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AWARENESS AND EFFECTIVENESS OF ENVIRONMENTAL SCIENCE AMONG PRIMARY SCHOOL CHILDREN

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ABSTRACT

Environmental education has sprouted as pragmatic educational response to the problems and concerns of environment. The concept of environmental education is still evolving and awaiting institutionalization in the educational systems. As such there is a dire need to understand the subject in proper perspective. Students were taught in a right manner for which their awareness level is normally distributed. They have their knowledge application ability which is supposed to be applied in the correct situation wherever necessary. Man should have an awareness and understanding of his community and its associated problems. That is the reason for orientation for environmental education at the early stage of schooling in order to develop awareness among students. Environmental education has sprouted as pragmatic educational response to the problems and concerns of environment. The concept of environmental education is still evolving and awaiting institutionalization in the educational systems. As such there is a dire need to understand the subject in proper perspective.

Key Words: Effectiveness, Awareness, Environmental science

INTRODUCTION

Environment is the precious gift of the nature to mankind. Man has been an inseparable part of the earth. In the beginning the limited needs of primitive man didn't disturb the harmony of nature. However, with the growth of human population industrialization and deforestation the present day human crisis has emerged. If environmental crisis is not checked in time it will endanger man's existence on earth. The need of the time is to prepare environmental conscious citizen who are concerned with saving the environment from disaster. It might happen only when people are knowledgeable about their environment, the associated problems, and their solutions. At the same time, people must be motivated to work towards the solution.

Man is the best creativity of god .In turn he sums up his experiences and others also and go on discovering, investing, creating and advancing. He can enhance the quality of life for his fellow human beings. But when needlessly applied the same creativity can cause harm to the environment. Thus, since the beginning g he benefited the earth and with same zeal caused harm also. One can observe his destruction in every field.

As man became progressively urbanized, his intimate association and interaction with natural resources diminished. Yet, it is imperative that man, wherever he lives, comprehend that his welfare is dependent upon the proper management and use of these resources.

Man should have an awareness and understanding of his community and its associated problems. That is the reason for orientation of environmental education at the early stage of schooling in order to develop awareness among students. Education has always played a crucial role in social change because it disseminates knowledge, provide necessary information, skill and help in forming certain attitude. Environmental education is needed for the wise management of the total environment. "There is a paramount need to create a consciousness of the environment .It must permeate all ages and all sections of society, beginning with the child."

The principal feature of the philosophy of environmental education is that man is an integral part of a system from which he can't be separated. Environmental education has sprouted as pragmatic educational response to the problems and concerns of environment. The concept of environmental education is still evolving and awaiting institutionalization in the educational systems. As such there is a dire need to understand the subject in proper perspective.

Environmental education has two components viz. Environment & Education. McGraw Hill E encyclopedia of Environmental Sciences defines environment as the sum total of all the conditions and influences that affect the life and development of organisms. In the present context, human kind is the referent .Education involves knowledge, understanding and application of facts and concepts pertaining to a discipline and forming desirable beliefs, attitude, disposition, value as well as inculcation of interests pertaining to that discipline. Thus

environmental education aims to develop interests, application and skill etc .for the natural environment, so as to preserve and improve it for the welfare of mankind.

Environmental education as the key concept in this study is defined as education that helps individuals to become more knowledgeable about their environment and to develop responsible environmental behavior and skills so that they can improve the quality of the environment (UNESCO, 1978; Nordstrom, 2008). In order to understand what environmental education is, one has first of all to make clear what is meant by environment. Although there have been many studies on the understanding of environmental education and its implementation, the aspect of how environment is conceptualized is often not included (Tani, 2006). But there is a dilemma in defining environment because it depends on how one perceives it. Knowledge about people's perception about the environment and how they relate to it has been found to be of importance in the adoption of attitudes and environmental behavior (Ballantyne & Packer, 1996) and also in the teaching and learning of environmental education.

Environmental education needs to begin at the early stage or early school level. It is at this that the positive attitude towards environment can be built. The best possible approach to environmental education at this level is to involve children in the study and understanding of the environmental issues in their own surroundings. Taking children close to nature can be a very exciting and enjoyable experience. The observation and learning through such a process are also sustainable and provide opportunity for both the students and teachers to appreciate nature and its various facets in a more meaningful manner.

The rational of environmental education in my study is to make primary children aware about the current environmental issues/problems and thus to acquire skill, attitude, motivation and abilities to participate individually and collectively towards finding and solving the problems and preventing a new one.

PURPOSE OF THE STUDY

The study sought to investigate the “AWARENESS AND EFFECTIVENESS OF ENVIRONMENTAL SCIENCE AMONG PRIMARY SCHOOL CHILDREN”

OBJECTIVES OF THE STUDY

1. To know the level of awareness on environmental study among primary school children
2. To know the level of effectiveness (application ability) of Environmental study among primary school children.

HYPOTHESIS

1. Awareness on EVS is normally distributed in the sample.
2. Effectiveness of EVS on application ability is normally distributed.

METHODOLOGY

A research design is the logical and systematic planning. It is a tentative blue print of the research study. A research design serves as a guide to the researcher as a way to conduct research and give an immediate overview of the research to its reader.

This chapter deals with the methodology and procedures followed in the present investigation. The present study is conceived with an aim to find out the level of “awareness and effectiveness of environmental study among primary school children”.

The present study undertaken by the researcher is a combination of both descriptive and inferential research. Descriptive research concerns itself with conditions or beliefs, point of view or attitudes that are viewed; that are going on, effects that are being felt, or trends that are developing (Best, 1963). It involves collection of data, its compilation, interpretation and synthesis. Inferential statistics is used to draw inferences.

Survey method has been adapted in the present study because it is a method that elicits information from a representative sample of respondents whose survey results are generalized to a larger population.

To know the level of awareness and effectiveness an awareness test was administered. Questionnaire was prepared for testing the level of awareness and effectiveness separately.

A research design is a plan to build a structure and strategy of investigation. It means the planned structure and strategy of investigation conceived to as to obtain answers to research question and the variables undertaken in the study. This study is a descriptive and inferential type of research.

A sample is a small portion of population selected for observation and analysis. So a sample in other words is a smaller representation of a large population. The sample should be small enough to avoid necessary expenses and large enough to avoid into learnable sample error. Therefore the study is limited to Birbhum, West Bengal. The sample of the study is class –V student of CBSE board school of Birbhum. The samples are drawn from Ekalavaya model School and K.V (Birbhum).

At first investigator consulted guide to develop the questionnaire. As the present study is descriptive type of research, here the researcher tried to find out the level of awareness and application ability of class –V student by administering a test. A questionnaire was prepared for testing awareness and effectiveness (application ability) of class V students separately. To test level of awareness 30 multiple choice questions were prepared and to test application ability 20 short type questions were prepared. The detail item of the questionnaire is presented at the end of the appendix.

Before administration of the questionnaire the researcher proceeded to different schools with a forwarding letter from the head of the Education Department, vinaya bhavana in order to collect data conveniently. Then the investigator met the H.M of different school and with their consent and permission she administered the questionnaire personally over the sample.

RESULTS

Analysis of data is the most important and crucial steps in educational research. After data collection it has to be processed and analyzed to draw proper conclusion. Analysis requires an open flexible and alert mind. Analysis of data means studying organized material in order to discover inherent fact. It is worthwhile to mention that collection of valid, reliable, and adequate data is necessary t before proceeding for analysis. It does not serve any work, unless the so collected are carefully edited, systematically classified, tabulated scientifically, analyzed intelligently, interpreted rationally and draw conclusions in an effective manner.

Analysis of data means to make raw data a meaningful or to draw some results from the data after the proper treatment. In analysis the tabulated material is studied in order to determine inherent facts. It involves breaking down existing complex factors into simple parts and putting the parts together in new arrangement for the purpose of interpretation. Interpretation calls for the careful logical and critical examination of the results arrived after analysis, keeping in view the limitation of the sample chosen, the tools selected and used in the study. The detail of analysis is given below.

COLLECTION OF INFORMATION:

The first objective of the study is to know the level of awareness among class-V students. The researcher collected by administering an awareness test on 71 samples of two CBSE board school. All the scores on awareness test are given in the table.

SCORES OF AWARENESS TEST

Above Table shows the scores of awareness test of class-v student. There are 71 students who were appeared the awareness test. The table indicates more than 10 students scored above 20 out of 30, more than 40 students have secured above 12 and less than 10 students have secured below 10.

MEAN AND S.D. OF TOTAL SCORES

MEAN OF TOTAL SCORE	S.D. OF TOTAL SCORE
16.385	5.094

Above table indicates the mean of total score. The mean value of the total score is 16.385 and S.D. is 5.094.

The researcher categorized the students into high awareness group, average awareness group and below average group on the basis of scores obtained by the sample of class V students. The following table shows categories of student according to their obtained marks.

CLASSIFICATION OF SCORES

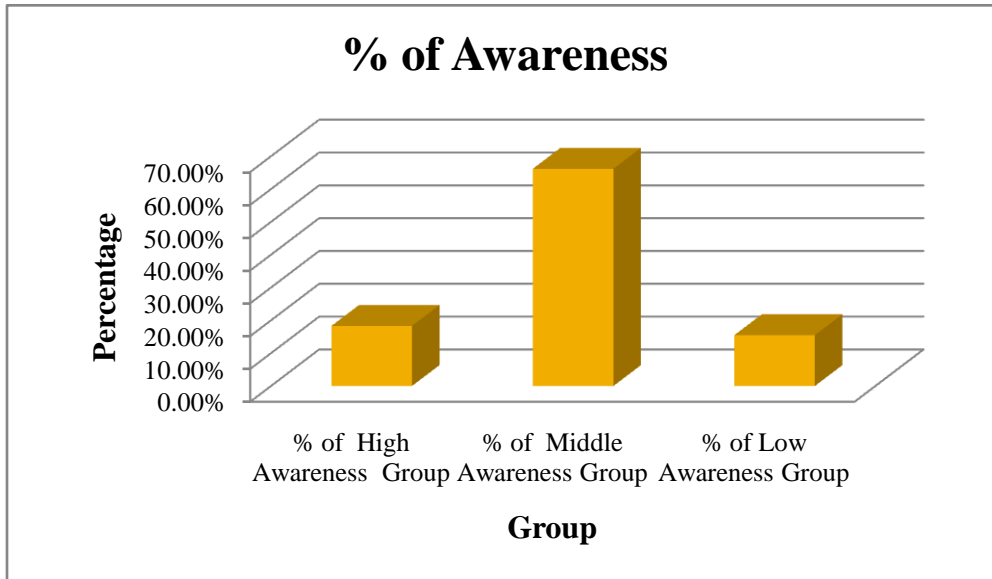
Above table indicates that 13 students come under high awareness group, 47 students come under average awareness group and 11 students come under below average group. So from above table it is found that more students are concentrated in average awareness group.

PERCENTAGE OF THREE GROUPS

% of High Awareness Group	% of Middle Awareness Group	% of Low Awareness Group
18.30%	66.19%	15.49%

From the above table it is clear that average awareness group have high percentage than high and low awareness group.

BAR DIAGRAM SHOWING PERCENTAGE OF AWARENESS OF THE THREE GROUPS



Above graph represents that near to 20% students i.e. 18.30% student have high awareness and 66.19% students have average awareness and 15.49% students have low awareness.

HYPOTHESIS 1

The first hypothesis of the study is --Awareness on EVS is normally distributed in the sample. . In order to test the hypothesis chi square was adapted the obtained value was compared with table value. From the calculation of chi-square it was found that the obtained value is not significant.

TABLE VALUE AND CHI-SQUARE VALUE OF THE GROUP

Chi-square or obtained value	Table value	
	0.25	0.01 level—9.210

The above table indicates that obtained value is less than the table value. So it is not significant that means awareness on EVS is normally distributed.

The second objective of the study is to know the level of effectiveness of EVS. So for the collection of information or to know the level of effectiveness (practical ability) of class V student the researcher administered a test. There were 10 items in the test comprising 2 marks each. It was a very short answer type test. Students were supposed to answer within 5 sentences. The secured marks of the students are given in the following table.

SCORES OF EFFECTIVENESS (APPLICATION ABILITY) TEST

The above table indicates the obtained score by all the 71 samples of two CBSE board school. The table indicates more than 10 students scored above 20 out of 30, more than 40 students have secured above 12 and less than 10 students have secured below 10.

MEAN AND S.D. OF THE TOTAL SCORE

MEAN OF SCORES	S.D. OF SCORES
12.84507	5.721258

The above table reflects the mean and S.D. score of the student which is 12.84507 and 5.721258 respectively.

CLASSIFICATION OF SCORES AND GROUPS OF STUDENTS

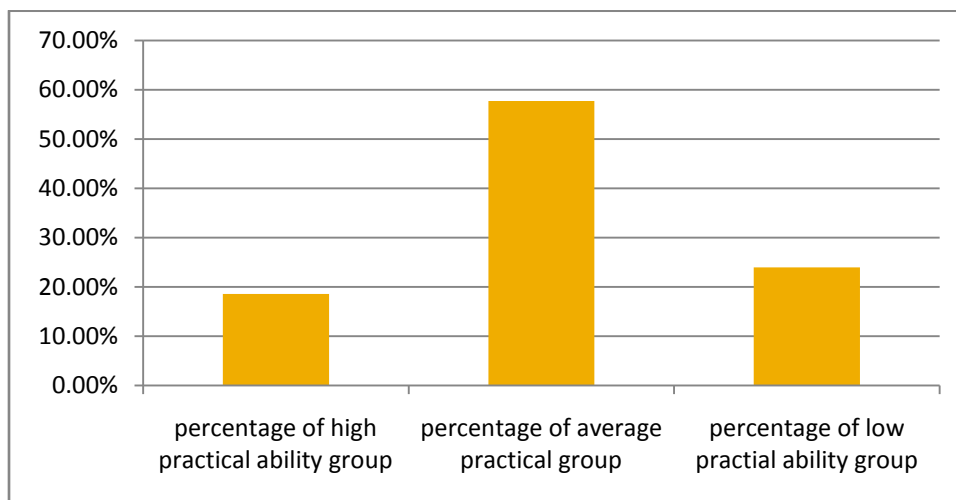
The above table indicates that 13 numbers of students possess high application ability and 17 students possess low application ability. Majority of students possess average application ability.

PERCENTAGE OF THE GROUPS

% Of High Practical Ability Group	% Of Average Practical Ability Group	% Of Low Practical Ability Group
18.56%	57.74%	23.94%

Above table shows that 18.56% students have high application ability, 57.74% have average application ability and 23.94% students possess low application ability of the knowledge of EVS.

BAR DIAGRAM SHOWING PERCENTAGE OF GROUPS



Above graph represents that near to 20% i.e 18.56% student have high awareness and 57.74% students have average awareness and 23.94% students have low awareness.

HYPOTHESIS 2

The second hypothesis of the study was--- effectiveness of EVS on application ability is normally distributed. In order to test the hypothesis chi square method was adapted the obtained value was compared with table value. From the calculation of chi-square it was found that the obtained value is not significant.

TABLE VALUE AND CHI-SQUARE VALUE OF THE GROUP

Chi-square or obtained value	Table value	
4.119	0.01 level—9.210	0.05 level—5.991

The above table indicates that obtained value is less than the table value. So it is not significant that means awareness on EVS is normally distributed.

DISCUSSION OF THE RESULTS

For the first objectives the researcher found that ---

- 18% students come under high awareness group.
15% students come under low awareness group.
67% students come under average awareness group.
- Awareness on EVS is normally distributed in the sample.
- More number of students is concentrated in the average group.
- Only one student is found poor who have secured only 1 mark in test.
- More than 10 students have secured above 21 out of 30 marks in the application ability test.

For the second objective the researcher found that---

- 13% student comes under high application ability group.
41% student comes under average application ability group.
17% student comes under average application ability group.
- Effectiveness on EVS is normally distributed in the sample.
- More number of students is concentrated in the average group.

4. Only one student is found poor who have secured only 1 mark in the test.
5. More than 7 students have secured above 18 out of 20 marks in the application ability test.

CONCLUSIONS:

Students were taught in a right manner for which their awareness level is normally distributed. They have their knowledge application ability which is supposed to be applied in the correct situation wherever necessary. Man should have an awareness and understanding of his community and its associated problems. That is the reason for orientation for environmental education at the early stage of schooling in order to develop awareness among students. Environmental education has sprouted as pragmatic educational response to the problems and concerns of environment. The concept of environmental education is still evolving and awaiting institutionalization in the educational systems. As such there is a dire need to understand the subject in proper perspective.

EDUCATIONAL IMPLIATION

The findings of the related study are relevant in the field of education in following ways.

1. It is found that the students who have an understanding of something about environmental study is likely to value the study of Environmental Education and develop positive attitudes towards it particularly if the knowledge is gained through real life experiences.
2. The learning of environmental education has not only enable learners to understand the environment but also it has developed skills to solve the problems in their environment.
3. The teaching of environmental education involves hands on activities.
4. Most of the teaching in primary schools is characterized by the transmission of knowledge. Therefore, the teachers should attempt to make the learners able to develop problem-solving skills, it may be difficult if the learners do not learn by doing.
5. Researcher in the study assumed that if pupils obtain the knowledge and are told how to solve different problems in their environment, they might develop skills to solve environmental problems. This suggests that pupils should be exposed to real life situations in learning environmental education.



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