



## EFFECT OF SIGHT AND GENDER ON ENVIRONMENTAL AWARENESS AMONG SCHOOL STUDENTS

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### ABSTRACT :

*Inclusive education is now one of the accepted educational policies in India. As students with sensory impairment are an integral part of mainstream society it is necessary that they too grow up as environmentally responsible citizens of a country This study is based on quasi-experimental approach seeking to make a comparative analysis of environmental awareness and pro-environmental behaviour between sighted and visually impaired students belonging to secondary stage of education in the state of West Bengal, India. A self constructed standardized Likert type questionnaire was used. The statistical analysis found that two groups did not differ in respect of environmental awareness and Pro-environmental behaviour. The degree of relationship between the environmental awareness and pro-environmental behaviour scores in the context of sightedness and gender was also found to be insignificant. Thus, the sense of sight or the gender does not have impact on the environmentalism.*

**KEYWORDS :** *Inclusive education , environmental awareness and pro-environmental behavior.*

### 1. INTRODUCTION

The objective of environmental education is to develop environmental literacy as part of school education for every child who comes to school including the special children who are integral part of inclusive society. It is difficult to define environmental literacy as no general accepted meaning has emerged. According to the National Environmental Education Advisory Council, to be environmentally literate is to understand how each and every component in an ecosystem interacts with and affects one another. In this formulation, environmental literacy has four aspects. Ecological concepts provide knowledge to make ecologically sound environmental decisions. Conceptual awareness is concerned with how individual and collective behaviours influence the quality of life and quality of environment. Issue investigation and evaluation develop the knowledge and skills to investigate environmental issues and evaluate solutions for remedying them. Environmental action skills develop skills for taking positive actions to help resolve environmental issues (Hungerford et al. 1980). According to another definition, environmental literacy is where an individual is not only knowledgeable about ecology, but is also able to combine knowledge and values leading to action. It has been observed that a number of research works on environmental education



has been conducted in the context of normally abled students in different areas of the world including state of West Bengal. The research areas in this respect include environmental knowledge (Meinhold & Malkus 2005), perception, awareness, attitude, literacy and particularly pro-environmental behaviour of the different categories of students including the teachers teaching environmental education. However, the researchers were unable to locate any research work in

the context of environmental education conducted on differently abled students (visually impaired, hearing impaired etc.) either in India or abroad , although a few awareness programmes for the nature's special children were organised by the West Bengal Pollution Control Board (WBPCB) to enhance their environmental awareness. WBPCB conducted a programme in association with Birla Industrial & Technological Museum (BITM) and Indian Institute of Cerebral Palsy (IICP). The, main components of the programme comprised: "Sense the smell of nature" for students; Tactile game titled `Touch and Find"; and Painting competition and Quiz on nature and environment.

The researchers wanted to find out whether such awareness programme and school education has had any impact on the visually impaired students. Physically impaired children are integral part of the society (Kalyanpur 2008). Their education and normal development is the responsibility of the education system. Hence, it is necessary to know about their feelings and attitude towards environment and whether they differ in this respect from the other children, devoid of any such impairment. Besides it also requires that special children must come under the influence of environmental education. The study is especially important as it seeks to find out the present knowledge and awareness level of visually impaired children. The study did not include all types of special children, as the number of visually impaired children is highest among the all types of impairments, for which visually impaired group was compared with the normal group.

## 2. OBJECTIVES:

- a. To study the effect of sightedness and gender on the scores of environmental awareness and pro-environmental behaviour of the students.
- b. To study the degree of relationship between environmental awareness and pro-environmental behaviour of normally sighted students and visually impaired students.

## 3. HYPOTHESES:

- a. There is no significant difference in environmental awareness between the normally sighted and visually impaired students-boys and girls.
- b. There is no significant difference in pro-environmental behaviour between the normally sighted students and visually impaired students-boys and girls.
- c. There is no significant difference between the normally sighted and visually impaired students boy students as well as girl students in the degree of relationship - environmental awareness and pro-environmental behaviour scores.

## 4. METHOD:

### a. Sample:

Purposive sampling was applied. It is a non-probability sampling. The present sample comprised 97 students (50 normally sighted and 47 visually Impaired) from Schools of Kalaburagi District.

### b. Tools:

Environmental Awareness Scale (EAS) developed by the researchers was Likert type (3point) scale having a reliability of 0.72 (KR-21) and its item validity was also tested by Tetra choric correlation. Pro-environmental Behaviour Scale (EAS) developed by the researchers was a Likert type (5-point) scale having a reliability (KR-21) value of 0.66 and its item validity was tested by Tetra choric correlation.

## 5. PROCEDURE:

The students belonging to the secondary stage were studied. The average age at this phase of education is 14-16years. At this phase of development, the children pass through the formal operational stage of mental development towards the stage of hypothetical deductive reasoning as proposed by Piaget. Hence, they are likely to be impressed by the various environmental issues and the basic foundation of moral character is laid at this time. Moreover, it has been proved that environmental protection or action is positively correlated with social values. Sensorial deprived children may not perceive the environment as

normally endowed children do. The items in the questionnaire were read out to both the sample groups by the researchers and responses were noted down. The researchers tried to maintain the objectivity as far as possible. The Mean (M), Standard Deviation(SD), Analysis of Variance (ANOVA), correlation and Fisher's z, were done to find out effect of the sightedness and gender.

## 6. RESULT AND DISCUSSION:

The results showed that the gender or sight had no significant effect on environmental awareness and pro-environmental behaviour. The means and the standard deviations of the awareness scores of different groups were:

**Table-1: Mean and S.D. of Environmental awareness Scores of students based on sightedness**

Sl.No.	Type of sight	Mean	S.D.	
1.	Total normally sighted	76.16	7.09	
2.	Total visually impaired	76.72	6.33	
3.	Total normally sighted (Boys)	74.64	6.75	
4.	Total visually impaired (Boys)	75.44	5.50	
5.	Total normally sighted (Girls)	77.68	7.25	
6.	Total visually impaired (Girls)	78.18	7.01	

Total normally sighted (M-76.16, SD - 7.09), Total visually impaired (M-76.72, SD - 6.33 ) and the Sub sample boys ( for Normally sighted M-74.64, SD - 6.75 and for Visually impaired M-75.44, SD - 5.50), and girls ( for Normally sighted M-77.68, SD - 7.25 and for Visually impaired M-78.18, SD - 7.01), did not differ much.

**Table-2: Mean and S.D. of pro-environmental behaviour scores of students based on sightedness**

Sl.No.	Type of sight	Mean	S.D.	
1.	Total normally sighted	109.32	13.95	
2.	Total visually impaired	113.09	12.96	
3.	Total normally sighted (Boys)	108.27	15.88	
4.	Total visually impaired (Boys)	112.92	12.55	
5.	Total normally sighted (Girls)	109.68	12.05	
6.	Total visually impaired (Girls)	113.27	13.71	

On the other hand the means and the standard deviations of the pro-environmental behaviour scores of different groups were: Total normally sighted (M-109.32, SD - 13.95), Total visually impaired (M-113.09, SD - 12.96) and the Sub sample boys ( for Normally sighted M-108.96, SD - 15.88 and for Visually impaired M- 112.92, SD - 12.55), and girls ( for Normally sighted M-109.68, SD - 12.05 and for Visually impaired M-113.27, SD - 13.71), also did not differ much. The fact that these differences were statistically insignificant was further demonstrated, where all the F values for awareness (Total sample -.169, boys-.21 and girls-.21) and for pro-environmental behaviour (Total sample -1.889, boys-.957 and girls-.915) were found to be insignificant. It is commonly believed that high level of environmental awareness will automatically make an individual adopt pro environmental behaviour indicating strong positive correlation between the two variables. However, previous research findings reveal that the relationship between the two is positive but weak (Gaterslaben etal. 2002; Bamberg 2003). It means that environmental awareness per se does not lead to environmental activism and some other factors like motivation and values are involved. Analysis found that relationship between awareness score and behaviour score is weak but positive ( $r=0.27$  for normal sighted and  $r=0.34$  for visually impaired).The coefficients of correlation ( $r$ ) between environmental awareness and pro-environmental behaviour for the sub-samples under study were tested for their significance of difference by computing the t-value. The obtained correlations were first corrected to the nearest two decimal figures (Corrected  $r$ ) and the corresponding Fisher's z functions were found out followed by the estimation of t-value ( Total sample .3336, boys.4312 and girls.5428) . The first

hypothesis was retained as the F value was not significant, which means that in respect of environmental awareness scores students with normal vision and those with visual impairment do not differ significantly. In the same way, all other hypotheses in this study were also retained as all the related F values were found to be insignificant. This revealed that the relationship between awareness and action is similar for both the two groups, that is visually impaired and the normally sighted.

## 7. CONCLUSION:

The study was conducted to find out the level of environmental awareness and pro-environmental behaviour among the normally sighted and visually impaired students. It was expected that the two groups may differ in the context of two above mentioned variables but statistical analysis did not show any such difference which means that the two groups belong to same population. It may also be concluded that the sensory impairment does not come in the way of the development of environmental awareness and adoption of pro-environmental behaviour. Probably, the schools were able to teach the visually impaired students about environment related problems. Therefore, it may be accepted that educational policy in the context of special education has been realised to some extent.

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