

ACADEMIC INFORMATION BEHAVIOR OF VISUALLY IMPAIRED STUDENTS: A CASE STUDY OF MAHESHWARI SCHOOL OF BLIND, BELAGAVI, KARNATAKA

DAYANANDAPPA KORI

Research Scholar
Department of Library and Information Science
Visvesvaraya Technological University
Belagavi-590018, Karnataka State
Email: koridh@gmail.com

Dr. K. R. MULLA

University Librarian
Visvesvaraya Technological University
Belagavi-590018
Karnataka State
Email: krmulla@gmail.com

ABSTRACT

The present study deals with the academic information seeking behavior of visually impaired students of Maheshwari School of Blind, Belagavi, Karnataka, India. The objectives of the study were to know the use of library and its resources by the students, to examine the frequency of information use, to understand the purpose of library visit, method of accessing information, and difficulties in finding information and availability of special facilities in the school as well as library. The data were collected using both qualitative and quantitative techniques, in depth interviews and focus group discussions from a sample of 108 blind students. Findings shows that cent percent seek information from the library and were taught how to find information, assistive technology available, information access easy for majority, hundred percent seek information daily, more than half felt difficulty in information seeking, students consult library staff, friends and teachers for getting information. Recommendations formulated.

Keywords: *Library Services, Information Seeking, Information Seeking Behavior, Information Behavior, Academic Information Seeking Behavior, Library Use, Disabled Students, Blind Students, Visual Impairment, Visually Impaired Students, Special Needs Students, Assistive Technology, Maheshwari School of Blind, Information Service, Karnataka.*

1. Introduction

Information is now a basic need of human being. It is needed for people of all walks of life, socio-economic development, decision-making, and a wide variety of purposes. The right to information is a fundamental right of a citizen. Since physically challenged persons are also part of our society, they also have equal rights. Globally, at least 2.2 billion people have a near or distance vision impairment (WHO, 2020). It is estimated that at least 200,000 people in India have severe visual impairment or blindness, and approximately 15000 of

them are in schools for the Blind. Blind and visually impaired persons also need the information to survive in this World. However, they find it difficult to know things, do activities, write, read, and follow commands. As such, the information support for the blind is more expensive than others. Even then, we can see that many of the libraries of educational institutions have either a section devoted to the blind or blind corners in libraries. This study aims to investigate the information behavior of the students of the Maheshwari School of Blind at Belagavi, which has not been explored so far. The results

of this study will help to improve information resources and services provided to them at present.

1.1. Maheshwari School of Blind

The Belagavi District Association for the Blind, established in 1973, started the Maheshwari School for the Blind in 1978 in Belagavi. The school commenced on 2nd October 1978. With its sprawling campus, the School offers hostel, boarding, and playground facilities in addition to quality education, regular medical checkups, uniforms, and entertainment to all inmates. The students from the first through tenth grades have access to all facilities free of cost in one large family-like ambiance.

2. Review of Literature

There are numerous studies on the information behavior of visually impaired students. But the lion's share of these studies is on students in higher educational institutions. There is a dearth of studies on academic information seeking at the school level. Some of the recent studies are reviewed here.

Researchers, Namugenyi and Wamea (2021) identified students' information-seeking behavior with visual impairment at the Hamu Mukosa Library of Uganda Christian University in Mukono, Uganda.. The aim of the study by Priscah et al. (2021) was to establish the information-seeking behavior of visually impaired students of University of Nairobi, Kenya Library services. The authors (Dayanandappa and Mulla, 2021) of this paper did a study on the information seeking of students in Maheshwari School of Blind, Belagavi.

The paper by Alabi and Mutula (2020) aims to determine the state-of-the-art report assistive technologies developed for people living with visual disabilities and those used

in academic libraries around the World. Ahmed and Naveed (2020) did the research to explore the information accessibility of university students with visual impairment at higher educational institutions in Lahore, Pakistan. Another study by the same authors (Ahmed and Naveed, 2019) also deals with the same people. As part of a Masters's thesis, Kabogolo (2020) studied visually impaired students' information-seeking behavior at the University of Dar-es-Salaam, Tanzania. The visually impaired information needs in Nigeria have been surveyed by Jegbefumea et al. (2020).

A collaborative study by Erlianti and Fatmawati (2019) discusses students' information-seeking behavior with visual impairments in facing the industrial revolution era. This research reported by Anna (2018), conducted in Foundation for Blind Handicapped Persons in Surabaya, Indonesia, deals with the information need of visually impaired students in Indonesia. Information access mechanism for visually impaired students in select universities in Delhi has been studied by Bhardwaj (2018). This study by Aramide et al. (2018) investigated the information needs and library service delivery to students with visual impairment in Oyo state, Nigeria. A collaborative study by Aghauche and Udem (2018) investigated the utilization of library and information resources by visually impaired primary school people in special education centers in southeast Nigeria. What are the difficulties faced by visually impaired students? This aspect has been studied by Ghayyor (2018).

Wang and Yu (2017) describe the everyday information behavior of the visually impaired in China. The study by Siamian et al. (2016) was based on a descriptive-analytic method in which 384 blind Iranians of both genders included. Chaputula and Mahapulanga (2016) conducted a study about the provision of library services to people with disabilities in

Malawi. Abdelrahman (2016) studied the availability of library and information services, facilities, and support to visually-impaired and blind students at the University of Khartoum in Sudan. The study pointed out the specific challenges these students faced in meeting their information needs. Sayema et al. (2014) studied the information behavior of blind and visually impaired students at the University of KwaZulu-Natal, Durban, South Africa.

3. Objectives of the Study

The specific objectives of the study are:-

- To know the use of library resources and services of Maheshwari School of Blind
- To understand the purpose of library visit and frequency of information seeking
- To find out the level of difficulties while seeking information and method of accessing it
- To determine the availability of special facilities for the visually impaired provided in the school as well as the library
- To formulate recommendations for improvement

4. Methodology

The researcher obtained the necessary information via various channels, such as telephone, email, or personal communication with the respective school authority. The researcher has interacted with the students, principal, staff and teachers and hence the observation and interview methods are appropriately utilized in the process. For this present study, data were collected by using both qualitative and quantitative techniques of survey method, in-depth interviews and

focus group discussions was used to collect data from a sample of 108 blind students. The total strength of the blind students in the Maheshwari School of Blind Belagavi, Karnataka was 116. There are several formulas for calculating the required sample size. This study has followed the formula given by Krejcie and Morgan (1970).

$$n = \frac{x^2 * N * P * (1 - P)}{(ME)^2 * (N - 1) + (X^2 * P * (1 - P))}$$

Where :

n = required sample size

x^2 = Chi-square for the desired confidence level at 1 degree of freedom

N = population size

P = population proportion (.50 for this table)

ME = desired margin of error (expressed as a proportion)

4.1. Ethical Consideration

The current study was subject to certain ethical issues, school authority, staff, teachers principal and respondents were fully informed regarding the objectives of the study, while they were assured and reassured that their answers will be kept confidential and used only for academic purposes and only for the purpose of research.

5.1. Analysis of Data

5.1. Demographic Information

The majority of the respondents are male when compared to female. Similarly, the majority (63.9%) are in the age group of 10-15 years. Those students up to 20 years constitute the sample of the study. A significant share of them are from rural areas of Karnataka.

Table 1
Demographic Information

Gender of Respondents			
Sl. No.	Gender	Frequency	Percent
1	Male	69	63.9
2	Female	39	36.1
Age Group of Respondents			
Sl. No.	Age	Frequency	Percent
1	10-15	69	63.9
2	15-20	39	36.1
3	20 -25	0	0.0
4	25-30	0	0.0
Residential Area of the Respondents			
Sl. No.	Residential Area	Frequency	Percent
1.	Rural	86	79.6
2.	Urban	18	16.7
3.	Semi Urban	4	3.7
	Total	108	100.0

5.2. Use of Library Resources and Services

To meet the information needs of blind students, the library is providing specialized

services to them. The analysis in table 2 shows that more than half (56.5%) opined that they have a very high use of library resources and services, whereas 43.5% opined as high.

Table 2
Frequency of Use of Library Resources and Services

Sl. No.	Use	Frequency	Percent
1	Very high	61	56.5
2	High	47	43.5
3	Moderate	0	0
4	Slightly	0	0
5	Not at all	0	0
	Total	108	100.0

5.3. Purpose of Library Visit

The library is considered the 'heart' of an educational institute. It is the only place on the campus where students can meet, read books, and exchange ideas. It acts as a networking hub on the academic campuses as it provides various services such as Internet access,

printing, photocopying, etc., and includes reading materials. It is good to note that the students visit the library for various academic purposes. The purpose of hundred percent of the students visiting library are for four purposes, viz. i) using assistive technology ii) reading educational resources iii) preparing for examination and iv) to relax with friends.

Table 3
Purpose of library visit

Sl. No.	Purpose of Library Visit	Frequency N=108	Percentage
1	Using assistive technology	108	100.00
2	Reading of Educational Resources	108	100.00
3	To Prepare for examinations	108	100.00
4	To relax with friends	108	100.00

*multiple answers permitted

5.4. Frequency of Information Seeking

seek information daily which is depicted in table 4.

It is found that all of them (100%)

Table 4
Frequency of Information Seeking

Sl. No.	Frequency of seek information	Frequency	Percent
1	Daily	108	100.0
2	Once a week	00	100.0
3	Twice a week	00	100.0
4	Fortnightly	00	100.0
5	Occasionally	00	100.0
Total		108	100.0

5.5. Accessibility of Information

More than 3/4th (79.6%) of the students

expressed that it is easy to access information. In comparison, for 20.4%, it is fairly easy to access.

Table 5
Level of Accessibility of Information

Sl. No.	Accessibility	Frequency	Percent
1	Easy to access	86	79.6
2	Fairly easy to access	22	20.4
3	Not easy to access	00	00.0
Total		108	100.0

5.6. Difficulties While Seeking Information

Access to information and knowledge has never been more critical than in the present information age. The study found from the

survey (table 6) that more than half (53.7%) of the students sometimes face difficulties while seeking information. Around a quarter (25.9%) usually faces a dilemma, and 20.4% have a problem always.

Table 6
Difficulties While Seeking Information

Sl. No.	Frequency	Frequency	Percent
1	Always	22	20.4
2	Usually	28	25.9
3	Sometimes	58	53.7
4	Usually Not	00	00
5	Never	00	00
Total		108	100

5.7. Method of Accessing Information

It is seen that 100 percent of the

students consult the library staff, friends as well as teachers for accessing the needed information effectively and efficiently (table 7).

Table 7
Method of Accessing Information

Sl. No.	Method of Access	Frequency N=108	Percentage
1	Consult with library staff /professionals	108	100
2	Discuss with friends	108	100
3	Discuss with teachers	108	100
4	Others	00	00

5.8. Information Seeking Behavior

Effective use of library resources and services by students depend upon the availability of required books and other reading materials. At the same time, the school libraries need to provide innovative need-based library services to students to

fulfill their academic and learning needs. Thus school students need current and adequate school library information resources, provision of Information and Communication facilities, and professional school librarians to manage libraries and a conducive reading environment. Students opinion are given in table 8.

Table 8
Information Seeking Behavior

Sl. No.	Statement	Frequency N=108	
		Yes	No
1	Do you seek information from the library?	108 (100%)	00 (0.00%)
2	Are you taught to use the school library to find information?	108 (100%)	00 (0.00%)
3	Do you think Assistive software/hardware facilities are available in the institution/ library?	108 (100%)	00 (0.00%)

5.9. Availability of Assistive Software/Hardware Facilities in Library

All the respondents (100%) expressed the availability of Assistive Software /Reading facilities in their school libraries. Assistive Technology (AT) is very essential for the special schools as it aids the children in reading books

and for better understanding the concept. This technology has proven to be effective and many special educational institutes all over the country have started adopting this innovative technology to make their teaching learning program effective. It is happy to note that this special school has made provision for this wonderful technology.

Table 9
Availability of Assistive Software/Hardware Facilities in Library

Sl. No.	Avilability	Frequency N=108	Percentage
1	Available	108	100.0
2	Not available	00	00.0
	Total	108	100.0

5.10. Use of Assistive Technology for Reading

Assistive Technology (A.T) is not less than a blessing. Through this magic technology, the students can read, understand and possess the knowledge stored in books and other reading

materials independently. However, it is disappointing to note that no respondents (0%) said they use the A.T. to 'high' and 'very high extent.' About 68% of the respondents said they used the AT to a 'moderate' extent, while 31.3% disclosed that they used the A.T. 'slightly.'

Table 10
Use of Assistive Technology for Reading

Sl. No.	Assistive Technology for Reading	Frequency N=108	Percentage
1	Not at all	00	00
2	Slightly	38	35.19
3	Moderate	70	64.81
4	High	0	0
5	Very High	0	0
	Total	108	100.00

5.11. Special Library Services

It is found that the facilities such as Assistive Technologies and Audio-Visual Materials were available in the library.

However, the library is lacking in the areas of library automation, subscription to e-journals and e-books, qualified librarian, and library staff with training in computer applications.

Table 11
Availability of Library and Information Services

Sl. No.	Library and Information Services	Yes	No
1	Library Automation	X	✓
2	Subscription to accessible e-text, e books, websites	X	✓
3	Audio Visual Materials	✓	X
4	Assistive Technologies	✓	X
5	Qualified Librarian	X	✓
6	Library staff with training in computer applications	X	✓

5.12. Special Information Services

It is revealed that the library has staff members who were experts in braille language. However, it is very disheartening to note that library under the study not had made provision for the following services: separate reading room, special arrangements, audio recording of Library materials, specially designed signs and specially designed shelf marking. Further it is found that this library is not following the Library Services Performance Indicators and National Guidelines Issued for the Welfare of the People

with Disabilities on the academic campuses. There are many things that the library can do to provide effective and efficient library services, which are lacking in the present case. It is happy to note that the library had made this provision for the benefit of their users. 'Directory of Braille Experts' provides useful contact details of the people who have expertise in interpreting the braille. This list/directory will be a great resource when the children require such help. 'Library Orientation Programs' help the new students joining the schools understand everything

about their libraries. Orientation/ Induction Programs are excellent opportunities for the library staff to showcase their resources and services to the users. 'Access to CD ROM/ Online Database' was not available in library. The children often consult the textbooks and other reading materials for their studies, and they hardly refer to any online database for their studies. This could be the answer why the libraries do not provide this service to their users. The libraries are expected to compile a list of useful and accessible websites for their users' benefit. This process will save the time

of the library users. Compiling the list of best academic websites will save the users from searching hundreds of unwanted sites for authoritative information. Unfortunately this library is not doing it. The Library Catalogue acts as an index to library resources. Suppose a 'Catalogue of the Material in Alternate Format' is designed and kept in the library, it will save time for library users, and they can access the library resources without any difficulties. However, unfortunately this library does not provide such a facility.

Table 12
Availability of Special Information Services

Sl. No.	Information Services	Yes	No
1	Book- Talks/ Discussion	✓	X
2	Photocopy Assistance	X	✓
3	Braille Translation	✓	X
4	Audio Recording of Library Materials	X	✓
5	Reading out	X	✓
6	Access to Internet with Assistive Technology	✓	X
7	Modification of Lending Process	X	✓
8	Reformatting to Another Medium	X	✓
9	Alternative Format Materials	✓	X
10	Retrieval of Materials From the Stacks	✓	X
11	Art and Crafts Program	✓	X
12	Home-Assignment	✓	X
13	Document Delivery Service	✓	X
14	Directory of Braille Experts	X	✓
15	Orientation Program	✓	X
16	Access to CD-ROM/Online Database with Assistive Technology –	X	✓
17	Directory of Accessible Web sites	X	✓
18	Catalogues of Materials in Alternative Formats	X	✓
19	Following the Library Service's Performance Indicators	X	✓
20	Following the National Guidelines	X	✓

5.13. Accessibility of Special Facilities in School

It is happy to note that disable friendly building, disable friendly seating, purified drinking water, separate dormitory for boys

and girls, accessible public areas such as toilets are made available to the students with visually impaired. When basic facilities are accessible to people with disabilities, they find the environment user-friendly and live a healthy life.

Table 13
Accessibility of Special Facilities in School

Sl. No.	School Facilities	Yes	No
1	Disable Friendly Building	✓	X
2	Disable Friendly Seating	✓	X
3	Drinking Water	✓	X
4	Separate Dormitory for Boys and Girls	✓	X
5	Public Areas (such as toilets)	✓	X

5.14. Special Facilities in Library

The Ramps provide safe mobility for the people with visually impaired and the steps create more problems for them, especially when they try to climb down. It is happy to note that this library created the ramp facility. 'Entrance with Suitable Clear Opening Doors' were made available in all the library, which is also a positive thing to note. Open and Wide

Doors provide safe movement for the people with visually impaired. 'Parking' facility is also provided. Those people using vehicles (driven by drivers or assistants) when visiting the library will help them access the library services quickly. Unfortunately, this library has not provided the 'Elevators/Lifts' and 'Accessible Self Service Circulation Stations.' Such facilities, if provided, would boost the confidence of the students.

Table 14
Availability of Special Facilities in the Library

Sl. No.	Library Facilities	Yes	No
1	Parking	✓	X
2	Entrance with Suitable Clear Opening Doors	✓	X
3	Ramps	✓	X
4	Elevators/Lifts	X	✓
5	Accessible Self-Service Circulation Stations	X	✓

6. Findings of the Study

- Most of the students are male in the age range of 10-15 years coming from rural areas.
- More than half (56.5%) expressed a very high use of library resources and services.
- All the students visit library for using Assistive Technology, reading educational resources, prepare for examinations and to relax with friends.
- All the students seek information daily.
- For more than 3/4th (79.6%) of the students accessing information is easy.
- All the students are facing difficulties while seeking information, but the frequency varies.
- All students consult library staff, friends and teachers for accessing information.
- All the students seek information from the library. Further they were taught to use the school library and assistive technology.
- All of them expressed that Assistive Technology available.
- Majority (64.81%) of the students use Assistive Technology to a moderate extent and 35.19% slightly.
- Library has audio visual materials and assistive technologies.
- The library has special services such as book talk, braille translation, access to internet, alternative format materials, retrieval of documents from

stacks, art and crafts program, home assignment, document delivery service and orientation program.

- Special facilities provided to students in the school are disable friendly building, seating, drinking water, separate dormitory and public areas.
- Special facilities provided to students in the library are: parking in proximity, entrance with opening doors and ramps.

7. Recommendations

The recommendations of this study are:

- The library should conduct library orientation/induction programs to create more awareness about the various types of special library services.
- Library should modify the document lending rules in tune with the special needs of the students.
- Popular Assistive Technology software should be made available.
- Library should provide elevators/lifts, automatic sensor doors and self-book check-in and check-out facilities.
- Existing library staff should be sent for training programs and skill enhancing workshops for upgrading their skills.
- Through the Rehabilitation Council of India (RCI), the Government should provide special grants to special schools for developing their libraries.
- Qualified and trained library staff should be appointed.

8. Conclusion

Information seeking is a subjective process. Visually impaired students have the same needs as those of sighted people. This study looked into the factors that influence students' information-seeking behavior with visual impairment in Maheshwari School of Blind, Belagavi. It revealed that the specific information seeking is academically centered. Even though the school has digital resources to support the visually impaired, there is necessary to acquire more computer systems, braille screen readers, JAWS, magnifiers, audio cassettes, headphones, electronic texts, and audiobooks for the students. A sighted person is also a must for getting information from the library. The researcher sought authorization before the commencement of the study, and further, they have explained what the study was about. Findings revealed that the students were making use of the existing available information resources of the school. However, there is a need to provide various formats of information resources. Library -in-Charge of the institution must understand the information need of their students, and for that, they should conduct surveys occasionally. Appointing a library staff with braille literacy will help serve these students effectively and efficiently. Even though the Maheshwari School of Blind is making efforts to improve the academic standard of blind students, there is a need for further improvement in updating the information resources needed by them.

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