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Assessment of Environmental Awareness among English Medium Secondary School Teachers in Jorhat District of Assam, India

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Abstract

A study was carried out to know the environmental awareness of English medium Secondary School teachers in Jorhat district of Assam, India. A total of 120 teachers (60 male and 60 female) teaching in 9th and 10th standards were randomly selected for the present study. Environmental Awareness Test for Teachers (EATT) was developed by the investigator to assess the level of environmental awareness among the teachers. For analysis and computation of results, the investigator used 'Three Way Analysis of Variance' as the statistical technique to investigate the influence and interactions of variables. In addition to 'Three Way Analysis of Variance', the investigator used measures of central tendency for computing the mean scores of environmental awareness. Results revealed that as a whole, English medium Secondary School teachers had moderate levels of environmental awareness. But it was found from the study that educational qualification showed very high influence on the environmental awareness but other variables like teaching experience and settlement of teachers had not any influence on the environmental awareness.

Key words: Environmental awareness, English medium Secondary School, educational qualification, teaching experience, settlement.

Introduction: Environmental education is the study of nature, natural resources, the interrelationship with man, human activities, disturbances to the environment and the attempts to improve the environment.¹ It can be said that environmental education is education through environment, about environment and for environment. It is both a style and subject-matter of education.² The term 'Environmental Awareness' not only implies knowledge about environment but also attitude, values and necessary skills to solve environment related problems.³ The future generations shall have to reap the harvest of unplanned and insensitive approach that has irreparably damaged the relationship and harmony of human beings with the nature. For this a number of conferences and seminars were organized where it was resolved that education about environment should be a key

component of the curriculum of every country. The main landmark in this direction was the Belgrade Charter (1975) which underlined the goal of education of environment. According to this charter, the purpose of this kind of education is 'to develop a world population that is aware of and concerned about the environment and its associated problems, and which has the knowledge, skills, attitude, motivations and commitment to work individually' and collectively towards solutions of current problems and prevention of new ones'.⁴

Education acts as a powerful tool in the social change. It not only sharpens the knowledge of people but also develops awareness to make people's mind logical. As an agent of social change, teacher plays vital role in shaping the behaviour of children to promote desire change for environmental awareness.⁵ Taking into consideration this situation, the investigator felt a need to conduct a study to know about the environmental awareness among English medium Secondary School teachers in Jorhat district of Assam (India) in relation to their educational qualification, teaching experience and settlement.

A survey of literature on Environmental Awareness yielded quite inconclusive results. Nagra (2015)⁶ found in her study that secondary school teachers had higher level of environmental education awareness than elementary school teachers and the urban teachers had a higher level of environmental education awareness than the rural teachers. Nagra and Singh (2013)⁷ found in their study that there is no significant difference in the environmental education awareness among senior secondary school teachers with respect to type of school, gender and with respect to stream. Dinakara (2000)⁸ reported significant difference between urban and rural school teachers in environmental awareness. Also, government and private school teachers differed significantly in their environmental awareness. Sabhlok (1995)⁹ found that urban teachers differed significantly from rural and tribal teachers on their awareness of environmental problems. No difference was observed between rural teachers and the tribal teachers. On the contrary, Patel and Patel (1995)¹⁰ found significant impact of environmental awareness programs on the environmental awareness of the teachers. The above literature of review revealed that most of the studies had concentrated upon the elementary or secondary level teachers but very rarely any study has concentrated upon the influence of variables like educational qualification, teaching experience and settlement of teachers on the environmental awareness.

Objectives of the Study:

The main objectives of the present study are as mentioned under:

1. To study the environmental awareness of English medium Secondary School teachers in Jorhat district of Assam.
2. To study the influence of educational qualification, teaching experience and settlement and their interactions on environmental awareness of English medium Secondary School teachers in Jorhat district of Assam.

Hypothesis of the Study:

On the basis of the objectives of the study, following hypothesis have been formulated for the present study:

1. There is no significant difference in environmental awareness among the male and female teachers of English medium Secondary Schools in Jorhat district of Assam.
2. There will be no influence of educational qualification, teaching experience and settlement on environmental awareness among the English medium Secondary School teachers in Jorhat district of Assam.

Delimitations:

The present study has been delimited to:

1. English medium Secondary school teachers in Jorhat district of Assam only.
2. The study is limited to 120 teachers only.
3. The study is limited to environmental awareness of the teachers only.
4. The study is limited to the variables like educational qualification, teaching experience and settlement of the teachers only.

Methodology:

Sample: The sample for the present study consisted of 120 English medium Secondary School teachers teaching in 9th and 10th standards in Jorhat district of Assam (India) from 24 schools. Teachers teaching different subjects like Science, Social Studies, Mathematics and Languages were randomly selected from the pre-selected schools as the sample for the study. Out of the 120 teachers, 60 were males and remaining 60 were females.

Tool: Environmental Awareness Test for Teachers (EATT) was developed by the investigator. The purpose of this test is to measure the level of Environmental Awareness among secondary school teachers. This test is norm referenced test and consists of 30 multiple choice items, focusing on six different areas of Environmental Awareness such as Environmental Concepts, Pollution, Population, Health and Hygiene, Biodiversity, Environmental Concern and Legislation and lastly environmental preservation movement. The draft consisting of 50 items was given to subject expert who edited the contents of the draft and it was further given to the language expert to examine the language of each statement of the items. The verified draft was tried on 25 teachers to find out the level of item difficulty. The computed item variance showed that 30 items out of 50 ranged from 0.40 to 0.60 of variance. Therefore, 30 items were retained in the final draft of the scale. Finally, the Test-Retest method was applied to find out the reliability of the scale and computed value reached at 0.85; it indicated that the scale has reliability at satisfactory level. The investigator ensured the content validity of the scale by seeking the opinions of the content experts.

Procedure: The researcher personally visited all the selected schools, where teachers were met individually for explaining purpose of the study and were instructed how to respond to

Environmental Awareness Test for Teachers (EATT). Further clarifications were offered on the questions/doubts raised by them and they were requested to cooperate with the investigator for successful completion of the study.

Analysis of Data: For analysis and computation of results, the investigator used ‘Three Way Analysis of Variance’ as the statistical technique to investigate the influence and interactions of variables. In addition to ‘Three Way Analysis of Variance’, the investigator used measures of central tendency for computing the mean scores of environmental awareness of belonging English medium secondary schools in the Jorhat district of Assam.

Results and Discussion:

1. The environmental awareness scores of 120 teachers were used for computing the Environmental Awareness mean scores. The maximum marks of the test were 120. It means the Environmental Awareness mean score of the test may range from zero (0) to 120 marks and the mean the mean scores of the test as a whole is 78.62, but the mean scores for male teachers is 78.36 and the mean scores for female teachers is 78.87. But the overall mean scores of 60 male teachers and 60 female teachers is almost equal to the mean scores of the tests. It means that male teachers and female teachers are having equal mean scores to the mean scores of the test. It means the male and female are having an average amount of environmental awareness.

Table-1: Environmental Awareness Test Scores of English Medium Secondary School Male Teachers of High and Low Levels of Teaching Experience, Settlement and Educational Qualification

Sl. No	Source of Variation	Sum of Square	d. f.	Mean Squares	F-value
1	T. Experience (A)	31.2	1	31.2	1.26
2	Educational Qualification (B)	12450	1	12450	503.23
3	Settlement (C)	18	1	18	0.73
4	A x B	14.5	1	14.5	0.59
5	B x C	18.1	1	18.1	0.73
6	A x C	8.5	1	8.5	0.34
7	A x B x C	26.45	1	26.45	1.07
8	Treatment within Set	1781.2	72	24.74	

$$\text{TSS} = 12566.75 - 31.2 - 12450 - 18 - 14.5 - 18.1 - 8.5 = 26.45 \quad (\text{A x B x C})$$

2. Table-1 reveals that the computed ‘F’ value was found 1.26 relating to the variable Teaching Experience, where as the table ‘F’ value is 3.98 for 1/72 d.f. at .05 level of confidence. It means that that obtained F value (0.25) is smaller than the table value 3.98; it is concluded that the mean scores of Environmental Awareness of the male teachers belonging to English medium secondary school belonging to high and low groups of teaching experience group do not differ significantly. In view of this the hypothesis is retained and interpreted that the variable teaching experience does not influence the

Environmental Awareness of the male teachers of English medium secondary schools in Jorhat, Assam.

3. It is indicated in Table1 that the obtained ‘F’ value is 503.23 regarding the variable of Educational Qualifications, which is higher than the table ‘F’ value 3.98 for 1/72 d.f. at .05 level. It means the mean scores of Environmental Awareness of the male teachers of English medium secondary school belonging to high and low groups of Educational Qualifications group differ significantly. Therefore, the hypothesis has been rejected and interpreted that Educational Qualifications influence the Environmental Awareness of the male teachers of English medium secondary schools in Jorhat, Assam.

4. Table 1 shows that the computed ‘F’ Value came out to be 0.73 regarding the Settlement variable whereas the table ‘F’ value is 3.98 for 1/72 d. f. at .05 level. Here, the obtained ‘F’ value 0.76 is lesser than the table value 3.98. Hence, it is concluded that the mean scores of Environmental Awareness among rural and urban male teachers of English medium Secondary School do not differ significantly. In view of this, the hypothesis is retained and interpreted that the variable Settlement, does not influence the Environmental Awareness of the male teachers of English medium secondary schools in Jorhat, Assam.

5. Further, Table 1 indicates that the obtained ‘F’ values of interactions between Teaching Experience, Educational Qualifications and Settlement, were found 1.2, 503.23, and 0.73 respectively, which are lesser than the criterion ‘F’ value 3.98 for 1/72 d.f. at .05 level of confidence. Although Educational Qualifications shows very high influence on the environmental awareness of English medium Secondary School male teachers the other variables like Teaching Experience and Settlement of teachers does not have any influence therefore it can be concluded that as a whole the interaction between these variables on environmental awareness of English medium Secondary School male teachers are insignificant.

Table-2: Environmental Awareness Test Scores of English Medium Secondary School Female Teachers of High and Low Levels of Teaching Experience, Settlement and Educational Qualification

Sl. No	Source of Variation	Sum of Square	d.f.	Mean Squares	F-value
1	T. Experience (A)	36.9	1	36.9	1.57
2	Educational Qualification (B)	12550.5	1	12550.5	534.52
3	Settlement (C)	18.5	1	18.5	0.79
4	A x B	10.8	1	10.8	0.46
5	B x C	26	1	26	1.11
6	A x C	3.6	1	3.6	0.15
7	A x B x C	26.9	1	26.9	1.15
8	Treatment within Set	1690.4	72	23.48	

$$TSS = 12673.2 - 36.9 - 12550.5 - 18.5 - 10.8 - 26 - 3.6 = 26.9$$

$$(A \times B \times C)$$

6. Table-2 reveals that the computed 'F' value was found 1.57 relating to the variable Teaching Experience, where as the table 'F' value is 3.98 for 1/72 d.f. at .05 level of confidence. It means that that obtained F value (1.57) is smaller than the table value 3.98; it is concluded that the mean scores of Environmental Awareness of the Female teachers belonging to English medium secondary school belonging to high and low groups of teaching experience group do not differ significantly. In view of this the hypothesis is retained and interpreted that the variable teaching experience does not influence the Environmental Awareness of the Female teachers of English medium secondary schools in Jorhat, Assam.

7. It is indicated in Table-2 that the obtained 'F' value is 534.52 regarding the variable of Educational Qualifications, which is higher than the table 'F' value 3.98 for 1/72 d.f. at .05 level. It means the mean scores of Environmental Awareness of the female teachers of English medium secondary school belonging to high and low groups of Educational Qualifications group differ significantly. Therefore, the hypothesis has been rejected and interpreted that Educational Qualifications influence the Environmental Awareness of the female teachers of English medium secondary schools in Jorhat, Assam.

8. Table-2 shows that the computed 'F' Value came out to be 0.79 regarding the Settlement variable whereas the table 'F' value is 3.98 for 1/72 d. f. at .05 level. Here, the obtained 'F' value 0.76 is lesser than the table value 3.98. Hence, it is concluded that the mean scores of Environmental Awareness among rural and urban female teachers of English medium Secondary School do not differ significantly. In view of this, the hypothesis is retained and interpreted that the variable Settlement, does not influence the Environmental Awareness of the female teachers of English medium secondary schools in Jorhat, Assam.

9. Further, the Table-2 indicates that the obtained 'F' values of interactions between Teaching Experience, Educational Qualifications and Settlement, were found 1.57, 534.52, and 0.79 respectively, which are lesser than the criterion 'F' value 3.98 for 1/72 d.f. at .05 level of confidence. Although Educational Qualifications shows very high influence on the environmental awareness of English medium Secondary School female teachers the other variables like Teaching Experience and Settlement of teachers does not have any influence therefore it can be concluded that as a whole the interaction between these variables on environmental awareness of English medium Secondary School female teachers are insignificant.

The results obtained in the present study are more or less not in accordance with some of the studies mentioned here. The findings of Fong (1994),¹¹ Owens (2000),¹² Rai (2002)¹³ and Raja Kumari (2002)¹⁴ highlighted that higher environmental awareness is due to higher level of education. Present study also showed similar trend. In this study, educational qualifications of the teachers have very high influenced on the environmental awareness.

The findings of Patel and Patel (1994),¹⁵ Pradhan (1995),¹⁶ Pareek and Sidana (1998),¹⁷ and Pradhan (2002)¹⁸ also suggested that there exists significant difference in the environmental awareness level in relation to residential background. But in the present

study, it was found that settlement of teachers have not any influence the environmental awareness.

Conclusion: Bloom's Taxonomy¹⁹ defines the educational goals in terms of three domains viz. the cognitive, the effective and the psychomotor or the connative and environmental education is also comprises of these three domains. Environmental Education aims at developing the knowledge, attitude and skills necessary to protect our environment. Environmental Education helps a man to interact with the surrounding world. A teacher can help his students to know, to protect and to enrich their environment. Student follows their teachers and draw inspiration from them. The role of the teacher has changed according to the new paradigm of education. Now-a-days, learning is regarded rather than teaching. It is the time to help the students to build the capacity of critical thinking. Without proper knowledge about environment a teacher can never encourage his students for critical thinking.

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