

Learning Difficulties of Secondary School Students with Low Vision in an Inclusive Indian Classroom

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Abstract

This paper is an attempt to analyze the learning difficulties of secondary school students with low vision in an inclusive Indian classroom. In this study, eight students with low vision from four different inclusive secondary schools of Jharkhand (India) were selected by convenient sampling method. In-depth interviews with them were conducted for collecting the data. A set of questions were prepared in advance by the researcher for conducting the interviews. The data collected were analyzed qualitatively. The responses of the questions given by the students were transcribed. All the transcriptions were examined thoroughly with a view to identify different themes that emerged out of participant's responses to the questions asked in the interviews. This study reveals that secondary school students with low vision in an inclusive Indian classroom face difficulties in reading, writing and taking class notes; difficulties in participating and performing in the class; and difficulties in preparing for and performing in the examinations.

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Visual impairment has a significant effect on the life of an individual. Life gets changed dramatically because of it. It hampers all the aspects of an individual's life especially education which is undoubtedly the backbone of an individual's growth and development (Goldie and Raznik, 1986). Secondary school students with low vision face several significant difficulties and challenges in accessing the world at each and every step of their day to day life. They may find it difficult to perform even simple activities such as reading, writing, playing etc. They may have difficulties interacting with their environment and participating in the activities inside and outside the home as well as the classroom. One of the major challenges faced by them in an academic environment is the huge amount of printed materials with which they are confronted each and every day.

If visually impaired students need to be included in the mainstream society, the first step must go through the educational institutions. This is because education is one of the most important tools of empowerment. Inclusive education is gaining momentum globally

as an idea to the education of learners with special needs in mainstream classroom settings (Bachofner, 2007). This approach provides all the students with community membership and greater opportunities for academic and social achievements (Corn and Koenig, 2003). Inclusion of students with low vision in the common classroom is a part of inclusive educational policies. Because of this inclusive process these students are facing many new difficulties. The lack of resources to enhance their education in inclusive schools is one of the important factors affecting those who are ready and willing to learn and bring changes in their life (Yalo and Indoshi, 2010). But there are no trained human resources in many schools to ensure their inclusion (Hutto and Hare, 2001). Visual impairment can be overcome with proper training and guidance.

Low Vision and its Limitations

As per WHO report "Every five seconds an individual in the world goes blind. Globally there are nearly 45 million blind people and almost 135 million with low vision, a total of 180 million people with

some degree of visual disability. Nine out of the ten who are blind live in developing countries." In case of India for visual impairments, the 2001 census conducted by government of India includes people using spectacles or contact lenses, whereas 58th round of the National Sample Survey (NSS) of India conducted in 2002 ignores them. While the census finds 2.16 million youth with visual impairments, the NSS finds only 0.18 million (Jeffery and Singal, 2008).

According to the WHO working definition of low vision (WHO, 1992) "A person with low vision is one who has impairment of visual functioning even after treatment, and/or standard refractive correction, and has a visual acuity of less than 6/18 to light perception or a visual field of less than 10 degrees from the point of fixation, but who uses, or is potentially able to use, vision for the planning and/or execution of a task." Students with low vision have visual acuity between 20/70 and 20/400 after all corrective possibilities. They cannot read the newspaper at a normal viewing distance, even with glasses (Cook, 2008). The National Eye Institute (NEI, 2006) defines low vision more loosely, as a visual impairment not correctable by standard glasses, contact lenses, medication or surgery that interferes with the ability to perform activities of daily living.

Low vision imposes its own set of learning difficulties and limitations to an individual. Secondary school students with low vision may experience difficulties with a variety of tasks, like taking accurate notes, reading map, multi-sensory tasking etc. (Shepherd, 2001). Different students with visual impairments have different learning needs and difficulties (Hutchinson, Atkinson & Orpwood, 2008). There is a need to build and strengthen inclusive education system for responding to the diverse needs of secondary school students with low vision. Many of these students with low vision can read large print, if it is written clearly and boldly (Jose, 2004). As we become more sensitive to the diversity of their needs, we can adjust how we teach and facilitate learning in different ways which will benefit all of them (Shepherd, 2006).

What literature says about students with low vision

Most of the students with low vision have a very poor distance vision. This makes it difficult for them to see the chalkboard or to gather detailed information from filmstrips, charts or overhead screens (Cook, 2008). In addition to that they have difficulties in reading, writing, spelling difficulties, drawing and some of the class activities (Avake, Dogbe and Mamah, 2010). These difficulties are perpetuated and snowballed due to poor awareness of teachers about the students with low vision. Avake *et al.*, (2010) reported that there are teachers who are not aware of the low vision of students even if they had been in the schools for more than five years.

Research has supported that children with low vision do not read as well as do sighted children of the same age (Coroley and Pring,

1993). This warrants special attention and heed for the academic needs of the children with low vision. This is corroborated by the study conducted by Fellenius (1999). According to Fellenius (1999) students with low vision exhibit a wide range of visual impairments. Therefore, special attention must be given in assessing the needs of the students with low vision.

Yalo, Indoshi, and Agak (2012) conducted a study concerned with the challenges and strategies of working with learners with low vision. The results of the study suggested that the major challenges faced by teachers are lack of appropriate devices for learners and lack of adequate training for teachers. Strategies suggested to address these challenges were supply of low vision devices and low vision teams at each school to provide co-ordinated learning support.

Jose (2004) pointed out those learners with low vision scan visual tasks with their heads instead of eyes. It may also be possible that page lines were too feint to be seen by learners with low vision and that is why they tended to write in zigzag lines that were accentuated by poor eye-hand coordination and erratic scanning with the head. Lack of large print books was another common challenge to learners with low vision. Without prefer size of print for learners with low vision, resulted in poor clarity of vision and visual fatigue.

Corn (1996) noted that learners with low vision must be given appropriate size of print in order to improve on their retinal spread. She also strongly recommended the use of low vision devices. When such equipment are lacking from the classroom environments, teachers face challenges of teaching curriculum content to the learners with low vision. Lack of equipment forced teachers to work at frustration levels, thus leading to lack of confidence in giving the best instructions to the learners with low vision. The learners with low vision get tired quickly due to very close working distance. This observation is consistent with what Jose (2004) observed the stronger the low vision device, the shorter the working distance.

Barraga (2006) and Corn (1996) both observed learners with low vision have problems of reading crowded diagrams from course books. They observed that learners with low vision required diagrams to be adapted. This adaptation of curriculum to suit learners with low vision seemed not to be carried out because most teachers had not been trained in the area of low vision use. Teachers in inclusive schools for the visually impaired were routinely trained as teachers for sighted learners and then purportedly trained to work with the visually impaired.

Besides this Daugherty and Moran (1982) conducted a study regarding the comparison of the reading comprehension, decoding and spelling skills of children with low vision and a norm sample of same-age sighted children. The results of the study revealed that the children with low vision with no additional disabilities performed less well than the sighted children only on decoding.

There is dearth for research studies on the problems of students with low vision in India. This reveals that this issue is not properly addressed in the subcontinent. Though the issue of learning difficulties of students with low vision is well explored internationally, even in the 21st century it remains as an unidentified and neglected area in educational research. Since issues of blind students are extremely different from the issues of students with low vision, high research vigil was needed to get original research results about a study on students with low vision without an overlap. This study may be first of its kind which very specifically addresses the issues of students with low vision in India. Social, economic, cultural and educational background of India makes it a unique issue to be addressed in the Indian context.

Purpose of the study

The purpose of the study is to find out the learning difficulties faced by the secondary school students with low vision in an inclusive Indian classroom. Exploring the learning difficulties faced by these students at each and every step of their academic life will definitely stimulate to think and rethink about the different ways of overcoming the learning difficulties faced by them. In this regard the purpose of the present study acquires paramount importance especially in India where there is severe dearth for research related to the issues of visual impairment and related problems in educational settings.

Methodology

The present study is qualitative in nature. The following key query guided the present study: What are the different learning difficulties faced by the secondary school students with low vision in an inclusive Indian classroom? In this study eight students with low vision from four different inclusive secondary schools of Jharkhand (India) were selected by convenient sampling method. In-depth interviews with them were conducted for collecting the data. Then the data collected were analyzed qualitatively. This section will outline the research participants, design of the study and data analysis.

Participants

In this study the participants were eight students (aged between 15 and 17) with low vision from 9th standard of four different inclusive secondary schools of Jamtada district in Jharkhand, a state of India. Out of these eight participants, four were male and the other four were female. All the participants were suffering from 50% or above visual impairment, as per the certification made by the District Medical Officer. Convenient sampling method was used to select the subjects. They were from two public and two private schools. All the four schools were located in urban areas. In-depth interviews with the participants were conducted to collect the data during December, 2011 and January, 2012. The participants

were made aware of the nature of the present study, their role in it, provisions for confidentiality and their option to withdraw from the study at any point. Each interview lasted for half an hour to one hour. Participants' names have been changed for the purpose of anonymity and pseudonyms have been used within the results and discussion section of this paper. All the participants cooperated well. The data collected from the participants were analyzed qualitatively.

Design

This study was designed to find out the learning difficulties of secondary school students with low vision in an inclusive Indian classroom. It is based on the in-depth interviews with the participants. In-depth interviews were conducted for collecting the data. The data were systematically recorded and analyzed qualitatively.

Data collection

In-depth interviews with the selected students with low vision were conducted for collecting the data. A set of questions were prepared in advance by the researcher for conducting the interviews. The responses of the questions given by the students were transcribed by the researcher. Transcriptions were read in front of the respondents. Necessary modifications were incorporated according to their suggestions.

The questions used in the interviews with secondary school students with low vision are as follows:

1. How do you feel and respond, when you face difficulties in reading and writing because of your visual impairment?
2. How do you manage the class notes, when you are unable to take notes properly in the classroom while teaching?
3. When you are unable to compete with the normal children because of your visual impairment, how do you feel and react? do you
4. When you have any doubt regarding the topic discussed in the classroom, how do you clarify your doubts?
5. Which strategy do you adopt to actively participate in the classroom?
6. What are the different methods you use for the preparation of exams?
7. When you do not get good marks, what may be the probable causes which you feel?
8. When a teacher does not care of your special needs in the classroom, how do you feel and react?
9. When a teacher asks a question to all the students in the classroom, what do you do?

10. What is the major difficulty you face in the classroom during teaching learning process?
11. Do you feel that if you had normal vision, you would be much better in learning as you are now?

Data analysis

In the present study the data collected were analyzed qualitatively. The process of data analysis was guided by the research question, the purpose of the study and the review of related literature. Investigators thus began data analysis by establishing some initial categories and themes related to the objectives and literature. Investigators read all the transcriptions thoroughly with a view to identify different themes that emerged out of participant's responses to the interview questions. Response to all the eleven questions was thoroughly read. Based on this three major themes were formed. They were: difficulties in reading, writing and taking class notes; difficulties in participating and performing in the class; and difficulties in preparing for and performing in the examinations. These themes are discussed in detail in the following section.

Results and discussion

The learning difficulties faced by the secondary school students with low vision in an inclusive Indian classroom will be explored in this section. The results drawn here are those that emerged out of an analysis of participants' responses. The following learning difficulties emerged as central themes: Difficulties in reading, writing and taking class notes; difficulties in participating and performing in the class; and difficulties in preparing for and performing in the examinations.

Difficulties in reading, writing and taking class notes

One of the major challenges faced by the secondary school students with low vision in their academic life is concerned with the difficulties in reading and writing. All the eight participants in the present study accepted the fact that they face difficulties in reading as well as in writing. While interviewing it was found that there are also difficulties in taking notes by these students with low vision in the classroom during the teaching learning process. When further probed, it was found that three out of eight participants managed the class notes with the help of their classmates or peer groups, when they were unable to take the notes in the classroom. Rekha, one of the participants, said,

"My friends help me a lot in managing the class notes. The class notes are very important from the examination point of view. Without these class notes it's very difficult even to pass in the examinations for me."

The other three out of eight told that they managed the class notes through their private tutors. Rajeshwari, one of the participants, reacted,

"Private tutors are God for me at the time of examinations because I am much dependent on my private tutors for the printed notes."

This shows that private tutors play a significant role in teaching learning process in case of secondary school students with low vision. The other two participants, Suraj and Krishna, responded that they did not care about the class notes. Suraj said that he did not bother about the class notes because all the class notes are either from textbooks or guide books. Thus, there is a mixed response regarding the class notes among these secondary school students with low vision. There is no single source for managing the class notes for them. They use different sources like peer groups, classmates or private tutors for managing their class notes according to their convenience.

Difficulties in participating and performing in the class

While interviewing it was found that secondary school students with low vision in an inclusive Indian classroom also face difficulties in participating and performing in the class because of their visual impairment to a certain extent. Regarding the doubt clearance in the class most of the participants told that they generally did not ask any question in the classroom, even when they felt serious and genuine doubts regarding the topic discussed in the classroom. If they had any doubt, they managed with the help of their classmates or peer groups. Only Ram, one of the participants, said that he asked questions in the classroom itself, if he felt any doubt regarding the topic discussed in the classroom.

The results show that most of the secondary school students with low vision in an inclusive Indian classroom do not feel comfortable and easy in asking questions from the teachers. The reason behind this may be their low self-confidence. As they were reared up in a climate which is dominated by the normal people, their exceptionality in the form of low visibility might have caused harm for the development of a healthy self-concept. Most of the participants accepted that they hesitate and feel uneasy in answering any question asked by the teachers in the classroom during the teaching learning process. But Krishna, one of the participants, differed. He responded that he felt happy in answering the questions asked by the teachers.

Fifty percent of the participants responded that they were attentive and listening carefully during the teaching learning process in the classroom, whereas other fifty percent of the participants accepted that they were not much attentive in the class during the teaching learning process. This may be because of the different methods of teaching followed by the different teachers in the classroom during the teaching learning process. All the participants accepted that one of the major difficulties faced by them in the classroom during the teaching learning process is their failure to visualize many concepts explained by the teachers through verbal communication. This shows that verbal explanation is not sufficient to them while

learning a new concept taught by the teacher. Krishna, one of the participants, said,

"Some models like clay models or plastic models which can be sensed through touching should be used by the teacher while introducing a new concept during the teaching learning process in the classroom. These models will definitely help us to a great extent in learning a new concept taught by the teacher."

Most of the participants told that they did not bother, when teachers did not take care of their special needs. The reason behind this might be the uncaring and insensitive behaviour of the society to which they belong. They might have been accustomed of not bothering about whether their special needs are sufficiently taken care off or not. Only Ritanjali, one of the participants, responded that she felt very bad and distressed, whenever a teacher did not bother about her difficulties and problems caused by low vision.

All the participants agreed that there is a need of awareness, consciousness and sensitization among the teachers towards the special needs of the students with low vision. For example a teacher should articulate the words while writing on the blackboard. He should speak to the class upon entering and leaving the classroom. He should call the students with low vision by his name, if he wants his or her attention. Visual materials must be accompanied by a verbal description. Radhika, one of the participants, responded,

"I never bother about my visual impairment, but many times my parents, teachers and relatives make me feel that I have difficulties because of my visual impairment."

This shows that how society imposes a socio-psychological barrier in the growth and development of students with visual impairment. Society urges to keep all the individuals under certain norms and thereby makes hurdles in their natural ways of performing. This hurdle further intensifies the learning difficulties of students with low vision in the class.

Difficulties in preparing for and performing in the examinations

In-depth interviews with the participants show that secondary school students with low vision in an inclusive Indian classroom face several difficulties regarding the preparation for and the performance in the examinations. They face difficulties in reading the text, drawing the diagrams and analyzing the new concepts. Regarding the methods used for the preparation of examinations most of the participants told that they generally used self-study method as well as group learning method. They do not hesitate in asking academic help from their classmates or peer groups. This throws light into the cooperative and friendly behaviour of their classmates and peer members.

Most of the participants accepted that sometimes when they do not get good marks in the examinations, they themselves are

responsible for that and the reasons might be lack of motivation, sincerity or commitment. But Rekha and Rahul (participants) differed. They considered that low vision is one of the major causes for such kind of situations. The analysis shows that most of the secondary school students with low vision do not feel visual impairment as a hurdle in their academic success. Most of the participants responded that they felt normal, when they were unable to compete with the normal students. But Suraj, one of the participants, said that he felt distressing and painful, when unable to compete with the normal children because of his visual impairment. The results show that the secondary school students with low vision do not care much about the competition with others.

This study will help us to understand and analyse the learning difficulties of secondary school students with low vision in an inclusive Indian classroom. The understanding and analysis of the learning difficulties faced by these students will lead to the suggestions and further studies regarding how to overcome these difficulties. For example the analysis of their learning difficulties suggests that some seats should be reserved for them in the front row of the classroom. Large print versions of classroom materials should be provided to them. Teachers should be flexible with assignment deadlines for them. Because note taking is such a fundamental learning skill, training sessions should be arranged for them on taking concise and accurate notes. It should be noted that there is no list of strategies which is applicable to all the students with low vision.

Conclusion

The present study shows that secondary school students with low vision in an inclusive Indian classroom face difficulties in reading, writing and taking class notes; difficulties in participating and performing in the class; and difficulties in preparing for and performing in the examinations. The major findings of the study reveals that most of the secondary school students with low vision in an inclusive Indian classroom hesitate to ask questions during the teaching learning process, even when they have genuine doubts regarding the topic discussed in the classroom. Besides this they accepted that they also hesitate in answering the questions asked by the teachers in the classroom. One of the major difficulties faced by them during the teaching learning process is their failure to visualize many new concepts explained by the teachers through verbal communication. Most of these secondary school students with low vision use self-study method as well as group learning method for the preparation of their examinations. But they do not hesitate in taking the help of their peer groups or classmates. Most of them responded that they felt normal, when they were unable to compete with the normal students.

As we saw the secondary school students with low vision face several learning difficulties in an inclusive classroom in India. These difficulties influence their learning process as well as future

life to a great extent. To address this issue a mutually supporting dualism is needed. The inclusive school environment should be made sophisticated to cater the needs of students with low vision. This can be in the forms of changes made in the infrastructure, teaching and learning aids and training and skill improvement programmes arranged for the teachers to address the issues scientifically and systematically. Another important part of this dualism is empowering the students with low vision to address the issues inhibiting them in the learning process. This can be in the form of material assistance like more sophisticated equipments giving more visual clarity and use of text books and other materials used for their study. Equally important is the intellectual and emotional support given to them for developing strategies to cope up with the difficulties originating from low vision. All kinds of support should be need oriented and client centred, so as to device a case sensitive strategy to decide which aspect (environmental support or self empowerment) need to be tailored for each student. There is an imperative need to address the learning difficulties of secondary school students with low vision. The concept of inclusive education can be successful, only when differently abled learners are sufficiently taken care off.

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