

Teacher's awareness about the availability and use of technology for Visually Impaired: A Study

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Abstract - This study focuses on, what is the use of technology for VI? What different types of technology available for VI? And how it's useful as a learning resource for VI? People with VI are gaining access to technology and assistive device designed to minimize the effect of their disabilities. Technological advances open up a new world for people with severe visual impairment. These advances give there greater participation and independence in all aspect of modern society. We have noted the technology affects many aspect of life for person with VI. This system is using different mean of input that is visual, auditory and tactile. These devices improve independent learning opportunity and enhanced participation in recreational and leisure time activities. Student with VI may need to learn to read and write by using different method. Braille is one of the best sources for VI, but today Braille is less popular. Why? The reason is that the unavailability of teacher who know how to teach Braille and another reason is that the increasing the availability of ICT. Advances of the technology have significant influence on the life of blind and low vision.

Index Terms: - Technology, Visually impaired, Teacher awareness



1. Introduction

Advances in technology have significantly influenced in the blind and low vision individuals. Over the past 20th year improvement in computer has allowed for readily access to VI. Today a large percentage of students with VI spend over 80% of their school days in general educational classroom. Student with very severe visual impairment may need to learn read and write using different methods. Braille is a coded system of dots embossed on paper, so that individuals can feel a page of text. Braille is use for different type of reading such as Maths, and Music. Now seen fewer people are using Braille as a reading method today. First reason is that Braille method is slow. According to Tuttle and Ferrell (1995) reported that good Braille reader achieve a rate of only 100 words per minutes. Nolan (1967) found that average high school students who is blind reads even fewer words per minutes.

Can you think of some other reason, Why Braille is less popular today? The first reason is that the teachers don't know how to use or teach the Braille and unavailability of the experts. Another reason is increasing availability of audio tape, immediate computerized print to voice translation difficulty of getting Braille version of books. Braille literacy has become focus of a great debate. Advanced technology is a reason for its unpopularity.

VIBUG (Visually Impaired Blind User Group), the Boston Computer Society are exchanging information to expand computer literacy among person with visual impairment. Gaining access of technology and the assistive device designed to minimize the effect of their disability. These exciting technological advances open up a new world for people with severe visual impairment. Technological aids categorized under three heads.

2. Technological Aids

CCTV - It can be used to enlarge the print found in printed texts and books.

Microcomputer – Using special word processing program can produce large print display that allow person with low vision.

Kurzweil Reader – One of the first computerized systems designed for people with visual impairments that translate print into synthesized speech.

Audiodescription – A technique in which trained narrators describe visual and nonverbal information during the pause in the audio or scripted dialogue of plays, films and TV shows by using FM transmission or extra sound track available on stereo TV.

Talking Books – A books available in auditory format.

Braille – A system of reading and writing that uses dot codes that are embossed on paper, developed by Louis Braille in 1929.

Perkins Brailier – It is a compact and portable machine that uses keys that, when pressed down, emboss special paper with the Braille code.

Braille Printer – A special designed Braille printer is attached to a micro computer, standard text can be translated into Braille, allowing teacher who does not know how to use Braille to produce Braille copies of handouts, tests, maps, charts and other class materials

Community Radio – It is a recent development in the technology. (Sakal Newspaper Published news on 23 March 2010) conducted exam of VI students with the help of community Radio. It is a great contribution of Vidyavani section – Advanced Educational lab for Blind of University of Pune, in the area of special education and especially for VI

3. Use of technology for VI

- Students with very severe visually impaired may need to learn read and write.
- Immediate computerized print to voice and voice to print translation of document.
- Many low vision students they can read a specially adapted version of the text.
- Greater and easier access to classroom material for student with severe visual impairment
- Benefits from improving their listening skills.
- Independent learning is possible.
- Increase the confidence level and minimize the effect of disability.
- Enhanced participation in recreational and leisure activities.

Availability of technology and assistive educational devices is important for VI person is no doubt, but now the question is raised in mind that, what is the duty of teacher? How they know about technology? Are they interested to get knowledge about technology? Will they are aware about technology or not?

To find out this curious view point the researcher took following study:

4. Method

The purpose of the present study to explores the teacher awareness about the technology and its use for VI. The main objective of the study was to find out the technology awareness among teacher of VI. This is a descriptive research and a survey method was used. All teachers who teach in special school and integrated school set up in Pune district. 23 teachers who teach at primary and secondary level from special school and integrated school were selected. A purposive sample method was used. To understand the awareness about technology, the researcher constructed the questionnaire. The researcher used open and close ended question to get maximum information from teacher.

5. Result and discussion

Table -1
Technology available in school

	Braille Printer	Screen reader	Graphical Embosser	Instant book reader	Karzweil Reader	CCTV TTI	Others
Responses	Yes	Yes	Yes	No	No	Yes	----

Table 1 revealed that Braille Printer, Screen reader, CCTV TTI, Graphical Embosser are available in school but Karzweil Reader, Instant book reader are not available in school. Out of these technological aids, no others aids are available in school. Teachers have not responded the others.

Table -2
Knowledge about Technology

Response ↓	Braille Printer	Screen Reader	Graphical Embosser	Instant book reader	Karzweil Reader	CCTV TTI
Yes	21	18	13	6	9	14
Percent	91%	78%	57%	26%	39%	61%
No	2	5	10	17	14	9
Percent	9%	22%	43%	74%	61%	39%

Table 2 shows that the teachers have very well knowledge about technology. As compare to others aids teachers have minimum knowledge about Instant book reader and Karzweil Reader because of unavailability of aids in school

Table - 3
Technology use in teaching

Response ↓	Braille Printer	Screen reader	Graphical Embosser	Instant book reader	Karzweil Reader	CCTV TTI
Yes	11	07	4	00	00	2
Percent	48%	30%	17%	00%	00%	9%
No	12	16	19	23	23	21
Percent	52%	70%	83%	100%	100%	91%

Table 3 -indicates that a few teachers are use technology in their teaching. Only 9% teachers use CCTV for VI because the electricity problem and inconvenience about use.

Table -4
Provide training program about Technology

Response	Frequency	Percent
Yes	5	22%
No	18%	78%
Total	23	100%

Table 4 highlighted very high percent (78%) teachers said that no any training program arrange about the technology for them.

Table - 5
Need of training Program

Response	Frequency	Percent
Yes	23	100%
No	00	00%
Total	23	100

Table -5 indicates that (100%) all teacher have need a training program about technology and how its use. The program should organize for VI students.

Table -6
Need of training Program from which level

Response	Frequency	Percent
primary	22	96%
Secondary	1	4%
Higher secondary	00	00%
Total	23	100

Table -6 indicates that (96%) teachers are said that the training program should be arranged from the primary level.

6 Responses of the Teachers

1. Technology is really good and it is very useful for person who can not see.
2. Because of technology, student can learn independently without any supporter
3. For the easy interaction with normal children
4. Increase their reading, and listening skills Technology is really good and it is very useful for person who can not see.
5. Because of technology, student can learn independently without any supporter.
6. For the easy interaction with normal children
7. Increase their reading, and listening skills
8. Technology is not available in school
9. It is available but we do not have knowledge about technology.
10. Financially it is not affordable for school.

7. Conclusions

- Technology is available in school. Karzweil Reader and instant book reader is not available in school. Most of the teachers have the knowledge about technology.
- In case of the awareness about technology the study found that the teachers are better aware about the technology.
- All (100%) teachers wanted a special training program about technology, through which they will get sufficient knowledge

Referances

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