Politicindia Media & Research

People's Dialogue on Education

Vol. – 10, Number – 1, January 2018

ISSN(L)-0974-5955

Peer Reviewed Journal

http://journal.politicindia.com

Effective Use of Audio Media in Teaching Visually Challenged Students

Mukta Mani*

Abstract

The present paper is a case study of 'Antarjyoti Balika Vidyalaya', Patna, a voluntary organization being run by Bihar Netraheen Parishad for visually challenged girls. In this particular school a total of eighty-four students are being taught by ten teachers using various audio media as - tape-recorders, audio cassettes and broadcasting radio. Although some researches had been done in the past but none of them had focused on the use of audio media in teaching such students. Thus, an attempt has been made by the researcher to highlight how effectively the above-mentioned audio media is being used in teaching visually challenged students in this particular school. Meaningful suggestions are also forwarded to improve the teaching-learning of visually challenged children.

Keywords

CWSN, Disability, Visually challenged students, Audio media

Introduction

India has witnessed remarkable progress in school education especially concerning overall literacy, infrastructure, and universal accessibility. Two perceptible developments recently identified- the political recognition of Universalization of Elementary Education (UEE) as a legitimate demand and the State commitment towards UEE in the shape of the Right of Children to Free & Compulsory Education Act 2009 constitute the background to the reform in education. Despite decades of educational reform through the ages, it was realized that a vast majority of children, especially children with special needs are still lagging in terms of their educational development. Although the efforts have been made both at the national and the state level, yet it is sorry to state that only a fraction of efforts is devoted to developing their educational potentialities to the optimum extent possible. It is under-utilization of human resource capital. Children with special needs have not only the right to healthy physical development but also to grow their full potential- intellectually, socially, morally, and culturally. They too have the right to expect the same standard of education as their normal counterparts but unfortunately, they do not receive the same. It is, therefore, necessary that provisions must be made to cater to the special educational needs of such special children irrespective of the kind, category, and degree of disability. They must be provided necessary resources, special provisions, or support for ensuring their success

leading to an effective adjustment in the society. There is a need on the part of differently-abled children to move from charity mode to the right mode of thinking.

To realize the potentialities inherent in children with special needs, it is necessary to redesign the teaching-learning environment, instructional methodologies, and to select the media available. As far as visually challenged students are concerned, it has been proved that visual impairment does not result in intellectual retardation. There are however some differences in conceptual development as such children rely more on touch and listening skills to learn about the world. Agrawal (2004) suggests that cognitive structures of children are not affected by visual loss; "What they grow deficient in are primarily their perceptions and secondarily their symbolic abstractions which are gained through visual perception" (p.34). Students with visual impairments have unique learning needs that must be addressed if they are to access the general education core curriculum and become independent, productive citizens. Researchers have shown that early training through suitable instructional strategies coupled with effective use of audio media as audio cassettes, tape- recorder-cum-radio, CDs, etc. could play a vital role in their educational development. Massodi & Ban (1980) highlighted the need of audio media in teaching visually challenged students in regular classrooms. Sanchez & Flores (2004) have introduced audio math software for enhancing visually challenged students' memory and mathematical skills through audio. A most recent study has developed a sound-based virtual environment for children with visual disabilities to enhance memory and fully tested the software with diverse children concluding that it can help to enhance the development and practice of short-term memory in children with visual disabilities (Sánchez and Flores, 2003, 2004). Syal (2011) discusses the benefit of audio modules in teaching visually challenged students and gives an overview of how audio modules were used to introduce concepts, provide support for self-study, and to increase their engagement with educational materials. The need to incorporate assistive technologies (audio supported reading) within educational programs for these children is widely recognized (Jackson 2012). Rout (2012) states that along with Braille materials and computers, such children prefer to use audio materials in their studies. They use various cassette players and other recording machines to record lectures, books, and study materials Thus all these studies univocally emphasize the need for audio media in teaching such children. Teaching visually challenged students through these media has immense possibilities in our country in general and Bihar in particular. Owing to the constraints of finance, shortage of teachers, resources, and lack of political will, Bihar as a developing state still has limited access to the advanced form of ICT and the use of audio media remains the cheapest mode of educating such children. Thus all efforts and resources must be mobilized towards this end as necessary and crucial investment.

The paper that I intend to present is a case study of 'Antarjyoti Balika Vidyalaya', Patna, a special school being run by Bihar Netraheen Parishad for visually challenged girls since 1993. The vision of this school is that persons with disabilities must have equal opportunities leading to improved quality of life and ensuring their full participation in a society that respects their dignity. At present this particular school has a total of 84 (eighty-four) students which are being taught by 10 (ten) teachers using various audio media as - tape-recorders, audio cassettes, and broadcasting radio. Although some researches had been done in the past none of them had focused on the use of audio media in teaching such students. Thus, an attempt has been made by the researcher to highlight how effectively the above mentioned audio media is being used in teaching visually challenged students in this particular school, thereby offering suggestions.

Statement of the Problem

The present study can precisely be stated as 'Effective Use of Audio Media in Teaching Visually Challenged Students'.

Operational Definitions of the Term Used

i. Effective Use-
By the term "effective use", the researcher means how well the audio media is used in teaching visually challenged students and to what extent it is capable of producing the desired result in terms of both academic performance & behavioural changes in such students.

ii. Audio Media-
By the term "audio media", the researcher means those teaching aids which involve the use of the sense of hearing and have important implications for teaching visually challenged students, viz.-radio, and audio cassettes.

iii. Visually Challenged –
By this term, the researcher means those students who suffer from such visual impairments, difficulties & deficiencies and thus require special educational provisions.

Objectives of the Study

- To conduct a study on the effective use of audio media in teaching visually challenged students in 'Antarjyoti Balika Vidyalaya', Patna, Bihar;
- To study the constraints, if, any in the use of audio media in teaching such students;
- To offer suggestions regarding the best utilization of audio media in the aforesaid purpose.

Significance of the Study

- This study is expected to provide a basis for comprehensive information on the effectiveness of audio media in teaching visually challenged students;
- This study is expected to address the problem of visually challenged students and how audio media should be utilized during the teaching-learning process (TLP) to provide them the maximum benefits;
- It will also highlight the need to train teachers regarding how to use audio media;
- It would also help in further researches in the above-mentioned context;
- The output of this study will serve as a blueprint for the stakeholders of education to chart the right course of action in the context of both audio media and visually challenged students;
- It would be of utmost significance as till now none of the researches in this regard has been done in the context of Bihar.

Research Questions

- To what extent audio media has been employed for teaching visually challenged students in Antarjyoti Balika Vidyalaya?
- Does the use of audio media have any effect on the learning of students?
- How effectively is the audio media used in teaching such special students?
- Do the teachers have the required knowledge, skills in making use of such media?
- Are there any constraints in the effective use of audio media in teaching visually challenged students?

Research Methodology

The present study entitled "Effective use of Audio Media in teaching Visually Challenged Students" is descriptive. It is a case study of Antarjyoti Balika Vidyalaya, which examines the use and effectiveness of audio media in teaching such students.

Delimitation of the Study

As per the initial survey, the researcher found that the audio media is used only in the secondary classes i.e. from class IX-X. Therefore, the researcher has delimited the study to the students of secondary classes only.

Tool of the Study

For the study, two questionnaires (Appendix I & II) were developed and used by the researcher- one for the student having 20 items and another for the teachers having 30 items. It was concerned with gathering factual information concerning the following dimensions :

- Type of audio media used;
- Purpose of the audio media used;
- View on the content i.e. audio lessons developed and delivered through audio media;
- Role of both teachers and students during the transaction of the lesson through audio media;
- Benefits of audio media;
- Constraints in the effective use of audio media;
- Suggestions.

Method of Data Analysis

The questionnaire was administered over the teachers and students who were requested to answer all the items of the questionnaire. All their opinions were of qualitative nature which was carefully collected and placed on record. The method of data analysis used was the

simplest form of organizing data. The raw figures were converted to %age and tabulated. The responses were then qualitatively analyzed and interpreted by the researcher.

Interpretation of Data

Analysis of teachers' response

The analysis of teacher's responses is being produced here in a summarized form-

- All the teachers said that both radio and audio cassettes are used as an audio media to help the students' understanding, but audio cassettes are used mostly. 83.3% of them said that it is the cheapest means available, while 50% were of the view that it can give immediate support to the students. 66.6% of teachers agreed that it is easier for the students to handle it and only 33% said that audio lessons make the concept clear.
- Further, none of the teachers accepted that they use radio for teaching visually challenged students. But all of them reported that radio is used by the students to update their general awareness and recreational purpose. All of them said that there are not specially designed programmes which may be broadcasted for meeting the needs of visually challenged students. Only 66.6% of them said that the radio does not match with the sequence of curriculum transaction.
- Although 83.3% of the teachers accepted that there is a need to provide special training to the teachers regarding how to use audio media in TLP only 66.6% of them have received some kind of training.
- All the respondents reported that audio lessons are related to subjects as Literature and Social Studies. 83.3% of them said that it is not used for teaching Science because it involves practical, thereby involving vision. Only 33.3% of teachers emphasized that not much effort has been done in this context.
- 66.6% of the teachers admitted that audio media helps them in guiding the students on subject matter thereby stimulating self-activity among them. 50% said that it also helps in motivating the students. Only 16.6% accepted that audio media reduces the workload of teachers.
- 83.3% of the teachers believed that audio lessons are relevant to the students' needs. 66.6% said that these provide difficult concepts in a simpler way to understand. Only 16.6% admitted that audio lessons just transmit information.
- All the respondents accepted that they too have a role in the development of an audio lesson.
- Not only this, but all of them also agreed that both teachers & students are actively involved during teaching-learning through audio media. All the teachers use discussion to assess students' understanding. 66.6% of them said that they also use questioning.
- In response to the question that whether audio media caters to the need of all the students equally, only 66.6% favored it and the rest denied. Among the teachers who were in favor, 50% said that it motivates students towards learning and helps in improving the academic performance of the students. Among the teachers who denied, 33.3% said that many of the students fail to understand both the concepts and words used in the audio lessons.
- Finally, with regards to difficulties in teaching-learning through audio media, 66.6% said that it is a mechanical process that does not allow for two-way interaction, 16.6%

said that it only develops verbal skills among students and the rest said that voice quality of the audio lessons is generally poor.

Analysis of Students' Response

The analysis of students' responses is being produced here in a summarized form-

- All the students said that both radio and audio cassettes are used as an audio media to help their understanding, but audio cassettes are used mostly. 90% of them opined that it is so as it reduces the work of writing, 50% of them said that it is easier to handle and 45% of them accepted that it can give immediate support to them.
- None of them said that teachers use radio for teaching rather the students themselves use radio for updating their general awareness and recreational purpose.90% of them said that there are not specially designed programmes which may be broadcasted on radio.
- Further, all the students agreed that audio lessons are mostly related to subjects as Literature and Social studies; it is not used for teaching Science as it involves practical thereby involving vision. 60% of them however said that not much effort has been done in this context.
- The majority (85%) of the students accepted the benefits of audio media and said that it helps to stimulate self-activity among them. 40% of them accepted that it provides guidance & discussion on the subject matter.
- 75% of the students have a positive view of the audio lessons and said that it is relevant to the students' needs. 66.6% said that these provide difficult concepts in a simpler way to understand. Only 16.6% admitted that audio lessons just transmit information and does not clarify the concept.
- Besides these, 80% of the students admitted that teachers make the concept clear with suitable examples while teaching through audio media. 60% of them also said that the teachers provide them opportunity to be actively involved in the TLP. However, the majority of them agreed that the teachers assess their understanding through discussion and questioning.
- Further 80% of them denied that audio media caters to the need of all the students; the rest 20% admitted that it caters to their need by motivating them and improving their academic performances.
- Finally, with regards to difficulties in teaching-learning through audio media, 80% said that the voice quality of the audio lessons is generally poor. 25% said that it is a mechanical process that does not allow for two-way interaction.

Findings and Discussion

In the present study, it was observed that both audio cassettes and radio have educational implications, former is mostly used for teaching visually challenged students because not only the audio cassettes are cheapest & easier for the students to handle, it also gives immediate support to them by reducing the work of writing and making the concepts clear. But despite having an educational implication, radio is not used for teaching as there are not specially designed programmes which may be broadcasted for meeting the needs of visually challenged students. Yet its significance as an effective media is clear from the fact that students make use of radio for updating their general awareness and recreational purpose. As per the respondents' opinion, it is clear that the audio lessons recorded in the audio cassettes mostly relate to Literature & Social studies, and because of the practical nature of Science, its

scope is limited. The majority of the respondents accepted that audio lessons are well planned, enriched, and relevant thereby motivating and improving the academic performances of the students. However, many of the students had a negative opinion about the audio lessons. As per their view, these lessons do no cater to the need of all the students and many of them fail to understand the concept and words used. This underlines the need for some changes to be introduced in the audio lesson with particular reference to addressing the issue of individual differences. The effectiveness of audio media in teaching visually challenged students emerges from the univocal acceptance of the benefits derived. Both the respondent group accept that audio lessons help in stimulating self-activity among students by providing guidance and discussion on the subject matter. Further, it is worth mentioning that the active involvement of both the teachers and students during the transaction of lessons (teaching, learning, and evaluation) through audio media adds to its effectiveness. Finally, with regard to constraints that hamper the effective use of audio media in teaching visually challenged students, the mechanical aspect of audio media which does not provide scope for two-way interaction can't be overlooked. The poor voice quality of the recorded audio lessons also deserves equal attention so that it does not interfere with its effective use.

Conclusion and Suggestions

Based on the findings and discussion, the researcher arrived at the following conclusions which are being arranged as per the sequence of research questions:

- The respondents viewed that audio media are not only used for teaching visually challenged students, it is also used by the students in updating their general awareness and recreational purpose.
- The use of audio media has a positive effect on the learning of the students. It offers increased flexibility in learning to them. It also helps in motivating & stimulating self-activity among them through guidance and discussion on the subject matter.
- The use of audio media is effective in teaching visually challenged students. The audio media (audio cassettes) through its well-planned and enriched lessons not only helps in motivating the students thereby modifying their behavior positively, it also improves their academic performances and enriches their knowledge. Teachers reported a greater level of students' engagement with learning materials in the form of audio cassettes.
- Although teachers are actively involved during the transaction of lessons through audio media, the majority of them have not received any kind of training and hence they lack the required knowledge & skills in making use of such media in teaching visually challenged students.
- The mechanical aspect of audio media which does not provide scope for two-way interaction coupled with poor voice quality, inappropriate pacing of the audio lessons are some of the factors which adversely affect the effectiveness of audio media in teaching such children.

Based on respondents’ opinions and the researchers' view, the following suggestions were made:

- There must be some specially designed programmes for visually challenged students which may be broadcasted through radio.
- Audio media may also be used for the teaching of Science and Mathematics to such students.

- Strong lesson planning is to be done. The length of the audio lessons should be increased and must be supplemented with suitable examples. Simpler words should be used in the audio lessons.
- The pacing of transacting the lesson through audio cassettes must be appropriate.
- The format of audio lessons must include some variations as use of lecture, conversational, question-answer style, etc.
- The Voice quality of the audio lessons must be improved.
- Teachers must be provided training for using audio media in the TLP.
- The government should provide financial and material aids to such schools.

References

- Agrawal, S. (2004): Teaching Mathematics to Blind Students through Problem-Solving Strategies, Abhijeet Publications, New Delhi.
- Jackson, Richard M.(2012): Audio-Supported Reading for Students Who are Blind or Visually Impaired**,** *Paper prepared for the National Center on Accessible Instructional Materials* retrieved from http://aim.cast.org/learn/practice/future/audio_supported_reading dated 15.12.2012
- J Sanchez and H Flores (2003): Audio Memory: Developing memory in children with visual disabilities through audio. *Proceedings of the 8th International Workshop on Educational Software, TISE 2003*, Santiago, Chile, November 2003 retrieved from http://citeseerx.ist.psu.edu/showingciting?cid =483256 dated 15.12.2012.
- J Sánchez and H Flores (2004): Memory enhancement through audio. To be published by in the *Proceedings of ACM Assets 2004*, Atlanta, Giorgia, USA, October 18-20 retrieved from http://citeseerx.ist.psu.edu/showingciting?cid =483257 dated 15.12.2012.
- J Sánchez and H Flores (2004): Audio Math: Blind Children Learning mathematics through Audio retrieved from http://www.iodvrat.reading.ac.uk/2004/papers/SO6-N2-Sanchez-Flores-ICDVRAT2004.pdf dated 15.12.2012.
- Masoodi, B. & Ban, John, R. (1980): Teaching the Visually Handicapped in Regular Classroom, pg. 354 retrieved from http://www.ascd.org/ASCD/pdf/ journals/ed-198001-masoodi.pdf dated 05.12.2012.
- Rout, S.P. (2012): Persons with Visual Impairment and their Educational Needs in India: Use of Special Devices & Assistive Technologies retrieved from http://indiagovernance.gov.in/files/technology and ed.pdf dated 17.12.2012.
- Syal. A (2011): Increasing Visually Challenged Students' Engagement by using Audio Modules as Educational Tool for Self Learning retrieved from http://www.academia.edu/640586/Increasing_Visually_Challenged_Students **dated 05.11.2012.**

Assistant Professor, DDE, L. N. Mithila University, Darbhanga, Bihar (India)** ***Email id: muktamani.164@gmail.com Contact no. 6299776901