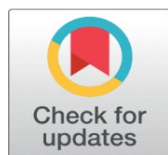
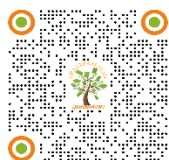


AWARENESS AND USE OF ELECTRONIC RESOURCE BY VISUALLY IMPAIRED STUDENTS AT DELHI UNIVERSITY

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ABSTRACT

For the purpose of determining if visually impaired students at Delhi University are aware of and making use of online resources, researchers utilized a survey approach that relied on structured interviews to examine 300 students who were blind or partially sighted. Using 'SPSS version 23', the data was evaluated and compiled. More than 90% of visually impaired pupils (90%) are aware of and utilize e-books and e-newspapers, according to the study's findings (83.33 percent). Furthermore, the results of this study are expected to help professionals in libraries and institutions serving the visually impaired to develop effective electronic services to facilitate access to knowledge in a digital environment. trends among others. Institutions. This study's goal is to learn more about the educational institutions' efforts to accommodate blind students and the challenges they face. Students from the University of Delhi who were blind for the duration of the research participated in this investigation. Researchers used a questionnaire they developed after conducting extensive literature reviews on the subject of the present study to interview several pupils with visual disabilities. The purpose of this study was to determine the different services given by their individual universities, assistive technology available in their libraries, and the difficulties experienced by visually impaired students in accessing information via the available resources. Students with visual impairments have access to Braille books, large-screen computers with assistive technology, recorded audiobooks on CDs or cassettes, and other necessary infrastructure, according to the findings of this research. Additionally, libraries provide their patrons a variety of services, including access to tutors and writers to aid in the completion of assignments and exams. A lack of suitable assistance equipment and assistants, a lack of internet connection, and a lack of adequate assistive technology are among the challenges students confront while using the library for their research.

Keywords: Delhi University, Electronic Resources, Visually Impaired

Received 14 July 2022

Accepted 15 August 2022

Published 02 September 2022

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DOI

[10.29121/granthaalayah.v10.i8.2022.4745](https://doi.org/10.29121/granthaalayah.v10.i8.2022.4745)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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1. INTRODUCTION

Reproducing print-disabled resources has become an important part of Braille Library, DULS, and Equal Opportunity Cell (EOC) efforts. The whole collection of Audio Books and E-Texts is accessible online for limited usage by visually impaired

users on the DUCC IP Range in light of recent changes in copyright law. The Braille Library requires all students and teachers who are blind or visually impaired to register and get a username and password from the library before they may access these resources in the library.

We have entered into a whole new era, the "information age," since information has been digitised and made accessible to all of us. For academics, e-resources are a godsend since they provide quick and easy access to vast amounts of data. With the use of electronic resources, storing, classifying and retrieving information has become more efficient and easier to use. In today's world, these resources are a requirement for academic institutions, and their use has grown globally over the years, particularly in poor nations [Pelzer and Wiese \(2006\)](#). Internet or intranet connectivity is required to use computers or mobile devices to access e-resources. The most common e-resources are electronic books, journals, e-theses and dissertations, and electronic maps, for example [International Federation of Library Associations and Institutions, \(2012\)](#). Since the WWW makes it possible to publish, own, and update a website at a minimal cost to a large audience, it is a primary driver in the creation and development of these types of assets [Pawan \(1998\)](#).

Library services have been shifted from conventional information distribution to digital knowledge transmission as a result of the emergence of electronic resources throughout time. Previously, the only educational resource accessible to those who are blind or visually impaired was Braille. However, due to the scarcity of Braille books, new educational options have opened up for them with the introduction of electronic resources. Visually impaired persons are defined as those who are either partly or fully blind, according to Friend ["Visually impaired people" \(2009\)](#).

2. OBJECTIVES

Study aims include determining how students with visual impairments utilise and are compatible with various types of online resources, including those mentioned below.

- For the purpose of determining the needs and requirements of pupils who are blind
- Studying how libraries might better serve blind students in terms of library and information services
- To learn about the assistive technology libraries, employ to serve people who are blind or visually impaired.
- Students with visual impairments may benefit from a wide range of study aids that libraries have acquired or manufactured.
- To examine the obstacles that blind students have in accessing information.
- Objectives and Approach

Many facilities and services are available to students who are visually impaired, as shown by comments and discussions with the university's Visually Impaired Student Association. These services, infrastructural facilities, and other assistive technology were found to be available at the library for students who are blind or visually impaired.

For the purpose of this research, students at the central library's Braille section and in the department's where visually impaired students are enrolled were interviewed using a survey approach and a structured interview guidebook. Based

on the following precise factors, the questions were designed to expose the outcomes.

- An array of e-resources.
- E-resources education approaches.
- The places and devices they utilise to access e-resources, as well as their experiences while carrying out various jobs
- Usage of online resources on a regular basis.
- Intention behind utilising electronic resources.
- They're having issues accessing online resources.

Students' lack of knowledge about the resources and services accessible in the libraries, for example, includes things like the upkeep of assistive software and instruments/equipment. Students with visual disabilities may benefit from assistive technology like audio web browsers, adapted computer keyboards and screen readers, or Braille output, according to Kumar and Sanaman. According to Balagi, ICT plays a crucial role in providing education to those who are blind or visually impaired. ICT has the potential to have a significant impact on achieving social equality throughout the country. Students who are blind or visually handicapped may utilise ICT technologies to read, study, and communicate more readily and intuitively.

1) Library and information services provided by the libraries.

- Books for the visually impaired are available in braille
- Talking Books
- Anthology of Audiobooks
- The Newspaper That Talks
- Assistive Technology "
- Accessibility programmes for pupils who are blind

2) Libraries' infrastructural amenities for visually impaired users' personal usage.

- Cellular Telephones
- Talking Recorders
- book accessories
- Scanner for the portal
- Keyboards that can be customised.
- Ramp/Rails
- Software for the blind
- a blind arrow
- Means of transportation

3) Accessible library resources for people with disabilities

- Magnifying Glasses for Computer Monitors
- Braille Printers.
- Scanners that can be held in one's hand
- All you need is a pair of magnifying glasses!

- a keyboard you can use with only one hand
- A Braille display with a refresher button
- a sly and cunning reader
- Keyboard with large print
- Converter for the assistive listening devices.

There are 'mobility and accessibility' kits available at Delhi University for students who are blind or visually impaired. Students would be able to go about campus more easily if this were implemented.

students who are blind or visually impaired at the university have access to mobility and accessibility kits thanks to a partnership between Duke University and the Ministry of Social Justice and Empowerment.

There will be DAISY players as well as smart canes in the package. As a result of the smart canes, "students will be able to go about campus without any problem," he stated.

DU officials enlisted the help of NIVH Dehradun, the National Institute for the Visually Handicapped.

"While the government contributed funding for the endeavour, NIVH prepared the kit's contents. Kits may contain specific tablets for visually impaired people, but that will be sorted out during phase two," he said.

Our goal is to provide these starter kits to all new students at the start of the next semester, but distribution will begin at the end of this month.

After graduation, he noted, students are not required to give back their kits to the university where they got them.

Prior to this, Delhi Institution (DU) had previously built a unique technology that scans books and transcribes text to voice in all of its libraries, which the university claims to be a first of its type of effort for visually challenged students by an Indian university.

The 'Inclusive Print Access Project', which was implemented last year, is a mix of software's brought from overseas to meet the demands of pupils who are visually impaired.

For students with disabilities, members of historically underrepresented groups, and members of other ethnic groups, the DU Equal Opportunity Cell was formed as early as 2006 to address these challenges.

Disabled students are eligible for a 5% reduction in qualifying requirements at DU.

University resources for students with disabilities include a Braille library and an Audio Book Resource Centre.

3. PROBLEMS FACED BY STUDENTS

It has also been noted by the researcher that visually impaired people encounter difficulties retrieving information.

Resources for finding information. The following are the most often reported issues by students:

- Time constraints due to class schedules prevent individuals from making the most of the resources available to them.

- There is a lack of room in both the library and the college's equal opportunity cell. "
- Librarians' assistants to help patrons find and take out books from the library
- Libraries should have more reading aids available.
- Internet connection issues.
- For some kids, there aren't enough authors to complete an assignment.

4. USE OF E-RESOURCES BY VISUALLY IMPAIRED STUDENTS

Table 1 shows that 270 students (90 percent) utilise e-books, while another 250 students (also 90 percent) use e-newspapers for their research. 110 (36.67%) students utilise the Institutional repository, whereas 169 (56.33%) rely on e-theses/dissertations as their primary source of research materials.

Table 1

Table 1 Use of E-resources by Visually Impaired Students		
E-resources	No. of Respondents (N=300)	Percentage
E-books	270	90
E-journals	179	59.66667
E-maps	185	61.66667
E-theses/dissertations	110	36.67
E-databases	102	34
E-newspaper	205	83.33333

5. CONCLUSION

As a result, libraries and the people who use them have come to rely on online sources and databases. In light of this fact, it is imperative that these resources be made accessible to visually impaired users in addition to other items as well [Power and LeBeau \(2009\)](#). Despite their familiarity with e-resources, Delhi University's visually impaired students face a number of challenges, the most significant of which being the inability of these resources to be used with screen readers and the resulting lack of support they need to be successful in their academic work.

Because of the difficulty of supplying resources on time, it is imperative that libraries get accessible materials while also offering enough training to their staff in order to eliminate any potential obstacles to accessing those materials. For students with visual disabilities, Delhi University and its associated institutions provide them "equal possibilities" to keep themselves "updated," "satisfied," and "equal to other students," according to this research. Among the resources available to visually impaired students are specialised classes, computer laboratories tailored to their needs, scanning and accessible reading technology, and volunteer tutors. When it comes to accessible amenities, students are generally happy. However, some issues persist, such as a lack of enough employees to assist them, writers for their papers, and an absence of a suitable information and communication technology environment.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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