquiring information. Formal learning in a school or university is one of the most common types, though self-teaching and so-called “life experiences” can also qualify. Communities around the world place a high value on educating people of all ages, whether formally or informally. It is widely believed that constant exposure to new ideas and skills makes people better workers, thinkers, and societal contributors. There is nothing beyond nature, behind nature and other than nature. Man and nature are inter-related and interdependent. In the words of Dalia Lama—

“If we care Nature, it can be rich, bountiful, inexhaustible and sustainable”. Life does not occur in a vacumm. Man is an integral part of the natural environment and owes his existence to wise use of resources for sustainable development. It is surprise to note that, the delicate ecosystem of our planet is facing a danger of destruction on a large scale as never before in the history of mankind. In the circumstance, Environmental education refers to organized efforts to teach about how natural environments function and, particularly, how human beings can manage their behavior and ecosystems in order to live sustainably. The term is often used to imply education within the school system, from primary to post-secondary. However, it is sometimes used more broadly to include all efforts to educate the public and other audiences, including print materials, websites, media campaigns, etc. related disciplines include outdoor education and experiential education. Environmental education should be an integral part of the educational...
process, aimed at practical problems of an interdisciplinary character, build a sense of values, and contribute to public well-being. Its focus should reside mainly in the initiative of the learners and their involvement in action and guided by both the immediate and future subjects of concern. According to the International Union for the Conservation of Nature (IUCN), environmental education (EE) is: "... the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among men, his culture and his biophysical surroundings. EE also entails practice in decision-making and self-formulation of a code of behaviour about issues concerning environmental quality.

UNESCO Seminar as Jammu (1976) defined environmental education as: "Environmental education is a way of implementing the goals of environment protection; it is not separate branch of science or field of study it should be carried out according to the principles of long integral education". Environment Science / Education is a multi-disciplinary subject (Figure 1). It is related to geography, physics, chemistry, biology, history, economics, politics, law and management. In the language of E.D. Enger and B.F. Smith: "ES is an interdisciplinary area of study that includes both applied and theoretical aspects of human impact on the world. Since humans are generally organized into groups, ES must deal with politics, social organization economics, ethics and philosophy. Thus ES is a mixture of traditional science, societal values, and political awareness".

Now-a-day’s population explosion also creates environmental problems. So at any cost the equilibrium between man and his environment should be maintained. More recently, environment factors have played a significant role in the social and economic development in India and in several countries. Thus the future of our existence ultimately depends on man’s attitude towards environment. It is very necessary to know about several factors of natural environment which affect man’s food, health, wealth and recreation. Thus, for developing student’s attitude towards environment, environmental education plays a vital role in all sections / levels of the society and school; particularly on the minds of young little children at school and at home levels. Environmental education is a process in which students / individuals gain awareness of their environment and acquire knowledge, skills, values, experiences. They can also determine which will be possible to act individually and collectively and to solve the present and future environmental problem. The concept of EE (Environmental Education) is not a new theory in the primary school curriculum in India. Before 1970, environmental and health education were normally thought in the primary stage through nature study hygiene. The Kothari commission (1964-66) has expressed the importance of environment education. The National Policy of Education (1986) has strongly directed to introduce environment related topics at all levels i.e., from the primary to university level. M. K. Gandhi in his Basic Education Scheme laid stress on physical and social environment. R. N. Tagore introduced Environmental Education is nature study in his school at Santiniketan in 1901 and chose nature as he prefer point children’s all round development of personality. Recently National Curriculum set by NCERT 2000 has also emphasized the environment education in school level. Therefore, proper understanding of the environment in which the man lives is inevitable. Since the secondary level is the crucial stage of the present educational system in our country, it needs special attention. After which the students will go for various profession and they are also regarded as very responsible person of our future society. Therefore, the necessity of getting the students well acquainted with environmental education from school stage can never be minimized. The environmental awareness should spread all over the world. It is found that there are different reasonable opinions in this regards. But we cannot come to a
Conclusion about all the school students' attitude towards environmental education from several comments or discussions with a handful of students only. Many questions are arising in the researchers mind about the students' attitude towards environmental education at school level. Still now it is very important and sensitive issue. It is an urgent need for developing certain strategies which can improve their knowledge attitude and skills on environment. Therefore, in order to know the attitude of secondary school students towards environmental education the investigators have decided to take up a systematic and objective attitudinal study of secondary school students towards environmental education. The investigators intend to restrict his research work to Purulia district of West Bengal.

**Statement of the problem**

The problem for the present study may be specifically stated as follow:- An Investigation into the Attitude of Secondary School Students towards Environmental Education in Purulia District of West Bengal”.

**Need and significance of the study**

Our environment determines our lifestyle. Development contemporary civilization also depends upon the environment. The younger generation, especially students of secondary education, who are supposed to be the future leaders and decision makers, may opt for changes in their lifestyles. Indications are prominent in this context around us, from which predicted, these changes will certainly be some determining factors in the renewal of development, especially with respect to products as well as demands of all types of industry, agriculture and thereby the economy. Secondary educational institutions are in general, and the faculty members absorbed there in specific, have major responsibilities in shaping the above-mentioned changes, both directly and indirectly. Students at secondary educational institutions should be well equipped in this mission so that they can encounter the problems of environment on one hand, and on other hand, can impart consciousness about environment among the masses that education and awareness about environment is essential, sound environmental education, irrespective of levels while attending tertiary education, students will be able to develop their philosophy of life in tune for the decisions and actions during active life and actual field of work.

Though it is essential to transfer the knowledge and skills about the environment and environmental hazards (most of which are man-made), however is not enough. So far as the taxonomy of educational objectives are concerned, it comprises three domains viz. Cognitive, affective and psychomotor (also known as cognitive), incorporating intellect behavior and skills, respectively. The affective domain needs to be given much priority for developing feelings, interest, commitments, ethical values and responsibilities with respect to protection and, improvement of environment with due consideration given to future generations. This should be the prime task of secondary education to nurture and generate planners and implementers of future with environmental awareness, as well as appropriate methodology to be accorded to environmental education. Therefore, an urgent need at present is to investigate the effectiveness of the present curriculum and to see the attitude of students towards the newly introduced course of study on environment. It is this feeling that has urged these investigators to take up the present study in a particular region of west Bengal. It is expected that this study, though small, will be able to make some significant contributions in the field of education.

**REVIEW OF RELATED LITERATURE**

Dhillon and Sandhu (2005) “Environmental Education awareness among Elementary School Teachers”, To study the environmental education awareness of the elementary school teachers with respect to their residential background (urban/rural), gender and subject specialization. Findings were: (1) Significant different was found in the environmental education awareness between urban and rural school teachers, with the former having greater awareness than the later. (2) No significant difference was observed in the environmental education awareness between male and female teachers. (3) Significant difference was found between teachers with respect to their subject specialization. (4) Science teachers had greater educational awareness than both social science and languages teachers, social science teachers had greater awareness than language teachers. According to Abraham and Arjuna (2005), “Environmental Interest of secondary schools students in Relations to their Environmental Attitude,” To study the environmental interest of secondary school students in relation to their environmental attitude. Findings were: (1) The secondary students did not have a high level of environmental interest. (2) A differential effect of gender and locale was observed in their environmental interest with the boys and urban subjects having more interest in environment as compared to their rural counter parts. (3) A high positive and significant correlation was found to exist between environmental interest and environmental attitude in all the sample groups studied. According to Nayek, Behera and Rath (2011), An Investigation into the Attitude of Secondary School Students towards Environmental Education in Birbhum District of West Bengal. According to Manikandan and Thilagavathy (2013), A Study of attitude towards Environmental
Education and Environmental Awareness of B.ed. Trainees.

Scope of the study

This type of study may be conducted in different ways and at different levels, such as:

1. A comparative survey of the attitude of secondary schools students of different parts / district of west Bengal towards environmental education may be undertaken.
2. The attitude of the secondary schools students belonging to rural and urban areas of a single state or of all the states of India towards environmental education may be compared.
3. The attitude of the secondary school students belonging to different socio-economic status may be investigated.
4. A comparative survey of attitude of secondary schools students of different states of India towards environmental education may be conducted.
5. ‘In-depth’ attitudinal studies may be conducted in order to know real attitude of the secondary school students towards Environmental education.
6. Causal studies regarding attitude of secondary schools students towards Environmental Education may be conducted.

Delimitations of the study

The present study was delimited in the following manner:

a. Geographical area: The study was delimited to only Purulia district of West Bengal.
b. Level of Education

i. The study was delimited to the students reading at secondary schools of the said district.
ii. Among the secondary school students, only the students of classes IX and X were considered as the subjects of the present study.

c. Level of Study: The study was conducted only at surface level. It was not an “in-depth” study. Attempts to know the subjects attitude were made by administering an attitude scale constructed by the researcher himself. No interstate or inter-district comparison was done. Only intra-district comparison between the boys and girls, the students of Rural and Urban secondary schools, General and SC & ST students, Students of IX and X were done.

Objective of the study

The following were the specific objectives of this study:

i. To ascertain the attitude of secondary school students towards Environmental Education in Purulia district of West Bengal.
ii. To compare the attitude of boy-and girl-students reading in secondary schools of Purulia district towards Environmental Education.
iii. To compare the attitude of rural-and urban-students reading in secondary schools of Purulia district towards Environmental Education.
iv. To compare the attitude of class IX students and class X students of the secondary schools of Purulia district towards Environmental Education.
v. To compare the attitude of General and SC / ST students of the secondary schools of Purulia district towards Environmental Education.

Hypotheses of the study

H₁: The Secondary school students will have more favourable attitude towards Environmental Education in Purulia district of West Bengal.
H₂: There is significant difference between the attitudes of boy and girl students reading in secondary schools of Purulia district towards Environmental Education.
H₃: There is significant difference between the attitude of rural students of secondary schools and the urban students of secondary schools towards Environmental Education.
H₄: There is significant difference between the attitude of class IX students and class X students of secondary schools of Purulia district towards Environmental Education.
H₅: There is significant difference between the attitude of General students and SC/ST students of secondary schools of Purulia district towards Environmental Education.

METHODOLOGY

The present study was based on survey method, particularly, the normative survey research method.

Population of the study

The secondary school students of Purulia district of West Bengal comprised the population of this study.

Sample and sampling procedure

75 students of two Rural Secondary Schools and 75
students of two Urban Secondary schools studying in classes IX and X (Purulia district) were taken as representative sample of the whole population. Stratified random sampling technique was adopted for selecting the schools. At first two separate lists of Rural Secondary and Urban Secondary Schools were prepared. From among each list, two schools were selected through random sampling procedure. From among two sections of each class in each selected school, only one section was taken as representative of the whole class and all students of that section were treated as the subjects of the present study. Hence, total sample of this study consisted of 150 students (75 students of Rural secondary schools and 75 students of Urban secondary schools).

**Tool used**

An Attitude Scale (Likert Type) was used for knowing the attitude of the students towards Environmental Education.

**Statistical technique**

CR test was used to analyze the collected data and verify the hypotheses.

**RESULTS AND DISCUSSION**

Through the help of cut-off point (Table 1) we verify the \( \text{H}_1 \). Here Cut-Off Point is \( \text{M} + 1\sigma \). It means, Mean=121.21, \( \text{N}=150 \) and \( \sigma=11.59 \). Hence \( \text{M} + 1\sigma = 121.21 + 1 \times 11.59 = 132.8 \). And \( \text{M} - 1\sigma =121.21 – 1 \times 11.59=109.62 \). Most of secondary school students (89 in number) that is 59.33 % of students were lies between 109.62 to 132.8 scores. Hence, it can be said that the attitude of secondary school students of Purulia district of West Bengal is neither more favourable nor unfavourable towards Environmental Education, that is, satisfactory or average in attitude towards Environmental Education.

It can be found that a CR is significant if it is 1.96 or more. Since 3.79 is more than 1.96 (3.79 > 1.96), the difference between the two groups is significant at 0.05 level (Table 2).

Hence, the \( \text{H}_2 \) is rejected and the researcher’s \( \text{H}_2 \) is retained; that is to say that, there is significant difference between the attitude of boys reading in secondary schools of Purulia district and girls reading in secondary schools of Purulia district towards Environmental Education.

From Table 2 and Figure 2, it is also found that, \( \text{M}_2 \) is much greater than \( \text{M}_1 \). Since greater score is indicative of more favorable attitude, it can be said that, the attitude of Girl- students reading in secondary schools of Purulia district towards Environmental Education is more favorable than that of Boy- students reading in secondary schools of Purulia district. It may be due to the fact that, Girl students reading in secondary schools have realized more the importance of Environmental education for their better future. It may also seems to be that the girl-students reading in secondary schools have more prefer Environmental Education because they feel that is – acquaints them with the wealth of knowledge in different areas of life. It is also due to the fact that the girl students were more sensitive about the environmental awareness than boy-students. Chin, Chi-Chin (1994), Patel (1995) and Ashraf (2012) also reported that girl students were more sensitive about the environmental awareness than male students.

Hence, the \( \text{H}_3 \) is rejected and the researcher’s \( \text{H}_3 \) is retained; that is to say that, there is significant difference between the attitude of rural students reading in secondary schools and the urban students reading in secondary schools towards Environmental Education.

From Table 3 and Figure 3, it can be found that, \( \text{M}_2 \) is much greater than \( \text{M}_1 \). Since greater score is indicative of more favorable attitude, it can be said that, the attitude of urban students in secondary schools towards Environmental Education is more favorable than that of rural students reading in secondary schools. It may due...
due to in schools of urban areas better exposures provided through various co-curricular activities.

It can be found that, 1.16 is less than 1.96(1.16<1.96), the difference between the two groups is not significant at 0.05 level (Table 4). Hence, the $H_{0a}$ is retained and the researcher’s $H_a$ is rejected; that is to say that, there is no significant difference between the attitude of class IX students and class X students of the secondary schools of Purulia district towards Environmental Education.

Though the researcher’s $H_a$ is rejected, but from Table 4 and Figure 3, it can be found that, $M_1$ is much greater than $M_2$. Since greater score is indicative of more favorable attitude, it can be said that, the attitude of class- IX students in secondary schools towards Environmental Education is more favorable than that of Class-X students reading in secondary schools. On the basis of this finding, it can be said that whatever be the attitude of the students regarding this important issue, little difference (and therefore, little change in attitude) is found among students within one year or so of their schools – Education.

Since 0.75 is less than 1.96(0.75<1.96), the difference between the two groups is not significant at 0.05 level. Hence, the $H_{05}$ is retained and the researcher’s $H_5$ is rejected; that is to say that, there is no significant difference between the attitude of General students and

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**Table 3.** Showing significance difference between the attitude of rural – students reading in secondary schools and urban students reading in secondary schools.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>CR</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude of students reading in Rural Secondary Schools</td>
<td>75</td>
<td>115.83</td>
<td>12.57</td>
<td>3.75</td>
<td>Significant at 0.05 levels.</td>
</tr>
<tr>
<td>Attitude of students reading in Urban Secondary Schools</td>
<td>75</td>
<td>126.6</td>
<td>7.55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Figure 2.** Mean Attitude score of rural and urban students reading in secondary schools.
Table 4. Showing significance of difference between attitude of class IX students and class X students of the secondary schools of Purulia district.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>CR</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude of Class IX students</td>
<td>70</td>
<td>122.4</td>
<td>11.92</td>
<td>1.16</td>
<td>Not Significant at 0.05 levels.</td>
</tr>
<tr>
<td>Attitude of Class X Students</td>
<td>80</td>
<td>120.18</td>
<td>11.37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Figure 3](image1.png)

**Figure 3.** Mean Attitude Score of class IX students and class X students of the secondary schools of Purulia district.

Table 5. Showing significance of difference between attitude of General Students and SC/ST students of the secondary schools of Purulia district.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>CR</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude of General students</td>
<td>112</td>
<td>122.08</td>
<td>11.70</td>
<td></td>
<td>Not Significant at 0.05 levels.</td>
</tr>
<tr>
<td>Attitude of SC/ST students reading in Secondary Schools</td>
<td>38</td>
<td>118.66</td>
<td>11.26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Figure 4](image2.png)

**Figure 4.** Mean attitude score of General Students and SC/ST students of the secondary schools of Purulia district.

SC / ST students of the secondary schools of Purulia district towards Environmental Education.

Though the researcher’s H₅ is rejected, but from Table 5 and Figure 4, it can be found that, M₁ is much greater
than $M_2$. Since greater score is indicative of more favorable attitude, it can be said that, the attitude of General students in secondary schools towards Environmental Education is more favorable than that of SC / ST students reading in secondary schools. It may seems to be that, General students feel that Environmental Education acquaints them with all sphere of life and they are more conscious / aware about their environment for peaceful living than SC/ ST students.

**EDUCATIONAL IMPLICATIONS**

i. It is a humble attempt in this direction to assess the level of knowledge and attitude of students towards the Environmental Education.

ii. This study contributes a new teaching-learning in the form of assessing the level of knowledge and attitude towards Environmental Education in the classroom instruction.

iii. This study is very much essential for the development of student’s interest, attitude, knowledge, motivation towards Environmental Education.

iv. The need of the day is to make students realize their capabilities and improve upon capabilities to help solve the problems of their life through Environmental Education.

v. More information should be made available to educate students about Environmental Education.

vi. Varied programmes of Environmental Education should be organized in school (basically rural areas).

vii. Special efforts should be made in order to develop environmental awareness among the SC and ST students.

**Conclusion**

The study carried out with 150 secondary students of Purulia district of West Bengal. The attitude of secondary school students of Purulia district of West Bengal is neither more favourable nor unfavourable towards Environmental Education, that is, satisfactory or average in attitude towards Environmental Education.

It was also found that there is significant difference between the attitude of boy- and girl- students reading in secondary schools of Purulia district towards Environmental Education. The $M$-Att. Score of girls being greater than that of boy- students.

The present study indicates that there is significant difference between the attitude of rural students of secondary schools and urban students of secondary schools towards Environmental Education. The $M$-Att.score of urban – students of secondary schools being greater than that of rural- students of secondary schools. Hence, it can be said that, the attitude of urban-students of secondary schools is more favourable than the rural – students of secondary schools towards Environmental Education.

However, it is found that there is no significant difference between the attitude of class IX students and class X students (as a whole) of the secondary schools of Purulia district towards Environmental Education. On the basis of this finding, it can be said whatever be the attitude of the students regarding this important issue, little difference (and therefore, little change in attitude) is found among students within one year or so of their schools – Education.

The major findings of this study reveal that there is no significant difference between the attitude of General students and SC/ ST students (as a whole) of the secondary schools of Purulia district towards Environmental Education. On the basis of this finding, it can be said whatever be the attitude of the students regarding this important issue, little difference (and therefore, little change in attitude) is found among the General and SC /ST students.

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