ENVIRONMENTAL AWARENESS OF SENIOR SECONDARY STUDENTS IN RELATION TO THEIR ECO-FRIENDLY BEHAVIOUR

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ABSTRACT

Knowledge acquired, if not put into action is of no use and will go waste. If the awareness to protect environment manifests in the form of execution then the world will be a better place to live in. The present study shows the level of environmental awareness in relation to eco-friendly behaviour through the sample drawn randomly from two CBSE affiliated schools of Bhopal. The sample consisted of 150 students, which includes 75 boys and 75 girls. Survey method was used for the study and questionnaire was used to assess the environmental awareness and eco-friendly behaviour by taking into consideration natural resources like air, soil, water and their sustainable use. The data was statistically analysed using Karl Pearson's coefficient of correlation ('r'). Findings indicate that respondents had only a limited understanding of environmental issues which positively impact eco-friendly behaviour. We often talk about clean and green environment but little do we think of using eco-friendly products. Most environmental education to date has focused on green topics i.e. tree planting and nature conservation. Connections have seldom been made between environmental issues and social, cultural and economic concerns. Key principles of education for conservation include critical thinking and social transformation. These elements have often been lacking from environmental education.

Key words: Environmental Awareness, Eco-friendly behavior, Environmental education and Critical thinking.

INTRODUCTION

Today all lives are at stake due to environmental pollution and the root cause of this is over population, greed and unconcerned attitude of human beings towards humanity. There is a lot of awareness about the protection of environment that is taking roots amongst the youngsters. If this awareness manifests itself in the form of execution then

the world will be a better place to live in. We often talk of clean and green environment but little do we think of using eco-friendly products.

Since the sixties concern over the state of environment has grown worldwide. Modern environmentalist starts with the promise that-"We bear the responsibility of our action towards nature and therefore our eyes and heart must be educated". There has been substantive decline in environmental quality.

In India, the environmental action formally started with the participation of Mrs. Indira Gandhi in the United Nations Conference on human environment in Stockholm in 1972.A national committee on environmental planning and co-ordination was established to be the apex body in the department of science and technology. The term environment was figured for the first time in the fourth five year plan (1969 – 74) which recorded that "harmonious development is possible only on the basis of a comprehensive appraisal of environmental issues".

The school education can significantly promote environmental awareness. Environmental education became the integral component of the National Policy on Education 1986. It was declared that there is a need to create consciousness of the environment which must permeate all the ages and all sections of the society. As a result of directions issued by Supreme Court, environmental science was made mandatory for undergraduates and Environmental Science was introduced as a subject in Class I to V. The curriculum on environmental education was prepared by N.C.E.R.T. in accordance with the guidelines laid down by the N.C.F. (National curriculum framework) 2005 and as per the directives of the honorable Supreme court of India, and adopted by the C.B.S.E. (Central Board of Secondary Education), C.I.S.C.E. and various state boards. The syllabus encourages the learner to observe their surrounding critically and understand the importance of a healthy environment.

Review of related research reveals that few isolated studies has been done on various environmental issues by Shahnawaj(1990), Hausebeck, K.W., Milbrath,L.W., & Enright, S.M.(1992), Bradley,J.C., Walichek,T.M. & Zajichek, J.M.(1999), Kuhlemeier, H., Bergh, H.V.D., & Lagerweij, N. (1999), Abdul Wahab S.A.(2008). From overall view of review of past studies, it was found that researches had been conducted on environmental knowledge, environmental awareness, environmental attitudes and

environmental behaviour among teachers and higher secondary school students. But no comprehensive effort has been made to highlight the relationship between environmental awareness and eco-friendly behaviour.

Hence the present study is being conducted to find out the level of environmental awareness the students have along with the implementation of their knowledge which project their eco-friendly behaviour. This study will investigate the extend of relationship between environmental awareness and knowledge implementation and secondly, where lies the problem in protecting our environment, which is the hurdle that needs to be crossed.

CONCEPTUAL FRAMEWORK

A) Environmental awareness: is the mirror image of all the knowledge one has after going through rigorous curriculum in the school which provides detailed knowledge about environment and current environmental problems. A person with high environmental awareness realizes that an effort is required individually and in group, to improve general environmental conditions.

B) Eco–friendly behaviour: is the application of one's knowledge into practice such that after a certain amount of guidance and practice one develops all the needful qualities in his behaviour. These include consumer's willingness to buy organic products, products which are certified 'environmentally-safe'.

OBJECTIVES OF THE STUDY

- To find the relationship between environmental knowledge and eco-friendly behaviour of senior secondary students.
- To find the percentage distribution of scores of environmental awareness and eco-friendly behaviour of senior secondary students.
- To study the superstition controlled eco-friendly behaviour among boys and girls of senior secondary students.

METHODOLOGY

RESEARCH DESIGN: Descriptive survey method was used for the study.

SAMPLE: Two C.B.S.E. affiliated schools of Bhopal city were selected for the study. Random sampling technique was used. The sample consisted of 150 eleventh grade students, which includes 75 boys and 75 girls of these two randomly selected schools.

TOOL USED:

A test was developed, by the investigator to assess the **Environmental Awareness** and **Eco-friendly behaviour**, by taking into consideration natural resources like air, soil, water and their sustainable use. The test contains items in the form of multiple- choice responses. Each correct response is assigned one mark. The maximum mark that was scored by each sample in each one of the two tests was 40. Separate list for boys and girls has been prepared for detailed analysis.

STATISTICAL TECHNIQUES USED

- Karl Pearson's Coefficient of Correlation ('r').
- The data were also analyzed quantitatively using percentage distribution of scores.

ANALYSIS OF DATA AND INTERPRETATION OF RESULTS

In order to analyse the first objective, degree of correlation between environmental awareness and eco-friendly behaviour among senior secondary students has been calculated as shown in the Table 1.

Table -1: Correlation value 'r' between environment awareness and eco-friendly behaviour

Category	**N**	**Obtai-ned Score**	**Percentage**	**'r'**	**SEr**	**Nature of 'r'**	**Degree of 'r'**
Environmental awareness	150	4129	68.81	0.47	0.07	Positive	Moderate
Eco-friendly behaviour		3340	55.66				

The value of correlation between the environmental awareness and eco-friendly behaviour has come out to be 0.47.The value of 'r' signify the relation between the two variables is positive and moderate. Thus we conclude that if environmental awareness among the students rise it will lead to the further rise in eco-friendly behaviour.

To achieve the second objective, percentage wise distribution of score between environmental awareness and eco-friendly behaviour of senior secondary students is being calculated as shown in Table-2

Table-2: Percentage wise distribution of scores between environmental awareness and eco-friendly behaviour

Category	N	Maximum score	Obtained score	Percentage
Environmental awareness	150	6000	4129	68.81
Eco-friendly behaviour		6000	3340	55.66

Table 2 shows that the students have secured 68.81 % in environmental awareness and 55.66 % in eco-friendly behaviour. Hence among all the respondents the level of environmental knowledge is higher as the percentage of environmental awareness is more than Eco -friendly. Though students have more environmental awareness but they fail to implement the same, equally in their behaviour. This may be because of the family and school rituals and practices which as a result, fail to give desired environment in which a child can follow eco-friendly behaviour.

DIMENSION WISE DISTRIBUTION OF SCORES

Environmental awareness test was constructed on the basis of five dimensions as follows:

- Air
- Soil
- Water
- Noise and
- Basic awareness

Then each dimension is analysed on the basis of number of correct responses given in each dimension as shown in Table 3

TABLE 3: Dimension wise distribution of environmental awareness scores in each of the five dimensions

Dimension	N	Maximum score	Obtained Score	Percentage
Air	150	1500	966	64.4
Soil		1500	1036	69.06
Water		1050	676	64.38
Noise		750	544	72.53
Basic awareness		1200	880	73.33

As can be seen from the table respondents seem to have maximum knowledge about the general concepts of environment but as we go from general to specific we get to know that out of the few chosen dimensions, respondents have deepest knowledge about noise and soil pollution. This may be because this is one pollution which is encountered by everyone at every place for e.g., in their personal colonies one suffers from noise of high loud speakers and music system and noise from traffic or vehicles .Further, the soil pollution and conservation as a topic has been dealt with clarity and depth in their curriculum in all the classes from fifth to tenth. So the students have both knowledge and experience of soil conservation and protection.

Then on coming to air and water pollution respondents had shown low ranking due to the fact that respondents didn't had knowledge relating to the sources of these pollutions and if one doesn't know the sources of these pollutions then it becomes difficult to prevent it. Hence It can be concluded that respondents are good at general environmental concepts and lack knowledge about specific pollutions and there causes.

But this is what is needed if we want to enhance people's participation in improving the environmental condition then their knowledge has to be enhanced first and that too in every environmental aspect. Detailed knowledge will guide their lives and living both. For example people know that the use of polythene bags is harmful but they fail to know the causes and effects so they do not prohibit its use strictly.

To achieve the third objective, the responses indicating superstition controlled eco-friendly behaviour held by the students were recorded which are as follows:

- Major cause of passive smoking is industrial smoke. On the contrary it is vehicular smoke out of all the options given which is the most hazardous for the people.
- When compared to unleaded petrol, petrol with oil is more eco–friendly. Though the fact is that it is unleaded petrol which is more eco-friendly.
- Soil erosion is the removal of sub-soil. Fact is it is top soil which contain necessary nutrient required for the growth of plants.
- Project Tiger is concerned with killing of man eating tigers. Rather it is concerned with protection and preservation of the tigers.
- Use of artificial air perfumes would purify the environment. They would instead release such chemicals which would harm both environment and human health specifically lungs.
- On a shopping trip one should carry his own plastic bags as buying one is wrong. Rather use of plastics itself is injurious for the environment.

- Maximum respondents believed that to avoid too many poisonous substances as pesticides it is better to use dettol. It is instead ash which should be used as pesticides.
- To avoid excess of water loss from the environment plants like eucalyptus and water hysinth should be planted. They should rather be removed as they consume lots of ground water resulting in decrease in the water level.
- Using wooden furniture would mean being eco-friendly. No, that would lead to cutting of trees, rather it would be better to use furniture made of rote iron which would last longer and can be recycled.
- Hybrid variety of fruits and vegetables are preferred by most of the respondents when compared to seasonal fruits and vegetables. Instead it is the seasonal fruits and vegetables which are better for health.

Finally, a variety of environmental problems now affect our entire world. Every environmental problem has causes, numerous effects, and most importantly, a solution. We all know the world has its problems, particularly where the environment is concerned. But not too many of us know the details, and the stories behind those problems.

We have to educate, spread awareness, involve and motivate every child, woman and man in the country to conserve the local flora and fauna, soil and water resources and all other gifts of God which belong to all and to none individually.

EDUCATIONAL IMPLICATION

Environment as a subject is included separately in the curriculum but even then serious attention is not been given by the teachers and the students. Several misconception held by the students related to environmental issues indicate that they read the subject to clear the exam and fail to implement their knowledge in day today life. The curriculum of environmental education should be amended and to based on following philosophy:

- Environment as a subject should be dealt with complete practical approach.
- The subject of environmental education should be evaluated on the basis of its practical application by the student, exclusively.
- The coordinated efforts of teachers and supporting teams like curriculum planners, examiners and environmentalist associations are certainly required to improve the

situation and promote the balanced development of environmental consciousness in schools.

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