



Perception of the Students with Visual Impairment Regarding Environmentalism: A Case Study

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Abstract

This paper underscores the importance of doing qualitative research in the context of environmental education with a special group of respondents, the students with visual impairment. In this regard it is necessary to understand in depth how this group of school students perceives their physical world, its degradation and what they really want to do for its protection. The sample of the present study comprises the students with visual impairment (N=40) studying in classes IX to XII (age range 14-25 years). This study is based on purposive sampling. The quantitative research in this respect may not yield adequate information. The students as bounded cases are more likely to reveal relevant data. Since case study is a holistic approach, the application of this method in studying the perception of the visually challenged students is appropriate. Through the coding of responses from research questions it was observed that these students have high level of awareness about intricacies of environmental problems. They also reported that they are willing to take various actions to safeguard the environment. At the same time they spoke about the various types of impediments for which they find it difficult implement their behavioural intention in to actual practice.

Keywords: Environmentalism, students with visually impaired, case study, Environmental degradation, environmental protection and environmental behaviour.

Introduction

Environmental threats at the Global as well as local levels are assuming larger proportion as time passes. The very existence of human being is at peril. As such the protection of environment is of utmost importance as never before in the history of human. Under these circumstances every individual has to do something for safeguarding environment. The Constitution of India in Article 51-G specifies the fundamental duty of each Indian is to protect, safeguard and improve the natural environment of the country. The natural environment encompasses our forests, lakes, rivers and wild life. The objective is to develop ecological compassion for every living organism. The researches on environmental education are considered to be very important because it is necessary to understand how pro-environmental behaviour can be developed and sustained. Taking cue from the Constitutional provision (Article 51-G) this study will investigate the environmental awareness and the behaviour of the students with visual impairment, as they are integral part of democratic society. Besides it also requires that special children must come under the influence of environmental education. The present study will not only clarify the relation among relevant variables but also developed new perspective on visual deprivation and environmentalism.

In environmental education research both quantitative and qualitative approaches have been applied and the general indication is that the mixed method approach is more suitable.

The review of study on environmental awareness, attitude values and behavior of the student with visual impairment did not yield much result, although a few quantitative studies have been reported¹⁻⁴. However in the context of environmental educational research qualitative approach is more likely to reveal important data in this regard.

Qualitative approach to research is a recent development, which emphasizes on how people construct their mental world or the meanings they attach to various phenomena. In the context of environmentalism qualitative approach is rapidly gaining ground, as thoughts about environment are very much subjective where attaching numerical values to their ideas really does not explain the views of the people. Qualitative research seeks to identify intangible factors like social norms, socioeconomic status, gender role, ethnicity religious beliefs and many such things. All these things may not be readily apparent by means of impersonal mode of data collection as it is done in quantitative method. This approach to research has greater spontaneity and better adaptation. The advantage of this method lies in the fact that meaningful, culturally salient information related to particular group can be obtained.

Palmer discussed the development of environmental education research in her book titled Environmental Education in the Twenty First Century⁵. The international editorial board of Environmental Education Research suggested that the aim of environmental research should be striking a balance between

qualitative and quantitative research. *Robottom and Hart* critiqued the positivistic approach to environmental education and maintained that the launching of debate over different competing approaches to environmental education research will be helpful in understanding the theories and practices in environmental education⁶. *Malone* an exponent in this type of qualitative research emphasized on environmental research as activism⁷. It means becoming environmental activists while doing research. In other words she maintained that environmentalism is social movement through social action research. *Chawla* another researcher in the field of environmental education studied the 'significant life experiences' as part of qualitative analysis to understand more about environmentalism⁸. In environmental research, the researchers are emphasizing more on ontology than knowledge. *Payne* suggested that in environmental education there is a need to emphasize more on our becoming, the focus being on social ontology⁹. The researcher needs to study how humans grow as 'socially constructed' through social experiences. However, this type of research has been criticized as naïve and based on uncritical methodology yet such research has been claimed as preeminently rational based on reliable and valid rules of data collection^{8,10}. *Denzin and Lincoln* mentioned that *qualitative* research is a situated procedure with the objective of placing the observer in the real world¹¹. They further stated that this type of empirical study is based on a set of interpretive, material practices that make the world real. In this type of research the investigator observes things in their natural setting, tries to make sense of or interpret phenomena in terms of meanings people attach to them.

There are various approaches to qualitative method of researching which essentially an umbrella term. It includes hermeneutic, reconstructive or interpretive approaches¹². Often the term research is replaced by 'inquiry' or sometimes it is simply known as ethnography¹². In this study the qualitative approach to research has been adopted and within this broad approach, the case study method has been used to understand the nature of environmental behaviour in depth.

Methodology

Yin postulates that the case study looks in to a contemporary phenomenon in the context of reality¹³. In such studies the boundaries between the phenomenon and context are blurred. Besides, research data are based on multiple sources of evidence. Case-study methodology, therefore, is the ideal research tool. According to *Stake* a case is a bounded system and case study method seeks to find out what complex things go on within that system¹⁴. It is exploratory, descriptive and explanatory in nature. A case study is a holistic approach where a particular phenomenon in this regard environmental behaviour of the students with visual impairment is studied in its natural setting that is within their college environment. It is an enquiry approach collecting data, which are rich in content involving multiple sources of information. The present study is to be

considered as third category of case study whereby a number of cases that is some students with visual impairment were selected as typical cases and interviewed on basis of some open ended questions.

Procedure: The following steps are usually adopted in case study research: i. Determine and define the research questions, ii. Selecting the cases and determining data gathering and analysis techniques, iii. Preparing to collect data, iv. Collect data in the field, v. Evaluate and analyse the data, vi. Preparing the report

Determine and Define the Research Questions: In case study researches this first step is to define the research questions so that foci of the study remain clear to the researcher and the phenomenon or the object can be unambiguously investigated. This also determines the purpose of the study. Case study method is identifying research questions. Usually case study research questions start with 'what', 'how' and 'why'. These questions are targeted to a certain number of cases. In this study the targeted cases are some specifically selected students with visual impairment. A literature survey was done to find out appropriate questions so that refined and insightful questions can be framed to elicit the data. Proper framing of questions is very important part of case study as insightful questions would yield evidence and right information for the thesis. The objectives of the study were to find about the feelings of the respondents about natural environment, its degradation, why people fail to protect environment despite having environmental awareness, reasons behind the gap between awareness and action, necessary steps to be taken to protect environment and the impediments in this regard. The following open-ended research questions were formulated: i. What do you know about environmental pollution?, ii. How should environment be protected?, iii. What do you do to protect the environment?

Selecting the Cases and Determining Data Gathering and Analysis Techniques: The selection of appropriate cases for the research is important. The cases are to select in such a way so that reliability, validity, i.e. internal as well as external validity of the study are ascertained. At the time of selection it is to be decided what should be the designated tools of data collection. It was also decided before hand how the data were to be analysed. The number of cases was 40. The students belonged to the age group of 14 to 25. The students with visual impairment studying in classes IX to XII in schools situated in urban and semi-urban areas of West Bengal and affiliated to West Bengal Board of Secondary Education and West Bengal Council Higher Secondary Education. The selection was based on the participants' willingness to be interviewed. Many of the students were eager to talk. But as time was a constraint, the students who spoke fluently and confidently were selected.

The process of coding and categorizing the themes were also planned at this stage. As case study method constantly requires referring back to the objectives of the study it is necessary to

choose cases from which relevant information can be gathered. So students with ample vocabulary and ability for critical thinking were selected. Actually in case study the cases are selected not on randomly but the focus is on theoretically useful cases. Emphasis is not hypothesis testing but to know more about the specified population.

Preparing To Collect Data: The designated tool for data collection for this study was interview. The authorities of the institutions that were included in the sample were contacted and permission to interview the students was obtained. During the interview session the participants were asked the above-mentioned questions. The questions were open ended. Each participant was interviewed individually. On an average twenty minutes time was allotted for each session. The interview was audio taped.

Collecting Data in the Field: The investigator meets the participants and debriefs them. They have already completed the questionnaire as part of quantitative mode of data collection. This is a very crucial stage of data collection as data collection and analysis often overlap. Apart from audio taping the interview the researcher also took some field notes comprising the participants' gesture and postures, their overall observation regarding the issues. The researcher adopted flexible opportunistic data collection method that may be termed as iterative questioning. The researcher returned to matters previously raised by a participant and extracted related data through rephrased questions. The researcher was alert about contradictions so that a falsehood was detected and suspects' data were discarded. The above mentioned research questions were the bases of the interview questions. The researcher paraphrased, elaborated the questions and prodded the students to interact.

Results and Discussion

The technique of analysis in case study is within case analysis. Cross case pattern search using divergent techniques was also adopted. The investigator examined the similarities and differences of the data and gradually the pattern began to emerge. The unique case features were also identified. Thus the researcher was able to see evidence through multiple lenses. The data from this qualitative part of research are coded. Codes are tags or labels for assigning categories of meaning to the descriptive or inferential information. This information is gathered during in depth interview or participatory observation. Codes are usually related to groups of varying size-words, phrases, sentences or whole paragraph¹⁵. Coding comprises two simultaneous activities namely data reduction and analytic categorization. The data were audio taped and played back several times while researcher organized them into categories. A few selected responses on the basis of the research questions are given below, first in Bengali and its translated versions.

“Paribesh dushanta onekta bere gecche. Bigwaner jinist gulo nie amra bwabaha korchhi. Segulo sadharanata upokare kaje na lagie onek manus opokare lagie. Tai sikkhhito manusder uchit sei jatio manusder pashe darano.....”

[**Translated:** “The rate of pollution has increased rapidly. Scientific inventions are often abused instead of using them judiciously. It is the responsibility of the educated person like us to prevent these people from misusing scientific inventions.....”]

“Paribesh dishon niontron korte gie je somosto samasya dekha diechhe tar modhye boro samasye holo amara porke onukoron kori orthat X korchhe na bole ami korbo na , Y korchhe na bole ami korbo na. Ai ekta monobrittity mone tairi hoe gecche.....”

[**Translated:** “One of the problems of controlling pollution is that we tend to follow others' behaviour. For example X is not doing this (doing pro-environmental behaviour) Y is also not doing it. So I will not do it”]

“Paribesh dushan jemon bayu dushon, jol dushon, mati dushon ebong sabda dushon, a sob manus sobai buchhte pare kintu nije je er proti agraha hobe sai ichchha karor-e nai. Sobai sudhu dialog marar jonnya achhe . sikhita chatrachatri, tader kortobya hobe asikhita manus-der ai sob kaje ana , Sorbopratham nijeke aisob kaje ana.....”

[**Translated:** “Everybody knows about environmental pollution including air pollution, water pollution, sound pollution and soil pollution. People only talk about these pollution but are not interested do anything in this regard. The students should take individual action and help ignorant people to adopt pro-environmental behaviour.....”]

“Paribesh dushener muldai holo sikhita manus, asikhita manus to dushon na jene kore kintu sikhita manus-ra jenei beshirbhag dushan kore. Tai dushon rukhte gele sikhita manus-der agia aste hobe.....”

[**Translated:** “Educated people are mostly responsible for environmental pollution. The uneducated people also pollute the environment without knowing the consequences so educated people should come forward to arrest pollution.....”]

“5-e june biswa paribesh dibash hisabe palan na kore jeno atwaraksha dibash hisabe palan kora dorkar. Kenona paribesh roksha na korte parle nijeder roksha o hobe na.....”

[**Translated:** “5th June should be observed as a day for self preservation not as a World Environment day. Because if we fail to protect environment then we will also fail to protect ourselves.....”]

“Ajkal je dushon bere geche ta bortomane roka khubi muskil . koek bochhor dhore jemon manush dushon chalie gachhi , dushon rukhte gele o amader onek bochhor dhore chesta korte hobe, kokhono amader pichhie porle cholbe na.....”

[Translated: “The level of pollution is so high that today it is very difficult to reduce it. As it gas continued for so many years, so we also need many years to rectify the situation. We should not give up our efforts in this regard.....”]

The quantitative data gave us a general idea regarding the level of environmental value and behaviour of the students. But qualitative data helped to add more detail, which could not be obtained from the close-ended questionnaire. Thus it is evident that rich information about environmental belief and value system of the students has been brought out by means of qualitative study. The qualitative part of the research further revealed the students’ ability for critical thinking. For example they pointed how and why people shirk their responsibility and how the education system and educated people must be involved in the protection of the environment.

The responses of the participants may be summarised in the following manner: i. The participants displayed quite high level of awareness regarding pollution. They knew about pollution including different types of pollution which are responsible for damaging the nature and air, soil, sound and water in particular. They also mentioned categorically the causes of pollution and how level of pollution is adversely affecting human health. ii. The participants correctly pointed out how environment should be protected and what sort of action should be taken. They further elaborated different kinds of actions to be taken at different levels like individual, group action and measures to be adopted by the government. One of the important observations of the participant was the role of educated people in preserving environment. They mentioned that educated people should take the initiative in the protection of the environment as they are more knowledgeable in this regard and hence play active role in guiding other people who ignorant. iii. The case study interviews showed that they themselves are engaged in various type of environment related behaviour, which is best on the basic principles like reduce, recycle and reuse. One of the often practiced behaviour is plantation of tree and looking after the sapling.

First the researcher located themes and assigned initial codes in order to condense the mass data in two categories. The process of open coding resulted in the following categorization.

Questions	Code	Responses
Awareness about environmental pollution	Nature of pollution	Different types of pollution like air, water, sound, soil etc (85%)
	Why pollution is increasing	Misuse of scientific inventions. (55%) Industrial growth (85%) Use of pesticide (65%)
	How does it affect human health	Different types of diseases like cancer and immunity disorder (70%)
Ways and means of protecting environment	Individual action	Writing protest letter (45%) Taking part in environment programme (67.5%)
	Group action	Organise rally (55%) Group activity like cleaning the road (35%)
	Govt. action	Environmental laws (78%)
	Role of educated people	Taking leadership role (72.5%) Taking initiative (80%)
Respondents’ behaviour regarding pollution	Recycle	Selling old news paper and polybag(60%)
	Reuse	Using old cloth, paper etc (55%)
	Reduce	Saving fossil fuel like switching off fans and use of natural recourses like saving water (85%)
	Tree plantation	Planting and looking after sapling (97.5%)

Conclusion

The researcher wanted to find out in detail the view of the students regarding various aspects of environmentalism. Specifically the intention was to know the knowledge based on the students in the context of the pollution, how the environment should be protected or what steps should be taken in this direction and lastly what do the students do to protect the environment. The theme wise coding revealed that the students have adequate knowledge about pollution and also they described clearly as to the measures to be taken to protect the environment. The researcher also concludes that many of them practice a number of environment related activities.

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