

# Accessible Infrastructural and Learning Environment: Positions and Possibilities

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**Abstract:** Students with visual disabilities have their academic concerns, which make an impact on their day-to-day learning. Like others, they have limited opportunities to interest or choice based educational access. They usually struggle in accommodating themselves in institutional environment specifically in academics and infrastructural arrangements. Their frequent encounter with institutional environment many times impact their learning outcomes and restricted their participations in many of activities significant for their professional growth. This paper explored the perception of the student teachers of teacher education institutions at Delhi University. The authors tried to analyze the existing infrastructural and learning environment conditions in teacher education institutions and highlighted their immediate concerns. Based on the results and findings of the study, the authors suggested some suitable accommodation strategies with special reference to infrastructure-related support systems, classroom instructions, need-based learning materials, adapted assessment systems, and accessibility unit resource support. These suggested strategies will support providing an accessible learning environment and help in minimizing their exclusion during their study.

**Keywords:** Accessible infrastructural environment, inclusion, reasonable accommodation, accessible instructional strategies.

**Introduction:** The Indian Constitution guarantees equality to all citizens, but persons with disabilities have, in reality, been suffering from stigma,

discrimination, and neglect due to socio-psychological and cultural factors. Historically, people with disabilities have lived in India alongside others, but their treatment and attitudes have varied over time. In terms of education, even the Gurukula education system, which advocated basic education principles for people with disabilities, didn't satisfy the social expectations of prospective populations. It is evident from the history of disability studies that in terms of social and economic empowerment, education is the most effective tool. Let's talk about education at the higher education level. The journey from school education to higher education has not automatically happened. Still, many worldwide initiatives and national policy perspectives played significant roles in attaining this level, particularly regarding disabled people. Disabilities in higher education have a different context regarding access and opportunities. Persons with disabilities have limited access to higher education. The Indian context of disability and higher education is characterized by a variety of educational structures and systems, as well as a variety of different policies that address students with disabilities.

In India, During the Ninth Five-Year Plan, the University Grants Commission (U.G.C.) launched a program popularly known as the Higher Education for Persons with Special Needs (H.E.P.S.N.); this program focused on recognizing the need for special education programs as well as infrastructure for students with disabilities (N.C.P.E.D.P., 2004). One more program, Inclusive Education of Children and Youth with Disabilities (I.E.C.Y.D.), talks explicitly about inclusive education for students with disabilities in higher education. This program is an action plan in which provisions have been made to give equal importance to people with disabilities in accessing higher education. Its provisions focused on increasing access to secondary, higher, and vocational education for young people with disability. The program also emphasized the disabled-friendly assessment system and the availability of special educators and rehabilitation professionals with

experience in disabilities as needed to assess teachers at all levels. The National Policy for Disabled Persons in 2006 directed the state of India to provide a barrier-free environment that supports the independent functioning of persons with disabilities so that they can participate without assistance in their day-to-day activities. Emphasis has been placed on the policy to make buildings, transportation facilities, public places, and educational institutions accessible. Here, the authors also want to highlight the provisions under the most improved and revised version of the Person with Disability Act 1995, which was launched in the year 2016 and is popularly known as the Right to Person with Disability Act-2016(RPwD-2016). RPwD-Act 2016 talks about every concern of disabled persons, makes provisions accordingly and elaborates on every provision comprehensibly. The act covered 21 disabilities; the number of disabilities increased from 7 to 21. One of the critical concerns that researchers want to highlight is that access to the classroom and buildings may be one of the biggest challenges for a person with locomotor disabilities. It is made mandatory for all educational institutions to provide inclusive education with reasonable accommodation according to their individual needs in terms of course structure, medium of instruction, and modes and means of assessment. Section 32 of the R.P.W.D. Act 2016 creates a mandatory obligation for all government educational institutions to provide 5% reservation for the person with benchmark disability, including upper age relaxation of five years for admission to an Institution of higher education (I.H.E.). The new education policy 2020, with particular emphasis on equitable access to quality higher education for all students with specific emphasis on socio-economic groups, further stresses ensuring sustainable refers in schools and higher education (N.E.P. 2020) because the concerns of equity and inclusions are pretty similar across the school and institutions of higher education. The policy also ensures that all buildings and facilities are accessible and disabled-friendly. **N.C.P.E.D.P. (2005)**

surveyed 119 universities; the data revealed that about 0.1 % of students of different disabilities were admitted as per 3% reservation rates. Now, the reservation has increased to 5%.

The latest guidelines of U.G.C. that came out in July 2022 on provisions for students with Special learning disabilities highlighted the report of the National Sample Survey Organization (N.S.S.O., 2011) that in India, 2.2 % of the total population is disabled. Here, it is essential to mention that this data consists of only seven disabilities, as mentioned in P.W.D. Act 1995. Out of the total disabled population, only 1.46 Crore people are literate. The number may have increased after 2016 when the Rights of Persons with Disabilities Act came out, which specified 21 types of disabilities. Now, the population of persons with disabilities also has increased.

The U.G.C. guideline also highlighted the adapted instructional strategies according to the nature of disabilities, keeping in mind the learning style of disabled students. The guidelines also suggested the kinds of assistive devices required to cater to their needs. There are several suggestions for universities to follow for the retention of different types of disabled students; it also illustrates the pedagogical support system required for students with benchmark disabilities. The last chapter of this document (U.G.C. guidelines) emphasized accessibility and pedagogy for different learning-disabled students in higher education. This policy supports and focuses on using Different instructional methods to meet the needs of more students with learning disabilities due to the variety of ways they learn. This broader framework will support the professionals in higher education. Higher education institutions should have to make accessible environments for students with disabilities.

Providing and managing support services for students with disabilities is a complex task. Every kind of disability is unique and requires separate provisions of

inclusion. To establish a universal design for teaching and learning, we need to address all types of diverse concerns across disabilities. There are numerous challenges to overcome, including the availability and accessibility of resources, training of in-service teachers, pre-service teachers' awareness about diversity and special needs of students with disability among staff, effective referral services, as well as emotional and pastoral support for these students to reveal their disabilities and minimize stigma (Allard, 1987; Hall & Tinklin, 1999).

Students with disabilities can use various support services in higher education institutions to improve their learning experiences. Universities are responsible for providing these students with a safe and conducive learning environment. These students will be able to experience better employment opportunities and improved living conditions through participation and learning in general or regular education classes.

This paper is an attempt to highlight the concerns and challenges faced by the institutions of higher education as well as students with disabilities, specifically in teacher education. The authors of this paper tried to incorporate the research work related to this work. **Azad (2008)** suggested in his work that higher education has a significant role in employability, empowerment, and national development. Higher education is considered a contributory factor for ensuring social justice for deprived sections of society, including people with disabilities, by making education accessible to them and, in the process, improving the quality of life of the nation as a whole. **Warnock Committee Report (1978)** emphasizes the importance of reassessing the needs of students with disabilities well before they enter the world of higher education. Many disabled students are unaware of the provisions for admission into higher education. **U.G.C. (2008)** directed the universities to establish resource units that enable the unit to provide the necessary guidance and develop awareness and counselling of students with disabilities

(Jameel, 2005). N.E.C.P.E.D. (2004) emphasized that the infrastructure facilities for the student with disability to be designed in such a manner that enables them to access the classroom, laboratories, toilets, etc. easily. Of the total youth in India, 6% have access to higher education, which when applied to disabled youth population 1.44 million disabled youth should have access to higher education. However, the reality presents a different picture: only 0.1% of students with disabilities are enrolled in various universities.

Some international-level research studies also highlighted that it is a difficult task to provide an accessible environment to students with disabilities. Most studies revealed that past policies have been implemented gradually, and progress has often been slow. The main barriers to these are the social, economic, and pedagogical nature created by society, institutions, and the country itself. And there is a need to take some essential steps for the inclusive education of children with disabilities in higher education. Further, every University must facilitate an inclusive teaching and learning process, and support mechanisms must be built up for visually as well as disabled students [Hieman (2006), Howell's (2005), and Hall's (1999)]. Some studies indicated significant differences between institutions in how policies are implemented. In the same way, how students experienced their academic careers varied greatly from institution to institution and department to department. Several policies were written for disabled students regarding access, enrolment, and buildings. The researcher found significant gaps between policy and its implementation on the ground level (Wilson in 2003).

Considering the work done in different countries and India, it has been found that there are so many systemic hindrances and challenges in establishing inclusive setup in higher education. Authors in this work tried to explore and study the existing infrastructural and academic concerns of students with visual disabilities in higher education. This research work has been entitled as “ACCESSIBLE

## INFRASTRUCTURAL AND LEARNING ENVIRONMENT: POSITIONS AND POSSIBILITIES."

### OBJECTIVE OF STUDY:

1. To study student teachers' views on infrastructural and learning environments in their respective teacher education institutions.
2. To identify immediate concerns of student teachers with visual disabilities in their studies.
3. To suggest some instructional strategies for reasonable accommodation of students with visual disabilities.

**Methodology:** A descriptive survey method of research was used to conduct this research work. Qualitative paradigm of research has been adopted and an ethical framework (in- terms of maintaining the confidentiality and informed consent of participant) was designed to conduct this piece of research work

**Sampling:** A Simple Random Sampling technique was used to select the 20 visually impaired student- teachers pursuing their B.Ed. from all the four colleges of teacher education under University of Delhi. Five students from each college have been selected randomly to get the sample of 20 visually disabled students.

**Tools:** An in-depth semi structure interview schedule and an observation schedule were prepared by the authors to collect the data for this study. The items of tools have been prepared by covering all the necessary elements (infrastructure-related support systems, classroom instructions, need-based learning materials, adapted assessment systems, and accessibility unit resource support) keeping in mind the objectives of the study. The tool was finalised after expert validation.

### Data collection, Analysis, and Interpretation:

The data has been collected by the authors through self-prepared tools covering all the described themes. The collected data has been coded and classified thematically. No specific statistical parameters have been used for analysis. The

collected data has only been analysed qualitatively. A few responses from the sampled population have been converted into percentile scores. The respondents' specific narratives were recorded with specific care and placed as were they and tried to be analysed.

## **FINDINGS OF THE STUDY**

### **Awareness level of students with respect to the Admission Policy**

The majority of respondents were well aware of the process of admission. All of them admitted that the institution's admission committees had supported them to take admission to their particular courses. However, some respondents showed unawareness of their reservation policy and selection procedure. All the participants responded to the question about the scholarships, what they received, and the agency where they received. The particular institution supported them in completing the codel formalities to get the scholarships.

### **Infrastructural Support System: Accessibility and Concerns**

The location of the building was accessible, but there was no available tactile path within the building, no available tactile route to reach the classrooms, office, and faculty member's office, even to the enabling unit, Library, computer room, Drinking water, and in fact, toilets.

“We encountered many problems of accessibility immediately after admission in the course for two or three months, but now we are familiar with our classroom, office, and canteen. We face problems when we need to move to classrooms other than our assigned classrooms. At the initial phase of our course, many of our peers supported us in accessing many places in the building, and now we are adapted to our institution. It will be easier for we people if they may be sign board outside every classroom”.

The majority of the student teachers had shown their concerns regarding the access within the building and suggested installing a coding system and tactile path to be there in their respective institutions. They rarely received any support other than VI

students to reach inside the classrooms and other parts of the building like the Library, labs, canteen, etc, as responded by a large number of participants.

### **Classroom instructions: Accessibility and Concerns**

The majority of students responded that classroom instructions are used by most of the teacher educators to suit their linguistic needs. “The institution tried to club all the students with disabilities only in one section, which sometimes creates an excluded environment for us. Most of the teachers tried to communicate bilingually in Hindi and English, understand our learning barriers, and focus on our immediate learning concerns in the class.” Moreover, the responses collected from the sampled population indicated that the pace of teaching is appropriate as per their diverse needs. The educators repeat their instructions, give individualized attention to them, and try to make accommodations and adaptations according to their needs. Generally, the discussion method is used by the teachers in the classroom; teachers use many illustrations to conceptualize the teaching content. Most of them have different views on the method of teaching as lecture method. They also faced problems completing and submitting their assignments in a time-bound manner. Sometimes, teachers give them extra time, but most of the time, they have to submit the assignment with their nondisabled peers.

### **Availability of the Course Material**

Most of the available course material is in a foreign language, English. All the institutions have not prescribed any particular book for any course; generally, different reading material is required to go through the course content in Bed and Med. “The available reading materials provided to us are in PDF format, but sometimes only a few are in our specified medium of instruction. Only a few of the reading materials are in accessible format and easily available. Most of the time, we have to depend on our peers to provide the course material in PDF and recording format. All teachers allowed us to record the ongoing discussion during the class. Only one-third believe that teachers are not allowed to record the discussion. We

always keep our learning material in audio and pdf formats on our laptops”. The respondents expressed that teachers do not use appropriate aids in class. Most of the student teachers replied that no course-related books in Braille are available in the Library. Most of them believe that PDFs of course books or eBooks should be provided to the library. During the purchase of library books, the concerns of visually disabled students must be considered.

### **Accessibility Unit: Resource Support and Facility Available**

The accessibility unit or Enabling units were available in all the sampled teacher education institutions. However, there is a scarcity of reading material, many aids, and appliances or assistive devices, audio recordings, and braille material. Efforts have been made for many years by the concerned institutions to strengthen their Enabling Units. It is observed that there is a financial crunch before the institutions. There are no specific annual grants for the strengthening of resource support system for the students with disabilities. Only two institutions have braille printer in functional condition. The availability of Braille printers, recording devices, adapted laptops, and other assistive devices were not appropriate as per the strength of students. Many of the devices are old versioned and even not functional. The enabling units of all the sampled institutions supports the students with disabilities to complete all paperwork required to get scholarships and coordinates between the organizations that offer scholarships for the students with disabilities. The institutions also support them by providing scribes during their examination, But to complete their assignments in various subjects, they face many challenges due to the nonavailability of writers. Sometimes, it becomes difficult to arrange the scribes; most teachers allow the students with disability to submit assignments in typed format to resolve the scribe issue, as the majority of the participants responded.

### **School experience program and Field observation**

The views of the participants regarding School Experience Programme have also been analysed, and it has been found that the institution's committees give special care for the allotment of schools for disabled students for their field engagement activities. They have been given the nearest and easily accessed schools by clubbing them in groups of non-disabled peers. The non-disabled peers are especially counselled to facilitate their disabled peers during field engagements (schools and other visit outside the institutions). The respected schools have also been requested to facilitate the students with disability to complete their assigned projects. During the class teaching experience, they are facilitated by their peer student teachers.

### **EDUCATIONAL IMPLICATIONS AND RECOMMENDATIONS**

#### **For Institutions of Teacher Education**

1. One significant study finding revealed that accessibility to the institution is a problem for students with disabilities. Hence, it is suggested that the institution work on this issue and make provisions to manage the tactile path to access all spaces of the building.
2. This study exposed that the student-teachers with disability were not very aware of the provisions for them; therefore, it is suggested that special awareness programs or counselling session should be designed considering the policy perspectives.
3. Although the University has already constituted a help desk for the students during admission processes, but they need continuous support for their accommodation in the institution immediate after admission. Hence, the institutions should organise seminars, conferences, and induction programmes for non-disabled students to support their disabled peers.

4. The study revealed that some institutions have established their Enabling/accessibility Units. Best-suited practices should be adopted for the students with disabilities in the existing infrastructure.

5. The condition of the enabling unit in the sampled institution is not at par with the needs of students with visual disability; although the Enabling units are functional, the critical concern is the lack of assistive devices, infrastructure, and learning material in accessible format due to financial crunches for these units. It is suggested that the Enabling Units should be provided with continuous financial grants to enable them to benefit visually disabled students.

#### **For Teacher Educators**

1. The medium of instruction plays a significant role in the process of learning. The suitable approach for students with visual disability is to provide instructions in audio format and in their respective styles of learning. It has been found that students with visual disability face challenges in opting for the medium of instruction. It is advised that teacher educators should consider this concern and try to provide the opportunity to the students with disability in their respective language. The bilingual instructional mode would be more suitable for them.

2. Most of these student-teachers have Hindi as the medium of instruction in higher education, specifically in teacher education. It is suggested that to include students with disabilities in a general setting; teacher educators should keep in mind the language barrier and try to make their teaching language appropriate to them.

3. Another vital concern of student-teachers with a visual disability is the methodology adopted by their teacher educators. The method of teaching should be appropriate as per the needs of learners. It has been observed that most teacher educators consider the concerns of students with visual disabilities, but sometimes, it becomes difficult for them to change the methodology according to the needs of students with disabilities; the reason may be the lack of expertise of teacher

educators to teach the students with disabilities, and presence of non-disabled in the same class. Hence, it is suggested that the teacher educators working in teacher education institutions should be given opportunities to attend short-term courses specifically designed to handle students with visual disabilities.

4. Another critical concern of students with visual disabilities highlighted in the study was assessment approaches adapted to evaluate their course-work assignments, projects, and examination scripts etc. and it has not been taken care of as per their ability to perform or complete in the desired format as expected from non-disabled peers. Some flexibility is required to given to them for submission of assignments in typed format if they do not have writer. It is suggested that all teacher educators make the approach flexible while considering the concerns of students with visual disabilities.

5. Diverse class composition plays a very significant role; hence, it is suggested that class or section allocation can be made keeping in view the strength of disabled and nondisabled students.

6. The provision to sit in the examination has already been made in several university notifications and by the University Grants Commission and University examination guidelines. The R.P.W.D. Act 2016 has already addressed the need for students with visual disabilities. The students with visual disabilities can be oriented before the examination.

#### **For Peer Group**

1. One of the findings of the study revealed that the non-disabled peers of disabled ones many times do not support them in the same class. Many non-disabled have their first experience of learning with them. It is suggested that a sensitization program should be organized by the institutions. Few volunteer students can be identified to support the disabled. A committee of volunteers can be constituted at

the institutional level. Proper recognition should be given to their innovative ideas and work to help disabled students.

2. The initial phase of students with disabilities in the institution always becomes critical for them; this phase requires an immediate support system. Any institution, with the support system of old volunteer students, can plan to accommodate disabled students. In institutions like teacher education, second-year students can assist the newly admitted one.

3. The study highlighted one primary concern of disabled student to attend their school experience program and field observations. Again, a new environment and accessibility issues come before them; one more time, they need the support of their peers to access the classrooms and prepare and transact lessons in someone's presence. They also have to observe the lessons, classroom processes, and many school activities. They can only complete all these projects with the support of their peers. It is suggested that guidelines be prepared by S.E.P. and F.O. committees for nondisabled peers to support them.

4. There should be a flexible mechanism for appearing in the examination so that support can be obtained from peers. It is suggested that peer or volunteer groups can help to identify the scribe for them.

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