

A STUDY ON ENVIRONMENTAL AWARENESS OF SECONDARY SCHOOL STUDENTS OF BOUDH DISTRICT

SARBANI SANKAR PANIGRAHI

LECTURER IN EDUCATION

K.S.U.B. COLLEGE OF TEACHER EDUCATION

BHANJANAGAR, GANJAM

ODISHA, INDIA

ABSTRACT

Environment is of vital concern for human being living in the society. He must understand the various elements of environment explore them and utilize in proper way so as to live for a longer period of time. To fulfill this, man must aware about various pollutants in the environment. The present study attempts to find out the extent to which the students aware of the environment and explores the factors related to it. It follows survey method and collects data by the help of questionnaire which intends to find out the extent of awareness of secondary school students.

Key words: environment, pollution, awareness, secondary school, students.

INTRODUCTION

Man is a part and parcel of the environment and it is indispensable for his survival. He cannot go without it. Nature must be thought of as an entity having an essential unit among its constituents. This unity is inter-related and interdependent of soil, water, minerals, plants, animals and man constitutes the web of life. Though man is a part of environment, he is occupying the highest position.

Our country being geographically placed in the best environmental conditions has abundant resources of all kinds. Yet our society is at the verge of poverty because the people are less involved in tapping, utilizing, maintaining and protecting them. Moreover, unnecessary wastage and lack of saving the resources is not uncommon. For example, when some people are looking up for water with grim face at the clouds and with dry pots at the wells and tubes, other people are wasting purified water in the cities and towns by simply letting the taps unclosed. Similarly, the other aspects of environment are also badly affected due to the carelessness of man in using and managing them while living in the society.

ENVIRONMENTAL EDUCATION

The international Union for the Conservation of Nature and Natural Resources has given a suitable definition of environmental education as on the following:

“Environmental Education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man, his culture and his bio-physical surroundings. Environmental education entails practice in decision making and self-formulations of a code of behavior about issues concerning environmental quality”.

Despite its recent origin, the theme of environmental education has good or ill directed our attention to a number of problems, both old and new concerning the question of what education is and what it ought to be, in a world society tormented by profound and persistent crises. These crises are particularly discernible in the matter of human fellowship and the growing discrepancies between culture- the ‘second nature’, created by man and the original biogenetic nature of the planet.

ENVIRONMENTAL EDUCATION / AWARENESS PROGRAMMES

Due to the significance of the environment in our lives and for survival, it is being increasingly felt that certain specific values pertaining to the environment which have emerged through the global and national efforts, should be identified, defined and integrated in the educational process to be assimilated in the cultural ethos of the society.

Factors Influencing Environmental Awareness of the Children:

- i) **Family Condition:** This includes the relationship between the parents, their attitude, love, affection towards the children, discipline maintenance, the literary or educational standard of the parents, their attitude towards learning, and behavior towards learned persons in the society.
- ii) **Classroom Condition:** The child not only learns from home only, but also from the conditions of the classroom in the school. Here, the factors are the teacher’s attitude towards environment, availability of materials, teaching through activities in the form of SUPW work etc. Again, it also includes the experience conducted in the school, demonstrations given on environmental awareness etc.
- iii) **Socio-economic Condition:** This include the economic condition or standard of the family, social relationship of the family, attitude of the family members towards social gathering, working and other such social welfare activities etc.
- iv) **Variations in Environmental Conditions:** These variations found in the layer of the earth and it is universal by nature. This includes the things or the physical features surrounding the child, the need of the child towards the surroundings, the individual choices may be mentioned, as it differs from region to region, locality to locality and nation to nation.

REVIEW OF LITERATURE

A review of related literature is very much essential in undertaking a research project as it enables the researcher to find out the areas in which researches have been already done and the areas left untouched by the researchers. Then only he can try best to make up his mind in undertaking a new field of research.

Let us focus on few studies undertaken in this field:

Water M. and Filho Leal D.S. in their study “An analysis of the logistical and structural problems involved in the undertaking of Environmental Education Programmes in Developing Countries” find out that, there are great difference in the status of environmental education among developed and developing nations. The social and economic problems create obstacles for the implementation of educational initiatives in developing countries.

Childress (1978) in her study “A critical study on the place of environmental education in the school curriculum” finds that involvement in environmental education programme is greatest at grade : V, VI, X, XI & XII and lowest in kindergarten, the needs of the students and interest of the teacher were the factors exerting the most influence on the selection of curriculum content. Materials developed by teaching staff made up most of the instructional materials. These help them to develop an appreciation of the environment but not in developing problem solving skills, with regards to the environment.

Dr. Sayi Prasad K.K. Studied “Environmental Awareness – A study on the women of a South India Village” and find out that the degree of awareness is directly related to the caste system and educational status. It is much less among the SCs and uneducated group. But as far as radiation hazards and knowledge of Bhopal Gas accident, it does not make much difference among different castes and educational categories.

Dr. Gakhar S.C., Kaira Bindu and Saini Kiran in their study “Environmental Pollution Awareness among urban and rural school going youth in relations to Intelligence” found that there exists significant positive differences between the high intelligent urban and low intelligent urban and high intelligent rural and low intelligent rural group of students. This shows high intelligent youth is having high awareness of environmental pollution than the low intelligent groups.

Pal (1981) studied “Preparations and try out curriculum in environmental studies leading in life-long education for College students” and finds out that the experimental group had gained more than the control group had gained more than the control group in environmental activities inventory indicating effectiveness of the curriculum. Due to the instruction for using the curriculum, students reflected the clearer and more vivid images perceived in terms of their sensitivity towards the environment.

Joshi B.P. (1981) studied “Development of science education for upper primary classes based on the Environmental Approach” and finds that, Environmental education at the upper primary level was essential and vital to develop insight and skills needed to influence not only the environmental attitudes and the behavior of the students but also to stimulate their re-orientation of values regarding the importance of environment. Children at the primary stage were interested in and learn from experiences with the real things that they could manipulate in some way. The environment outside the school was potentially significant for educational purposes. The teachers did not identify the objects outside the classroom which might be usually brought inside for study. The syllabus was not environmentally oriented and did not contain information about ecological balances, protection of flora and fauna, did not include topics like conservation of resources, pollution of water and air and preservation of wild life and their relevance to real life.

The Regional Research Centre made a study on “Nutrition, Health Education and Environmental Sanitations at Primary Level” and find out that, there is an awareness of cleanliness of clothes, hand and feet and cutting of nails. They have good bathing habits, i.e., away from the well, and habits, i.e., far away from the village and use water in container rather than from the ponds directly. There is use of soak pit for waste water in the kitchen and preparation of foods using starch and flour, washing before cutting and eating green vegetables.

Gupta (1981) studied “Awareness of Environment among rural and urban schools and non-formal education centre students of class-IV” and finds out that, school going rural children were more aware than urban children. Non-formal education centre students were more aware than urban students.

Deopuria R.P. (1984) studied “A comparative study of teaching science through environmental and traditional approach in the schools of Madhya Pradesh” and found out that the students in the experimental group, i.e. class V, VII, IX & X obtained higher achievement scores due to teaching of science through environmental approach. The environmental approach showed greater cognitive gain in knowledge, understanding and application of science concepts related to environmental education of primary, middle and secondary levels. But it was no effective in the teaching of factual recall type concepts of middle and secondary level. The Primary school students of experimental group showed considerable improvement towards environmental awareness. The teachers of experimental group of schools had a very high positive attitude towards the environmental approach for teaching science.

NEED/ IMPORTANCE OF THE PROBLEM

Today there is a great threat to the environment in which man is living. With the change in time augmented with rapid advancement of science and technology, man is confronted with problems of various kinds mostly environmental. To mention a few are air pollution, water pollution, land pollution, noise pollution, unprecedented floods, unwarranted draughts, extinction of animals, ecological imbalance and energy crisis. Man is in the full grip of these problems and is trying into the solutions, remedies, control and curative methods, through science and technology. If we explore the reasons, the trend appears to be due to lack of proper utilization and management of natural resources. In a word, due to lack of conservation, mineral deportation and so on, there is altering of season as a result of which we find scanty rainfall and widespread draughts.

Fuel is another severe problem of our time. At present, the chief source of energy is petroleum which is an unrenewable source. The fuel reserves will exhaust on one day or the other as there is heavy use of motor vehicles now-a-days. Conversion of solar energy and hydrogen conversion into energy is proved to be impractical due to many reasons. Research at present is focused on producing energy from plants. Plants can be a renewable source of energy provided they are dealt with scientifically. But, as an immediate domestic fuel, the plants are felled down indiscriminately and thus aggravating the fuel problem still further. But this is done by the common man due to his ignorance and lack of scientific knowledge. Hence, the importance of trees in our life, their optimum utilization, care taking, reimbursing the spent

quantum by planting trees should be known to the common man. It is nothing but imparting knowledge of conservation of forests and plants.

Killing of beautiful wild animals and birds is another problem. Man has travelled very long distances from denizen life to citizen life. In this process, he had mercilessly killed many animals and birds. Today, many species have disappeared and in the same magnitude are at the edge of extinctions. God created nature with all its beauty for future generations. In one way, it is conservation of animals.

Conservation of natural wealth and resources means the wise use of natural resources for the greatest good of the largest number of people. In a broadest sense, conservation is a way of life involving processes that are social, ethical as well as economical.

Thus, it is clear from the above that the effect of environmental pollution on mankind is too much serious. To save human being from extinction, we need to protect our environment and it is possible only if there is awareness among people to save and conserve environment.

STATEMENT OF THE PROBLEM

The problem of study has been undertaken with the aim of assessing how far the students aware of about their environment or surroundings. However, the concepts used in this study needs to be clarified so that it will help to the researchers and scholars who ought to work in this field. Again, it will also help to the teachers and students to know a better idea about the environment. In this study, three basic concepts are used, viz, study, environment and awareness. These concepts are to be clarified or stated what it actually means in this study.

The term "Study" is defined as a systematic and objective investigation of a particular thing or phenomena which must have a specified goal. In this study also, the same has been attempted to ascertain the environmental awareness of secondary school students.

The term "environment" not only includes the sum of all material things that make up the mosaic of the countryside or landscape which constantly interact with each other, but also the economic structures, the outlook and habit of people in different parts of the world. Thus, it includes not only physical or material structures but also economic and cultural aspect as well.

"Awareness" can be taken as a psychological factor which is variable in nature and can be measured with some assumed values, synonymous with consciousness from a layman's point of view. But the dictionary meaning of awareness is 'having perception' or knowledge. This study aims to assess the awareness of secondary school students towards their environment and find out possible solutions.

OBJECTIVES

The study has been undertaken to fulfill the following objectives:

- To ascertain the environmental awareness of secondary school students of Boudh District.
- To know their understanding about the environment and various problems related to it.

- To examine the environmental awareness of secondary school boys with respect to the whole group of boys and girls.
- To analyze the environmental awareness of secondary school girls with respect to the whole group of boys and girls.
- To compare the environmental awareness of girls with that of boys at the secondary school level.

HYPOTHESES

The following hypotheses been taken to examine in the study.

- The secondary school students of Boudh District are less aware about environment.
- They do not have understanding about environment and other problems related to it.
- There is no significant difference in the environmental awareness of boys with that of girls at the secondary level.

RESEARCH METHODOLOGY

In the study, the researcher has followed the School Survey Method as it has been found suitable to the problem. The secondary school students of different High Schools under Boudh Block in the District have been selected as the subjects under study. For this, stratified random sampling procedure has been followed. Data has been collected with the help of a questionnaire which includes forty items both positive and negative statements. For scoring, each statement is having five possible answers. So five-point scaling technique i.e., likert technique has been followed. in the study.

RESULTS AND DISCUSSION

The data collected has been analyzed by the help of statistical techniques, i.e. mean standard deviation and critical ratio. The following table illustrates the result of the study:

MEAN, SD AND CR OF ENVIRONMENTAL AWARENESS SCORES OF BOYS AND GIRLS

Sex	Mean(M)	Standard Deviation (SD)	Critical Ratio (CR)
Boys	126.55	21.15	-1.33
Girls	124.45	24.17	-0.35
Boys & Girls	123.57	17.0	0.67

It has been seen from the above table that, the value of CR of boys is -1.33 which is less than 1.96. So, the difference between means is not significant at 0.01 and 0.05 level.

The value of CR of girls is -0.35 which is also less than 1.96. So, the difference between means is not significant at 0.1 and 0.05 level.

The value of CR of the group of boys and girls is 0.67 which is again less than 1.96. So, the difference between means is not significant at 0.01 and 0.05 level.

Though there is no significant difference between the means of boys and girls, the boys are little bit more aware towards the environment as compared to the girls.

FINDINGS

The following findings are drawn from the study.

- The secondary school students of Boudh district are aware about environment.
- The boys are little bit more aware about the environment and other factors related to it.
- Although the whole group of boys and girls do not differ significantly from the boys, boys are more aware about the environment.
- The girls are little less aware about the environment eventhough they do not differ significantly from the whole group.
- The boys are more aware towards the environment than the girls at the secondary school level in Boudh district.

RECOMMENDATIONS / SUGGESTIONS

Much emphasis has been given on environmental awareness in this study. So it will help the researchers for further investigation in this field. So, they can construct different types scales to the teachers, educators to investigate the cause of the growth of environmental pollution. The researchers may extend the study to other parts of the country to have a generalization of result which will help the environment experts to frame policies for creating a suitable and conducive environment.

CONCLUSIONS

The secondary school students of Boudh district are aware about environmental pollution. They maintain a good way of living while interacting with the environment. Although the boys and girls group do not differ significantly from the whole group, boys are little more aware towards environment and other factors related to it than the girls.

LIMITATIONS

- The study is limited to Boudh district of Odisha.
- It's scope is limited to the secondary school students only.
- It tried to assess the awareness of the students about the environment.
- The researcher does not measure any other physical or psychological trait except awareness regarding the environment.
- The study has been delimited to some randomly selected schools of Boudh district.

SCOPE FOR FURTHER RESEARCH

The present study has been undertaken by taking the secondary school level students of Boudh district of Odisha. However, researchers may find it worthwhile to extend research in this field by taking the subjects from other parts of Odisha or India to make the result more comprehensive, reliable and valid. They may take primary or higher secondary level also for the purpose of study. Again, study may undertaken by taking the general mass of population to find out their awareness towards environment and other factors related to it.

REFERENCES

1. Best, John W.(1989). Research in education. New Delhi: Prentice Hall of India Pvt. Ltd.
2. Bhatnagar, Suresh (1993). Indian education- today and tomorrow. Meerut: Royal Book Depot.
3. Buch, M.B. (1983-88). Fourth survey of research in education. New Delhi: NCERT.
4. Chauhan, S.S.(1983) Advanced educational psychology. New Delhi: Vikash Publishing House Pvt. Ltd.
5. Garret, H.E.& Woodworth, R.S.(1981). Statistics in psychology and education. Bombay: Vikils, Feffer and Simons Ltd.
6. Kumar, Arvind (2003) Environmental challenges of the 21st century. New Delhi: APH Publishing Corporation.
7. Koul, Lokesh (1992). Methodology of educational research. New Delhi: Vikash Publishing House Pvt. Ltd.
8. Mohanty, J (1992) Current issues in Indian education. New Delhi: Cosmo Publication.
9. Panneerselvam, A & Ramkrishnan, M (1996) Environmental science education, New Delhi: Sterling publishers.
10. Rout, P.(1988) environmental concept development in children. New Delhi: Ashish Publishing House.
11. Sharma, R.A.(1998). Environmental education. Meerut: Surya Publication.
12. Sharma, R.C (1981).Environmental education. New Delhi: Metropolitan Book Co. Pvt. Ltd.
13. UNESCO (1990). Source Book on environmental education for secondary teachers. Bangkok: UNESCO Principal Regional office for Asia Pacific.
14. UNESCO (1994). Source Book on environmental educations. Bangkok: UNESCO principa Regional Office for Asia Pacific.
15. UNESCO (1997). Trends in environmental education. Paris: UNESCO
16. UNESCO (1998). Education for a sustainable future, A transdisciplinary vision for concerted action. Paris: UNESCO
17. WHO (2004) Skills for health: an important entry-point for health promoting/ child friendly schools. Geneva: World Health Organization.

APPENDIX / ANNEXURE**QUESTIONNAIRE****ENVIRONMENTAL AWARENESS QUESTIONS****Name :****School :****Class :****Boy / Girl:**

Children, you will be supplied a questionnaire. This questionnaire contains 40 questions. These questions are based on how much you are aware about the environment. The response will in no way related to success or failure in the subject. Try to suggest answers to these questions without fear and hesitation. Each question contains five possible answers. Answer is strongly agree, agree, undecided, disagree, and strongly disagree. Put a tick (✓) mark over the answer that you think correct.

Sl.No	Questions	(SA)	(A)	(UD)	(DA)	(SD)
1.	There should be tree plantation in different places.	()	()	()	()	()
2.	It is better to root out wild bushes around the house.	()	()	()	()	()
3.	It is unnecessary to celebrate the "Banamahotsaba" week.	()	()	()	()	()
4.	It is better to through dirty and rotten things of the house everywhere.	()	()	()	()	()
5.	It is unnecessary to pull out weeds from the ponds.	()	()	()	()	()
6.	It is not harmful to have house surrounded by drains, ditches.	()	()	()	()	()
7.	It is better to take bath at the river Mahanadi.	()	()	()	()	()
8.	The environment of school such as classroom, school ground, school garden should be cleaned.	()	()	()	()	()
9.	It is better to wash dirty clothes in ponds or river banks.	()	()	()	()	()
10.	It is easier to cack on the side of the roads, ponds etc.	()	()	()	()	()

11.	It is not harmful to put all the dirt and drain water of town in the river water.	()	()	()	()	()
12.	The water of the well used for drinking purpose should not be used for other purpose.	()	()	()	()	()
13.	The dirty water of house and roads should be enclosed through drains.	()	()	()	()	()
14.	We depend upon plants for our food, clothing & shelter.	()	()	()	()	()
15.	It is better to set industries and plants by deforestation.	()	()	()	()	()
16.	It is better to drink water that is used all purposes.	()	()	()	()	()
17.	Dirty things and garbages should be deposited on the road.	()	()	()	()	()
18.	The wild animals of forests should be killed.	()	()	()	()	()
19.	Our environment will possibly be good if there is decrease in population.	()	()	()	()	()
20.	Existence of living organisms is not possible without the environment.	()	()	()	()	()
21.	It is not harmful to blast bumbs in the day of Diwali.	()	()	()	()	()
22.	Air pollution does not occur by the mosquito gas which is used to kill them.	()	()	()	()	()
23.	Factories should be set up inside the town.	()	()	()	()	()
24.	Schools should be away from the town or market.	()	()	()	()	()
25.	Gasses from the motor vehicles does not pollute the atmosphere.	()	()	()	()	()
26.	The arousing of mosquitoes is due to pollution of environment.	()	()	()	()	()
27.	Air pollution obstructs the rainfall.	()	()	()	()	()
28.	Polluted gases generating from the industries should be blown into the air through very high chimney.	()	()	()	()	()
29.	Soil erosion takes place if the trees are cut off.	()	()	()	()	()

30.	Water & air also get polluted due to the polluted soil.	()	()	()	()	()
31.	Plants and animals are interdependent upon each other.	()	()	()	()	()
32.	It is not harmful to smoke cigarette while travelling through busses, trains etc.	()	()	()	()	()
33.	We respire difficulty if there are more polluted gases in the atmosphere.	()	()	()	()	()
34.	Pollution of the atmosphere decreases ozone layer.	()	()	()	()	()
35.	The increase of disease is only due to pollution of water.	()	()	()	()	()
36.	The dead body of cows and such animals should be placed under the ground, far away from village.	()	()	()	()	()
37.	The noise of vehicles, aeroplanes factories etc. are suitable for human body.	()	()	()	()	()
38.	Our hearing capacity increases due to sound pollution.	()	()	()	()	()
39.	A city should have parks at many different places.	()	()	()	()	()
40.	The gasses of the coal engine, train does not pollute the atmosphere.	()	()	()	()	()