

Difficulties Faced by Students with Visual Impairment Registered in Open and Distance Learning Programs of AIOU, Islamabad, Pakistan

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ABSTRACT

The major purpose of this survey study was to explore difficulties and barriers faced by students with visual impairment who were enrolled in different programmes of Allama Iqbal Open University (AIOU) Islamabad. A self-developed and validated questionnaire (Cronbach alpha: 0.897) was employed for data collection from a sample of forty (40) students with visual impairment (males=32, females=08 selected through snow ball sampling technique) belonging to different cities of the Punjab, Khyber Pukhtoon Khah (KPK) and Azad Jammu & Kashmir (AJK), Pakistan. The participants were required to respond on three point criteria (yes, no, to some extent). Data were analyzed by using SPSS. Frequencies were run to have an overall picture of barriers encountered by students with visual impairment in Open and Distance learning (ODL). Major findings revealed that students with visual impairment were encountering problems in orientation, transportation, academics, provision of reading material in Braille, soft and audio form, taking examination through different modes and in use of information technology etc. The study recommended that Distance Education Teachers should provide material to students with visual impairment both in Braille and soft form. Permission should be granted to take examination in four modes. Disability friendly library should be established. Audio recorded books and note taking assistance in the classroom should be provided to students with visual impairment.

Keywords: Barriers, students with visual impairment, open and distance learning

INTRODUCTION

The right to education has been universally acknowledged since the Universal Declaration of Human Rights in 1948 (United Nations Universal Declaration of Human Rights, 1948). A programme adopted by UNESCO in 1951 deals with the processes for valuing the right to free and compulsory education in the spirit of Article 26 of the Universal Declaration of Human Rights. Moreover, The Education for All (EFA) movement is a universal obligation to give quality basic education for all children, youth and adults (A Human Rights- Based Approach to Education for All, 2007).

Pakistan has also pledged to achieve the Millennium Development Goal for Education, committing that by 2015: "Children everywhere, boys and girls alike, will have equal access to all levels of education." The 18th Amendment of the Constitution has included Article 25(A) which goes "The state shall provide free and compulsory education to all children of the age of five to sixteen years in such manner as may be determined by law" (The Constitution of Pakistan, 1973). As far as persons with visual impairment are concerned they have equal rights to education.

Open and Distance Learning (ODL) or distance education plays an important role in making persons with disabilities able to use Information and Communication Technologies

(ICTs). Persons with disabilities can make their life better through innovations taking place in technology. With the help of computers, they can undertake tasks which seem to be impossible to be completed such as: letter writing, having communication with others etc.

Furthermore, now the people with disabilities can have same livelihood as that of persons without any disability which is due to digitalization of a number of public services such as education, library, banking etc. They can live a self-governing life and achieve social acceptability (Williamson, et al., 2001).

Kurubacak and Yuzer (2004) have mentioned that for effective learning in distance education, integration of novel technologies is of great importance. Many developed and developing countries are solving educational problems in distance education with help of integration of modern technologies. However, all people including people with disabilities can have an equal chance and ability for education and can take an advantage of communication technology as well (Özgür and Gürcan, 2004).

In higher education, suitable approach, usability and e-learning atmosphere are crucial to ascertain that students with visual impairment are easily approaching different parts of the virtual campus. Furthermore, they gain the capability of accomplishing their training under similar situations and with equal facilitation as are enjoyed by other students without impaired vision. But it is not enough. It is the dire need of the hour to have a more clear understanding of the clients in their daily situation (Theofanos&Redish, 2003).

Burgstahlers (2002) opines that the features of many distance education programmes involuntarily create barriers for students with special needs. Visual impairments pose negative effects on accessibility and inclusion of special needs students in Open and Distance Learning (ODL). So rigorous planning during development of different courses before enrolling students with disabilities is essential and compulsory. Universal design principles should be followed for taking necessary steps to cater a great variety of abilities and disabilities (Harrison, 2001).

Candido (2008) propounds that much research has not been conducted to have a vision of experiences and views of visually impaired persons about virtual learning. He put emphasis on using qualitative methods to have a closer look into the perceptions of students with visual impairment concerning on-line learning. Gill (2009) conducted a case study bearing results that students with visual impairment were encountering a number of difficulties in distance education including unavailability of materials, sluggishness in using a typo technical tool and difficulty in adapting content.

Haugann (1987) conducted a study on exploring the problems of students with visual impairment in institutions of higher education. The results of the study reflected that counselling services were not available to students with visual impairment. Braille printed books were available in a short quantity. There was a lack of visual readers. Moreover, students with visual impairment were facing difficulty in adjusting to university life. Teachers did neglect their specific problems. The difficulties in taking exams and problems in utilizing transport also existed.

Fuller et al, (2004) also studied hurdles faced by students with disabilities at higher education level. The results threw light on the problems such as the fast speed of teachers' delivery of lectures, difficulty in taking part in discussions and giving answers to questions. It was also reported that some of the teachers did not allow to record their lectures on audio tape. It was also difficult for students with visual impairment to reach their campus. There was a lack of suitable computer programs. Taking into consideration the sensitivity of the issue, the researchers conducted this research to investigate the barriers faced by students with visual

impairment enrolled in programs of distance education of Allama Iqbal Open University (AIU) Islamabad, Pakistan.

OBJECTIVES OF THE STUDY

The study was conducted to achieve the following objectives:

1. To explore academic barriers for students with visual impairment in distance education.
2. To investigate barriers for students with visual impairment in taking examination in distance education.
3. To find out problems encountered by students with visual impairment in the use of information technology.
4. To find out problems of students with visual impairment in interaction with their sighted peers and teachers in distance education.
5. To explore difficulties encountered by students with visual impairment in getting adapted material in distance education.

METHODOLOGY

Methodology can be discussed under the following headings:

Population of the Study

Population of the study consisted of all graduate and continuing students with visual impairment enrolled in different programmes of distance education of Allama Iqbal Open University (AIU) Islamabad.

Sample of the Study

A sample of forty (40) graduate and continuing students with visual impairment (males= 32, females= 08) was selected using snowball sampling technique from Punjab, Khyber Pukhtoon Khah (KPK) and Azad Jammu & Kashmir (AJK). These students with visual impairment belonged to nineteen cities of the Punjab (Arifwala, Attock, Bahawalpur, Burewala, Chiniot, Dera Ghazi Khan, Faisalabad, Gujjar Khan, Gujrat, Islamabad, Jhelum, Kasur, Lahore, Multan, Okara, Rawalpindi, Sheikhpura, Sargodha), five cities of Khyber Pukhtoonkha (Deer, Swat, Malakand, Haripur, Murree) and two cities of Azad Jammu & Kashmir (Mirpur and Bagh). Among these forty (40) participants, thirty (30) were totally blind and ten (10) were low vision. Their qualifications ranged between B.A. to M.Phil (B.A., B.Ed = 03; M.A., M.Ed = 33; M.Phil = 04). Their age ranged between 20-50 years (20-30=22; 30-40=15; 40-50=03). Out of forty (40), twenty students had completed their degree whereas twenty were enrolled in different programmes. Informed consent by the participants was obtained.

Instrument of the Study

After reviewing the related literature and consulting with eminent persons with visual impairment, a questionnaire containing forty (40) questions with three (3) options (Yes, No, To some extent) was developed. The questionnaire was validated by persons with visual impairment. The questions were related to barriers faced by students with visual impairment in academics, orientation & mobility, information technology, transportation, interaction with peers and teachers, modes of taking examinations, provision of material in Braille and soft form, provision of audio books and assistive devices etc. The reliability of the instrument was 0.879 (Cronbach alpha).

Data Collection Procedure

First of all, the telephone numbers of graduate and continuing students with visual impairment of Allama Iqbal Open University, Islamabad were collected with the help of some dedicated persons with visual impairment. Then telephonic contacts were made with all forty subjects belonging to different cities of the Punjab, KPK and AJK. They were informed about the purpose of telephonic call. They were requested to spare 15 to 20 minutes for filling up the questionnaire. They were assured that confidentiality and anonymity will be observed. The filling up of one questionnaire took fifteen to twenty minutes.

Data Analysis

Data were analyzed by running frequencies.

MAJOR FINDINGS OF THE STUDY

The data collected were tabulated and analysed as under:

Table 1. Frequency distribution of responses

S. No.	Statements	Frequency		
		Yes	To Some Extent	No
1	Is transport provided to you by AIOU during workshops?	2 (5%)	0	38 (95%)
2	Are you fully oriented with AIOU and its surroundings?	15 (37.5%)	12 (30%)	13 (32.5%)
3	Do the resource persons use mike for audio recording during their lectures in workshops?	5 (12.5%)	7 (15.5%)	28 (70%)
4	Are you provided with reading material in Braille?	4 (10%)	0	36 (90%)
5	Does your institution make any arrangement for letting you know about the information displayed on the notice board?	5 (12.5%)	2 (5%)	33 (82.5%)
6	Are you provided with audio books by AIOU?	1 (2.5%)	2 (5%)	37 (92.5%)
7	Has JAWS software been installed on library computers in AIOU?	3 (7.5%)	3 (7.5%)	34 (85%)
8	Do you seek help of others for completing your course assignments?	39 (97.5%)	0	1 (2.5%)
9	Has AIOU made arrangements for easy access to toilets?	3 (7.5%)	2 (5%)	35 (87.5%)
10	Does AIOU provide you with audio cassettes for audio recording?	0	3 (7.5%)	37 (92.5%)
11	Does similarity exist between lectures of the resource persons and course material?	22 (55%)	18 (45%)	0
12	Is there any note taker in the classroom for your assistance?	5 (12.5%)	1 (2.5%)	34 (85%)
13	Has AIOU provided you with barrier free environment?	5 (12.5%)	5 (12.5%)	30 (75%)
14	Do you face difficulty in getting your notes recorded?	33 (82.5%)	3 (7.5%)	4 (10%)

15	Are computer lab assistants helpful to you?	9 (22.5%)	11 (27.5%)	20 (50%)
16	Does AIOU provide you lap top with JAWS installed in?	1 (2.5%)	1 (2.5%)	38 (95%)
17	Does AIOU have Braille embossers?	2 (5%)	2 (5%)	36 (90%)
18	Does AIOU allow you to take examination through audio recording?	2 (5%)	0	38 (95%)
19	Does AIOU allow you to take examination through a writer?	36 (90%)	3 (7.5%)	1 (2.5%)
20	Does AIOU allow you to take examination in Braille?	4 (10%)	1 (2.5%)	36 (90%)
21	Does AIOU allow you to take examination on computer?	1 (2.5%)	3 (7.5%)	36 (90%)
22	Do your class fellows help you in studies?	36 (90%)	4 (10%)	0
23	Are you provided with special facilities at the canteen of AIOU?	7 (17.5%)	2 (5%)	31 (77.5%)
24	Are you provided with opportunities of taking part in sports and games?	4 (10%)	2 (5%)	34 (85%)
25	Are you given any training for personal grooming in AIOU?	9 (22.5%)	4 (10%)	27 (67.5%)
26	Do you have good interaction with your teachers of AIOU?	32 (80%)	7 (17.5%)	1 (2.5%)
27	Can you go to the offices of your teachers without any hesitation?	25 (62.5%)	8 (20%)	7 (17.5%)
28	Do your teachers/resource persons give special attention to you during lectures?	15 (37.5%)	18 (45%)	7 (17.5%)
29	Do all teachers/ resource persons allow you to record their lectures?	28 (70%)	9 (22.5%)	3 (7.5%)
30	Do all people help you in AIOU?	26 (65%)	12 (30%)	2 (5%)
31	Does AIOU provide you with white cane and other assistive devices?	1 (2.5%)	0	39 (97.5%)
32	Does AIOU provide prospectus and other documents in Braille?	0	1 (2.5%)	39 (97.5%)
33	Are you given special assistance in the use of audio visual aids?	1 (2.5%)	1 (2.5%)	38 (95%)
34	Does AIOU provide material in soft form?	5 (12.5%)	3 (7.5%)	32 (80%)
35	Does AIOU provide text books in Braille?	4 (10%)	0	36 (90%)
36	Has AIOU made any policy regarding exams?	11 (27.5%)	4 (10%)	25 (62.5%)
37	Are you being awarded any scholarship on the basis of disability by AIOU?	4 (10%)	0	36 (90%)
38	Does AIOU facilitate persons with low vision in taking exams according to their special needs?	4 (10%)	4 (10%)	32 (80%)
39	Has facility of scanner been provided in library of AIOU?	5 (12.5%)	0	35 (87.5%)
40	Do teachers/ resource persons teach Maths and Stats according to your needs?	4 (10%)	14 (35%)	22 (55%)

Major findings of the study are as under:

1. A large number of participants (95%) responded that (AIOU) did not provide them with facility of transport during workshops.
2. A vast majority of respondents (70%) answered that the resource persons did not use microphones for audio recording of their lectures during workshops.
3. (90%) of students with visual impairment were of the view that Allama Iqbal Open University was not providing them with reading material in Braille.
4. Majority of the respondents (92.5%) opined that audio books were not being provided to them by AIOU.
5. (85%) of participants responded that JAWS software had not been installed in library computers in AIOU.
6. A significant number of students with visual impairment (97.5%) were of the view that they had to face great difficulty in seeking help of others in doing their course assignments.
7. (92.5%) participants answered that they were not being provided with audio cassettes for audio recording of lectures by the university.
8. Almost all of the respondents opined that similarity existed between lectures of the resource persons and course material.
9. A large number of students with visual impairment (85%) responded that AIOU did not appoint any note taker for their assistance during lectures.
10. (75%) students with visual impairment were of the view that AIOU had not provided them barrier free environment.
11. A vast majority of respondents (82.5%) opined that they had to face great difficulty in getting their notes recorded.
12. Only (22.5%) participants reported that computer lab assistants were helpful to them.
13. A large number of respondents (95%) reported that AIOU did not provide them with lap tops with JAWS installed in to take lecture notes and complete their assignments.
14. (95%) students with visual impairment responded that AIOU had not the facility of Braille embossers.
15. (95%) of the respondents reported that they were not allowed to take examination through audio recording.
16. All of the participants (100%) were of the view that they were allowed to take examination through a writer.
17. A small number of participants (10%) reported that they were allowed to take examination in Braille.
18. Only one participant (2.5%) out of forty reported that he was granted permission to take examination on computer.
19. A vast majority of the participants (90%) responded that they were helped by their class fellows.

20. (80%) students with visual impairment opined that they had good interaction with their teachers and they could go to their offices without any hesitation.
21. (37.5%) participants were of the view that resource persons paid special attention to them during lectures.
22. A great number of respondents (70%) answered that resource persons allowed them to get their lectures recorded.
23. (65%) subjects reported that they were helped by all people related to AIOU.
24. A great majority of students with visual impairment (97.5%) responded that they were not provided with white cane and other assistive devices by AIOU.
25. (97.5%) respondents reported that AIOU did not provide prospectus and other documents in Braille.
26. A large number of participants (80%) responded that AIOU did not provide material in soft form.
27. A vast number of respondents reported that AIOU had not made any policy regarding exams.
28. (90%) students with visual impairment responded that AIOU was not awarding any scholarship on the basis of disability.
29. A great majority of subjects (80%) responded that AIOU was not facilitating persons with low vision in taking exams according to their special needs.

DISCUSSION ON MAJOR FINDINGS

The present study has many anticipated results. Some of the major findings reflect that students with visual impairment are encountering barriers in acquisition of reading material in Braille, in soft and recorded form. Moreover, they are allowed to take examination in only one mode i.e. through writer. They are not being provided with facility of transport by Allama Iqbal Open University. These findings are consistent with the results of a study conducted by Haugann (1987). The results threw light on different problems of students with visual impairment in higher educational institutions such as lack of Braille printed books, lack of visual readers, teachers' inattentive behaviour, difficulties in taking exams and transport etc.

Some of the subjects of the present study reported that during workshops teachers/resource persons did not allow them to get their lecture recorded on audio tape. The same finding was also reported by Fuller, Healey, Bradley & Hall (2004) in a study on obstacles of visually impaired persons at university level. They also found lack of suitable computer programs which shows consistency with an important finding of the present study which goes that JAWS software has not been installed in the computers which has created great difficulty for students with visual impairment.

Gill (2009) indicated many barriers encountered by visually impaired students in distance learning i.e. inaccessible materials, slowness in using a typo technical tool, and anxiety in content adaptation. These findings are consistent with those of present study.

It is quite evident from the findings of the present study that during designing different distance education programmes, the special educational needs of students with disabilities are not taken into consideration. It gains support from Burgstahlers (2002) who asserts that the designs of many distance education programmes unintentionally erect barriers for students with disabilities. Visual impairment has great effects on access and inclusion of students in

Open and Distance Learning (ODL). So proactive planning during course development is required to facilitate students with visual impairments.

LIMITATIONS OF THE STUDY

The following were the limitations of the study:

1. Interview schedule must have been used in place of a questionnaire with three point Likert type scale to have an in depth understanding of barriers encountered by students with visual impairment.
2. Due to lack of time and resources data were collected from only forty students with visual impairment.
3. Data were collected on telephone which may affect the reliability of the instrument.

RECOMMENDATIONS

The following recommendations are made on the basis of the study:

1. The students with visual impairment should be allowed to take examination in four modes i.e., through audio recording, Braille, writer and computer.
2. All the allied material, text books, lecture notes, prospectus and other documents should be provided both in Braille and soft form.
3. The students with visual impairment should be allowed to submit course assignments in typed form and not in hand written format.
4. JAWS software should be installed in all computers of main campus of AIOU and all study centres as well.
5. Scholarships should be awarded to deserving students with visual impairment.
6. Laptops with JAWS software should be provided to deserving students with visual impairment for taking lecture notes and doing all of your academic work independently.
7. AIOU should establish disabled friendly digital library accessible to all special need students especially visually impaired ones.
8. Teachers/ resource persons responsible for preparing and providing the content and learning activities must be well trained in accessibility issues in order to ensure that they are fully aware of the difficulties that visually impaired students face.
9. The organizations working in audio recording of books may be contacted to purchase recorded material which may be provided to all study centres.
10. Transport facility should be provided to all students with disabilities in general and to students with visual impairment in particular at higher education level.
11. Note taking assistance in classrooms should be ensured.
12. A comprehensive policy regarding taking exams in four modes should be formulated at the earliest.

CONCLUSIONS

In nut shell, the students with visual impairment are encountering great barriers in distance education. The study centres are inaccessible, the allied material, handouts, text books, prospectus and other documents are not available in Braille, soft and recorded form. The students are dependent on others for preparing course assignments in hand written form as AIOU has not allowed these students to prepare their assignments on computer with the help

of JAWS software. They have to endure great hardships in taking exams only through writers which has enhanced their dependency on others. Despite all of the above mentioned problems, one thing is highly commendable that almost all of the visually impaired participants expressed deepest gratitude to their class mates by saying that they could never be able to continue their studies without their utmost cooperation and assistance. In the same manner, they have given positive comments about the behaviour of their teachers/ resource persons and supporting staff of AIOU towards them. Many steps are required to be taken in open and distance learning for the ease and support of students with visual impairment to make them really successful in their lives.

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