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Creating Environmental Concern through Environmental Education: A Study

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Abstract

Many of our natural resources are being depleted at an alarming rate and it makes conservation, the urgent need of today. Two major reports viz., United Nations Environment Programmer's (UNEP) and the Brundtland Commission's have drawn world attention to the need for long-term environmental strategies to achieve sustainable development. Even the constitution of India **Article 51 A** g stated that:" It shall be duty of every citizen to protect and improve the natural environment, including forests, lakes, rivers and wildlife and to have compassion for living creatures". Further, the Hon'ble supreme court's directive to develop a model syllabus of environmental education as a compulsory subject in a graded manner for the entire school stage was welcomed. In this junction, there is an urgent need for people to understand the present environmental crisis in order to save our mother nature. It is possible only if the people are aware about its repercussions through environmental education. It will lead to enlighten the society on environmental issues with a slogan of 'think globally and act locally'.

Need for Environmental Education

Knowledge is one of the important components of behavior and as such, it plays a major role in covert and overt behaviour of human being. Thus, basis input for achieving sustainable development is that individual and different social groups should acquire awareness and knowledge, development of appropriate

attitudes, skills and abilities and participate in solving environmental problems which is a way of implementing the goals of environmental protection.

The environmental education has to be imparted to every one of all age group of the society which needs in all walks of life to protect our natural environment. Yom Niobium, (1991), an African Environmental educationist stated that: "Learning to be environmental concern comes through 'doing something' for the environmental protection and not just through learning about the environment". In other words, it is the process of recognizing values of environment and clarifying concepts in order to develop skills and attitude of mindset of society. Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter- relation of man and environment (Agawam, 1993).Children naturally are an important target group for environmental educational programmed which have the greatest stake in the preservation of the environment and its judicious management depends on them (Nair,1992).The main purpose of environmental education is to acquaint and sensitize the young minds to the environmental problems and concern for present-day scenario. It is a process aimed at developing individual awareness and concern about the total environment and its associated problems and which has the knowledge, motivation, commitment and skills to work individually and collectively towards the solution of current rate problems as well as the prevention of new one. In this backdrop, environmental education has to respond to urgent need of the hour.

Role of Teachers for Creating Environmental Concern

Teachers should be able to mould the student community, a sense of awareness of themselves and their environment and to develop the basic observation skills through questions, and discussions along with the sensory experiences like looking, observing, fieldtrip etc., It will enhance the student community to achieving environmental endeavors. If the teachers play their role effectively, many of our environment problems can be effectively tackled in the near future. For example, the students are sensitized to the problems of plastic carry bags. Teachers should make it very clear to every child that he is a part of the environment and if he protect the environment, the environment will protect him. Otherwise, every one has to face the repercussions. In this way teachers should sow the seeds of environmental concern in the young mind.

Rationale of Study

Environmental problems are matters of common concern for at present time. In future, the existence of human beings depends on the solution to present environmental crises. In this critical situation, environmental education can play a

vital role to reach a target group which will make conducive environment where it means of transforming them in accordance with nature's laws. Moreover no doubt, environmental education is expected to help in two ways developing environmental concern or awareness and on the other hand, reduce environmental issues. Further, many research study suggested that up gradation of knowledge will lead to change in attitude which in turn influence behaviour. Hence in this background, the present research paper was designed to assess the level of awareness among upcoming youngsters and teaching community and what level of attitude they have developed while interacting with their environment.

Objectives

In the light of the above questions with the following objectives have been framed:-.

1. To study about environmental awareness of primary level;.
2. To unearth the environmental awareness between boys and girls;
3. To examine environmental awareness between teaching and student community;
4. To evolve strategies for 'safe environment' from findings of the study.

Hypotheses

The following null hypotheses were tested:-.

Ho : there exist no significant difference in environmental awareness between boys and girls students.

H1: there is no significant difference in environmental awareness between teaching and student community.

Methodology

Sample size Selection

The present study was conducted among primary, high school and higher secondary school level students as well as teaching community in Mayiladuthurai Taluk, of Nagapatinam District Tamil nadu. Purposive random sampling techniques was used for selecting the sample. The sample included 90 students, 30 teachers. Thus, the total 100 sample were contacted. Details of the sample selection for the study area are given in Table-1

Table,1:Details of the Sample Selection for the Study

School	Total Population		Total no of sample Respondents		No of sample From Total Respondents			
					Students		Teachers	
	Students	Teachers	Students	Teachers	M	F	M	F
Primary School	226	12	50	10	24	26	3	7
High School	236	25	10	10	5	5	4	6
Higher Secondary School	1254	75	30	10	17	13	4	6

Source: Field Survey. M-Male F-Female

Method of Data Collection

Field survey method was used for data collection .The students were gathered in classroom and proper instructions were given to be followed while applying the test.

Tools and Techniques for Data collection

The investigator used following tools and techniques for collecting the relevant data for the study.

Scale of Environmental Awareness Test (EAT)

Environmental learning Kits

Construction and Standardization of Environmental Awareness Test (EAT)

An Environmental Awareness Test (EAT) was constructed for the purpose of the study. It was meant to measure the knowledge among the school children and teachers on various environmental issues and their commitment towards environmental protection. The environmental awareness test was developed systematically following the standard procedure and method of a 'Likert Scale'. A five-point scale was used to rate the awareness of the subjects (respondents) on a frame of 25 statements intimately related with the environmental issues. The investigator consulted standard literature and based on his practical experience, the investigator prepared 40 statements related to environmental awareness test. These items were edited and given to experts for their opinion with regard to relevancy and adequacy of statements.

On the basis of comments and suggestions obtained from the experts, about 15 statements were rejected and some others were modified. Accordingly, 25 statements were selected for the final scale. The responses on five point scale strongly agree to strongly disagree were found out for each of the five statements. The responses were scored and a frequency distribution of environmental awareness scores was prepared. The mean and standard deviation of the scores have been worked out for the sub samples of respondents from teachers and students.

Table 2: Aspects of Environment

Aspects	**Weight age**	**No. of items**
Pollution	40%	10
Deforestation	24%	6
Importance of safe environment	36%	9
	100%	25

Table-2 presents the different aspects of environment, the weight age given to these aspects and corresponding number of items. The environmental awareness among primary school children obtained through environmental learning kits. The learning kit was designed to include (a) the simple experiments (b) a guide booklet for experiment (c) an environmental game booklet and (d) a booklet on riddles.. Experts were consulted on the content of each of the items in the kit. After completing the kit preparation children were revolved in handling/playing /learning related to all items in the kit. Children were given minimum two exposures to each item. The major concept covered is as follows.

Oxygen is necessary for breathing by human beings,
When we inhale polluted air, lungs get affected,
We drink only boiled water.
The germination of seed, air, water and sunlight are necessary.

The data on environmental awareness obtained through Questionnaire, Environment learning kits, and Environmental Awareness Test (EAT) score were processed in a systematic manner. Frequency distribution and percentages have been used to anlayse the data. Descriptive and narrative procedure was used to explain the environmental issues. The 'F' test and ' χ ' test were employed to compare the mean scores on environmental awareness test of sample respondents. The results of the study are presented below.

Results and Discussion

The investigations have been analysed and presented under the following subheads:

A. Environmental Awareness Level for Primary School Children.

B. Comparison of Environmental Awareness between Boys and Girls and

C. Comparison of Environmental Awareness between Teachers and Students.

Environmental Awareness level for Primary School Children's:

Children are born scientists –with spontaneity of their ideas having a passionate drive to explore the world in which they live. It is important that adults play a critical in helping young children to experience the sense of discovery. Acceptance, encouragement and support by adults to their boundless curiosity will help to keep the scientific spirit alive in every child and moreover enable them to have a better understanding of the scientific 'environs' around them (Klein Singer, 1991)

A pre-test was conducted before exposing the kits to primary studnets. Also, a post -test was conducted to measure the impact of using the kit. The pre-test gave the following information.

Table 3: Measuring of Environmental Awareness for Primary School Children's Through Pre-Test

Concepts	Percentage
Ecological conservation	40
Birds rounding	50
Crowding	20
Insects	20
Tenants in homes	20
Counting nature	10

Sources : Field survey.

From the observation of table-3 , it clearly depicts the pre-test among the primary children have very poor knowledge of environmental. After an exposure of kits, 50 children were again tested for their knowledge on environment. It can be learnt from table-4 ,post- test which was highly proving the effectiveness of environmental learning kits.

Table 4:Measuring of Environmental Awareness for Primary School Children's Through Post-Test

Concepts	Percentage
Ecological conservation	50
Birds rounding	60
Crowding	30
Insects	30
Tenants in homes	30
Counting nature	20

Sources : Field survey.

Table 5:Comparison of Environmental Awareness Between Teachers and Students on Environmental Issues.

Particulars	Teachers		Students	
	Mean	SD	Mean	SD
Improper disposal of waste water, Garbage and solid waste leads to disease.	4.9	0.89	4.5	0.63
Too much noise disturbs and irritates our minds.	2.17	0.39	1.5	0.21
Deforestation affects the environment adversely.	2.17	0.39	2.3	0.32
Too much of chemical fertilizers and pesticides are detrimental to human health.	2.4	0.43	1.83	0.45
Industrial effluents often pollute the underground water.	2.17	0.39	2.3.	0.32
People living in congested areas lead breathe polluted air.	13.5	2.46	14.5	2.05

Source: Field Survey.

As it could be seen in table- 5, the mean and standard value of environmental attitudes of teachers and students explained. The investigator considered only six statements out of twenty five statements. It is learnt to have understood by mean value of scores on environmental issue of the teachers were higher than the students. It can be understood that the teaching community is having good knowledge about environmental issues. The mean and standard deviation of the scores have been worked out for the sub- samples of the respondents from two variables. The details of analysis arte presented in Table- 6. 'F' test was employed to compare the mean score on environmental awareness test of respondents from the

teachers and students. As the 'F' value is significant at 5% level of significance. Thus, the computed value of 'F' value (1.83) is smaller than the table value of (4.67). Therefore, the hypothesis accepted and concluded that the teachers were more aware of environmental issues than students community which has been proved by Analysis of Variance.

Table 6:Comparison of Environmental Awareness Between Boys and Girls

Schools	**No of Respondents Selected**	**Boys**		**Girls**	
		Awareness	**Non Awareness**	**Awareness**	**Non Awareness**
High school	10	(20)2	(30)3	(40)4	(10)1
Higher Sec School	30	(23.3)7	(33.3)10	(40)12	(3.3)1

Source: Field Survey. Figures in the Parenthesis Percentage.

It is generally thought that girls children were more sensitive to environmental happenings than boys. Hence, they should possess more favourable environmental attitudes than the boys. The gender-wise comparison in a Table – 6 reveals that girls children's were more aware about environmental awareness. This fact was supported by the EAT and there is a significant difference in boys and girls students. It is reported that the girls were willing to help a great deal for environmental protection. Table value of ' χ ' for degree of freedom at 5 per cent level of significance is 3.841 the computed value of 'χ' is very higher than the table value. Hence, null hypothesis is rejected and concluded that there is difference between boys and girls children.

Policy Suggestions

- Environmental awareness camps should be organized in schools.
- To make students community environment friendly habits in the way of protection, preservation and conservation of environment.
- Appropriate environmental values and attitudes should be developed among youth generation through 'Eco and Nature Clubs' in schools.
- Environmental consciousness and ethics should be created among the students community through effective implementation in the school curriculum. In the way of to design projects should be undertaken by students.
- The teachers should be further enriching their knowledge pertaining to environmental issues through orientation programmes.

- Efforts should be organized through the seminars, conferences and symposia to deliberate upon various environmental issues for school teachers.

II. CONCLUSION

From the findings of the present research study, the variation of environmental awareness among primary school children, boys and girls and the teaching community. Thus, the researcher was to conclude that the teachers should be highly specialized to provide better learning environment to young minds which are most receptive and sensitive. Therefore, the teachers should motivate them to establish a congenial and harmonious co-existence with nature.

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