Impact of Barriers Encountered by Students with Disabilities on their Learning Experiences in Higher Education Institutions

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Abstract

The present study is exploratory in nature. The paper aims to understand the barriers encountered by students with disabilities and their impact on the learning experiences of these students at higher education institutions. The study was conducted in the erstwhile State of Andhra Pradesh (now, bifurcated into Andhra Pradesh and Telangana). For this study, firstly, we selected three universities from different parts of Andhra Pradesh by using purposive sampling. Secondly, we interviewed 100 students with disabilities from selected universities by using snowball sampling. The mixed method approach, i.e., both quantitative and qualitative data analysis were employed in this study, and in most cases, the quotes of narratives for each theme were maintained and used extensively. The findings of the paper covered physical, academic and attitudinal barriers faced by the students with disabilities and their impact on the learning experiences of these students in obtaining higher education. Overall, these findings highlighted the inherent limitations in the current institutional arrangements on the basis of students, their parents, the attitude of university management and staff because these factors affected the learning experiences of the differently abled students in higher education institutions. A comprehensive access service is required for addressing the needs of these students, which should become an integral part of the institutions.

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Background of the Study

People with disabilities in India are generally imperceptible to the rest of the society because they get less or no attention from the administration, activists and academicians. According to the Persons with Disability Act (Equal Opportunities, Protection of Rights and Full Participation) of India (1995), "a person with disability" means "a person suffering from not less than 40 per cent of any disability, as certified by a medical authority". The conditions of disability include blindness, low-vision, hearing impairment, locomotor disability, mental retardation, leprosy and mental illness. According to the Census 2001 (Registrar General of India), there were 21.9 million people with disabilities, wherein those suffering from visual, speech, hearing, mental and locomotor impairment have been considered. As per the survey conducted by the National Centre for Promotion of Employment for Disabled People (2004), only 0.1 per cent of the students with disability are enrolled in various universities and they face many barriers in higher education institutions. Only six per cent of the youth in India have access to higher education, and if this six per cent is applied to the disabled youth population, then 1.44 million disabled youth should have access to higher education. But the reality presents a different picture. At the higher education level, the infrastructure needs to be designed in such a manner that it enables these students to access classrooms, laboratories, toilets, etc., easily. But there is a dearth of research in this area, specifically in the Indian context. The study aims to explore the educational experiences of students with disabilities in higher education institutions in Andhra Pradesh.

Students with Disabilities in Higher Education Institutions

Physical barriers continue to exist in higher education institutions for these students. The physical barriers faced by them are lack of access to buildings, classrooms, restrooms and other public facilities due to the non-existence of elevators and parking facilities within a university (Brown, 1992; Schneid, 1992). Paul's (1998) study indicates that students using wheelchairs have to struggle due to inaccessible classrooms and restrooms. A study conducted by West, et al. (1993) further demonstrates that barriers identified by students with disabilities have been their inability to access buildings and classrooms, and lack of other accommodations. Further, Howell and Lazarus (2003) suggested that changes are needed to be made not only in the physical environment, where both teaching and learning take place simultaneously, but also through the organisation, delivery and accessibility of higher education curriculum. Disability service providers also play an important role in the success of these students at higher education institutions (Reber, 2007). Many students due to fear of being labelled and of the

stigma attached avoid disclosing their disability and needs to higher authorities, teachers and friends in higher education. Hence, they face many problems in higher education institutions. Similarly, Fichten, et. al. (1990), in their study, observe that staff and students without disabilities are concerned about the needs of differently abled students in higher education institutions, which have developed an accessible environment and generated support services on their campuses. A study conducted by Moisey (2004) demonstrated that students with visual impairment in higher education institutions have been facing academic barriers because of inappropriate learning resources, teachers' lack of experience in teaching students with special needs, as well as, lack of discussion with these students regarding their problems and needs. Students, who received better assistance, had more success and lesser barriers in pursuing higher education. However, there is a dearth of research on this issue in the Indian context. Therefore, the researcher attempts to understand the impact of the barriers encountered by students with disabilities as regards to their learning experiences in higher education institutions.

Objectives

1. To examine the demographic profile and educational status of students with disabilities, who have enrolled in higher education institutions in the erstwhile state of Andhra Pradesh,
2. To understand the barriers encountered by these students and their impact on their learning experiences in higher education institutions.

Methodology

The present study is exploratory in nature and employs mixed method approach that involves the procedure of collecting, analysing and mixing or integrating both quantitative and qualitative data at different stages of the research process. For this study, we collected data from three universities — one Central and two State universities located in different parts of Andhra Pradesh, before it was bifurcated. Of the three universities, the Central university and State university 'A' have a Disability Cell as well as a coordinator to look into the needs of differently abled students. However, State university 'B' neither has a Disability Cell, nor a disability coordinator. Subsequent to the selection of the universities, we interviewed all students with disabilities from each university using snowball sampling. We conducted semi-structured in-depth interviews of those students, which we scheduled by taking their consent. For the study, we interviewed 100 students (48 from the Central university and 26 each from the two State universities A and B). Both quantitative and qualitative data analysis were used, and in most cases, the quotes of real text for each theme were maintained and used extensively.

Findings

The findings of the study are presented in two sections. The first section deals with the demographic profile and educational status of the respondents selected from the three universities. The second section presents the perception of these students on the support services provided to them in their respective universities.

1. Characteristics of Students with Disabilities

Table 1 provides a brief description of the respondents by the nature of their impairment.

As per the table, among the total number of students with disabilities, male students constitute a greater proportion (66 per cent). The dip in the number of enrolment of female students with disabilities is based on varied reasons, which include negative attitude towards girl education, less expectation from girls, over-protectiveness towards girls and underestimating the talent of female students by their parents. It is also seen that 72 per cent of the respondents were orthopaedically-impaired and 28 per cent were visually impaired. The number of

Table 1
Characteristics of Students with Disabilities

Variables		Nature of impairment		Total (100)
		Orthopaedic impairment (72)	Visual impairment (28)	
Gender	Male	48 (73)	18 (27)	66 (100)
	Female	24 (71)	10 (29)	34 (100)
Age	Below 25 years	34 (72)	13 (28)	47 (100)
	26–30 years	36 (84)	07 (16)	43 (100)
	31 years	02 (20)	08 (80)	10 (100)
Course of study	M.A. /M.Sc.	62 (81)	14 (11)	76 (100)
	M.Phil	3 (38)	5 (62)	8 (100)
	Ph.D	7 (44)	9 (56)	16 (100)

(Note: The figures in the parenthesis are percentage)

orthopaedically impaired students is nearly two times higher than that of visually-impaired ones. Students with other types of impairment were not found during the period of data collection. It is possible that some students did not want to disclose their disability.

Higher education tends to attract various social groups constituting people of different age groups due to multiple factors. Table 1 also provides a brief description of the gender composition of the respondents by the age bracket. It is observed that about half (47) of the students are aged 25 years, and a negligible number are above 31 years. Similarly, it is found that the maximum number of orthopaedic impaired students are aged between 26 and 30 years. It was also found that a greater number of visually-impaired students were above 31 years of age. This data indicate that visually-impaired students have to face more hurdles, so there is more gap in their education compared to orthopaedically-impaired students. It is possible that these students might have joined schools late because of their parents' over-protective nature, lack of proper support services that include assistive devices and lack of awareness about policies and support services. We can conclude that there are more orthopaedically-impaired students in the younger and middle age group and more visually-impaired students in the older age group in the study conducted.

Table 1 further shows that more students have enrolled for Masters courses, whereas a few have registered for M.Phil programmes. Moreover, the number of orthopaedically-impaired students enrolled in the courses is more than the visually-impaired ones. However, more visually-impaired students have registered for Ph.D courses, followed by M.Phil courses. Thus, as per the data collected, more number of visually-impaired students pursue higher education than orthopaedically-impaired students.

2. Barriers Encountered by Students and Their Impact on Learning Experiences

In this section, we attempted to find out from the students about reflections on their educational experiences and understand the barriers that affect their educational advancement in different universities. The factors that emerged from the interviews are classified into two broad categories. These are:

2.1. Physical Barriers, and
2.2. Academic Barriers.

2.1. Physical Barriers

One of the most important factors that leads to poor attendance of students with physical impairment was physical accessibility (Hammal Jarvis and Colver, 2004). In the study we conducted, it was observed that physical barriers were faced by both visually impaired and orthopaedically handicapped students. Majority of the students with physical impairment

stated that their impairment did not affect their academic life, rather they faced problems related to accessibility, as there was no facility for accessing computer centres, libraries and attending classes on the first or the second floor without the minimal support of lifts, elevators and transport facility to and from classrooms, restrooms and hostels. All three institutions did not have good facilities relating to transportation and accessibility, but the distance between classrooms, library, restrooms and academic and administration buildings, as well as, hostels, was substantial even within the universities.

Some of these students stopped going to the library for getting books issued because of their physical impairment. Procuring books from the library was not easy for them. Even if their friends agreed to help them, there were other issues, such as selecting a book from the catalogue, or tracing the book. Besides, there were restrictions, such as the cardholder should be present while the book was being issued. It was a big process and took a lot of time. On the other hand, nearly 70 per cent of the students with visual impairment said that they had visited the library hardly two to three times. The following narratives represent the response of a group of respondents:

"Till now, I (student with visual impairment) haven't gone to my library because the way to the library is not accessible to me. In case, the university management makes it an accessible environment with facilities, like proper footpaths and roads with special indicators and without major obstacles on the way/path to reach important places, including classrooms, library and other important places, it could help me a lot. Then, I can go wherever I need, without my friend's help. But the situation is entirely different. I have to depend on others for wherever I need to go."

"Being a wheelchair user, I can not access the library and computer terminals on my campus. Since the computers in my department and the computer centre are situated on the second floor, it is not easy for me go there every day. I rarely go and work on computers."

For a student's active participation in educational institutions, there are various aspects that need to be addressed in natural and constructed educational environments. All three university buildings were only partly accessible to students with disabilities. Accessibility in these institutions was poor not only because the buildings or their parts were old and no modifications had been made to make them suitable for disabled students, but also because the new buildings were inaccessible as no lifts or elevators were in place. Similarly, a study by Paul (1998) indicated that students, who used wheelchairs, struggled due to inaccessible classrooms and restrooms. Further, a study by West, et al. (1993) suggests that although the inclusion of students with special needs in higher education has been

advocated for years, the buildings were constructed without taking into account the needs of students with physical and sensory impairment and the problems faced by them.

For some respondents, the distance between classrooms and restrooms was substantial, which added to their inaccessibility. As the universities had huge premises, so hostels, academic buildings and libraries were located in different parts of the campus; hence, it was problematic for the students to attend classes regularly without proper transport facility and accessibility. Moreover, the effects of students' impairment, in the current study, was also striking and their participation in educational activities was complicated as it involved excessive effort, fatigue, pain and tiredness, which occasionally led to disengagement or withdrawal. The following narratives represent the feelings of a group of students:

"Recently, my hostel was renovated and expanded. I thought the authorities will put in place a ramp facility at least this time, but they did not do that. Whenever I go to the dining hall, I have to leave my wheelchair and I take my crutches. Since it is a huge dining hall, I could have easily gone and come if they had built ramps."

"I did not find that my disability had affected my studies in any case. But my department was situated on the second floor, so I had to climb many steps to attend classes. After climbing all these steps, I cannot immediately concentrate on what is being taught in the class due to fatigue. I also feel uncomfortable to sit in the class."

"There was a ramp at the entrance of the department but we did not have any lift facility inside the department. It was tiring for me to climb up the steps without proper accessible support."

From our study, we understood that majority of the students were concerned about the classroom arrangement and its accessibility. Two of the respondents informed their course teacher about their problems and requested him/her to change the classroom, but the response was: "This is the only classroom allotted to our department in this building, so we don't have an option. It's better if you could talk to the higher authorities."

The students had a choice of choosing convenient rooms on the ground floor in a hostel, but it was not possible for them to choose convenient and accessible classrooms. Some of the students from Central and State university 'A' stated that they were happy with the initiative taken by the university management as special bus services within the campus were arranged for them. These buses ferried them from the hostel to the department, and then, back to the hostel. It reduced their problems, such as long walks, fatigue and pain. Some of the students from state university 'B' stated that their university constructed disabled-friendly hostel for students with physical impairment.

Disabled-friendly hostels include facilities, such as ramps, railing system, accessible bathrooms, wheelchair accessibility to hostel rooms, washing rooms and bathrooms, and terrace.

2.2. Academic Barriers

The educational experiences of students with visual impairment are different from those with orthopaedic impairment. The learning experience of visually-impaired students in higher education institutions mostly depend on the availability of learning resources and their utilisation. For improving the academic outcome of these students in higher education, it is crucial to take advantage of assistive technology because without its use, students with disabilities will be at a more disadvantageous position than those without disabilities (Getzel and Thoma, 2008). Therefore, in this section, we analysed the data based on the number of students with visual impairment having their own assistive technology.

Assistive technology is a way to help students with visual impairment, so that it becomes possible to provide compensation for the difficulties they face in carrying out their academic work as well as support them in different academic areas. The provision of assistive technology changes the educational experiences of these students while they pursue higher education (Burgstahler, 2002; Goldberg and O'Neil, 2000). Assistive technologies considered in this study are those that are available to the students and help them to maximise their ability to effectively complete the course requirements. Some of the adaptive resources and services include adaptive computers, tape recorders, sound amplification systems, voice synthesisers, calculators or keyboards with bigger buttons, switches and technology assessment and evaluation. The visually-impaired students have to depend on assistive devices, such as computers, speech softwares, and their friends or family members for studies, whereas students with orthopaedic impairment have a problem with accessibility issues, such as accessing the computer centre, library and classroom.

In order to understand the educational experiences of visually-impaired students with and without the usage of assistive devices, we enquired whether the respondents have their own assistive technology or devices. The following section represents the results of respondents having their own technical assistive devices.

We found that more than 75 per cent of the visually-impaired students did not have any kind of assistive devices, such as personal computers with speech softwares, scanners and Braille. It was also found that more than 96 per cent of them used recording devices, such as tape recorders or walkman sets. However, those who had a computer also had scanners, as well as, speech softwares. Students in the Central university had more assistive devices compared to those in the State universities (A and B). It was

found that some respondents from the Central university got this speech software's copy or dummy from the university management, whereas, some got it from their friend circle as it is expensive to buy an original copy. Furthermore, it is seen that neither visually-impaired students from both the State universities (A and B), nor the university management itself had any special software or speech synthesiser.

Learning Experiences of Visually Impaired Students with and without Assistive Technology

In this study, it was found that respondents from both the State universities said that neither the universities, nor students with visual impairment had access to assistive technology or devices, hence they could not scan or read the material. Therefore, issuing books is hardly of any use to them. Some students, who did not use assistive devices, said their educational success depended on the mercy of their friends and peer group members. These students have to approach their classmates during exams. Every time requesting or troubling their friends for help made them feel bad but they had no other choice. It was apparent from the students' responses about the problems they faced, which included limited opportunities to complete their syllabus and rejection from friends. They also said that some of their friends stopped talking or greeting them, fearing that they would be asked for help. The following narratives represent the group of respondents:

"Other than exam time, I am not able to study any other time. In fact, that is discussion only. My friends discuss with me whatever they are reading at the time of exams."

"While in school, I studied with the help of my parents and friends. Now, too, I am taking help from friends, but in the university, everyone will be assigned different work. So, it is not necessary that my friends may also do or read the same work as me. It is not fair to ask them every time to read or record all material related to my assignment or work for me at the cost of their own work."

"If I read for long, my eyes start getting watery. Sometimes, I get a headache, so I have to stop for some time and apply eye drops (as prescribed by doctors). Sometimes, I cannot read and work. I, especially, face problems during the exam time. This is a bad situation for me and it is mainly because of my visual impairment."

"Not only education (reading and writing), but everything is a problem for me. If I need to go to some place, I need someone to escort me. I need to ask my friends if they are ready to help me. If I get someone, I finish my work early, but if nobody is ready to come, or they are busy with their own work, I have to postpone my work for the next day or to some other day."

"Some of my friends even stopped talking to me, fearing that I will

seek their help for reading, writing, recording or some other academic or administrative work."

"Several times, I have asked my friends to help me go to the library, but was often suggested that there was no use of a book after getting it issued, as they would only read it for me. They got the books issued and whenever they would get time, they would read it to me. So, there is no need of going to the library at this moment."

"Till now, I have not been to the library because even if I have books issued, who will read to me? If I had a computer along with a scanner and other assistive devices, I would have got books issued and scanned by this time. But I did not have any assistive devices."

We further enquired about the learning experiences of visually-impaired students, as well as, those who had assistive devices in the learning centre that was specifically arranged with all type of assistive technology, which included scanners, printers and speech softwares. From the data gathered, it was clear that 90 per cent of the participants who used assistive technology were from the Central university. The participants' narratives demonstrated that the provision of assistive devices and their usage influenced their participation in universities. The students who shared their experiences mainly stated that the support of assistive devices facilitated better educational experiences. These included — (a) enhancement of opportunities; (b) helping one to become independent; and (c) augmentation of career and life-flexibility, freedom and autonomy. They noted that the end result was their academic success. Some of the students said that they had good learning experience in their universities because they were getting quality and sufficient support. They believed that support from family members, friends and university management had helped them cope up with the problems that they experienced in higher education had institutions. Moreover, having a number of friends or network also helped them to manage their studies easily. Similarly, the availability of technology helped them to balance their studies and achieve their targets. The following narratives amply bring this out:

"I am always looking for some alternative and that makes it easy for me to complete my studies. I have more friends. If one says that he/she is busy or avoids me, I talk to other friends. Due to my good friend circle, I don't face any problem."

"Till my graduation, I had many problems regarding my studies. But at present, due to technical advancement and its availability on my campus, I do not have major problems regarding studies."

"Till I came here, I used the Braille machine and normal paper for studies. But due to the amount of text and the things I have to write, this machine is not of much help. It consumes much time and energy.

But after coming here, I started using a computer with speech softwares, which has enabled me to reach my targets. It is now easier to write, scan and organise materials with the help of computer technology."

It was apparent from the students' comments that many of the visually-impaired students wanted to be independent. Students who were using assistive technology could not spend sufficient time with their friends or get involved in activities other than studies, because they had to spend a good time collecting course material, scanning, editing or organising the collected text. It was apparent that they had strong motivation not to depend on others for small things. Even though they wanted to be self-sufficient in their work and were determined, their impairment had affected their studies. Due to their physical limitations, they faced problems, such as headache, watery eyes, etc. In the next section, we showed that some of the students did not get a chance of choosing subjects of their interest, whereas, some were more concerned about the completion of the course.

The learning experiences of the visually-impaired students in the Central university have been based on the condition that the university provided them with computer terminals, especially in the library and at the computer centre. It was apparent that the condition of computer terminals or systems, which were provided to them, was not good, and most of the time the computers did not work properly. For some of them, their physical limitations and impairment acted as barriers in accessing the learning resources available in their respective universities. Similarly, a few respondents reported that the library management did not take the responsibility of providing adequate technical assistance whilst the systems were not in a working condition. Most of the students were not taking cassettes from the library because it was not issuing quality cassettes. The following narrative represents the view of a group of respondents:

"There is only one computer system in the library with all kinds of assistive devices, including scanners, printer and speech softwares. Most of the time, a notice is attached to it, which says it is under repair. Since most of the students (student with visual impairment) are not using computers in the library, and, at the same time, there is no demand from their side, nobody is taking the responsibility to repair it."

Since the learning experiences of visually-impaired students with and without the usage of assistive devices were understood, it is important to know the facilitating and hindering factors that affect these students.

Conclusion

Overall, from the students' narratives, it was observed that all three universities have taken up some initiative towards supporting them and provided assistance in accessing the college campus by constructing ramps in most of the buildings, developing disabled-friendly hostels, and accommodating the students in the hostel rooms on the ground floor. However, two universities (Central and State university 'A', which have a disability cell and a coordinator, went a little ahead and arranged special transport facility for the students on their campus. On the other hand, it was also obvious that these students have been facing barriers in accessing classrooms, computer centres, libraries and other administrative buildings in their universities. Despite focused support from the disability coordinator, the physical environment was inadequately adapted for these students; hence, the full inclusion of these students needs to be ensured. A comprehensive access service is required for addressing the needs of all these students, so that they become an integral part of the institution.

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