

Status of Reading Technological Devices for Students with Visual Impairment in South Zone of Delhi's Inclusive Schools

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ABSTRACT

A sighted student read text books or novel or magazine or comics etc. in his daily life as per his choice, means he can read independently whatever he wants to read. But a student who has lost his vision cannot read as per his/her choice due to his/her limitation to see. For example if a student with visual impairment wants to read comics 'Chacha Chudhary' then s/he would be unable to read it himself, s/he needs help of other sighted student who read it for him. So for day to day reading purpose student with visual impairment totally depends on sighted student, which is the major barrier for inclusive and independent society. Technological devices are instrument to reduce the limitation of these students, and empowered them to do work easily, gain knowledge and enjoy during leisure time. These devices are also playing an important role in education of students with and without disability; it has changed the entire scenario of education of these students. For students with visual impairment, the importance of technological device is more than sighted students, because it reduces the limitation of vision loss and helps them to learn as par sighted students. To get the benefit of the technological devices, availability is the first most important criteria. Since many researches (Hosmer, 1995; Rocklage, Gillett, Preschong, & Delohery, 1995; Parette *et al.*, 2006; Judge, Floyd, & Jeffs, 2008; Matzen *et al.*, 2010) have proved that technology is an important vehicle for inclusive education and its availability for students with disabilities improve their performance and they take full advantages of education. Hence the question arises that are the reading technological devices for students with visual impairment available in schools? To find out the answer of this question this topic was selected for the study. The study was conducted in the Government funded schools of south zone of Delhi. The glimpse of the study is as follows:

Objective: The objective of the study was to find out the status of reading technological devices for students with visual impairment in south zone of Delhi's inclusive schools.

Method: Descriptive survey method was used to collect data with the help of Checklist cum questionnaire schedule. The sample of the study was 15 schools of three Educational Districts of Delhi.

Results: Results show that very few reading technological devices for students with visual impairment were available in those schools where special education teachers were posted, but where these teachers were not posted, the status of availability of these devices was not good.

Conclusion: International Agencies, Centre & State Govt. of India have made so many Schemes, Policies and Acts, but problems exist somewhere in implementation stage, that's why situation at gross root level is not up to the mark.

Keywords: Reading technological devices, students with visual impairment, South Zone of Delhi, inclusive school

Technological devices play a major role in modern education due to its ability to help students to get information easily and interactive way. For students with disability importance of technological device is more than students without disability, because

it helps them to access information, to move freely in environment and to become independent. As Bryant & Bryant (2012) said, "for people without disability, technology makes things easier; for people with disabilities technology makes things possible",

this statement shows the importance of technology for students with disabilities. Though it has been proved by various researches (Parette *et al.*, 2006; Anderson – Inman & Horney, 2007, Judge, Floyd, & Jeffs, 2008) that success in school, employment, and life is directly influenced by one’s ability to gain access to information. In present scenario an immense amount of information is obtained or produced through the use of technological device. It is already established that access to information is one of the most important human rights which allows the individual to develop himself and participate actively within a democratic society, fully exercising his/her rights and duties (Todaro, 2005). In this society, in which access to information is essential for full participation, rapid progress will continue to be made in all aspects of technology. If students with visual impairment are to participate on an equal basis with their sighted peers, then they must be given the opportunity to take advantage of the enormous benefits provided by technological devices to make the inclusive society.

AIM: The aim of this study was to investigate the status of reading technological devices for students with visual impairment in South Zone of Delhi’s inclusive schools.

Operational Definition of the Key Terms

- ❑ **Reading technological devices:** In the context of present study reading technological devices referred to any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used by students with visual impairment for reading texts.
- ❑ **Students with visual impairment:** In the context of present study students with visual impairment referred to those low vision and totally blind students who were enrolled in inclusive schools of Delhi.
- ❑ **Inclusive schools of Delhi:** In the context of present study inclusive schools of Delhi referred to the Delhi Govt.’s schools i.e. Directorate of Education’s (DoE) schools where both types of students i.e. students with visual impairment and sighted students were studying together.
- ❑ **South zone of Delhi:** In the context of present study south zone of Delhi referred to three

educational districts of Delhi i.e. South West- A, South West-B, and South.

METHOD & PROCEDURE

A descriptive survey study was carried out in the inclusive schools of Delhi. The samples consisted of 15 inclusive schools of three educational districts under south zone of Delhi i.e. South West-A, South West-B, and South. Total 429 students with visual impairment (totally blind and visual impairment) were enrolled in 15 schools of said Districts. Purposive sampling method was used to select sample. The sample was selected according to the three criteria: (i) Educational districts of south zone only. (ii) Five schools from each educational district (ii) Schools where maximum number of students with visual impairment (low vision & totally blind) were enrolled.

A checklist cum questionnaire schedule was developed by researchers with the help of various experts from the field of visual impairment in India. This tool was divided into two parts, part-A contained 14 types of reading technological devices, while part-B contained questions. The respondent were asked to write the ‘Yes’ or ‘No’ against each reading technological device on the account of availability and non-availability in school, further they were asked to write the reason for not availability of device (if any device is not available).

DATA ANALYSIS

A database was created and followings variable was analyzed:

1. Status of reading technological devices for students with visual impairment in inclusive schools of district “**South West-A**” of Delhi’s South Zone.
2. Status of reading technological devices for students with visual impairment in inclusive schools of district “**South West-B**” of Delhi’s South Zone.
3. Status of reading technological devices for students with visual impairment in inclusive schools of district “**South**” of Delhi’s South Zone.

RESULTS

1. **Status of reading technological devices**

for students with visual impairment in inclusive schools of district "South West-A" of Delhi's South Zone

Survey was conducted in the five inclusive schools of South West-A district of Delhi's South zone, and it was found that out of 14 reading technological devices three reading device i.e. *Highlighter/Marker*, *Tactile Image/Map*, and *Tape Recorder* were available in all five schools, means availability of these three reading devices were in all schools (100%). Another three reading devices namely *Typo-scope*, *Hand Held Magnifier* and *Computer with Screen Reading Software* were found in four schools, means availability of these three reading devices were in 80% schools. *Large Print Books*, useful for low vision students, were available in three schools, means its availability was in 60% schools. *CD player* was available in two schools, means its availability was in 40% schools. Three reading devices i.e. *Stand Magnifier*, *Recording Devices*, and *Talking/ Audio Books* were available in only one school, means availability of these three devices were in 20% schools. None of the schools of the district have three useful modern reading devices namely *Digital Access Information System (DAISY)*, *Refreshable Braille Display*, and *Closed Circuit Television (CCTV)*. The following bar diagram showing the status of availability of different types of reading devices for students with visual impairment in district South West-A.

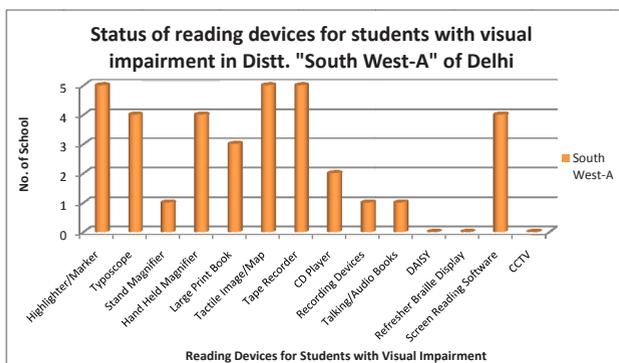


Fig. 1: Bar diagram showing availability of reading technological devices for students with visual impairment in inclusive schools of district South West-A of Delhi's South Zone

2. Status of reading technological devices for students with visual impairment in inclusive schools of district "South West-B" of Delhi's South Zone

Survey was conducted in the five inclusive schools

of South West-B district of Delhi's South zone, and it was found that two reading devices i.e. *Highlighter/Marker*, and *Tape Recorder & Cassette* were found in all five schools, means availability of these two reading devices were in all schools (100%). *Large Print Books* were available in four schools, means its availability was in 80% schools. *Hand Held Magnifier* was found in three schools, means its availability was in 60% schools. Five reading technological devices viz. *Tactile Image/Map*, *CD Player & CD*, *Recording Devices*, *Talking/Audio Books*, and *Computer with Screen Reading Software* were available in two schools, means availability of these five devices were in 40% schools. *Typo-scope* a useful low cost device for students with low vision was found in only one school means its availability was in 20% schools. None of the schools of the district have four reading devices namely *Stand Magnifier*, *Digital Access Information System (DAISY)*, *Refreshable Braille Display*, and *Closed Circuit Television (CCTV)*. The following bar diagram showing the status of availability of different types of reading devices for students with visual impairment.

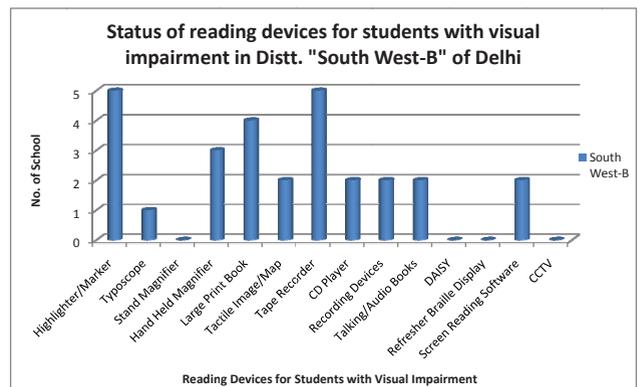


Fig. 2: Bar diagram showing availability of reading technological devices for students with visual impairment in inclusive schools of district South West-B of Delhi's South Zone

3. Status of reading technological devices for students with visual impairment in inclusive schools of district "South" of Delhi's South Zone

Survey was conducted in the five inclusive schools of South district of Delhi's South zone, and it was found that two reading devices i.e. *Highlighter/Marker*, and *Tape Recorder & Cassette* were found in all five schools, means availability of these two reading devices were in all schools (100%). Six reading technological devices namely *Typo-scope*,

Hand Held Magnifier, Large Print Books, Tactile Image/Map, Recording Devices, and Computer with Screen Reading Software were available in four schools, means availability of these six devices were in 80% schools. CD Player & CD and Talking/Audio Books were available in three schools, means availability of these devices were in 60% schools. Stand Magnifier a useful device for students with low vision was found in only one school means its availability was in 20% schools. None of the schools of the district have three important reading devices namely Digital Access Information System (DAISY), Refreshable Braille Display, and Closed Circuit Television (CCTV). The following bar diagram showing the status of availability of different types of reading devices for students with visual impairment.

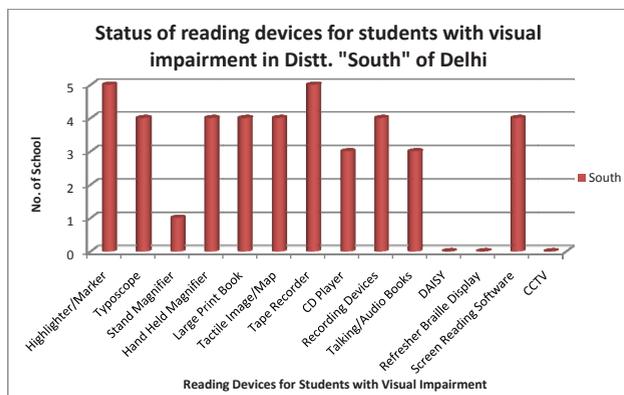


Fig. 3: Bar diagram showing availability of reading technological devices for students with visual impairment in inclusive schools of district South West-B of Delhi's South Zone

DISCUSSION & CONCLUSION

A person gets maximum information and knowledge in his life through reading; he reads text books, newspaper, policy related and other documents to improve his knowledge. The process to get information and knowledge is same for students with and without disability; difference is only the way they used to get these information. For example sighted student want to know the contents of a book then he can read it himself but if a student with visual impaired wants to know the contents of that book then he has two options either he request other sighted students to read it for him or use technological devices to read himself. The first approach make him dependent on other persons while the latter approach make him independent and also boost his confidence.

The use of reading technological devices enables students with visual impairment to better adjust to regular learning process and academic domains. It gives these students access to the same information which their peers get. With the help of computer with screening reading software and internet students with visual impairment would be able to communicate with the other students or teacher sitting anywhere in the world, and can access any information from any website or any library. These students can utilize their leisure time in more appropriate way with the help of reading technological devices like reading comics or stories or any interesting things during leisure.

Despite all these consideration many of schools of three districts of Delhi's South Zone do not have any modern technological devices for these students. The main reasons for non-availability of technological devices for students with visual impairment in inclusive schools of Delhi, is that (i) State Govt. has not allotted budget to school to procure technological devise for student with disability, (ii) unawareness of these devices (iii) unavailability of trained teachers/special education teachers, and (iv) unawareness of importance of these devices. The inclusive schools where special education teachers were working have more reading technological devices for these students compare to those schools where they are not working or posted. Since special education teachers know various reading technological devices and their importance for these students hence they have tried to manage anyhow to availability of these devices for students with visual impairment. But where special education teachers were not working status of those schools in terms of availability of reading technological devices is not good.

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