*Bulletin of Education and Research*
*August 2017, Vol. 39, No. 2 pp. 215-224*

# Library Resources for Persons with Special Needs: A Quantitative Analysis

Rukhsana Bashir[*], Ghulam Fatima[*], Misbah Malik[**]
Muhammad Younus[***] and Irfan Ali[****]

## Abstract

The main objective of this study was to identify the library resources available for persons with special needs in the libraries of public and private sector universities of Lahore, Punjab province. The sample of the study included 23 librarians working in the libraries of different departments which were selected through simple random sampling technique. A self-developed and validated instrument "Adaptation in Library Resources Questionnaire (ALRQ)" having four components; building access and environment, library staff, library services and adaptive technology for computer was used. The reliability index (Cronbach Alpha) was .79. The responses of the subjects were rated on three-point criteria i.e. yes, no, to some extent. Data were analyzed on SPSS. The findings revealed that ramps and elevators were available, directional signs in large print, book call numbers converted into Braille for blind students and telecommunication devices had not been provided to the deaf persons in the libraries. On the basis of major findings, it was recommended that academic libraries must follow universal design of learning that require the formulation of policy about provision of library services to people with special needs, allotting adequate budgets for constructing disability friendly buildings and installation of assistive technology for persons with special needs.

**Keywords:** Library Resources, persons with special needs, Braille, telecommunication devices

* Assistant Professors, Department of Special Education, University of the Punjab, Lahore.
Email: rukhsana.dse@gmail.com, fatima.dse@pu.edu.pk
** Assistant Professor, University of Education, Lahore, Pakistan
*** M.Phil Scholar, Institute of Education and Research, University of the Punjab, Lahore
**** PhD Scholar, Department of Library and Information Science, University of the Punjab, Lahore

## Introduction

Libraries are one of the important segments of any academic institution that work as center of information resources and services. They provide a number of opportunities of research, learning and recreation to an academic community (Ukpanah, 2006). Usually, students consult libraries for academic purposes and such information-seeking behavior promotes academic excellence in students (Ajiboye &Tella, 2007). Mabawonku (2005) pointed out that students utilize different channels and resources to collect information such as the internet, colleagues, libraries, friends, family members, etc.

Libraries work as service organizations which facilitate all their users without discrimination, including persons with special needs as well. According to disability prevalence, it is emerging as the largest marginal group in the world. The global disability prevalence was 10 % in1970s which has increased day by day. World Health Organization and The World Bank (2011) state that 15% of the total world population is suffering from some kind of special needs (Papworth Trust, 2011). The persons with special needs are actively participating in all spheres of life and as result of recent United Nations Conventions on the Rights of Person with Disabilities (2006), many initiatives have been taken to provide accessible learning environment to individuals with special needs. The United Nations Organization (UNO) states that persons with special needs should live independently and contribute fully to all facets of life. States institutions shall take suitable measures to ensure the access of persons with disabilities on equal basis. These measures shall include the identification and elimination of obstacles and barriers to accessibility to physical environment, to transportation, to information and communication technologies (UNO, 2006). As a result of these efforts, the enrollment rate of people with disabilities at higher education institutions has increased drastically. No doubt these individuals require assistance in search for data-based materials and availability of new and adapted technologies in libraries which has increased access to communication and information all over the world.

Beaton (2005) highlighted the importance of trained and well managed library staff, resources, and services for individuals with special needs. He further recommended that library and information system may try to investigate the gaps in communication and interaction to check the problems faced by library users with special needs.

Miller-Gatenby and Chittenden (2000) and Popoola (2008) discussed the significance of academic libraries in supporting students with special needs and he suggested to improve bibliographic instruction, web pages, and staff training for all students including people with disabilities. The authors also recommended the attitudinal training of the library staff, equipment training, service training, and legal information on the IDEA (Individual with Disabilities Education Act) requirements.

Other studies show that libraries have not been a source of attraction for people with special needs due to a number of reasons. Libraries in the past have not assisted blind persons very well, apart from large print and talking books. Additionally, adaptive technology for using the internet has recently begun to be used (Williamson, Schauder & Bow, 2002).

The physically challenged students encountered challenges in physical access to building and physical limitations such as retrieving books from the library shelves (Okoli, 2010). Guyer and Uzeta (2009) suggested that libraries should have provision of adaptive assistive technologies for persons with special needs. We have conducted this study, keeping in view the gravity of the situation, considering serious nature of the problems of persons with disabilities regarding access to library resources. On the basis of the major findings, gaps were identified and recommendations were given for the improvement of library resources for the better use of persons with disabilities.

## Objectives of the study

The major objectives of the study were:

1. To examine the library services and resources available for persons with special needs in universities in Lahore city.
2. To compare the library resources available for persons with special needs in public and private universities in Lahore city.
3. To suggest measures that may help the library management to improve the library services.

## Research Methodology

Survey method was used by researchers to achieve the objectives of the study. The population of the study included all librarians working in public and private sector university libraries. The sample of the study consisted of 23 Chief and Senior Librarians working in different libraries in Lahore. These librarians were selected using simple random sampling technique.

The research instrument was a self-developed questionnaire on "Adaptation in Library Resources Questionnaire". Close ended questions were designed to elicit responses on a three- point scale. The questionnaire was basically divided into four sections:

Section 1: Building access and environment

Section 2: Library staff

Section 3: Library resources

Section 4: Adaptive technology for computers

We personally collected data from the respondents after obtaining their prior consent. The response rate was 100%. The collected data were analyzed through SPSS (version17.0).

**Table 1**

*The characteristics of the sample*

| Variables | Type | Number |
|---|---|---|
| Gender | Male | 17 |
| | Female | 6 |
| Qualification | M. A.in Library Science | 15 |
| | M.Phil in Library Science | 4 |
| | Ph.D in Library Science | 4 |
| Institute | Public | 6 |
| | Private | 17 |

Table 1 shows descriptive analysis of the sample of the study. There were 17 males and six female librarians included in the sample of the study. Fifteen librarians had done M.A. in Library Science, four had done M.Phil in Library Science and four were PhD in Library Science. Data were collected from six public and 17 private sector university libraries.

**Table 2**

*Frequency table for librarians' responses on three-point scale*

| | Building and Environment | Yes (%) | No (%) | To some extent (%) |
|---|---|---|---|---|
| 1 | Is library entrance and parking area accessible for wheel chair users? | 9 (39.13%) | 10 (43.48%) | 4 (17.39%) |
| 2 | Have obstacles and hindrances been removed from the way of blind persons? | 9 (39.13%) | 10 (43.48%) | 4 (17.39%) |
| 3 | Has library been connected to main route for the ease of disabled persons? | 9 (39.13%) | 11 (47.83%) | 3 (13.04%) |
| 4 | Are ramps and elevators been installed in the library for disabled persons? | 5 (21.74%) | 17 (73.91%) | 1 (04.35%) |
| 5 | Have toilets been constructed according to the needs of wheelchair users? | 5 (21.74%) | 17 (73.91%) | 1 (04.35%) |
| 6 | Is service counter of the library accessible for wheel chair users? | 8 (34.78%) | 13 (56.52%) | 2 (08.69%) |
| 7 | Have directional signs been fixed in large print for blind persons? | 2 (08.69%) | 19 (82.60%) | 2 (08.69%) |
| 8 | Have shelf and stack identifier in braille and large print been fixed for blind persons? | 3 (13.04%) | 20 (86.96%) | 0 (0%) |
| 9 | Have call numbers of books been converted into Braille and large print? | 2 (08.69%) | 21 (91.30%) | 0 (0%) |
| 10 | Have labels in braille and large print been pasted on library equipment? | 2 (08.69%) | 21 (91.30%) | 0 (0%) |
| 11 | Have telecommunication devices been provided to the deaf persons in the library? | 4 (17.39%) | 18 (78.26%) | 1 (04.35%) |
| | Library Staff | | | |
| 12 | Is library staff aware of problems caused by disability? | 9 (39.13%) | 8 (34.78%) | 6 (26.09%) |
| 13 | Is library staff trained in the use of telecommunication devices for deaf persons? | 5 (21.74%) | 18 (78.26%) | 0 (0%) |
| 14 | Are refresher courses on disability arranged for the training of Library staff? | 2 (08.69%) | 21 (91.30%) | 0 (0%) |
| 15 | Is library staff aware of talking books and braille books? | 7 (30.43%) | 13 (56.52%) | 3 (13.04%) |
| 16 | Can library staff communicate with deaf persons in sign language? | 5 (21.74%) | 16 (69.56%) | 2 (08.69%) |

| | | | | |
|---|---|---|---|---|
| | Library Services | | | |
| 17 | Has a committee been constituted to meet the special educational needs of disabled persons? | 5 (21.74%) | 17 (73.91%) | 1 (04.35%) |
| 18 | Are disabled persons been included in Library's access planning process committee? | 3 (13.04%) | 19 (82.60%) | 1 (04.35%) |
| 19 | Are reference and circulation services been sent to disabled persons through phone and email? | 5 (21.74%) | 15 (71.42%) | 3 (13.04%) |
| 20 | Are library guides and handouts provided in Braille and large print? | 2 (08.69%) | 19 (82.60%) | 2 (08.69%) |
| 21 | Are readers and research assistants been appointed in library to assist blind persons | 5 (21.74%) | 18 (78.26%) | 0 (0%) |
| | Adaptive Technology for Computers | | | |
| 22 | Are adjustable tables available in library for wheel chair users? | 4 (17.39%) | 17 (73.91%) | 2 (08.69%) |
| 23 | Is software of making screen images large available for blind persons? | 4 (17.39%) | 18 (78.26%) | 1 (04.35%) |
| 24 | Are large monitors available for low vision persons | 3 (13.04%) | 20 (86.96%) | |
| 25 | Has JAWS software been installed in Library computers for blind persons? | 3 (13.04%) | 20 (86.96%) | 0 (0%) |
| 26 | Are Braille conversion software and Braille printers available in library? | 3 (13.04%) | 20 (86.96%) | 0 (0%) |

**Table 3**

*t-test for mean difference in the scores of four components of library services on the basis of gender of respondents*

| | Gender | *N* | Mean | Std. Deviation | *df* | *t*-value | Sig. |
|---|---|---|---|---|---|---|---|
| Building and Environment | Male | 17 | 16.76 | 7.190 | 21 | .082 | .935 |
| | Female | 6 | 16.50 | 5.320 | | | |
| Library staff | Male | 17 | 8.35 | 3.587 | 21 | 1.084 | .290 |
| | Female | 6 | 6.67 | 1.966 | | | |
| Library Services | Male | 17 | 7.18 | 3.486 | 21 | .541 | .594 |
| | Female | 6 | 6.33 | 2.503 | | | |
| Adaptive Technology | Male | 17 | 7.00 | 3.588 | 21 | .761 | .455 |
| | Female | 6 | 5.83 | 1.602 | | | |

Table 3 shows the results of *t*-test that was run to identify difference in the mean scores of four components of library services on the basis of librarians' gender. It is evident that there was no significant difference t (21) = .082, *p* = .935, in mean scores of male (M = 16.76, SD = 7.190) and female (M = 16.50, SD = 5.320) librarians on the component of library building and environment. For the component of library staff a gain difference was not significant, i.e. *t* (21) = 1.084, *p* = .290, in mean scores of males (M = 8.35, SD = 3.587) and female (M = 6.67, SD = 1.966) librarians. It was also revealed that difference was not significant *t* (21) = .541, p = .594, in mean scores of males (M = 7.18, SD = 3.486) and female (M = 6.33, SD = 2.503) librarians for the component of library services. Furthermore, there was no significant difference in mean scores of males (M = 7, SD = 3.588) and female (M = 5.83, SD = 1.602) librarians on the component of use of adaptive technology for special children.

**Table 4**

*t-test for mean difference in the scores of four components of library services in public and private institutes*

| | Institute | *N* | Mean | Std. Deviation | *df* | *t*-value | Sig. |
|---|---|---|---|---|---|---|---|
| Building and Environment | Public | 6 | 21.33 | 6.250 | 21 | 2.149 | .043 |
| | Private | 17 | 15.06 | 6.118 | | | |
| Library staff | Public | 6 | 10.33 | 2.944 | 21 | 2.291 | .032 |
| | Private | 17 | 7.06 | 3.030 | | | |
| Library Services | Public | 6 | 7.83 | 4.262 | 21 | .767 | .452 |
| | Private | 17 | 6.65 | 2.871 | | | |
| Adaptive Technology | Public | 6 | 8.17 | 4.579 | 21 | 1.334 | .179 |
| | Private | 17 | 6.18 | 2.531 | | | |

Table 4 shows the results of *t*-test that was run to identify difference in the mean scores of four components of library services between public and private institutions. It is evident that there was significant difference *t* (21) = 2.149, *p* = .043, in mean scores of public (*M* = 21.33, *SD* = 6.250) and private (*M* = 15.06, *SD* = 6.118) libraries for the component of library building and environment. For the component of library staff the difference was also significant, i.e. *t* (21) = 2.291, *p* = .032, in mean scores of public (*M* = 10.33, *SD* = 2.944) and private (*M* = 7.06, *SD* = 3.030) libraries. It was also revealed that difference was not significant *t* (21) = .767, *p* = .452, in mean scores of public (*M* = 7.83, *SD* = 4.262) and private (*M* = 6.65, *SD* = 2.871) libraries for the component of library services. Furthermore, there was no significant difference in mean scores of public (*M* = 8.17, *SD* = 4.579) and private (*M* = 6.18, *SD* = 2.531) libraries for the component of use of adaptive technology for special children *t* (21) = 1.334, *p* = .179.

## Discussion on Major Findings

Findings of the study revealed that library personnel were not satisfied with library entrance, parking area and accessibility to the counter of the library for wheel chair users. They pointed out non-availability of ramps, elevators and washrooms for persons with physical disabilities. Directional signs in large print for blind persons, call numbers of books converted into Braille and large print for low vision and blind and telecommunication devices had not been provided to the deaf persons in the libraries. These findings are consistent with the studies conducted by Williamson (2002), Okoli (2010), and Guyer and Uzeta (2009) who found the hazards of non-friendly architectural buildings, provision of adaptive assistive technologies for persons with special needs and availability of large print and talking books. However, Burke (2009) in his quantitative research from the persons with physical, mental, and emotional disabilities concluded that efforts to eliminate barriers in public libraries were positive if someone had used the public library in past years.

Library staff is not aware of talking books, braille books, sign language and telecommunication devices for deaf persons. Moreover, the librarians reported that disabled persons had not been included in library's access planning process committee. Moreover, facility of readers and research assistants for blind persons is not available. Adaptive technology for computers such as large monitors for low vision persons, JAWS software, Braille conversion software and Braille printers are not available. These findings are in line with the study conducted by Miller-Gatenby and Chittenden (2000) who threw light on the importance of training of the staff for improving their attitudes, service training, equipment training and legal training. Huang (2009) and Murray (2000) in their research studies also emphasized well planned training of library staff for better understanding about disabilities and disabled users in library.

The results of *t*-test indicate the difference in the mean scores of two components of library services in public and private institutions. It is evident that there was significant difference in mean scores of public and private libraries for the component of library building/ environment and library staff. The mean score of public universities was higher than that of private universities which shows that library services being offered to persons with special needs were better in public sector universities. This finding reflects that the public-sector universities are more concerned regarding the needs of persons with disabilities.

## Recommendations

Based on the findings of the study, the following recommendations are made to improve the efficiency of the university libraries:

1. Academic libraries must follow universal design of learning that requires the formulation of policy regarding provision of library services to people with special needs.
2. Practical measures should be taken for the provision of budget, constructing library buildings with ramps and installing lifts, acquiring Braille and large print, as well as providing assistive equipment.
3. It is essential to conduct staff training sessions to improve the perception of the library staff towards person with special needs.
4. Library should conduct user studies at regular intervals to develop an effective user centered library and information services.

## References

Ajiboye, J. O., & Tella, A. (2007). University Undergraduate Students Information Seeking Behaviour: Implications for Quality in Higher Education in Africa. *The Turkish Online Journal of Educational Technology, 6* (1), 40-52.

Beaton, M. (2005). Glasgow city council: Library, information and learning services for disabled people in Glasgow. *Library Review, 54*(8), 472-478

Burke, S. K. (2009). Perceptions of Public Library Accessibility for People with Disabilities. *The Reference Librarian, 50*(1), 43-54.

Guyer, C. C., & Uzeta, U, M. (2009). Assistive technology obligations for postsecondary education institutions. *Journal of Access Services, 6(1*),12-35. DOI: 10.1080/15367960802286120.

Huang, S. T. (2009). Reference services for disabled individuals in academic libraries. *The Reference Librarian, 11*(25-26), 527-539.

Mabawonku, I. (2005). The Information needs of Artisans: Case Study of Artisans in Ibadan, Nigeria. *Lagos Journal of Library and Information Science, 3*(1) 61-76.

Miller-Gatenby, K. J., & Chittenden, M. (2000). *Reference services for all: How to support reference service to clients with disabilities. The Reference Librarian 33*(69/70): 313-326. DOI:10.1300/J120v33n6928.

Murray, J. (2000). The training needs of school library staff for service delivery to disabled students. *Schools Libraries Worldwide, 6*(2), 21-29.

Okoli Cosmas I.B. (2010). *The Plight of Disabled Nigerians and the Need for Mass Enlightenment. Mobility Aid and Appliances Research and Development* Centre (MAARDEC). Retrieved from http://www.maardec.net.html.

Papworth Trust (2011). *Disability in the UK: Facts and figures*. Retrieved from http://www.papworth.org.uk/downloads/headlinestatisticsondisabilitynew_08 110314393 3.pdf on February 13, 2017

Popoola, S.O. (2008). The Use of Information Sources and Services and its Effect on the Research Output of Social Scientists in Nigeria Universities. *Library Philosophy and Practice*. http://unllib.unl.edu/LPP/popoola.htm

UNO (2006). *Convention on the Rights of Persons with Disabilities*.Retrieved from http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf.

Ukpanah, Mercy. E. (2006). *Information Seeking Behaviour and Information Needs of Law Students in University of Uyo*. *Journal of Nigerian Library Association, 2* (2) p.27.

Williamson, K., Schauder, D. and Bow, A. (2000). *Information seeking by blind and sight impaired citizens: an ecological study*. Information Research, *5*(4). Accessed fromhttp://informationr.net/ir/5-4/paper79.html. On dated February 2016.

World Health Organization and The World Bank (2011). Retrieved from http://www.who.int/disabilities/world_report/2011/en/. On dated April 2016.