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PROVISION OF LIBRARY SERVICES TO STUDENTS WITH PHYSICAL IMPAIRMENT IN GC UNIVERSITY LAHORE, PAKISTAN

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Abstract

Purpose: Major goal of this research was to know the provision of library services to physically disabled students at Government College University Lahore, Pakistan. **Design/methodology/approach:** Qualitative method was adopted to meet the objectives of the study. 30 visually impaired students were selected from the GC University Lahore by using random sampling techniques. A list of questions was designed to take an interview from the target population. The required data was gathered by using the interview. Important points were noted by the researcher. Lastly, gathered data was analyzed using Statistical Package for the Social Sciences (SPSS).

Research limitation (s): This study is limited to the visually impaired students of the GC University Lahore.

Key finding (s): Results of the study show that visually impaired students are satisfied with the services being offered to them at GC University Lahore. They take a deep interest in reading

books other than the syllabus. They prefer mostly the English language for reading, utilize braille for reading purposes, and prefer electronic materials. They sometimes face problems of the shortage of audiobooks, computers, and the latest tools.

Practical implication (s): The study recommends providing the latest tools to visually impaired students. University authorities need to increase the budget for the visually impaired students and documented policies need to be formulated for them also. Emerging technologies should be utilized to fulfill the information needs of visually impaired students. Feedback of the visually impaired students should be taken by the university to design more refined services for them so that they can bring the completion of set goals without facing any barriers.

Contribution to knowledge: Findings and recommendations of the study are very fruitful to support the visually impaired students in the educational institutes.

Research type: Research

Keyword (s): Library services to student with visual impairment, VIS, Resources-provision to special students in GC University Lahore, Pakistan

1. Introduction and Background of the Study:

Impairment is defined as "any loss or abnormality in an anatomical structure or a physiological or psychological function." Visual impairment is a situation in which a person can't read correctly with normal eye-sight. All countries around the world have realized the need to provide efficient resources and services to persons with visual impairment so that they can become valuable members of society and may not fall into an inferiority complex. The Royal National Institute for the Blind RNIB (2006) describes visually impaired persons as with the irreparable loss of spectacle. These include partial blindness, low sightedness, and complete blindness.

Categories of Visual Disability:

Sr. No.	Category	Better Eye	Worse Eye	% Age Impairment
1.	Category 0	6/9-6/18	6/24 to 6/36	20 %

2.	Category 1	6-18-6/36	6/20 to Nil	40 %
3.	Category 2	6/40-4/60	3/60 to Nil	75 %
4.	Category 3	3/60 to 1/60	F.C. at 1 ft. to Nil	100 %
5.	Category 4	F.C. at 1 ft. to Nil	F.C. at 1 ft. to Nil	100 %
6.	One-Eyed Person	F.C. at 1 ft. to Nil	6/6	30 %
F.C. Means Finger Count				

Kharamin & Siamian (2011) stated that Libraries and librarians have a key responsibility of providing required information to the end-users. It is a moral obligation of the libraries and information centres to provide information services to the users regardless of their religion, nationality, skin color, or physical disability. Visually impaired persons need the special attention of society and library professionals. They should not be considered a burden upon others. They need to be taken care of nicely. They should be provided information in such a format as can be utilized by them. Libraries have a key role to make provision of information services to visually impaired people like other normal persons. Information is known as the basic right of human beings. New technologies are of great help in giving the required information to visually impaired students. Now, disabled persons can avail themselves ample of learning opportunities. They can find much ease in making completion of desired objectives through the latest information technologies. There are specific software that are used in providing friendly services to the VIP.

GC University Lahore is a prominent educational institution in Pakistan. It has produced history-making personalities in all fields of life. It has been playing a great role in the spread of learning and research for the last 156 years. It has many unique achievements to its credit. In February 2008, GC University Lahore established a Centre for visually impaired students to eliminate their educational barriers. Visual disability means the loss of eye-sight. It also included special students who have some physical disability. The Centre of GC University Lahore is the first-ever public sector Centre for special students in Pakistan. It has brought great ease for physical disabilities. The Visually Impaired Students get education at the University without any fees. They are entirely facilitated in all matters without any financial constraints. They get

attracted to the facilities and incentives being offered to them by the university. The strength of special students has exceeded to 200. They are enrolled in different programmes spanning from Intermediate to Ph. D.

Efficient services are usually not been provided to persons with visual impairment in Pakistan as the labs and canters which are established for such students in the country are lacking in High-Tech facilities and requisite resources due to several reasons. Different NGOs are actively engaged in the provision of resources and services to persons with visual impairment however those are not linked with the labs of public sector institutions and consequently students with physical impairment face several challenges in meeting their goals. Provision of adequate services to the visually impaired students is highly necessary for the educational places of Pakistan so that they can get equal learning opportunities like other normal students. Demands of the students with visual impairment are very genuine as they face problems in meeting their information and research needs due to the non-availability of required information resources and services. This study explores resources and services which are being provided to students with visual impairment at Government College University Lahore, Pakistan. This study highlights such areas that need to be strengthened by policymaking authorities for better facilitating the visually impaired students. The following objective of the study was derived by the researchers keeping in view the research-problem:

- To determine the resources and services being offered to visually impaired students in GC University Lahore

2. Literature Review:

Adetoro (2010) conducted a study on reading habits and research needs of persons with physical disabilities in Nigeria. Findings of the study show that visually impaired students also need information resources and materials like normal human beings. Visually impaired people require material in some specific format. They use information resources to make completion of their information needs. They prefer books for reading besides textbooks. They prefer books on marketing, business, religion, and literature. They not only use their academic libraries but also public libraries. Braille materials are mostly utilized by visually impaired people. Audio records

are also frequently used. The study recommends the need to accumulate more and more information resources for visually impaired people in their required formats. Scheithauer & Jeffrey (2012) conducted a study to reveal the needs of handicapped persons and indicated that instructors of the visually impaired needed efficient braille-training methods. The research also concluded that visually impaired students learned the art of using braille machines to satisfy their information needs. They couldn't perform efficiently without making their grip firm on technology. They needed IT skills to make completion of their set objectives. All participants had received some training to use Perkin machines to fulfill their needs. They used special software. Their methods of using technology were different from other normal students. The study recommended a need for more and more training programmes for the visually impaired students so that they could use technology more beneficially to make quality learning without facing any possible barriers.

Lucky & Achebe (2013) stated that visually impaired students needed a variety of information resources. They should be provided with information in a specific format. They are different from normal human beings. Their information needs should be given special care. They require information to meet multiple tasks. They need the information to make the completion of their goals. Humara, Rahmatullah & Masud (2013) conducted a study on the Evaluation of provision and support for disabled students in Libraries of Special Education Professional Degree Awarding Institutions (DAIs) and Rehabilitation Centers (RCs). Findings of the study revealed that visually impaired students should be given preference by organizations. Visually impaired students should be recruited in the institutes to perform several projects so that their inferiority complex could be ended. Smooth and friendly systems should be designed to get set objectives so that no problems may take place in the provision of information resources to visually impaired students because they could also become valuable citizens if provided efficient services having utilized the emerging technologies.

Spacey, Creaser, and Hicks (2014) conducted a study on the benefits of reading for blind students. It was qualitative research in its nature. The findings of the study revealed that the majority of the participants preferred reading to enhance general knowledge. They used to study more than five hours a day to meet multiple objectives. Most of the respondents preferred a digital format for reading. Some of the respondents preferred a hard format too for reading

purposes. Libraries are thought a valuable source for quenching the thirst for knowledge of visually impaired persons. The study recommended the need to implement the latest technologies so that information, syllabus, and research needs of the visually impaired students may be met efficiently and no possible barriers may take place. Awais & Ameen (2015) conducted a study on Information accessibility for students with disabilities: An exploratory study of Pakistan. Results of the study revealed that visually impaired students usually depended upon parents and their concerned faculty members for accessing required information. Visually impaired students faced problems in accessing required information resources from the libraries and information centres. The study recommended recruiting well-trained staff to fulfill the information and research needs of the visually impaired students.

Boroson, Barker, and Xueming (2017) conducted a longitudinal study of reading growth for students with visual impairments. The findings of the study reveal that little research is conducted on visually impaired students. It was concluded that visually impaired people face problems in fulfilling their information needs. Their performance is not better than normal human beings. They are not provided with sufficient facilities. They don't find the latest resources to make completion of their set objectives easily. The gap between normal human beings and visually impaired people is vast. This gap needs to be bridged so that visually impaired students may become valuable citizens and may serve in different fields of life efficiently. Latest emerging technologies need to be implemented in centres of visually impaired students to make compliance of their information and research needs in an efficient manner. Khan, Idrees, Asghar, & Aziz (2018) conducted a study on Information literacy for visually impaired teachers in Pakistan. Results of the study revealed that visually impaired teachers were highly responsible. They took a keen interest in making compliance with required tasks. They were highly intelligent as they were quick in understanding the concepts of required things. They were less skilled in searching for required information resources.

Glory (2019) conducted research regarding services to the disabilities in Ogun State, Nigeria. An effort was made to know the information needs of the visually impaired students and methods to satisfy their needs. It was known that special students had similar reading habits like sighted people. They used alternative methods to quench their thirst for reading. They utilized

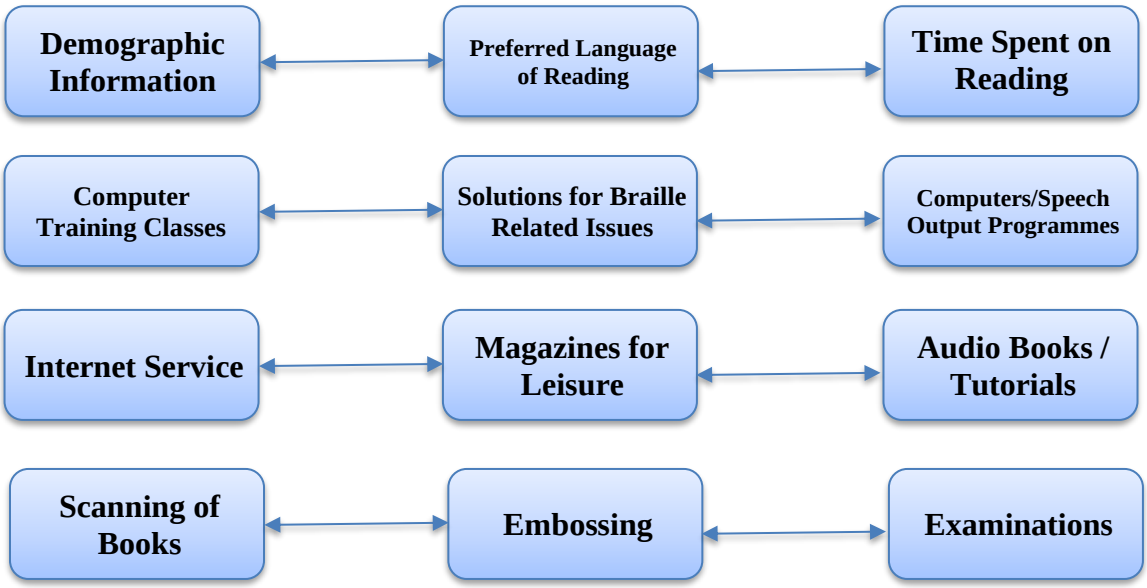
substitute fonts to make completion of their required tasks. They mostly used audiovisual tools. It was also found that the required material was not available to the visually impaired people in sufficient quantity. There was an intense shortage of required resources for visually impaired persons. Only a few institutes in Nigeria have reasonable information resources for visually impaired students. It was revealed that visually impaired students mostly preferred electronic modes of services. They didn't prefer traditional methods. It was recommended that competent authorities of the institutes should establish special centers for disabled students. Their information needs should be taken into account. They should be provided with satisfactory resources and services. Policies should be documented to fulfill the information needs of visually impaired students. Staff should be trained properly to provide services to visually impaired persons. There should be collaborative projects with such agencies that provide facilities to the handicapped persons of the society. Latest emerging technologies should be implemented in the special centres so that visually impaired students may benefit from the same to a great deal without facing any possible barriers. Information literacy sessions should be conducted for visually impaired students too so that they could do their required tasks easily.

Ismail & Waseem (2019) conducted a study to know the reading trends among special students of the University of Karachi. It was qualitative research. Findings of the study reveal that visually impaired students not only read the books of syllabus but also prefer popular literature. They also prepare for different competitive examinations. They like to read content in the Urdu language. They use content in the Arabic language also. They have certain demands to fulfill their information needs. They demand the translated books so that they can utilize the same with convenience. They desire to have skilled staff in the library so that they can be assisted in making completion to their assignments, terms papers, projects without facing challenges because trained manpower in the library can prove highly useful in satisfying the needs of the students with visual impairment. They are familiar with the latest technologies that have taken place in the present era to utilize the resources properly. They take a keen interest in an innovative program. They want to improve themselves through various creative activities. They want to have all the required facilities in the lab. Findings also reveal that the majority of the students read the material through braille. They utilize mobile technology to access required

information resources quickly. They feel a need for the opportunity of trainings so that they can utilize emerging technologies related to the solutions of their problems adequately.

3. Methodology

A qualitative method was adopted to meet the objectives of the study. This method was used to collect data as visually impaired students couldn't fill the questionnaires. The researchers wanted to get accurate data from the participants with essential details therefore qualitative method was adopted. 30 visually impaired students were selected from the university by using random sampling techniques. A list of questions was designed to take an interview from the target population. Questions were designed in light of a thorough overview of relevant literature, and services being offered to the visually impaired students at the university. The required data was gathered from 30 students by using the interview. Important points were noted by the researcher. Lastly, the gathered data was analyzed. It was a structured interview that was conducted by the researchers. Major variables of the interview are depicted as following:



4. Data Analysis/ Findings of the Study:

4.1 Participants' gender

Thirty (30) students with visual impairment participated in this research. The acquired results show that majority of the participants were males who were 27 (90%) in number. Three (10%) subjects were females. The frequency distribution of participants' gender is presented in Table 1.

Table 1

Frequency Distribution of Respondents' Gender N=30

Gender	Frequency	Percent
Male	27	90%
Female	03	10%
Total	30	100.0%

4.2. Respondents' ages

Respondents were asked to mark their age groups. Ages ranged from 16 to above 30. Acquired results show that six (20%) respondents were from 16 to 20. Eighteen (60%) respondents were aged between the ranges of 21 to 25. Four (13.33%) respondents were from 26 to 30 while two (6.67%) were more than 30 years old. The frequency distribution of participants' ages is presented in Table 2.

Table 2

Frequency distribution of respondents' age N=30

Age Groups	Frequency	Percent
16-20	6	20%
21-25	18	60%
26-30	4	13.33%
More Than 30	2	6.67%
Total	30	100.0%

4.3. Educational level of the respondents

Respondents were asked to mention their educational level in which they were enrolled in the university. Acquired results show that five (16.67%) respondents were in the class of

Intermediate, sixteen (53.3%) were in BA/BSc/B.Com Hons., eight (26.67%) were in MA/MSc while only one (3.33%) was enrolled in Ph. D. programme. The frequency distribution of participants' educational level is presented in Table 3.

Table 3

Frequency distribution of respondents' educational level N=30

Educational Level	Frequency	Percent
Intermediate	5	16.67%
BA/BSc/B.Com Hons.	16	53.3%
MA/MSc	8	26.67%
Ph. D.	1	3.33%
Total	30	100.0%

4.4. Respondents' level of blindness

Subjects were asked to mention their level of blindness. The results show that 25 (83.33%) respondents were totally blind while five (16.67%) respondents were partially blind. The frequency distribution of participants' level of blindness is presented in Table 4.

Table 4

Frequency distribution of respondents' level of blindness N=30

Experience	Frequency	Percent
Total Blind	18	26.9%
Partially Blind	16	23.9%

4.5 Period of using the computer

Table 5 shows that three (10%) respondents had less than 1 year experience of using the computer, twenty-one (70%) respondents had 1 to 4 years of experience of using the computer, four (13.33%) respondents had 5 to 8 years of experience of using computer and two (6.67%) respondents had over nine years of experience of using the computer. The results show that majority of the respondents were having 1-4 years of using computers in their life and it shows

that majority of the respondents were well aware of the use of computers. The frequency distribution of participants' period of using the computer is presented in Table 5.

Table 5.

Frequency distribution of respondents' period of using computer N=30

Period of using computer	Frequency	Percent
Less than 1 year	3	10%
1-4 years	21	70%
5-8 years	4	13.33%
Over 9 years	2	6.67%
Total	30	100.0%

4.6 Level of computer literacy skills

Table 6 reveals that two (6.67%) of respondents were novice, twenty-two (73.33%) respondents were intermediate, five (16.67%) respondents were advanced, and only one (3.33%) respondent was considered themselves as the expert. Hence, the data reveals that the majority of respondents were of intermediate level in respect of their having IT skills.

Table 6.

Frequency distribution of respondents' level of IT Skills N=30

Level of IT skills	Frequency	Percent
Novice	2	6.67%
Intermediate	22	73.33%
Advanced	5	16.67%
Expert	1	3.33%
Total	30	100.0%

4.7 Preferred language of reading

The question was asked from the respondents about the preferred language of reading publications, Out of 30, twenty-one students preferred the English language as most of the

interesting content was available in that language while the remaining 9 students had a liking attitude towards national language (Urdu) for reading material of their own choice.

Respondent No. 09 stated that:

"Because most of the international content is available in the English language therefore I like to prefer the English language for reading required material."

Respondent No. 27 Remarked that:

“I like my national language which is Urdu however most of the time required material is not available through WWW in my national language”.

4.8 Time spent on reading books

Users enjoyed reading during different timings. Out of 30 students, 7 users spent time on reading books during the early morning, 6 students used to study during evening hours and 17 respondents read books during the night.

Respondent No. 11 stated that:

“I spend time on reading books which are not syllabus-relevant whenever I get free otherwise I keep myself engaged with the books of the curriculum.”

4.9 Computer training classes

Visually impaired students receive expertise to use IT in the Centre. They are taught practical skills of the computer so that they can use Information and Communication Technologies efficiently. They were asked about their satisfaction level with computer training classes. Out of 30 students, 21 students showed a great level of satisfaction with the computer training that they received in the centre. 6 students were not satisfied with computer training classes while 03 students did not give any response.

Respondents No. 3 & 5 stated that:

"We are extremely satisfied with the computer training which is delivered to us in our lab. We are provided proper training so that we could become independent in using the computer"

4.10 Solutions for braille related issues

The Perkins Brailler is a "braille typewriter" with a key corresponding to each of the six dots of the braille code, a space key, a backspace key, and a line space key. Perkins Machines are provided to the special students in the Centre so that they can take their examination and may perform other class-related assignments, term papers, and tasks. These machines are very beneficial for blind students as they become eligible to make completion of required tasks without facing any problems. The respondents were asked about their satisfaction level with solutions for Braille related issues. Out of 30 students, 12 students were highly satisfied with solutions for Braille related issues, 9 students were somewhat satisfied with solutions for Braille related issues, 5 students were less satisfied while 4 students were not satisfied at all with solutions for Braille related issues.

Respondent No. 21 stated that:

"Perkin machines are not available in the sufficient quantity. During the days of hectic routines, machines are occupied by a limited number of visually impaired students".

An interesting remark was given by Respondent No. 29:

“I have my own Perkin machine because required numbers of Perkin machines are not available to us. I keep performing required tasks easily through personal IT equipment.”

4.11 Computers/speech output programmes

Visually impaired students are provided the facility of screen reader programmes. Through this facility, the blind students become self-reliant. They don't depend on others for getting learning. They satisfy their information and research needs with full confidence. Out of 30 students, 9 students were highly satisfied with computers/speech output programmes, 7 students were somewhat satisfied with computers/speech output programmes, 4 students were

less satisfied while 9 students were not satisfied at all with computers/speech output programmes.

Respondents No. 11 & 13 stated that:

"We are assisted through voice programs and we do our relevant functions by observing the sound as we can't view anything due to being blind".

4.12 Internet service

Special students are provided internet services in the computer lab. They search for the required material in the lab. They prepare relevant assignments through the facility of the internet. Out of 30 students, 15 students were highly satisfied with the internet surfing facility, 8 students were somewhat satisfied with the internet surfing facility, 3 students were less satisfied while 5 students were not satisfied at all with the internet surfing facility.

Respondents No. 15 & 17 stated that:

"We often encounter low speed of the internet and hence required assignments may not be completed efficiently within deadlines as provided by the concerned supervisors".

4.13 Magazines for leisure

Several magazines are available in the Centre. Special students read magazines to enhance their information and knowledge. Out of 30 students, 15 students were highly satisfied with the Braille magazines facility, 8 students were somewhat satisfied with Braille magazines facility, 3 students were less satisfied while 5 students were not satisfied at all with Braille magazines facility.

Respondents No. 12 & 16 stated that:

"Reading for leisure is highly essential to get emotional relief. We are provided with a good number of magazines however popular literature covering diverse areas should be increased to be kept in the library so that proper utilization may be made by us without having faced any possible barriers."

4.14 Audio Books/tutorials

Audio-video facilities are provided to the special students on priority because they don't depend on traditional resources and services. They use electronic services excessively. Out of 30 students, 10 students were highly satisfied with the audiobooks facility, 7 students were somewhat satisfied with the audiobooks facility, 5 students were less satisfied while 8 students were not satisfied at all with the audiobooks facility.

Respondents No. 4 & 8 remarked:

“We are happy with the facility of audio & video tutorials which are being provided to us. These enhance our learning and provide skills to cope with the dominating challenges.”

4.15 Scanning of books

The facility of scanning is provided to disabled students. A high-quality scanner is available in the centre to fulfill the needs of the students. Out of 30 students, 12 students were highly satisfied with the books-scanning facility, 11 students were somewhat satisfied with the books-scanning facility, 4 students were less satisfied while 3 students were not satisfied at all with the books-scanning facility.

Respondent No. 06 stated that:

“Books-scanning is a great facility which is being provided. In most of the cases, required books are not available to us in full-text format through online sites therefore we get the books scanned through the assistance of library staff for making completion of required works."

Respondents No. 7 & 10 remarked:

“Mostly required books are by local authors however the same ones are not available through the internet there we depend on library staff for the facility of scanned books and we are quite happy with this great facility."

4.16 Embossing

The centre has the facility to emboss the text material in braille. It is equipped with Everest Index Braille Embosser which can emboss double-sided braille language on a single page. Out of 30 students, 10 students were highly satisfied with the embossing facility, 09 students were somewhat satisfied with the embossing facility. 06 students were less satisfied while 5 students were not satisfied at all with the embossing facility.

Respondents No. 14 & 17 stated that:

“Provision of embossing facility enables us to go through relevant content without facing barriers and we are happy with the provision of this facility by the Centre."

4.17 Examinations

The Centre provides a facility to its users to attempt their examinations. Those blind students whose media of examination is Braille & Computer use the centre whereas the one with writer goes directly to the examination hall. Most of the wheelchair-bound students who cannot go downstairs to the examination room also use the centre for taking their papers. Out of 30 students, 17 students were highly satisfied with examinations-facility, 10 students were somewhat satisfied with examination-facility, 02 students were less satisfied while only 1 student was not satisfied at all with examinations-facility.

Respondents Nos. 18, 19, 20, 22 & 30 remarked:

“Exams methods are quite OK. Multiple methods are provided by the university to appear in the examinations for our facility i.e. Solution of the question paper through Perkin Machines, appear in the papers through the laptop, to get the paper solved through some writer. We are happy that the university provides all possible facilities to eliminate our exams challenges which is not less than a great challenge as our demands vary from situation to situation.”

5. Conclusion

Visually impaired students are equally important like other students of the educational institutes. Visually impaired students mostly prefer English as a medium of reading. They spend

a sufficient amount of time in reading material to enhance their knowledge. They are IT skilled to avail learning facilities. They utilize Perkins Braille machines. They use computers with screen reader programmes which enable them to work independently. They utilize braille magazines for pleasure reading. They avail audio/video tutorials to meet their needs. They get their desired content in scanned form. They use multiple sources to get the education and compete in examinations. They use technological innovations through their mobile phones too. On the whole, they are satisfied with the library resources and services.

6. Discussion

Students with visual impairment need to be given special value and proper attention as they may also become valuable members of society after having completed their education and developed required skills in accordance with market needs. All required books for the visually impaired students should be kept on special different shelves for providing easy access to required material. Books written by local authors should be scanned and digitized for providing to the special students as the same literature is not easily available through online forums. Timings of the Centre for special students should be designed as per needs of the students so that they may not face any constraints. IT-based training is highly essential for the special students for providing them access to required information resources quickly and efficiently. IT skilled staff needs to be deputed in Centre so that special students may not face any problem in the solutions of their problems. A state of the art Centre should be designed to encourage the students with visual impairment. The Library needs to keep on bringing innovation through creative projects and ideas for providing the best satisfactory resources and services to the special students.

7. Recommendations:

In light of the findings of the study, and reflection of the participants, the following recommendations are given to facilitate and empower the visually impaired students:

1. Special attention should be given to visually impaired students.
2. Training workshops should be conducted to provide IT skills among visually impaired students.

3. Required material should be provided to visually impaired students.
4. Efficient scanning service should be provided to visually impaired students.
5. Skilled manpower should be deputed to facilitate the special students on top priority.
6. More and more Internet labs equipped with the latest facilities should be built.
7. Publishers should work on such audio/video books that can meet the needs of the special students.
8. Special software needs to be introduced to support visually impaired students.
9. Elevator and lift facilities should be provided for the ease of special students.
10. Special online courses should be conducted for visually impaired students.
11. More IT resources and services should be provided.
12. More Perkin Machines should be arranged.
13. The speed of the internet should be made better.
14. Books written by the local authors should be scanned and digitized to facilitate the students with visual impairment.
15. Services should be designed keeping in view the information needs of the disabled students.

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