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SWARNANDHRA
COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)
Approved by AICTE, New Delhi ● Accredited by NAAC with "A" Grade
Recognised by UGC Under Sections 2(f) &12(B) of UGC Act 1956
Permanenet Affiliation to J N T U K, Kakinada
Seetharampuram, NARSAPUR- 534 280, W.G.Dist., Andhra Pradesh

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FIE (I) FIETE, MIET., MCSI., MISTE., MISSE
PRINCIPAL

UNDERTAKING

We hereby undertake that we have complied with various UGC regulations and guidelines, particularly the rules, regulations and guidelines pertaining to:

'Accessibility Guidelines and Standards for Higher Education Institutions and Universities'

and the same has been made available on the college website prominently.

College web site: (www.swarnandhra.ac.in)

Swarnandhra College of Engineering & Technology (AUTONOMOUS) SEETHARAMAPURAM 534 280

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शिक्षा मंत्रालय
Ministry of Education
Government of India

Accessibility Guidelines and Standards for Higher Education Institutions and Universities

ज्ञान-विज्ञान विमुक्तये

विशवविद्यालय अनुदान आयोग
University Grants Commission

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Disclaimer

These guidelines are intended as a comprehensive source for achieving accessibility and inclusion in higher education institutions/universities. For specific interventions, other accessibility guidelines and standards issued by the government of India shall also be applicable.

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विशवविद्यालय अनुदान आयोग

University Grants Commission

quality higher education for all

सत्यमेव जयते

शिक्षा मंत्रालय

Ministry of Education

Government of India

Accessibility Guidelines and Standards for Higher Education Institutions and Universities

प्रो. म. जगदीश कुमार
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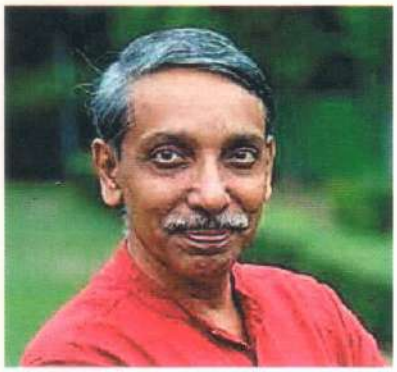
Prof. M. Jagadesh Kumar
Chairman

सत्यमेव जयते

ज्ञान-विज्ञान विमुक्तये

विश्वविद्यालय अनुदान आयोग
शिक्षा मंत्रालय, भारत सरकार
University Grants Commission
Ministry of Education, Govt. of India



MESSAGE

I am glad to inform you that UGC is bringing out its Comprehensive Accessibility Guidelines and Standards for Higher Education Institutions and Universities. These guidelines will play very significant role in making our HEIs accessible and shall be accordingly adhered to by the HEIs. The NEP 2020 has also an envisioned the provisions for extensive use for technology in teaching and learning, removing language barriers, increasing access for Divyang students, and educational planning and management including full equity and inclusion as the cornerstone of all educational decisions to ensure that all students are able to thrive in the system of modern education.

The Government of India launched the Accessible India Campaign (*Sugamya Bharat Abhiyan*) in 2015 to facilitate barrier-free urban development for persons with disabilities in three broad domains i.e., Built Environment, Information Technology, and Transportation. The Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice & Empowerment (Govt. of India) remains the nodal agency for successful implementation of the Campaign. It has been a nationwide flagship campaign to achieve universal access and development for persons with disabilities.

Inclusive practices in education ensure quality education without discrimination to any learner. It fulfils diverse needs in a responsive and supportive manner. Higher education institutions (HEIs) need to create a common learning platform that is flexible and accessible for all the students to learn together including those from varied backgrounds and diverse abilities. Such an inclusive environment will not only be beneficial for the learners but will also form a strong foundation for social inclusion and accessible environments as a whole. Thus, it should result in removing barriers by bringing necessary changes in infrastructure, curriculum, teaching-learning process, and all such components for equal and quality participation in both academic and social aspects of campus life.

University Grants Commission (UGC) aims at improving the participation and learning experiences of persons with disabilities in HEIs. UGC has made several provisions in Higher Education for persons with disabilities including those with Special Needs. This promotes greater accessibilities and a barrier-free environment in HEIs and universities. From time to time, UGC has always been committed to facilitate inclusive practices in all HEIs for the equal participation and academic achievement of persons with disabilities.

The aim of education is to create a learning platform for students from different backgrounds. The world is changing at a very fast pace. Diverse opportunities and innumerable changes and main responsibility of Higher Education System is to shape individuals who perform for common welfare.

(Prof. M. Jagadesh Kumar)

4th July, 2022

Preamble

The University Grants Commission has introduced various initiatives to provide the facilities required by persons with disabilities to ensure their equal participation and inclusion in Higher Education Institutions (HEIs). With an increase in the number of benchmark disabilities and recognizing their needs, it has become imperative to prepare the guidelines to ensure the inclusion of persons with disabilities in HEIs and Universities in an effective manner.

An expert committee has been constituted by the Chairman, UGC to prepare the Accessibility Guidelines and Standards for Higher Educational Institutions and Universities for persons with disabilities are intended to suggest the HEIs make provisions for persons with disabilities and to provide them an accessible environment for their barrier-free participation in all respect. Each HEI is required to develop an effective accessible mechanism at their premises for the persons with disabilities ranging from the admission process till the completion of the course.

To effect the United Nations Convention, the Rights of Persons with Disabilities (RPWD) Act, 2016 was enacted replacing the erstwhile Act, the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995. Section 16, 17, and 18 of its Chapter III (Education) pertains to the duty of the educational institutions and specific measures to promote and facilitate inclusive education; and adult education respectively.

The National Education Policy (NEP) 2020 also envisages that education is the foremost primary measure to achieve economic and social mobility, inclusion, and equality. It highlights the inclusive practices by making corresponding changes in curriculum, pedagogies, continuous assessment, and student support systems to ensure quality education.

Taking a comprehensive view of the inclusion of persons with disabilities in HEIs, these guidelines cover the parameters such as the need assessment and support provision for diverse benchmark disabilities; accessible information, communication and learning resources; inclusive mobility infrastructure; universal accessibility in built infrastructure; accessible curriculum, teaching and learning systems, accessible assessment and examination system, accessibility of resources and services, inclusive campus life; and Governance and Monitoring of Accessibility and Inclusive Practices. Nevertheless, the HEIs may include provisions apart from these to provide equal participation in all respect.

It is hoped that the provisions covered under these guidelines will help the HEIs develop an inclusive mechanism to provide an accessible environment for persons with disabilities to live independently and participate fully in all respects of their educational life.

ज्ञान-विज्ञान विमुक्तये

प्रो. रजनीश जैन
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Secretary

सत्यमेव जयते

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Dr. G.S. Chauhan, Joint Secretary, UGC acted as Co-ordinating Officer. The contributions of Mr. Kishor Kumar, Education Officer, UGC; Mr. Chandra Prakash, Section Officer; other officials and the technical team of UGC is also duly acknowledged.

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I am grateful to Prof. M. Jagadesh Kumar, Chairman, UGC for his guidance, advice and continuous support in preparation of this document.

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Rajnish Jain

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1

Accessibility in Higher Education Institutions : An Introduction

1

Accessibility in Higher Education Institutions : An Introduction

Higher education delivery in India needs to orient and accelerate its reach to persons with disabilities and several others who couldn't be included for reasons of inaccessibility or inadequacies. The new India and new education policy both commit themselves towards an inclusive development of education sector ensuring access for all.

1.1 Introduction to Accessibility and Inclusive Policy Perspectives

a) Inclusive practices in education ensure quality education without discrimination to any learner. It fulfils diverse needs in a responsive and supportive manner. Higher education institutions (HEIs) need to create a common learning platform that is flexible and accessible for all the students to learn together including those from varied backgrounds and diverse abilities. Such an inclusive environment benefits not only the learners but also forms a strong foundation of social inclusion and accessible environments as a whole. Thus, it should result in removing barriers by bringing necessary changes to infrastructure, curriculum, teaching-learning process, and all such components for equal and quality participation in both academic and social aspects of campus life. Needless to say, **accessibility and inclusion** as a concept and culture in HEIs would eventually benefit everyone.

b) University Grants Commission (UGC) aims to improve the participation and learning experience of persons with disabilities in HEIs. During the Tenth Five Year Plan (2002-07), it provisioned the Higher Education for Persons with Special Needs (HEPSN) scheme that promotes greater accessibility and a barrier-free environment. Further, consequent upon the striving need of making the system inclusive, 'Scheme of Equal Opportunity Centre for Colleges' in Twelfth Plan (2012-17) was made available to make the HEIs more responsive to the needs and constraints of the disadvantaged

social groups including persons with disabilities. From time to time, UGC has always been committed to facilitate **inclusive practices** in all HEIs for an equal participation and academic progress of persons with disabilities.

c) Effective guidelines are required to create inclusive HEIs duly supported by the existing acts and policies. Pursuant to the continuum of educational provisions for the persons with disabilities, a remarkable transformation in the welfare perspective of education to cater to the needs of the persons with disabilities has been acknowledged by the Government of India, *where* it has become the signatory and ratified the convention of the United Nations on the Rights of Persons with Disabilities (UNCRPD), in which the inclusive education has been conceptualized at para 11, p. 4 as "*a process of systemic reform embodying changes and modifications in content, teaching methods, approaches, structures and strategies in education to overcome barriers with a vision serving to provide all students of the relevant age range with an equitable and participatory learning experience and environment that best corresponds to their requirements and preferences"* (United Nations, 2016).

d) To give effect to the United Nations Convention, the Rights of Persons with Disabilities (RPWD) Act, 2016 was enacted replacing the earlier Act, the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995. Section 16, 17, and 18 of its Chapter III (Education) pertains to the duty of the educational institutions and specific measures **to promote and facilitate inclusive education** and adult education respectively. Also, Section 19 of Chapter IV (Skill Development and Employment) of the Act specifies certain provisions of imparting vocational training and self-employment. Moreover, the provisions such as reservation in employment and admissions at educational institutions have also been implemented and adherence to the provisions/directions has been emphasized from time to time. Hence, with the emergence of the Act, it has become imperative for the HEIs to comply with such provisions of the Act to safeguard the interest of the persons with disabilities.

e) Moreover, the **Transgender Persons (Protection of Rights) Act, 2019** was also enacted to safeguard the rights of transgender persons and their welfare and the matters connected therewith and incidental thereto *wherein* as per Section 13 and 14 of Chapter VI (Education, Social Security, and Health of Transgender Persons) educational institutions funded or recognized by the relevant governments shall provide inclusive education, sports and recreational facilities for transgender persons, without discrimination on the equal basis with others.

f) The **National Education Policy (NEP) 2020** envisages that education is the foremost primary measure to achieve economic and social mobility, inclusion, and equality. It highlights the inclusive practices by making corresponding changes in curriculum, pedagogies, continuous assessment, and student support systems to ensure quality education. The policy acknowledges that students from socio-economically disadvantaged groups (SEDGs) including persons with disabilities need help and

support to make an effective transition to higher education *wherein* there is a need for incorporating high-quality support centres with adequate funds and academic resources to carry out these effectively and efficiently.

g) Thus, as per NEP (2020), the HEIs are required to adopt measures to make the admission process and curriculum inclusive as well as develop technology tools for better participation and learning outcomes. They also need to provide adequate financial assistance and scholarships to SEDGs and conduct outreach on higher education opportunities and scholarships among SEDGs. They must ensure that all buildings and infrastructure facilities **are accessible** and **disabled-friendly for all**; develop bridge courses for those students who may come from disadvantaged educational backgrounds, and provide socio-emotional and academic support for all such students through suitable counselling and mentoring programs.

h) Enabling Higher Education environments must facilitate that all students who experience disability have the right to access and participate in education, the ability to learn, and the right to exercise their voice, choice, and control in managing their own educational experiences. Their right to develop to their fullest potential and to be an active, valued citizen in the community and their right to an appropriate and adequate allocation of resources to access and participate meaningfully in education need to be fully protected. The HEIs must consider their right to be safe- physically, emotionally, culturally, and socially and be treated respectfully.

i) Ensuring equal participation and inclusion of persons with disabilities in all activities are the priority goals of the nation. Hence, UGC commits itself to support HEIs in all possible manners so that persons with disabilities become part of various academic programs of universities and colleges in good numbers. Making HEIs accessible to all students remains one of the significant goals of the Commission.

1.2 Making Higher Education Institutions Accessible : A Holistic Approach

a) The Government of India launched the Accessible India Campaign (Sugamya Bharat Abhiyan) in 2015 to facilitate barrier-free and universally accessible development for persons with disabilities in three broad domains i.e., Built Environment, Information & Communication Technologies, and Transportation. The Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice & Empowerment remains the nodal agency for successful implementation of the Campaign. It has been a nationwide flagship campaign to achieve universal access and enablement for persons with disabilities through infrastructure ecosystems involving built environment, transportation, and Information & Communication technologies.

b) Different Nodal Ministries of Government of India have framed the accessibility guidelines for persons with disabilities to ensure equitable, universal access to persons with disabilities concerning the physical environment, transportation, and information and communications, which are important from the perspective of higher education set ups - such as **'Harmonised Guidelines for Universal Accessibility for India, 2021'** by the Ministry of Housing and Urban Affairs, Ministry of Electronics and Information Technology, Ministry of Education among others on Built Environment, Information and Communication Technology and e-content guidelines respectively. These guidelines shall play a very significant role in making our HEIs accessible and shall be accordingly adhered to by the HEIs.

c) The higher education systems not only comprises built environments like classrooms, laboratories or libraries, etc. but also of learning and social environments where students from various social and diverse backgrounds participate and become productive and responsible citizens of the country. Hence each environment needs to be accessible to all students irrespective of their abilities and disabilities. Effective guidelines and policies can support HEIs to achieve this important goal. **Inclusive policies** lead to inclusive practices and that ultimately further leads to an inclusive culture in HEIs by creating an atmosphere where everybody feels valued and supported. It is a mandate to provide accessible environment and inclusive services to diverse range of students, faculty and staff in all typologies of higher education institutions and universities ensuring that no one is excluded, denied or discriminated access to education in the HEIs in India, esp. on the basis of their special needs, functional limitations or disabilities.

d) Recognizing, accommodating, and meeting the needs of the persons with disabilities coming from diverse backgrounds, it becomes the primary responsibility for the Higher Education Institutions (HEIs) / universities to provide the facilities or environment that enables persons with disabilities having diverse socio-economic backgrounds to **live independently and participate fully** in all aspect of their educational life at HEIs.

e) To provide an accessible environment to persons with disabilities to live independently and participate fully in all aspects of their educational life, HEIs shall be committed to promoting inclusive practices by (i) ensuring a barrier-free and an inclusive mechanism to help in the admission process, (ii) taking appropriate measures to ensure universal accessibility in it's infrastructure systems, (iii) making adequate provisions and facilities for teaching so that all students including those having disabilities undertake their studies in an inclusive manner (iv) developing and supporting technology tools for better participation

and learning outcomes and (v) facilitating participation in corporate life on an equal basis with others.

f) Accessibility requires to be considered at priority as a significant issue of concern for all HEIs / universities to plan and implement in their respective campuses. These guidelines as issued by the UGC have been broadly structured under ten sections for developing a holistic perspective and understanding towards accessibility in the world of higher education. The sections are :
   (i) Accessibility in Higher Education Institutions: An Introduction
   (ii) Need Assessment and Support Provisions
   (iii) Accessible Information, Communication and Learning Resources
   (iv) Inclusive Mobility Infrastructure
   (v) Universal Accessibility in Built Infrastructure
   (vi) Accessible Curriculum, Teaching and Learning Systems
   (vii) Accessible Assessment and Examination Systems
   (viii) Accessibility of Resources/Services
   (ix) Inclusive Campus Life, and
   (x) Governance and Monitoring of Accessibility and Inclusive Practices.

g) Deaf and hard of hearing students must be provided with the opportunity to learn Indian sign language (ISL) and measures taken to recognise and promote the linguistic identity of the deaf community in India. The Committee draws the attention of State parties to UNESCO's Convention against Discrimination in Education which establishes the right of children to be taught in their own language, and reminds State parties that Article 30(4) requires that persons with disabilities are entitled, on an equal basis with others, to recognition of and support for their specific cultural and linguistic identity, including sign language and deaf culture. In addition, hard-of-hearing students must also have access to quality speech therapy services, induction loop technology and captioning.

h) Creation of partnerships and coordination between all stakeholders, including persons with disabilities through Organisations of Persons with Disabilities (OPDs), different agencies, development organizations, non-governmental organizations (NGO), and with parents/caregivers.

United Nations. (2016). General Comment No.4, Article 24: Right to Inclusive Education. www.refworld.org/docid/57c977e34.html

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2

Need Assessment and Support Provisions

2

Need Assessment and Support Provisions

The various aspects of access and need assessment in higher education include: Curriculum & Instruction; On & Off-Campus Services; Physical Spaces; and Information & Communication Technologies(ICTs). From policies and evaluation of specific needs; to planning and reviewing of curriculum, delivery methods, feedback, individualized modifications, assistive technology, safety, campus climate, events, residential and non-residential facilities and capacity building of stakeholders are major areas for evolving our HEIs towards an inclusive future. One of the most critical aspects however is to understand the specific needs of persons with disabilities by all stakeholders of HEIs including peer groups so that appropriate measures for accessibility and inclusion can be initiated by each institution in information, infrastructure and the overall learning of academic research, campus culture and systems. This section provides an overarching insight into specific needs of different types of disabilities and diversities; and provisions that can ensure accessibility for everyone in all aspects of higher education institutions.

Need Assessment Process for reasonable accommodation shall be duly followed in each HEI / university to ensure inclusion of persons with disabilities. The intent is to holistically assess the needs of persons with disabilities and make supportive provisions for them as reasonable accommodations to facilitate their education in the HEIs / universities. Some of the indicative steps shall include :

Step 1 : Application in a prescribed format to be received from user.

Step 2 : Assessment by internal committee and granting of reasonable accommodation.

Step 3 : Wherever internal committee is not able to arrive at a conclusion, it may take support from external collaborator such as CRCs / DDRCs, etc. and grant reasonable accommodation to

internal committee or in collaboration with an external committee.

Universities / HEIs to connect with the nearest rehabilitation / reasonable accommodation support such as CRCs / DDRCs for need assessment from time to time. This may be done at the beginning of the admission process to clearly assess health or medical / rehabilitation needs and education / campus living needs of persons with disabilities.

Step – 1 Health / Medical & Rehabilitation needs

At the time of joining the institution / university need assessment shall be carried out by a formal board i.e. Need Assessment Board, which shall conduct an assessment of the specific needs of the persons with disabilities.

Step – 2 Education & Campus living needs

Once the person is admitted to the university / HEIs, they may then conduct a thorough assessment to identify the specific needs for education or inclusive campus living.

Reasonable Accommodation

2.1 Disability Specific Needs

Persons with disabilities may have functional limitations due to their respective disabilities which could be well supported through appropriate provisions that address their needs.

Broadly, the aspects that may require accessibility considerations include Mobility; Hand manipulations; Therapy and Medication; Speech & Communication; Vision; Emotional – Behavioral support; Psycho-Social support; Cognitive and Intellectual skills; Self-Care & Daily Living Skills; Healthcare needs; Use of Infrastructure; Use of Information and Communication Technologies, etc.

The specific needs listed below in each category of disability may not be exhaustive. It, however, provides a broad and a generic understanding of diverse needs for various disability types. Further, it is to be ensured that these needs are not reflected as limitations but as domains of support to be provided by the various HEIs / universities to ensure access to education. In other words they may be considered as accessibility considerations or provisions required by diverse disabilities.

2.1.1 Physical Disability – I

a. Permanent Physical Disability (PPD) to Upper Extremities
b. PPD to Lower Extremities
c. PPD of the Spine
d. PPD in persons with Amputation
e. PPD of congenital conditions of the extremities & other conditions

Specific Needs

- May need support in motor and/or fine-motor functioning, locomotor and non-locomotor functioning.
- May need assistance with sitting, mobility, transfers and ambulation.
- May need support to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.

2.1.2 Physical Disability – II

2.1.2.1 Acid Attack Survivors

Specific Needs:

- May have limitations in speech and communication
- May need support in hand manipulations.
- May have limitations in visual acuity hence would have additional needs as applicable to vision disabilities
- May require frequent therapy, surgery, or medication.
- May need emotional-behavioral & psycho-social support.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.

2.1.2.2 Cerebral Palsy

Specific Needs:

- May need assistance with sitting, mobility, transfers, and ambulation.

- May need support to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May need preferential or adapted seating to participate in ongoing activities.
- May have associated intellectual or behavioral conditions and may need adaptations as applicable to intellectual disabilities.
- May need support in self-care and daily living skills.
- May experience vision or hearing disabilities and hence would have additional needs as applicable to vision, hearing and speech disabilities.
- May need specific seating furniture to assist in pain relief and postural control.
- May need support in speech and communication.
- May require frequent therapy, medical interventions, surgery, or medication.
- May require assistance in the use of infrastructure or ICT.

2.1.2.3 Leprosy Cured Persons

Specific Needs:

- May experience difficulty in hand manipulations and thus may need support to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May have limitations in visual acuity hence would have additional needs as applicable to vision disabilities
- May have limitations in mobility, speech and communication hence would have additional needs as applicable to physical and speech disabilities.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.

2.1.2.4 Short Stature/Dwarfism

Specific Needs:

- May need support with seating and mobility.
- May have specific needs related to associated vision, physical, hearing and speech disabilities.
- May need preferential seating to participate in ongoing activities
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.

2.1.2.5 Muscular Dystrophy

Specific Needs:

- May need assistance with sitting, mobility, transfers and ambulation.
- May experience difficulty in breathing.
- May have limitations in speech and communication.
- May experience difficulty in hand manipulations.
- May require frequent therapy, surgery, or medication.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.
- May need preferential seating to participate in ongoing activities.

2.1.3 Visual Disabilities

2.1.3.1 Blindness and Low Vision

Specific Needs:

- May access information in a variety of ways: braille, audio, enlarged print, digital formats, screen reading softwares or other tactile and sensory systems
- May need assistance with orientation and mobility.
- May need preferential seating to participate in ongoing activities
- May need support in concept development.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.

- May require frequent therapy or medication.

2.1.4 Hearing Disabilities

2.1.4.1 Deaf and Hard of Hearing

Specific Needs:

- May need support in speech and communication.
- May need to learn Indian Sign Language (ISL) and communication with all.
- May need assistance in understanding verbal information/directions e.g. difficulty to hear sounds like a class bell, announcements etc.
- May need preferential seating to participate in ongoing activities
- May require frequent therapy or surgery.
- May need to use devices like hearing aids and cochlear implants.
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.
- May require note taking assistance through technology or alternative means such as through peers, etc.
- Providing transition support from school to college or graduation to post graduation, etc.
- Offering clear instructions or demonstrations

2.1.5 Speech & Language Disability

Specific Needs:

- May have trouble with: Articulation – production of speech sounds; Fluency, rhythm & flow of speech; or Voice, quality of pitch, resonance, or loudness.
- May need support in speech and communication.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT
- May require frequent speech therapy or other medical interventions.
- May need preferential seating to participate in ongoing activities.

2.1.6 Intellectual Disability

Specific Needs:

- May need support in speech, communication and social skills.
- May need support in cognitive functioning (decision making, reasoning, problem-solving etc.)
- May need assistance with seating and mobility.
- May need support in hand manipulations.
- May need support to understand information.
- May need support in self-care and daily living skills.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.
- May require frequent therapy or other medical interventions.
- May need preferential seating to participate in ongoing activities.

2.1.7 Specific Learning Disability

Specific Needs:

- May need support in speech, communication and social skills.
- May need emotional-behavioral & psycho-social support.
- May need support to comprehend, speak, read, write, spell or do mathematical calculations.
- May need assistance in understanding verbal and written information/directions.
- May need emotional-behavioral & psycho-social support.

2.1.8 Autism Spectrum Disorder

Specific Needs:

- May need support in speech, communication and social skills.
- May need emotional-behavioral & psycho-social support.
- May have associated intellectual or behavioral conditions.

- May need preferential seating to participate in ongoing activities.
- May need support in cognitive functioning (reasoning, problem-solving, etc)
- May require assistance in the use of infrastructure or ICT.
- May be sensitive to bright lights, loud noises, busy hallways, textures, smells etc
- May require frequent therapy or medication.

2.1.9 Mental Illness

Specific Needs:

- May need support in speech, communication and social skills.
- May need emotional-behavioral & psycho-social support.
- May have associated intellectual or behavioral conditions.
- May need assistance in academic activities due to difficulties in concentration, memory, distractibility, impulsiveness, irritability, fear, anxiety etc.
- May need support in cognitive functioning (reasoning, problem-solving etc.) due to disorders of Thinking, Mood, Perception, Orientation, Memory that grossly impairs judgment, behaviour, capacity to recognize reality, or ability to meet ordinary demands of life.
- May need preferential seating to participate in ongoing activities.
- May require assistance in the use of infrastructure or ICT.
- May be sensitive to bright lights, loud noises, busy hallways, textures, smells etc.
- May require frequent therapy or medication.

2.1.10 Chronic Neurological Condition – Multiple Sclerosis

Specific Needs:

- May need support in motor and/or fine-motor functioning, locomotor and non-locomotor functioning.
- May need assistance with sitting and mobility.

- May need support in hand-functioning to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

2.1.11 Chronic Neurological Condition – Parkinson's disease

Specific Needs:

- May need support in motor and/or fine-motor functioning, locomotor and non-locomotor functioning.
- May need assistance with sitting and mobility.
- May need support in hand-functioning to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

2.1.12 Blood Disorder – Sickle Cell Disease

Specific Needs:

- May need support in motor and/or fine-motor functioning.
- May need assistance with seating and mobility.
- May have limitations in visual acuity.
- May need support in hand-functioning to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities

- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

2.1.13 Blood Disorder – Thalassemia

Specific Needs:

- May require frequent therapy or other medical interventions.
- May need support in motor and/or fine-motor functioning.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

2.1.14 Blood Disorder – Haemophilia

Specific Needs:

- May require frequent therapy or other medical interventions.
- May need support in motor and/or fine-motor functioning.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

2.1.15 Multiple Disabilities

Specific Needs:

- May need support in speech, tactile sign language, communication and social skills.
- May need support in cognitive functioning (reasoning, problem-solving etc.)
- May experience vision or hearing disability
- May have associated intellectual or behavioral conditions.
- May need specific seating to assist in pain relief and postural control.
- May need assistance with seating and mobility.
- May need support in motor and/or fine-motor functioning, locomotor and non-locomotor functioning.

- May need assistance with sitting, mobility, transfers and ambulation.
- May need support to understand information.
- May need support in self-care and daily living skills.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.
- May require frequent therapy, surgery or other medical interventions.
- May need preferential seating to participate in ongoing activities.

2.1.16 High Support Needs

Specific Needs:

- In terms of accessing higher education, a person with high support needs may require intensive support, in the form of an attendant/ carer for assistance in activities of daily living (ADLs), other physical, psychological support and otherwise to take independent and informed decisions to access facilities and participate in all areas of life including education, family & community life, treatment/therapy and employment.

2.1.17 Gender Needs for inclusion

- May need emotional-behavioral & psycho-social support.

2.1.18 Transgender Persons

Specific Needs:

- May need emotional-behavioral & psycho-social support.
- May need support in campus records and documents.
- May require assistance in participation of activities or use of facilities.

The needs enlisted above across all disabilities are not comprehensive and every individual or group/sub-group of disability may demonstrate further diverse needs as it is a contextual and dynamic concept. Hence proper assessment of needs and documentation of the same is important. The needs may be changing with time and it may be necessary to repeat the need assessment on request of a person with disability or on the basis of observations made by the faculty/ stakeholders of HEIs.

2.2 Specific Needs : Designing Accessible and Inclusive Curriculum

Universities and HEIs shall require to design accessible and inclusive curriculum in view of the specific needs of persons with disabilities. Considerations while designing and developing programmes / courses must include support provisions in Curricular Aspects that address specific needs at the level of Curricular Design and Development; Curricular Planning and Implementation; Academic Flexibility; Curriculum Enrichment; and Feedback Systems.

- Curriculum flexibility with a choice of subjects (both theory & practical).
- Planning for reduced course load, subject waiver, or subject substitutions.
- Offering plus-curriculum or expanded-core curriculum subjects.
- Flexibility in course schedules and academic calendar.
- Flexibility in the pace of the course content to allow for multiple speeds for learners.
- Flexibility in attendance requirements.
- Specify overall learning goals and specific learning objectives relevant to each diversity.
- Ensuring learning objectives cover cognitive, affective and psycho-motor domains.
- Offering multiple means of instruction to address a range of learning styles.
- Suggesting multiple options for students to demonstrate learning (e.g. assignments that are writing-based, problem-based etc.)
- Offering a variety of pedagogical choices in each discipline for diverse learning styles and functional needs (e.g. lecture, team-based learning, problem-based learning, Socratic method, simulations, role-play, debate, service-learning etc.)
- Developing clear rubrics and grading criteria.
- Flexibility in good quality assessment and evaluation methods.
- Availability of syllabus in various accessible formats as per the need of the student (digital copy, hard-copy, braille, large-print, images with verbal descriptions, Indian Sign Language formats, appropriate colour schemes, etc.)
- Include a list of reference material, reading material and textbooks that are available in accessible formats (eg. Visual media with subtitles, digital material compatible with screen readers etc.)
- Include a clear statement of how it addresses issues of diversity, inclusion and overall engagement.
- Developing a checklist for resources or accommodations that students may need to maximize their learning (both offline and online classroom).

For details in relation to curriculum development and implementation, Chapter 6 be referred.

2.3 Special Needs : Admission and Promotional Activities

All promotional activities including advertisement and surveys to measure/analyze the effectiveness of courses/campus activities. These will also include support in: Admission Processes; Advertisement Notification; Filling of Admission Forms; Processing for Admission; Counselling; Admission; Induction & Orientation.

- Ensure admission announcements and advertisements are circulated in accessible formats.
- Ensure that the content on the website, email and social media campaigns can be read by various assistive technologies; enlarged; meets color and contrast ratio requirements; includes alternatives for visual content; videos use closed-captioning and description.
- Encourage the translation of e-content in Indian Sign Language formats progressively.
- Ensure events and interviews (in-person or virtual) are offered in accessible venues and formats.
- Offer alternative communication support at all stages/processes of admission.
- Offer multiple formats for program information, such as large print, audio or video information.
- Offer multiple formats for Application Forms, such as digital, large print, braille, etc. also include a sample filled-in form.
- Make sure online materials and tools meet WCAG compliance.
- Include diversity and inclusion statements and information about how to access accessibility resources throughout admission materials.
- Include information on resources on campus providing student support that is not stated in the syllabus such as counselling center, LGBT resource center, etc.
- Make it clear that you value and respect their diverse backgrounds and identities.
- Work collaboratively with student support services to ensure an easy transition for enrolled students.

2.4 Special Needs : Administrative and Support Aspects

Universities and HEIs shall facilitate the provision of accessibility in administrative and other supports needed by diverse individuals with disabilities. The HEIs / universities shall ensure proper need assessment through their Disability / Equal opportunity Cell.

Provision of support at all activities for effective transition of students into the system, including Registration; Academic Support; Facilitating Stay & Conveyance; Fee Submission; Sponsorship; Time Table, Schedules and Academic Almanac; Grievance Redressal; Release/Delivery of Marksheet, Certification, Diploma, Transcript, Migration etc.; Counselling (Pre-exam, post-exam, career-planning etc.); Fellowship and Scholarships; and Capacity Building of Staff.

If the HEI / University has medical facilities on campus, further facilitation of medical / therapeutic support be extended.

For each category of disability, accessibility considerations include measures for supporting: Mobility; Hand manipulations; Therapy and Medication; Speech & Communication; Vision; Emotional-Behavioral support; Psycho-Social Support; Cognitive and Intellectual Skills; Self-Care & Daily Living Skills; Healthcare needs; Use of Infrastructure; Use of Information and Communication Technologies (ICTs) etc. Some examples of measures may include:

- Creating a universally accessible environment at campus & it's various facilities ranging from administrative to academic, mobility to residential facilities.
- Offering course waivers or substitutions or option of reduced course load.
- Flexibility with attendance, timetable/schedule etc.
- Allowing the use of assistive aids and technology.
- Providing conveniently located parking.
- Providing an opportunity to reschedule classes to an accessible location.
- Allowing service animals in facilities.
- Providing priority registration facility.
- Providing advance notice of class schedule and/or room changes.
- Familiarizing the student with the layout of the campus, classroom, laboratory & all facilities, noting the closest exits and locating emergency equipment etc.
- Facilitating raised line campus maps and tactile models of graphic materials.
- Offering advance notice of class schedule and/or room changes.
- Releasing results and documents in accessible formats like large-print, braille, a digital format supported by technology etc.

- Providing assistive lab equipment eg. Talking calculators, light probes, tactile timers etc.
- Releasing results and documents in accessible formats like large-print, braille, a digital format supported by technology etc.
- Ensuring accessible websites, social media, online materials/tools with WCAG compliance.
- Establishing diversity-friendly communication benchmarks.
- Safety, privacy and confidentiality measures.
- Assigning teaching assistants.
- Measures to showcase access, enrolment, retention, participation and achievement.
- Formation of alliance clubs etc.

Other specific considerations for Visual Disabilities (Blindness & Low-Vision)

- Providing academic support through Plus-Curricular (Expanded Core-Curriculum) Activities
  - Braille Reading & Braille Writing
  - Orientation & Mobility
  - Independent Living Skills
  - Sensory Training –Efficiency skills to use hearing/touch/smell/taste, optical devices.
  - Use of mathematical devices such as Taylor's Frame & Abacus
  - Compensational skills are necessary for accessing core curriculum like concept development, organization & study skills, tactile graphics, audio material etc.
  - Social Interaction Skills
  - Recreation and Leisure Skills
  - Career Education
  - Assistive Technology
  - Self Determination skills like choice-making, decision-making, problem-solving, personal advocacy, goal setting, conflict resolution etc.

Other specific considerations for Hearing Disabilities (Deaf & Hard of Hearing) & Speech and Language Disability

- Making sign language interpreters available.

- Providing visual alternatives for sound-based information like class-bell or verbal announcements.
- Providing academic support through Plus-Curricular (Expanded Core-Curriculum) activities:
  - Audiology
  - Career Education
  - Communication (Oral/Auditory-Oral; Verbal Uni-Sensory; Sign Language; Total communication)
  - Functional Skills like study and organization, concept development, cultural awareness etc.
  - Self-Determination and Advocacy
  - Social-Emotional Skills
  - Using interpreters and transliterators
  - Technology

Other specific considerations for Intellectual Disability, Specific Learning Disability, Autism Spectrum Disorder, Mental Illness, Multiple Disabilities and High-Support Needs:

- Providing Transition support from school-to-college or graduation-to-post graduation etc.
- Providing Scaffolding or step-by-step guidelines of each administrative aspect.
- Offering highly structured instructions or demonstrations to be presented in more than one way.
- Providing academic support through Plus-Curricular (Expanded Core-Curriculum) Activities
  - Self-Help and Independent Living Skills
  - Therapeutic support for speech, physio, occupational or sensory needs
  - Compensational skills are necessary for accessing core curriculum like concept development, organization & study skills, tactile graphics, audio material etc.
  - Social Interaction Skills
  - Recreation and Leisure Skills
  - Career Education
  - Assistive Technology

- Self Determination skills like choice-making, decision-making, problem-solving, personal advocacy, goal setting, conflict resolution etc.

2.5 Specific Needs : Teaching and Learning

Provision of support at all processes linked to learning and skill development, including:

- Student Enrolment and Profile
- Catering to Student Diversity
- Teaching-Learning Process
- Teacher Profile and Quality
- Evaluation Process
- Student Performance and Learning Outcomes
- Student Satisfaction Survey
- Getting along with the Theory curriculum
- Getting along with Practical curriculum
- Availability of Accessible Learning Resources
- Assignments, Projects & Course Works
- Participating in learning programs of other Departments
- Participating in Campus Life Activities
- Participating in Competitions and Events
- Participating in Excursions and Tours
- Considerations during Holidays
- Library & Reading resources
- Digital accessibility

Some examples of support for Physical Disability-I

- Use of note-takers and appropriate assistive technology
- Provide digital copies of the text (along with a complete list of accessible reference documents)
- Ensuring all off-desk activities are physically accessible or provide alternate assignment options
- Including the students while forming study/ work groups
- Giving extra time for assignments/presentations
- Modification in seating / furniture

Some examples of support for Physical Disability-II

- Extra time to reach the class, complete assignments/projects etc.
- Permission to record lectures in audio/video mode.
- Permission to briefly leave or move about during the class
- Giving multiple options to demonstrate learning (e.g. assignments that are writing-based, problem-based etc.)

Some examples of support for Visual Disabilities (Blindness & Low-Vision)

- Allowing the students to determine the ideal sitting location to see, hear and if possible, touch the presented material.
- Assisting the students in labelling lab materials so that they are easily identifiable.
- Verbal description of class activity, such as when a show of hands is requested, stating how many hands were raised.
- Voice recorders, computers, digital slates, styluses for note-taking.
- Permission to audio/video record lectures.

Some examples of support for Hearing Disabilities (Deaf & Hard of Hearing)

- Seating which allows a clear view of the instructor, interpreter and the board.
- Visual aids including captioned videos.
- Access to word-processor, use of an ISL interpreter for directions.
- Supplement with written instructions, assignments and directions.
- Providing unfamiliar vocabulary in written form, on the board, or in the handout.
- Permission to audio/video record lectures

Some examples of support for Speech & Language Disability

- Permit time to speak without unsolicited aid in filling the gaps in their speech.
- Modification in assignments such as a one-to-one presentation or use of the computer with voice synthesizers.
- Alternative assignments for an oral class report
- Use of assistive devices and alternative communication methods

Some examples of support for Intellectual Disability, Specific Learning Disability & Autism Spectrum Disorder

- Allow students to focus on parts of a topic /project; rather than the entire concept.
- Word processor with spell-check and/or voice output to provide auditory feedback
- Transition support during time-table
- Allow for choice in assignments
- Provide breaks during classes (if needed)

Some examples of support for Mental Illness

- Preferential seating arrangement (near or door or at the back of classroom etc)
- Assistance with time-management and study skills
- Pre-arranged or frequent breaks
- Personal and private feedback

Some examples of support for Chronic Neurological Conditions and Blood Disorders

- Allow frequent breaks to go to drink water, washroom, medical room/take medicine during class.
- Allow occasional rest from curricular activities.
- Providing recorded lectures/course material
- Extreme care for hygiene and cleanliness

Some examples of support for Multiple Disabilities and High Support Needs [such as Deafblindness, etc.]

Persons with deafblindness shall be provided support through

- Study material in braille
- Tactile sign language interpretation and
- Provision of Assistive Technologies like braille note takers.

However, persons with multiple disabilities including deafblindness shall also be supported through

- Scaffolding or step-by-step guidelines for each task/activity contextualised for their specific needs
- Assistance in performing classroom and personal care activities
- Support in classroom mobility and communication
- Sensitivity for challenges in concentration, distractibility, time management, cognitive abilities, social skills etc.

Some examples of support for Gender needs and Transgender Persons

- Gender friendly classroom environment and transactions
- Develop positive self-concept and self-esteem among students.

2.6 Special Needs : Assessment, Examination and Evaluation

Provision of specific need support at all academic procedures pertaining to continuous assessment and examination, including:

- Preparation for examinations
- Availing additional coaching & training for competitive examinations
- Continuous Support for examination and evaluation
- Appearing examinations
- Evaluation
- Access to results & related procedures of re-evaluation, re-totalling etc.

Some examples of support for sub-categories of Physical Disability – I & II

- Alternate test formats such as use of readers, written exams etc.
- Use of scribe or speech-to-text software to record answers to an exam
- Extended time for examination
- Alternate test locations
- Use of computers/ aids/ devices during exams etc.

Some examples of support for Visual Disabilities (Blindness & Low-Vision)

- Compensatory time for examination.
- Provision of braille/large-print question paper or alternate test formats such as audio, use of readers etc.
- Use of computer or assistive technology

Some examples of support for Hearing Disabilities (Deaf & Hard of Hearing) and Speech & Language Disability

- Substitute oral exams/ viva etc with written or any other alternative modality.
- Providing an alternate non-verbal way for exam bell or announcements.
- Allow use of hearing aids, cochlear implants and communication devices.
- Compensatory time for examination.
- Learners with communication impairments must be provided with the opportunity to express themselves and learn using alternative or augmentative communication. This may include but is not limited to provision of Indian sign language, low- or high-tech communication aids such as tablets with speech output, voice output communication aids (VOCAS) or communication books.
- State parties should invest in developing expertise, technology and services in order to promote access to appropriate technology and alternative communication systems to facilitate learning. Substitute oral exams/ viva etc with written or any other alternative modality such as Indian Sign Language.

Some examples of support for Intellectual Disability, Specific Learning Disability & Autism Spectrum Disorder, Multiple Disabilities and High Support Needs

- Alternate modalities for examination and evaluation; or alternate/adapted question papers
- Quiet, distraction-free examination area
- Breaks during exam
- Exam given by page or by section
- Scaffolding or step-by-step guidelines for examination.

Some examples of support for Mental Illness

- On-demand examinations
- Extended time for exams or breaks during exams.
- Quiet, distraction-free examination area
- Exams given by page or by section

Some examples of support for Chronic Neurological Conditions and Blood Disorders

- Extended time for exams
- Use of scribes
- Exam modifications eg. Shorter exam duration, on-demand exams etc.
- Allow breaks during exams for washroom, taking medication, moving around etc.

2.7 Specific Needs : Student Activities

Provision of specific need support at major students' activities which will be conducted and facilitated by the student council, including Student Support and Progression; Campus Life; Student Participation and Activities; Alumni Support and Engagement; Peer Group Development; Campus Recruitment etc.

The student council must engage with the diverse group of students, and work closely towards accessibility considerations for:

- Promoting an environment conducive to educational and personal development
- Enhance communication between students, management and staff
- Promote friendship and respect among pupils
- Represent views and concerns of students
- Assist with induction and/or mentoring for the first year of study
- Contributing to the development of college policy etc.

2.8 Specific Needs : Additional Considerations

While modifications will always be necessary for some capacity for improving and ensuring accessibility; and it can only be improved if we listen openly to hear from the experiences of fresh applicants and persons with disabilities.

We must also update ourselves to learn from disability scholars on the latest research and best practices, and critically think about existing traditional processes and practices.

While a host of resources already exist for improving accessibility, that has been developed by the National Institutes, NCERT, NGOs, DPOs, State and Central level organizations, UGC etc; there is an urgent need for convergence to develop a comprehensive document.

Additionally, to ensure full and equal access to university programs and facilities, a holistic approach must include considerations for providing:

- Additional Health-Care Support
- Support for Remedial Education
- Support for Plus Curriculum
- Therapeutic Support
- Mental Health Support
- Wellness Support
- Support during Pandemic and Disaster
- Access to online education
- Accessible web/video conferencing platforms that support assistive technologies etc.

Accessibility considerations must cover all aspects of assuring that persons with disabilities can participate and have the same choices as their typical peers. It must be ensured to remove any barrier that stops, impedes, prevents or causes difficulty for an individual to fully participate in all aspects of higher education. Considerations above will help design an environment that is free from architectural/physical; systemic/organizational, information/communication, attitudinal and technology barriers.

HEIs are encouraged to invest in developing expertise, technologies and services in order to promote access to appropriate technology and alternative communication systems to facilitate learning for all kinds of disabilities.

3

Accessible Information, Communication and Learning Resources

3

Accessible Information, Communication and Learning Resources

Access to information principally implies a focus to create and provide information for diverse purposes in higher education including moving to and around the campus, interacting with administrative systems, participating and engaging in learning activities and anything else that's considered part of a higher education environment. Information and Communication Technologies (ICTs) play a vital role in today's learning environments and in enhancing accessibility to information. As a guideline, it is recommended that all HEIs and universities shall strive to integrate the best possible ICTs and other means of communication to ensure access to information to diverse users including ones with visual and hearing impairments. This chapter shares further insights into various dimensions of accessibility provisions through ICTs for implementation across HEIs and universities across the nation.

3.1. Procurement Guidelines to ensure ICT Accessibility

Similar to the accessibility of the built environment, it is essential to ensure accessibility of information and communication technology infrastructure for full participation of persons with disabilities as employees or as students of higher education institutions and universities. For example, if the biometrics and software-based attendance system of the institution are not usable with speech or haptics output, then persons with blindness will not be able to mark their attendance.

Section 16 and 17 (Chapter 3 on Education) and Section 42 on Access to Information and Communication Technology of the RPWD Act 2016 make it mandatory for all educational institutions to make their environment including ICT infrastructure accessible for persons with disabilities.

Bureau of Indian Standards (BIS) has notified standards on ICT accessibility, namely IS 17802. These standards define what accessible ICT products and services mean. It is essential that all ICT products or services procured or created by institutions affiliated with the UGC adhere to these standards.

For example, if the institution hires services or creates its website, it must follow clauses related to the websites within the BIS standard and the conformance requirements of the standard (these conform to W3C Web Content Accessibility Guidelines Level AA). The ICT products and services would include websites, apps, learning management systems, office equipment, software, etc.

Similarly, the specifications drawn for inviting quotations or issuing tenders on ICT products and services such as computers, software, etc., would need to mention the clause adhering to the BIS standard ETSI ES 200 381-2 as provided under the IS 17802. In other words, the institution shall not purchase any ICT devices or services that are not usable by persons with disabilities.

Accessibility shall be ensured at the time of procurement of any ICT, hardware / software or services.

3.2. Accessibility of instructional material and learning resources

Instructional materials, written correspondence, circulars, or any other official documents need to be in a format readable and understandable by all, including by persons with disabilities. It is the responsibility of the institution that if the content in its original format is not accessible, then the same is converted to a format that is usable by persons with disabilities. Section 52(1)(zb) of the Indian Copyright Amendment Act (2012) allows for such conversion of the copyrighted materials without seeking prior permission of the copy-right owner.

3.2.1 Standards to be followed for digital content

All education institutions shall ensure that following the universal design principles, all e-content (online or offline) adheres to the e-content accessibility guidelines issued by the Department of Education, Government of India[1].

For example, a scanned image of a document is not readable with screen reading software. Similarly, if an Indian language digital document is prepared using a font that does not comply with Unicode standards, then such document is also not accessible with Assistive Technologies. Therefore, it is essential that digital documents have editable text in fonts compliant to Unicode standards. For ease of reference, the table below provides a list of accessibility guidelines and their validation tools for different digital content formats:

Table 3.1 Accessibility Guidelines and their Validation Tools for Digital Content

Content Type	Standard	Validator
Microsoft Word Document	Office Accessibility Guidelines	Word accessibility checker
PDF	PDF-UA	PDF Accessibility checker
EPUB	EPUB Accessibility Guidelines	ACE (Accessibility Checker for EPUB)
Websites, Videos and apps	WCAG (Web Content Accessibility Guidelines) or GIGW	AXE, WAVE, Etc.
Audio	DAISY	DAISY Validator
Fonts for Indian languages in all above types	Unicode	---

3.2.2 Content to Be Born Accessible

It is not possible to recreate and republish all digital content in accessible formats after first creating inaccessible versions of it, such as use of non-Unicode fonts for Indian languages. Thus, it is essential to follow e-content guidelines right at the stage of creation of any digital content by the institution, including for creating handouts, correspondence, instructional materials, question papers, and any other documents and publications. This saves duplication of effort and resources. At the same time, digital content adhering to the e-content accessibility guidelines provides a rich reading experience for everyone, not just for persons with disabilities.

For this purpose:

- Organize awareness events and training for content producers and publication divisions
- Issue clear guidelines for content creators regarding accessibility practices

- Ensure accessibility guidelines form part of all processes drawn for content creation and production

3.2.3 Service to convert instructional materials into an accessible format

Instructional materials such as prescribed books, recommended readings, books suggested by faculty to their students or the handouts provided by them, etc. need to be in a format that persons with disabilities could read themselves. It is the responsibility of the institution to convert the instructional materials into accessible format if the original format of the materials is not accessible. For example, hard copy print books or photocopied materials are not readable by persons with blindness, low vision, dyslexia, etc. If such learners are in the classroom, then institutions need to provide a service to make all required instructional materials in accessible formats such as accessible EPUB, braille, large print, audio, easy to read, plain language, and sign language, etc. Choice of the format would depend not only on the disability but also on the availability of assistive technology or skill level of persons who need such accessible materials or the choice of learners with disabilities.

Note: If instructional materials are converted to the accessible digital format described above, then the same can be delivered in multiple formats such as braille, audio, or large print as per the requirements of the persons with disabilities. Thus, in most cases, providing instructional materials in accessible format involves the conversion of hard copy materials into accessible digital format.

It is also preferable that persons with disabilities are provided with assistive technology such as computer/smart phone with screen reading software, refreshable braille display, DAISY player, etc. so that institutions can focus on the conversion of materials in accessible digital format. This digital document will then become audio, braille, or large print on the device of the person with disability. For example, if a person with blindness needs his/her materials in braille, then, it would be preferable to provide such students with a refreshable braille display along with the digital text readable on it. Similarly, for persons with hearing disabilities, the material should be provided through sign language or evolving technologies for Indian sign language translation.

Suggested workflow for institutions is:

1. Faculty and students with disabilities determine required instructional materials in an accessible format
2. Requirement is given to the designated person of the institution
3. Designated person organizes accessible format copy of the instructional material through

a. Searching resources of accessible format books and if not available in an accessible format already, then:

(i) Get material converted to accessible format through book conversion facility within the institution or

(ii) Get the book converted through external resources such as conversion companies or NGOs providing such services on paid or voluntary contributions.

b. Upload the accessible book on Sugamya Pustakalaya (national repository of accessible format books)

c. Deliver the book in the desired format to persons with disabilities or inform them that their book has been made available on Sugamya Pustakalaya from where they can download the book.

3.2.4. Sugamya Pustakalaya

Sugamya Pustakalaya is a shared online library of accessible format books created jointly by the Government of India and Non-government organizations. It can be accessed online through **www.sugamyapustakalaya.in.** The key objective of this online repository of accessible format books is to avoid duplication of conversion of books in an accessible format. Conversion of instructional materials in accessible format needs a lot of financial and human resources. Instructional materials required in one institution would be useful for many institutions all across the country. When there is a need for any book in an accessible format, institutions need to search for the book on Sugamya Pustakalaya. If the book is not available there, then only the conversion of the book in accessible format should be done and then uploaded on Sugamya Pustakalaya to add the same to the national collection.

Sugamya Pustakalaya has been created as a secure distribution system of accessible format materials produced under copyright exception for persons with print disabilities. It is part of the Accessible Book Consortium (ABC), Global Book Service hosted by the World Intellectual Property Organisation (WIPO). Partner libraries across the globe contribute their collections of accessible digital books to the ABC catalogue under the framework set out in the Marrakesh Treaty to facilitate access to published works for persons who are blind, visually impaired or otherwise print disabled.

Thus, institutions are required to:

- Subscribe to Sugamya Pustakalaya
- Upload instructional materials and books converted to accessible format on it
- Provide membership of it to all students and faculty with print disabilities

3.3 Accessible Communication

Communication is vital for any learning environment and particularly for students with hearing impairments. To take advantage of their residual hearing, amplification systems such as loop induction and/or FM system are recommended to be installed as they are beneficial to access acoustic information including alerts.

To further enhance inclusion, videos in Indian Sign Language (ISL) should be developed for certain topics, where a deaf educator explains certain concepts in detail in sign language. It should be an additional link for those who may need it.

The HEIs / universities shall advocate the development of Total Communication Strategies as part of their academic systems along with digital technological support through hearing enhancement systems, close captioning, sign language interpretation and relay services.

3.4 Assistive Technologies for Diverse Needs

Assistive Technology plays an important role in overcoming limitations caused by disability, especially in education. For example, a computer loaded with screen reading software enables students with blindness to read and write independently in the same format or mainstream script as everyone else, making them independent for all their reading and writing needs.

As part of reasonable accommodation, the institution must ensure that every student or faculty or employee with a disability associated with them is provided the Assistive Technology required by them. The device must be accompanied with appropriate training so that they can fully utilize the Assistive Technology devices. Where relevant this must be accompanied by awareness-raising activities and sensitization programmes for different stakeholders such as teachers, family members etc. so that they are made aware of the usefulness of these solutions and the changes are sustainable and long-term. It is also essential to create awareness about the latest developments in the field of Assistive Technology solutions so that associated persons with disabilities can take full benefit of these solutions and acquire skills to use them for furthering their quality education and livelihood prospects.

For this, institutions of higher education shall:

a) Organise at least one awareness and orientation seminar or workshop per year on the latest Assistive Technology solutions relevant for quality education and livelihood prospects.

b) Create or associate with Assistive Technology resource centers where persons with disabilities could experience and choose appropriate Assistive Technology solutions with the help of Assistive Technology experts.

c) Provide appropriate Assistive Technology devices to the associated persons with disabilities at subsidized rates or free of cost.

d) Organise training for persons with disabilities to use Assistive Technology solutions.

e) Organise awareness and orientation events for the teachers and family members of persons with disabilities about Assistive Technology solutions so that capabilities developed through these solutions could be fully utilized and made part of teaching and learning methodologies. For example events for teachers, students with disabilities, and their peers on how to create accessible formats of documents.

f) HEIs would maintain a suggestive list of Assistive Technology solutions that may be provided under the subsidy scheme to persons with disabilities. A specific scheme may be formulated for this purpose.

g) Work with persons with disabilities to provide the best service at their visit, consult local communities and empanelled vendors to integrate assistive technology into their usage to meet the requirement of a varied range of disabilities.

https://www.education.gov.in/sites/upload_files/mhrd/files/CWSN_E Content_guidelines.pdf

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4

Inclusive Mobility Infrastructure

4

Inclusive Mobility Infrastructure

Mobility is critical to all forms of life including education. It is therefore extremely relevant and important to enhance accessibility to HEIs through inclusive mobility infrastructures keeping in view mobility to, from and in HEIs. This includes physical infrastructure for mobility like streets, kerbs, side walks, etc. along with para transit systems that a campus provides for mobility on it's premises.

All HEIs should get a mobility audit survey conducted of the campus to identify the needs of accessibility and sustainable mobility infrastructure for the diversity of students and staff and prepare a 'mobility action plan' to implement the same in a time-bound manner.

4.1 Mobility to Campuses of HEIs (Public Transit Systems)

The absence of reliable and accessible mobility options to and from the Higher Educational Institutions can be a huge barrier for enrolment and retention of students with disabilities but also staff with disabilities in the higher education system. The HEIs need to network with the public or state transport agencies to provide sustainable and accessible public transport facilities to the HEIs campus and back. These public transport means should respect the travel passes /concessional students passes provided by the Central or State governments. Until accessible public transport facilities have been organized, the HEIs should provide suitable accessible transport for attending the HEIs to persons with disabilities. The accessible vehicles so provided may be either low floor or with lift facilities and shall have wheelchair restraint systems for enhanced safety besides other support systems.

Besides the above mentioned focus to evolve campus mobility systems, it is equally important to ensure that HEIs / universities provide accessible connectivity with diverse means of transport.

4.2 Inclusive Mobility on Campus

The universities / HEIs shall ensure first to last mile connectivity on their campuses to ensure inclusive mobility for all. The HEIs shall provide wheelchair-accessible battery-run shuttle service vehicles or other appropriate alternates to move within campus to specific destinations enhancing connectivity . This may also include provision of accessible mobility services from nearest mobility hubs to the HEI campus. Inclusive mobility within campus such as from the hostels to the departments, classrooms, libraries etc. shall require to cater to diverse disability types including invisible disabilities related to hearing, vision, cognition, etc. The personal mobility for persons with disabilities shall be enhanced by offering need-based personal mobility devices such as wheelchairs, battery-run adaptations to wheelchairs, adapted scooters, smart canes and other assistive technologies as deemed fit by utilizing the existing government schemes or by introducing new schemes at the level of HEIs. While assessing the needs, persons with disabilities shall be consulted for their preference and suitability of the mobility device.

4.3 Street infrastructure within HEI campuses

4.3.1 The HEI campus must develop street infrastructure with accessible pedestrian pathways that are at least 1800 mm wide for two-way movement. The pathways should be continuous without breaks and have a firm, level, and non-slip surface and be well lit for use in low light conditions. Level crossings, traffic calming measures at appropriate junctions, accessible bollards, tactile pathways, appropriate seating heights in street furniture and a whole range of elements of mobility infrastructure needs to adhere to various relevant codes including Harmonised Guidelines & Standards for Universal Accessibility in India, 2021 issued by Ministry of Housing and Urban Affairs, Govt. of India.

4.3.2 There should be accessible seating facilities provided along the street in the campus every 30 meters that don't block the pedestrian access facility. Enhancing walkability and making walkways wheelchair friendly is highly recommended as a priority for all HEIs. Not only this shall promote higher accessibility, but also advance measures for environmental sustainability. It is therefore important that street and mobility infrastructures are well designed, regularly monitored and maintained, audited for accessibility to ensure inclusive mobility for all. Where feasible, mobility alternatives such as cycling and related infrastructure such as bike-sharing systems should also be developed in the HEI campus. Similarly, parking spaces including accessible parking spaces for cars and adapted vehicles shall be earmarked near all important buildings expecting students and staff with disabilities.

4.3.3 Accessible Drop off and boarding points should be provided on the campus where users can safely board and deboard the public / HEIs transport options near the facilities, units, or departments. Besides the above, accessible parking provisions for adapted scooters or other mobility devices of persons with disabilities and creation of reserved car and two wheeler parking be adopted across all HEIs.

4.3.4 Further details for various elements of accessible street infrastructure like kerbs, kerb ramps, street furniture, tactile pathways etc. may be referred from the Harmonised Guidelines & Standards for Universal Accessibility in India, 2021 issued by Ministry of Housing and Urban Affairs, Govt. of India.

4.4 GPS Mapping or Bluetooth beacon-based technologies to enhance orientation in the campus

While an allocentric understanding of the environment is aided by constructing tactile and visual maps and by walking through the environment, accessible GPS mapping is a wonderful means to develop and reinforce an allocentric perspective and aid in easy mobility and orientation of persons with disabilities particularly those with vision disabilities within the HEI campus.

The HEIs should enhance the accessibility of the campus by GPS mapping or using Bluetooth beacon-based technologies so that persons with disabilities can locate different departments, buildings, services, etc. through the use of technology.

4.5 Signage and Wayfinding

HEIs / Universities need to strengthen the infrastructure for accessible information systems through appropriate wayfinding systems, digital systems integrations and other measures across the campuses. For better orientation within the campus, accessible signage – informative and directional shall be provided in compliance with accessibility regulations. Visual and Tactile Maps shall be provided uniformly across HEIs / universities to enhance way finding within the campus and buildings. Raised kerbs or tactile pavers shall be installed along with the pathways to guide users with vision disabilities for improved outdoor navigation in a holistic way. Electronic and Digital Signage Systems embedded with audio support and high visual contrast are also increasingly used to enhance accessibility for the diversity of users. Font type size of text, and illumination levels should comply with approved accessibility standards (Refer Chapter 5, Harmonised Guidelines & Standards for Universal Accessibility in India, 2021)

Signage for emergency systems and alarms needs to be ensured at high priority, especially guiding to the nearest exits and accessible public assembly areas.

It is also to be ensured that all signage and information systems are adequately illuminated and well maintained to facilitate mobility and wayfinding for all.

4.6 Provision of Repair/Maintenance of Mobility infrastructure and devices

The HEIs should make provisions for constant upkeep and maintenance of mobility infrastructure created and mobility devices given to persons with disabilities, through annual maintenance programs. Repair Counters can be established for smaller repairs that do not require replacements and in that case, an alternate device be provided to the persons with disabilities to continue to take part in the campus activities. It would be vital to ensure appropriate quality checks for ensuring minimum maintenance issues while strengthening the maintenance services on each educational campus.

Persons with disabilities should also be given prior training to use the various assistive devices and equipment.

5

Universal Accessibility in Built Infrastructure

5

Universal Accessibility in Built Infrastructure

Higher Education Institutes and universities require to not only envision but also ensure the idea of universal accessibility implemented in all campuses in a time bound manner across it's entirety. Each campus of HEI or a university under future planning shall ensure strict compliance to accessibility norms as issued from time to time by the Government with a spirit of creating best practices of inclusive infrastructure on each campus. For all existing campuses, it is recommended to get them evaluated for accessibility through proper access audits carried out by competent access auditors leading to an action plan of implementing accessibility in various aspects of built infrastructure of HEIs. Eventually, a proper certification of "accessibility for persons with disabilities" be attained to be classified as an accessible campus.

The Access Audit Reports and the prioritized action plan should be placed on the website of the HEIs. For accessibility of built infrastructure, the standards provided under Rule 15 of the RPWD Rules along with the National Building Code (as updated from time to time) shall be followed. It shall be mandatory for HEIs/ universities and colleges to adhere to built environment accessibility standards as above for **recognition from UGC.**

It is vital to understand that accessibility is a dynamic concept and not a static one. An accessible built infrastructure if not well maintained or serviced can also become inaccessible in temporary terms. It is, therefore, crucial that the maintenance and service of built environment of each HEI is strengthened appropriately to ensure accessibility at all times and not just at the inception stage. This section focuses on key aspects of campus accessibility for their built environments and guides the various elements to be made accessible.

5.1 Site Planning of Campuses

5.1.1. Site planning of HEIs and their campuses involves the overall planning of educational environments which needs to sensitively respond to a human centric approach incorporating the principles of universal design from the beginning itself. Universal accessibility needs to start from the point of campus entrance to the total experience of being on campus in every facet of it, be it mobility, be it learning, be it recreation or any other form of activities. Site planning is one of the first steps to ensure

the holistic implementation of accessibility in the campus built and unbuilt environment including enclosed and open space planning.

5.1.2 A wide range of elements require to be designed and planned for accessibility through site planning. Some of them include kerbs, kerb ramps, side walks, open spaces, walkways, parking, levels, signage and campus maps, street crossings, street furniture, tactile pathways, public washrooms, drinking water, etc. Harmonised guidelines for universal accessibility for India, 2021 may be followed to understand the various accessibility aspects of these elements.

5.1.3 However, in specific to education environments, it is crucial to sensitively plan and design for accessible learning and interactive spaces in outdoor environments. For eg. Provision of all weather spaces for interaction with proper access route for pedestrians and wheelchairs should be planned for inclusion in the campus sites. Tactile pathways through use of appropriate materials shall be continuous on these access routes and make proper interconnections to support independent mobility of persons with visual impairments.

5.1.4 Site planning needs to ensure access to sports infrastructure for all including persons with diverse or limited functional abilities or impairments. Access to outdoor and indoor sports complexes shall ensure equal opportunities for participation in the overall campus life of a student.

5.1.5 Considering diverse geographical and climatic contexts of India for various HEIs, appropriate measures need to be taken to ensure access in extreme climatic conditions like in heavy rainfall led areas, snow contexts or extremely high temperatures, etc. Design of built forms, their elements and material specifications need to respond to the above mentioned situations to ensure accessibility at all times.

The HEI campuses should be planned and designed as an integral unit from the very beginning of the design process incorporating accessibility and universal design and planning each facility/component from alighting points, pathways, parking, ramps, tactile ground surface indicators, toilets, and urinals for ambulant and non-ambulant users, lifts, stairs, signages, etc. The accessibility is not a one-time affair and should be maintained as universally accessible for the life of the facility or product.

5.1.6 The minute access features, such as stable, firm, level, slip-resistant, and preferably matt finish surfaces on all kinds of floors, walkway, ramps, and stairs; installation of circular handrails on both sides for required load-bearing; doors – their lever handles, widths, opening forces, vision panels and kick plates; heights of washbasins, controls, commode seats, bevelling thresholds and addressing level changes, mirrors, TGSI placements, ergonomics, wall signage with raised tactile and

braille in good colour contrast, etc need to be ensured meeting the requisite design standards in the approved national guidelines above.

5.1.7 Pedestrian pathways should be smooth, hard, and have a leveled surface suitable for walking and wheeling. Irregular surfaces such as cobble stones, coarsely exposed aggregate concrete, bricks, etc. often cause bumpy rides and should be avoided. The minimum walkway width for two-way traffic should be 1800 mm. The pathway should have a tactile orientation to enhance orientation for users with visual disabilities and have kerb ramps at the crossings. The pathway should connect all sub buildings and elements in the campus.

5.1.8 Access routes/ Floor surfaces should not have any projections, drops, or an unexpected variation in level. A vertical clearance of 2100 mm should be ensured on the accessible pathway and there should be no obstacles protruding into the pathway or access route. Where unavoidable, protruding objects should not reduce the clear width of an accessible route or manoeuvring space. Free-standing columns and posts within an access route should incorporate a band of 200 mm, between heights of 1400 mm and 1600 mm from the walkway floor surface. Lighting should illuminate the walkway and lighting fixtures not exceeding a height of 4m from ground level should be provided. White lighting at an average 35-40 lux be provided to ensure colour contrast of tactile pavers and visible at night to persons with low vision. Ensure that the lighting poles are located in tree planting zones and do not reduce the width clearance of pathways.

5.2 Academic Buildings and Learning Spaces

[Classrooms, Libraries, Laboratories, and other learning environments]

5.2.1 Academic & Learning Spaces

Academic purpose infrastructure extending into other learning spaces as an integrated whole shall be made universally accessible focusing on spaces like classrooms, lecture theatres, seminar rooms, tutorial rooms, laboratories of all kinds, along with all interactive spaces (both indoor and outdoor) across HEIs.

The academic spaces shall provide easy access to different levels in the built environment through ramps and lifts and sufficient circulation spaces to manoeuvre and turn for people using mobility devices or assistive technologies and equipment such as walkers, wheelchairs, etc. Various controls should be provided at reachable heights and seating, working and learning tables providing knee clearances of 680-700mm, and space for approach and use of 900mm x 1350mm.

5.2.2 Library Facilities

The teaching boards shall be preferably with an adjustable height feature or low height so that a teaching faculty using a wheelchair or one with a short stature could also easily use it. Raised Platforms for faculty should be avoided where possible and provided safe and convenient ramped access, where unavoidable. The seating in the class should be designed to accommodate students of varied learning styles and abilities. It needs to ensure adequate manoeuvring space for wheelchairs in the aisles of the classroom furniture. A typical wheelchair turning diameter is assumed in the range of 1500 to 1800 mm for all general purposes of spatial planning.

The library and knowledge resource centres shall ensure access for all. This involves having an accessible entrance features along with other aspects of the library facilities and equipment should be accessible and all open book stacks should be placed at or able to be pulled down to accessible heights for persons with disabilities. Aisle spaces shall ensure wheelchair manoeuvrability in library spaces. Inclusive infrastructure and spatial arrangement should be made for people with hearing and vision disabilities who need assistance while reading. Wherever library infrastructure poses limitations to reasonable accommodations, it needs to be ensured that library services are then rendered to the students / persons with disabilities.

5.2.3 Hybrid Education Accessibility

The built environment of the HEIs should facilitate hybrid and blended modes of education. Necessary equipment, technology should be deployed in the classroom that allows hybrid learning possible to include students with diverse abilities. Where students need support in terms of equipment, data connectivity etc, the same may be provided by the HEIs under different schemes. Procurement of such equipment and technologies shall be complying with procurement guidelines referred hereafter.

5.2.4 Illumination in the learning spaces

To improve the education environment, classrooms and learning spaces need good lighting. Good lighting makes the students feel safe, improves learning. A lighting level of 250-300 lux is appropriate in a classroom where students spend most of their time and focus on learning. To draw attention to the area where the teacher is located, to contribute to the students' concentration, higher illumination levels of 500-750 lux are preferable. Lighting should be positioned in a way to provide sufficient lighting on the face of the faculty so that lip reading is possible for students with hearing disabilities. Adults require 500 lux as visual acuity decreases with age. Shielded luminaires prevent irritating glare, keeping eyes fresh for longer.

For both - a classic blackboard or a modern whiteboard, the area should receive 500 lux, with a high degree of uniformity to ensure optimum perception and legibility even from the back of the room. For projection systems, presentations, or use of smart boards, it should be possible to dim the lighting system or only illuminate parts of the room as per the requirements and such controls should be accessible.

Flicker and glare is a critical issue in classroom lighting and must be avoided in all cases as they may cause eye strain and headache beyond disturbing students negatively impacting the teaching-learning process. LED lighting systems should be used which are not only energy-efficient but also reduce shadows and improve visibility.

It is encouraged to orient buildings to suit the best possible daylight features with climate responsive design and ensuring adequate contrast with classroom or space interiors. Responsive lighting to suit the contemporary needs of projector and digital based

5.2.5 Classroom Acoustics

Hearing and understanding are important parts of the learning process. A noisy classroom or a learning environment can make these tasks difficult. The class design should incorporate elements to ensure that the background noise can be kept to a minimum to facilitate the teaching-learning. Students with hearing disabilities can struggle even in rooms with the best acoustics. Good acoustic environment in classrooms requires to be created through

(a) architectural design of classroom

(b) use of appropriate materials for indoor surface treatment (preferably sound absorbing materials like soft boards, etc.).

(c) use of appropriate technologies for sound emission like speaker systems, microphones, etc.

especially for large classrooms or lecture theatres. To ensure inclusion of persons with hearing impairments in classrooms, HEIs should therefore install and provide for

a.) Appropriate state of the art technologies to augment hearing loss. For eg. Loop Induction Systems, Digital Interfaces with transcriptions, Speech to Text translations, etc.

b.) Sign Language Interpretation for all activities academic or non- academic in learning spaces like classrooms, laboratories, auditoriums, meeting halls, conference rooms, etc.

5.2.6 Vertical Circulation

HEIs shall ensure that all buildings including their different floors that are open to use by faculty, staff, or students are accessible through ramp/lifts and all level changes are addressed for universal accessibility. For vertical rise or level difference up to 150 mm, kerb ramps or slope ramps without the need of handrails will be provided.

For level differences over 150 mm, ramps shall accompany handrails on both sides at two levels (700mm, 900mm) that provide the continuous grip/ hold during the entire incline including at landings.

Many ambulant persons with disabilities negotiate steps more easily and safely. Hence, it is preferable to provide accessibility by both steps and ramps. Where the horizontal run of the approach ramp exceeds 9000 mm length, an alternative stepped approach, in addition to the ramp approach, should be provided for people with ambulatory disabilities. The ramp gradients (ranging between 1:12 to 1:20) and width (ranging between 1200mm-1800mm) shall be in accordance with the vertical rise being addressed by the ramp, as per the approved standards.

Steps/stairs provided shall have a uniform tread and riser of 300mm and 150mm respectively with handrails on both sides at two levels to cater to people with different heights. The stair edges shall be provided with a 40mm colour contrasting band to make the level change discernible to people with vision disabilities. Tactile warning pavers shall be provided 300mm before and after the ramp/stair run.

Where there is a large change in elevation that requires multiple ramps and landing combinations, accessible lifts/ elevators shall be provided. A lift that accommodates 1500mm x 1500mm space for 90 degrees turn of a wheelchair inside the lift car shall be provided, with a preference to a 13-passenger lift. The clear door width of 900mm and lift controls inside the car and in the lift lobby shall be at reachable heights and other accessibility features such as braille, tactile controls, audio visual announcements, handrails, view mirrors, and signage to identify the accessible lift, etc. complying with the approved standards.

5.3 Assembly Areas / Auditoriums

Large congregational spaces in HEIs or universities like assembly halls, auditoriums, open air theatres, convention centres, convocation halls or senate halls, etc. have specific purpose at different times of an year to facilitate various activities. It is essential that all such spaces known by different terminologies in different campuses to ensure universal accessibility in their design, layout and in their operations as well.

This includes accessible parking provisions (reserved) outside these spaces, accessible entrances, accessible seating including access to stage / backstage areas ensuring equity for all.

It should be possible for persons with impaired mobility to access both – the stage and floor seating area. The floor for a wheelchair viewing space should be connected to an accessible path of travel and have an unobstructed view at eye level up to 1200mm and should not be reduced by standing members of the audience. The rows and seat number identification signs should be in braille and tactile to be legible for visual disability users.

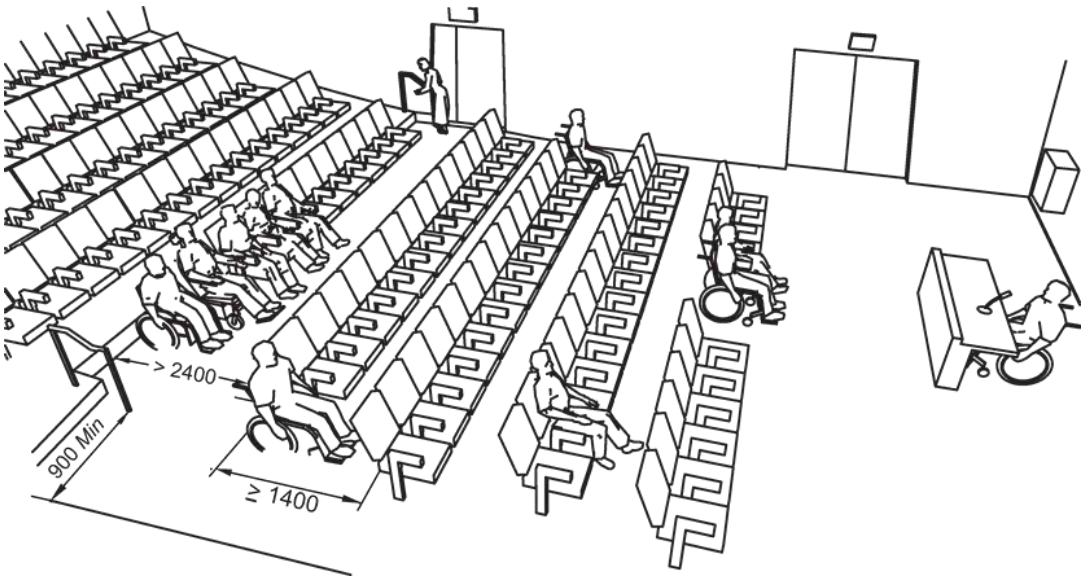
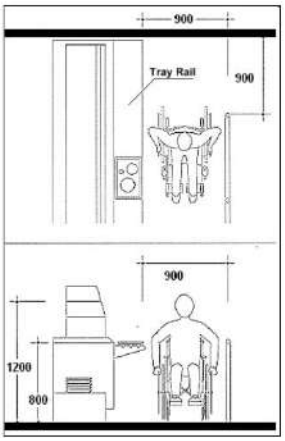


Fig.5.1 Examples of viewing spaces for wheelchair users in assembly areas/ auditoriums (source: NBC 2016)

5.4 Hostels and Guest Houses

Hostels and Guest Houses in the HEIs should be designed based on universal design and accessibility and have wider doors, controls on reachable heights, and circulation spaces among other access features. 10% hostel rooms should be made friendly for wheelchair users and have attached accessible toilets complying with the approved standards. Guest houses in the HEIs should also have **atleast two rooms** accessible with attached accessible washrooms in them. Where student dormitories are provided, provision of accessible unisex washroom and bathing/shower areas should be provided on each floor complying with approved standards.

5.5 Mess, Canteens and Common Dining Facilities



Mess and canteen services provided in the HEIs should be accessible based on universal design and accessibility and existing ones should be retrofitted. In self-service canteens/ mess, tray slides and counters should be mounted at 800mm from the floor for wheelchair users.

Food shelves should be mounted at a maximum height of 1200 mm and aisle space of a minimum 900 mm should be provided. Cantilevered tables or tables with straight legs at each corner are preferable to central pedestals that might restrict wheelchair access. Stools and high tables are not suitable for wheelchair users.

Therefore, accessible tables should be provided as well. (*see figure: Height of food shelf and aisle space for easy access (source: United Nations - https://www.un.org/esa/socdev/enable/designm/AD3-01.htm)*)

5.6 Accessible Sanitary Provisions

Sanitation systems and their adequacy remains one of the critical aspects of accessibility in Institutions of higher education across the nation. In all HEIs/Universities, it needs to be ensured that an accessible unisex toilet is made available at all strategic locations wherever the washrooms for both genders are also made available. Accessible toilets should always be signposted with international signage of accessibility.

The accessible toilets and others shall follow the Harmonised Guidelines 2021 for the same. Further, it needs to be ensured that persons with sensory disabilities (visual or hearing), persons with neuro diverse conditions and several other disabilities may also require to use the general washrooms with adaptive features like low height washbasin, low height urinal with grab rails, adapted Indian wc with grab rails and other supporting features including baby changing stations.

Independent entry and door opening outside should be provided at all locations where a general toilet is provided. The unisex toilet should be designed to also meet the needs of persons with high support needs and those with multiple disabilities).

It is recommended to use double action doors which can open in both directions especially for the accessible unisex toilets.

In the single-sex toilets (male and female), one toilet cubicle meeting the requirements for ambulant disabled users should be provided (with an internal dimension of 900mm x 1500mm) with a door opening outside.

In male toilets, one urinal should be provided for ambulant disabled with front handrail support with no steps/level difference to access. The law also requires an independent toilet unit for transgender persons.

The Unisex toilet and Female toilets should have bins to collect used sanitary napkins and incineration facilities. The toilet facilities in general should have a high level of hygiene and should be regularly maintained.

(*For details, see Harmonized Guidelines 2021*)

5.7 Administrative Spaces

The administrative spaces in the HEIs / universities should also be accessible to Persons with Disabilities. Means of access through step free entrances or through ramps and /lifts complying with the gradients and specifications should be made. Accessible reception counters alongwith assistance and accessible seating and desks should be provided in administrative offices among other things. Further, offices of administrative staff shall also ensure accessibility through doorways, maneuvering spaces, furniture types, etc. besides sensitivity to administrative staff towards persons with disabilities and others with diverse needs.

5.8 Recreational Spaces, Common rooms, Activity Rooms, Gyms/Yoga Halls,

All recreational spaces, common rooms, activity halls or rooms, gymnasium, yoga halls, etc in the HEIs should have easy access and be built on the Universal Design and accessibility parameters with step-free wider access doors. Sports and recreational equipment should be accessible and space for approach and use be ensured. Where needed, persons with disabilities be consulted for the installation of specialized exercise/sports equipment.

5.9 Accessible Parking Facilities

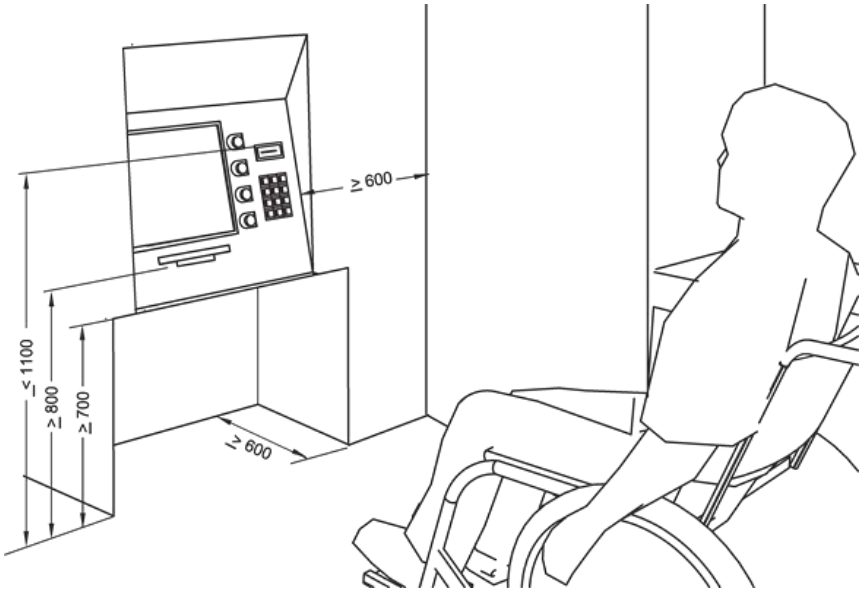
Dedicated accessible parking facilities should be earmarked, signposted within 30 meters of various departments, buildings for cars, and adapted four-wheelers and two-wheelers with side wheels. Misuse of these facilities by non-disabled users should be prevented through regulatory means and be progressively monitored.

Parking facilities shall connect with the main entrances of the buildings through a proper access route facilitating access for all. Tactile pathways to facilitate persons with visual impairments shall be ensured across all such access pathways.

5.10 Campus Amenities: Banks, ATMs, Post Office, Shops, etc.

Amenities provided on the campus shall ensure physical accessibility for persons with disabilities. Banks and ATMs will have ramps with handrails, wider doors for easy access. The counter height shall be dual so that standing and sitting users could easily transact in the banks. The ATM/ vending machines installed in the HEIs shall be of low height with knee clearance, with space for approach and use, and safety features complying with the approved guidelines. These should be braille enabled and have a jack or alternative mechanisms for hearing output for people with vision disabilities.

(*see figure below. Accessible Vending Machine (source: NBC)*)



5.11 Accessible Signage in the campus/buildings

People need clear information about the purpose and layout of spaces to maintain a sense of direction and independent use of a building. Often visual and tactile information is reinforced by audible information. Information may take the form of visual information (e.g. signs, notice boards), audible information (e.g. public address and security systems, induction loops, telephones, and infrared devices), or tactile information (e.g. signs with embossed lettering or Braille).

To enhance orientation and wayfinding on campus, all HEIs, should get a signage audit done for their campus covering the following areas:

a. the location, accessibility, layout, and height of signs;

b. the type of fonts, size of lettering, symbols, and their reading distances;

c. the use of tactile letters and symbols and braille;

d. visual contrast and lighting/signage illumination;

e. the finished surfaces of materials used for signs and symbols;

f. the simultaneous use of audible cues;

g. integration with any other communication systems.

h. tactile maps and models for orientation.

The International Symbol of Accessibility must be displayed at all accessible entrances. If an entrance is not accessible, directions to an accessible route, including the symbol, must be provided. Similar guidelines refer to elevators, evacuation and refuge areas, restrooms and bathing facilities, etc.

Tactile maps or models should be provided to help the visual disabilities users who may be unable to read signs, and people with hearing disabilities who may not be able to understand verbal directions for navigating around a building.

The signage material should be non-reflective, preferably a matt finish. It should have a non-glary and non-glossy surface. Natural and artificial light should be such so as not to produce a glare on the signage surface. The material of all signage should be chosen to reduce wear and tear and possible damage by vandalism and at the same time easy to maintain.

5.12. Accessible Emergency Preparedness

In all HEIs, accessible fire exits should be marked by placing signages. Fire escape plan, emergency alarm both audio (hooter type) and visual (flashing bulb) to be provided at strategic locations to be accessible to the users with vision and hearing disabilities. The evacuation route should be free of any level difference and should be kept free from obstacles such as furniture, coolers, AC units, flower pots, etc. Signage should be placed at various important locations. Exit Routes should be at least 1200 mm wide, to ensure that a person using a wheelchair and a non-disabled person can pass each other along the route. Fire extinguishers may be placed at strategic locations in the building, preferably recessed so as not to become protruding barriers beyond the detection range of white cane in circulation spaces. Assembly points for the area of rescue assistance/refuge area for persons with disabilities should be earmarked and be made

accessible through the route that connects them. The earmarked area should preferably be open to the sky and easily accessible and should also be easy to evacuate from by the emergency responders.

A communication system that allows two-way communications – both visual & auditory should be available at the assembly point/ refuge point. Many persons with disabilities can be active contributors to disaster mitigation such as fire & other emergencies. They should not be always presumed to be passive recipients of assistance. A fire extinguisher should be placed at a height of 750-900 mm from the ground so that in case of emergency, persons with disability can also operate the same. Persons with a disability should also be trained to use such tools so that they can help themselves and others in case of emergency. *For further details approved accessibility standards such as the Harmonised Guidelines 2021 and National Building Code may be referred.*

6

Accessible Curriculum, Teaching and Learning Systems

6

Accessible Curriculum, Teaching and Learning Systems

6.1. Equitable Access to Curriculum

All students can learn. Disability inclusion in education needs to build systems of support. Access to education only can be possible with an accessible curriculum. Self-esteem and learning process is impaired if the curriculum and teaching are not accessible to some of the students.

6.1.1 Equitable access to education is safeguarded by reducing inequality by eliminating issues related to curriculum design, teaching and learning. Accessible curriculum and effective instructional practices bring quality education for students with disabilities. This leads to a change in people's beliefs about what such students know and can do. Inclusive policies lead to inclusive practices and that ultimately further lead to an inclusive culture in HEIs by creating an atmosphere where everybody feels valued and supported.

6.1.2. Accessibility is relevant to all individuals and processes associated with curriculum design, teaching, assessment as well as student support. An accessible curriculum should be supported by an accessible infrastructure of student support services and interfaces across the higher education institutions.

6.2. Delivering Accessible Curriculum

Delivering an accessible curriculum is more of a process by means of anticipating diverse preferences, needs, abilities among students and providing in-built flexibility and anticipatory adjustment. An accessible curriculum contributes to equality, inclusion, participation and engagement among students that leads to students' optimum learning outcome, satisfaction and wellbeing. The accessible curriculum not only anticipates and expects diverse needs, abilities and preferences among its students but also teachers and assessors. Hence accessibility is a marker of quality in curriculum and a legal requirement.

. Diverse learners are resources, not deficits in the classroom. To ensure equitable participation in learning, the students should be able to benefit in a meaningful way from the curriculum and teaching-learning process. Presentation of

materials, engagement with material and assessment of learning should be flexible with required accommodation and adaptations/modifications.

6.2.1. **Accommodation** is a specific tool or a device or a strategy designed to support the needs of persons with disabilities. The use of specific language or media to accommodate the specific needs of a student such as Braille, screen reading devices, Indian sign language, or Alternative Augmentative Communication (AAC) are a few examples that ensure equitable participation.

6.2.2. Furthermore, **adaptations or modifications** are changes in the level or method of instruction that a student receives as a result of his or her specific disability. Additional teaching time, personalized learning support, reduced difficulty level are a few examples of adaptation. It should be designed in such a way that accommodation and modifications do not affect full access to the curriculum.

6.3. Provision of Flexibility and Adjustment in an Accessible Curriculum

An accessible curriculum uses formats, processes and language which anticipate the need for choices, flexibility and reasonable adjustment in teaching and assessment. Thus, higher education institutions need to develop their accommodation policy and procedure to avail these. This would clearly state about the accommodation plan and its implementation. Accommodation should include alternate formats and instructional materials.

6.3.1. The **alternate formats** should be made available by conversion of one format into another to make the content accessible. The common converted formats are: electronic version of print material, print to Braille or audio or large print, captioning of video, transcription of video or audio materials.

6.3.2. **Choices for instruction materials** need to be broadened. Reasonable efforts should be made by the faculty and institutions to make resources available such as course text books/e-books, audio/visual multimedia materials, online course contents. Additional efforts need to be made to prepare class handouts, a list of required and recommended reading, assignment information, grading rubrics, test and examination-related materials.

6.3.3. **Difficulty level** may be decided as per the learning profile of the student. The faculty needs to (i) adapt skill level, problem type or rules on how the learner may approach the work, (ii) allow the use of a calculator, (iii) set up word bank for weekly vocabulary words, spelling words, (iii) provide page numbers and paragraph to help students find answers, (iv) simplify written

directions by limiting words and numbering steps and pages, (v) simplify task directions. The faculty should make homework relevant to what has been covered in class.

6.4. Social-Emotional Learning (SEL)

Besides structured learning, incidental learning in higher educational institutions (observation, social interaction, Problem-solving) also contributes greatly to the educational outcomes of the students with disabilities. Equitable access reduces stress and improves opportunities as well as the capability of the student with diverse needs to learn from the environment. Social-Emotional Learning (SEL) plays a significant role. SEL focuses on students' needs for motivation, social connectedness, and self-regulation as prerequisites for learning. The development of a safe social and emotional learning climate is a must and also considered as a prerequisite for SEL through positive acceptance and interactions by peers and teachers. Students must feel that they have somebody to speak to when they are worried or upset. The teachers make themselves available to talk to them privately. The teaching-learning environment needs to provide opportunities to diverse students to improve their social skills too.

6.5. Adaptations in Teaching-Learning Process

As per need, the faculty may bring modifications or adaptations in the teaching-learning process in terms of volume of work, time, support, level of difficulty, participation and physical adaptation.

6.5.1. **Reduce the volume of work** by considering to; (i) optimise the amount of copying, (ii) optimise the number of problems, (iii) optimise the number of terms that the student must learn at one time, (iv)optimise the number of concepts that need to be introduced in a given time. The teacher needs to coordinate assignments with other teachers to avoid overload on the part of the student and reduce homework assignments or modify them when students get stressed.

6.5.2. Faculty needs to **adjust the time** in respect of (i) allowing extra time in class or outside for completion, (ii) providing additional time on task with an overview of the lesson before actual teaching, (iii) allowing extra time to complete a project, (iv) allow the student to take short breaks. Personalized support may be given by individualizing a timeline for a student for completing a task.

6.5.3. Students need **support** from time to time. Provide the support by (i) increasing the amount of personal assistance with a specific learner, (ii) assigning peer buddies or peer tutors, (iii) providing cooperative work in a

small group, (iv) copying notes from the presentation so the student who cannot write well or listen effectively can have notes to study. The faculty may prepare additional materials that the student can use at home.

6.6. Accessible Library Resources

The library also needs to follow a reasonable accommodation policy to make the library resources available in alternate formats, procure multimedia/video resources and make arrangements to provide alternate and accessible format materials to the persons with disabilities Library facilities and services should include talking books library networked through **'Talking Book Libraries in India'**. Also, the facility should have a print-accessible library so that any content of the library can be accessible to all including users having disabilities. 'Bookshare International', the world's largest online library offers an accessible e-Book for people with reading barriers.

6.7. Universal Design for Learning for Creating an Equitable Classroom

No single method can reach all learners; hence there is a need of having multiple pathways to achieve the goals of instruction. Universal Design is not just a technique for special education; rather it is a technique to enhance learning of all students in an inclusive manner. The faculty needs to consider **Universal Design for Learning (UDL)** for the following key .

6.7.1. It follows universality and equity. Planning of learning opportunities must cover the learning of all students, whatever their level of achievement, and help each one reach his or her potential.

6.7.2. It follows flexibility and inclusiveness. The planning of teaching and the time teachers allocate to students' activities must be sufficiently flexible to provide real learning experiences for all students, regardless of their performance level. Students are accommodated through different teaching strategies and learning materials that are relevant, engaging, and responsive to their learning needs; that makes use of all the senses; and that vary in form, level of difficulty, and manner of presentation;

6.7.3. It considers appropriately designed space. A learning environment should ensure that for example: (i) all students have a clear line of sight, (ii) all learning materials, including print, electronic, and interactive texts, are within comfortable reach of all students, (iii) there is adequate space for assistive devices.

6.7.4. It follows the principle of simplicity. Teachers can avoid unnecessary complexity and minimize distracting information by (i) Communicating consistent and achievable expectations, (ii) collaborating with students to

construct learning goals, using clear, student-friendly language, (iii) arranging information sequentially to clarify its relative importance, (iv) breaking instructions down into small steps, (v) providing descriptive feedback during the learning.

6.7.5. Safety is a precondition for learning. Classrooms must be safe both physically and emotionally. They must provide a caring and safe environment that is engaging, inclusive, and respectful of all students and promotes student achievement and well-being, allowing every student to learn to the best of his or her ability.

6.8. Applying Universal Design for Learning

Universal Design for Learning (UDL) as an approach shall be encouraged in higher education institutions by using a variety of teaching and learning materials that represent all modalities (i.e., that make use of all the senses, that employ different media, and so on). Use of multiple means of presentation, at various levels of difficulty, as deemed appropriate for the students in the class (e.g., present information using visual, auditory, and kinaesthetic formats during instruction; this includes auditory as well as a visual mode of language including Sign Language). Make varied use of space ensuring flexible models of learning. Ensure access to various types of information and communication technology tools to facilitate learning and adequate space and a minimum of distractions, so that students can concentrate on instructional elements. It is important to ensure that the classroom is a caring and safe learning environment. Teachers need to act as facilitators and are encouraged to move out of their comfort zone and concentrate on (i) listening to the learners from diverse needs, (ii) reflecting on experience while doing teaching-learning adjustment for all students means 'all' including students with diverse needs, (iii) Rethinking for improving the teaching-learning process on a regular basis.

6.9. Designing Accessible Course Materials

. Developing accessible courses/ course materials is the key task for any higher education institution to support inclusion. It is important to ensure that the students with disabilities can engage and interact with the content in a way similar to the students without disabilities.

6.9.1. Content developers must leverage Assistive Technology to design accessible courses. For example, videos should be available with captions for those who have hearing disabilities and there should be audio support for the students with visual disabilities. Students with visual disabilities should be able to access content using screen reader technology. If the PDF is simply a scanned image, the screen reader technology will not be able to read it. Then students with

reading difficulties (Dyslexia) have limited abilities to read the printed word and need access to assistive technologies that allow them to view the word and also hear it at the same time.

6.9.2. While designing accessible courses, the teachers must consider (i) easy-to-read fonts, (ii) colour contrast for the text, (iii) simple formatting, (iv) adding of audio/video files. Avoid unnecessary use of bold and italics. The audio contents should be prepared to have no background noise. It is important to include transcripts of audio and video lectures which students can access with assistive technologies.

6.10. Formulating Internal Policy for Inclusive Curricula and Teaching by HEIs

The HEIs/Universities need to prepare their own detailed internal policy and procedures for their curriculum along with teaching and learning process by including the following guiding points.

6.10.1. Curriculum should provide advanced information to students about how they will be taught, what type of activities they will need to undertake and how and why they will be assessed.

6.10.2. New teaching and learning strategies should highlight the commitment to designing and delivering accessible curricula.

6.10.3. Existing curriculum needs to be updated by including teaching methods, learning outcomes and assessment design to ensure support for diverse student abilities, needs and preferences.

6.10.4. Expert committee for approval of curriculum or courses should routinely include an individual who can address matters of accessibility in curriculum design.

6.10.5. Institutions should develop a code of practice on teaching and learning that requires lecture notes, slides or other course materials to be made available to the students in advance. Sign language support services (like sign language interpreters, relay services, training, technology solutions as services, etc.) also should be made available wherever required.

6.10.6. HEIs/Universities should organize training of its faculty members on accessible curriculum and inclusive teaching-learning process (for eg. Use of appropriate pedagogy, augmentative and alternative modes, diverse means and formats of communication, etc.) or encourage faculty members to receive similar training from appropriate resources.

7

Accessible Assessment and Examination Systems

7

Accessible Assessment and Examination Systems

Access to education only can be possible with an accessible curriculum and provisions for accessible assessment or examination systems. Diversification of assessment helps students having different abilities and disabilities to demonstrate their learning. Traditional and non-flexible assessment methods favour students with particular skills and preferences; and it works well for a particular group of students who have good recall under pressure and have no disability. Hence HEIs must adopt a range of assessment methods across a course/program that allows a greater number of students to show their abilities. An accessible examination system contributes to equality, inclusion, participation and engagement among students that leads to students' optimum learning outcome, satisfaction and wellbeing.

7.1. Need for Accessible Assessment

Providing an accessible assessment is more of a process through anticipating diverse preferences, needs, abilities among students and providing in-built flexibility and anticipatory adjustment. It provides equal footing and allows testing of students' knowledge, not their disability. Any modification that is used in the regular classroom that helps the person with a disability, the same should be provided during testing also.

7.1.1. **Assessment of learning should be flexible** and it would use required accommodation, adaptations, or modifications. For accommodating the diverse needs of a student, a specific tool or a device or a strategy should be used. The use of Braille, large print, screen reading devices, are a few examples that ensure equitable participation in the assessment process. Furthermore, adaptations or modifications are changes in the level or method of instruction that a student receives as a result of his or her specific disability.

7.1.2. **Accessible assessment should be an integral or inbuilt** feature of any assessment. For example, students with visual disabilities have access to the test

using a screen reader or students can personalize their view of the questions (eg. Font type, sizes or colours) or text to speech software can read out questions loud. This may help students who are dyslexic or with vision disabilities who can independently access the meaning of questions or accompanying resources.

7.2. Enabling Assessment Process Accessible

To make the assessment process accessible, change in test procedure or material, timing, setting, scheduling, presentation or response format is required. The use of assistive devices should be permitted and encouraged. Modifications used cannot change the meaning or comparability of scores of the tests.

The assessment of students with disabilities needs to consider several conditions for a realistic assessment.

7.2.1. If the test taker is yet to master the target skill due to insufficient or inadequate instruction, then the test taker needs to go through an extended or adapted learning process before the assessment.

7.2.2. If the students lack the necessary capabilities to have access to test items, then due to certain disabilities they may not be able to respond to the task. So, the students should be provided training on how to develop accessing skills.

7.2.3. If the student performs poorly due to limited accessibility, then develop the accessing skill or modify the test item. For example, assessment of mathematics may place a high burden on reading skills and subsequently cause access problems due to reading difficulties rather than math skills.

7.2.4. If the student performs poorly due to inappropriate task presentation itself due to the design flaws related to an error in a test item, inconsistencies, omission or insufficient instruction, then assessment/test should have been properly vetted/moderated for flawless design and accessibility.

To make assessment more realistic, sufficient attention must be given so that the test has (i) accessible test items, (ii) items amenable to accommodation, (iii) simple, clear and intuitive instructions and procedure, (iv) maximum readability and comprehension-ability, (v) maximum legibility.

7.3. Existing Provisions for Concessions in Examinations for Students with Disabilities

UGC Notification F.No. 6-2/2013 (SCT) dated 14 January 2019 has made the following provisions for conducting written examinations for persons with benchmark disabilities as per the guidelines issued on 29th August 2018 by DoEPwD of Ministry of Social Justice and Empowerment.

7.3.1. The facility of Scribe/Reader/Lab Assistant should be allowed to any persons with benchmark disabilities as defined under section 29(r) of RPwD Act, 2016 and has limitations in writing including that of speed if so desired by him/her (Blindness, Locomotor Disability [both arms affected-BA and cerebral palsy]).

7.3.2. Persons with benchmark disabilities should be given as far as possible, the option for choosing the mode for taking an examination, i.e., in Braille, or the computer or in large print or even by recording the answers as the examining bodies can easily make use of technology to convert question paper in large print, e-text, or Braille, can also convert the Braille text in English or regional languages.

7.3.3. Compensatory time (i.e., extra/additional time) should not be less than 20 minutes per hour of examination for the candidates who are allowed to use Scribe/Reader/Lab Assistant.

7.3.4. Candidates should be allowed to use assistive devices like talking calculators in examination (in a case where calculators are allowed), tailor frame, Braille slate, abacus, geometry kit, Braille measuring tape and AAC devices like communication chart and electronic devices.

7.3.5. Proper sitting arrangements (preferable on the ground floor) should be made before the commencement of the examination to avoid confusion or distraction during the day of the examination. Examination center also should be accessible to persons with disabilities.

7.3.6. Examining body should also provide reading materials in Braille or e-text or on a computer having suitable screen reading software for open book examination. Similarly, online examination should be in accessible format i.e., websites, question papers and all other study materials should be accessible as per the international standards laid down in this regard.

7.3.7. Alternate objective questions in lieu of descriptive questions should be provided for candidates with hearing disabilities in addition to the existing policy of giving alternate questions in lieu of questions requiring visual inputs for candidates with visual disabilities.

(For details, the complete guideline may be referred at UGC website or https://www.ugc.ac.in/pdfnews/7348678_Guidelines_Exam-Divyangjan-JAN-2019.pdf)

7.4. Considering Accessible and Flexible Assessment Process

. Universities/HEIs may consider further support for the candidates with disabilities to make the assessment process maximum accessible and flexible. It may be noted that the support provided or reasonable accommodation extended to a person with disabilities will be on a case to case basis and will be based on the specific need of the person and not on the degree or percentage of disability of the person. This means a person who may not be a benchmark disability (above 40% disability) may be extended such reasonable accommodation / relaxation based on their specific assessed needs.

7.4.1. Assessor may consider reducing the volume of work by reducing the number of test items. While doing so the assessor may consult the candidate with disability.

7.4.2. Review frequently the student's needs and preferences for any accommodations during the test. Individual students may require an adjustment to their assessment. The student should have been familiar and availed the similar accommodations and modifications in the class tests prior to the term-end or final examinations.

7.4.3. If Possible, prepare the student for the examination by giving a pre-test one or two days before the final test. To make the student confident and comfortable for an examination, practise similar tests in pairs or small groups. He or she may dictate answers to a test to a peer or adult (scribe) Allow additional time to complete the test. Provide the opportunities to the students to describe their issues and challenges by means of self-evaluation conferences regarding the test accommodations and modifications.

7.4.4. While giving an MCQ test requiring a, b, c, d answers, use capital letters and ask students to give answers as A, B, C, D to avoid confusion of b and d that may look alike to a student having a specific learning disability. Eliminate the choices of 'All of the above' or 'None of the above' in such tests. Vary formats such as True/False, MCQs, matching, short answers or essay type questions. If possible, give alternate tests.

8

Accessibility of Resources and Services

8

Accessibility of Resources and Services

Making provisions of equipment/resources will not serve the purpose unless due emphasis is given to provide the services and operationalization of the system effectively. Therefore, all the units under the HEIs need to be integrated to cater to the needs of the persons with disabilities to achieve the sustainable development goal of imparting quality education without any barrier and to ensure accessibility on an equitable basis without any discrimination. Where the persons with disabilities face barriers, mechanisms for addressing the same should be provided at every level in a transparent manner. An effective grievance redressal mechanism especially to ensure accessibility and inclusion must also be created at the HEIs level.

8.1 Integration of Resources and Services in an inclusive way

Resource integration refers to a mechanism that embraces deployment, grouping, sharing, and exchange of resources within the units of the establishment or with other establishments involved where proper coordination amongst the units is involved to obtain the desired result. The different units in the HEIs may integrate various resources such as physical, teaching-learning, knowledge, software, etc. to attain the desired goal. Such integration of resources would help the person with disability to have universal access in all the units along with the movement and the services.

The creation of enabling units for persons with disabilities, equal opportunity cells etc. are the initiatives that UGC has already undertaken with the notion of resolving the issues pertaining to providing barrier-free access, provision of coordination services and assistive technologies, creating awareness and addressing the challenges or difficulties faced. However, the following measures may also be adopted by the HEIs in this regard:

8.1.1 Integration of resources/services prior to the admission

A pro-active comprehensive system may be developed to accommodate the admission formalities considering the identified needs of the persons with disability. The guidelines must be developed with an appropriate mechanism to

assist the students with disabilities (physically and/or online) and be published on the website of the HEIs with fully-operative-communication systems. The HEIs may designate the officials who will assist or attend to the queries raised and resolve their problems in the admission process. The admission information must be displayed on the website with a full description of the process in audio/video mode with a separate column along with contact details of designated officials.

8.1.2 Availability of the Resources

After the need identification, all the required equipment/services need to be made available at all the units (e.g. library, photocopying services area, labs, resource centers, etc.). The above mentioned resources and services shall be made available promptly with a minimum lag time.

8.1.3 Remedial Classes

The HEIs shall support the persons with disabilities to cope up with their studies. All the issues pertaining to teaching-learning aspects shall be resolved timely. Remedial classes shall be provided to the persons with disabilities in formats and methods based on their specific needs. However, faculty members may also voluntarily come forward to provide remedial classes. The HEIs shall make a record of the number of persons with disabilities opted for the remedial classes after issuance of present guidelines. (Ref: UGC scheme for funding remedial classes may be referred to.)

8.1.4 Integration of E-contents

HEIs shall integrate the various technology-based platforms such as SWAYAM/DIKSHA etc. with teaching-learning considering the diverse needs of the persons with disabilities. Wherever the e-contents have been made available or being made available, it shall be provided in different formats accessible to all the persons with disabilities.

8.1.5 Scholarships & Beneficiary Schemes

Students with disabilities shall be provided with an appropriate and accessible information along with support regarding applications to various government, private or other scholarships or beneficiary schemes from time to time.

8.1.6 Internships, Training and Placement Services

HEIs must assist and support students with disabilities to gain successful employment in the public as well as private sectors after completing their degree programmes. The various notifications regarding employment schemes, important dates, application processes, etc. shall be made available in accessible

formats to diverse students with disabilities. HEIs must play a proactive role in engaging with various industry partners, bodies and various other agencies for the field or practical learning through internships or training programmes alongwith possibilities for final placements in them.

Creating awareness of inclusive employment and potentials of persons with disabilities across both prospective employers and also amongst student communities shall remain a regular activity across all HEIs and universities.

8.2 Healthcare and Para-Medical facilities

HEIs must prepare the necessary guidelines and adopt mechanisms to provide healthcare and para-medical facilities to persons with diverse disabilities in accordance with Section 25(1) and (2) of The Rights of Persons with Disabilities Act, 2016. Compliance with these provisions would entail the operationalization of the system. The paras and sub-paras of 8.1 may be made applicable to take care of the health facilities of persons with disabilities.

Accessible communication support systems be incorporated in health care systems for diverse disabilities such as Indian Sign Language interpretation, Speech to Text conversion facilities, Tactile sign language support for deaf blind, etc.

8.3 Library Facilities

A library plays a significant role in building the knowledge base of the students. The persons with disability must be facilitated with library services as per their needs by providing them with well-structured library building ensuring barrier-free accessibility, reading material in alternative formats, assistive technologies, besides having the provision of sensitizing the existing staff to support the readers with disability in the libraries. In the case of multiple libraries in an establishment, it should encourage information exchange, resource-sharing among libraries to meet the varying needs of the readers with disabilities. The following resources/services considering the varied disabilities that should be made available to the students with disabilities and these should be read in conjunction with provisions of Chapter 2 and 3 of these guidelines.

8.3.1 Library services for persons with physical disabilities

Persons with a physical disability may require assistance in performing some of the physical tasks that may require while accessing the library. The library shall provide helping hands, adjustable furniture, self-service circulation stations, accessible toilets, signages for easy movements to assist the reader with a

physical disability. Nevertheless, the HEIs shall remain committed to provide library services for the readers with a physical disability, if not covered herein.

8.3.2 Library Services for the persons with visual disabilities

To cater to the needs of persons with visual disabilities and person with print disabilities, libraries need to provide the service of magnifiers, digital accessible information system, digitized catalogue, web-braille system, screen readers and screen magnifiers support with appropriate software such as JAWs, NVDA, Super OVA, Kurzweil etc., large-print books, scanners, converting documents via OCR reader, alternate format services, talking notice boards, provision of tactile maps at conspicuous places, accessible websites and digital libraries.

8.3.3 Library services for persons with deafness or hearing disabilities

The libraries should also provide the services to persons with deafness or hearing disabilities with assistive listening devices, augmentative and alternative communication devices, closed or open captioning videos; loop systems, audio loop and counter loop; Indian Sign Language and telecommunication devices etc. to facilitate the needs of such readers at libraries.

8.3.4 Library services for persons with cognitive disabilities

Additionally, the persons with cognitive and intellectual disabilities should also be given due care at libraries and their needs be attended to as per their requirements. The libraries after admitting the students at HEIs must assess the needs of such students and provide the services such as content in 'easy to read' or 'plain language', enlarged print, audio material, spoken-word collection, audio & video in daisy format to enhance learning and understanding.

8.4 Grievance Redressal Mechanism (GRM)

The University Grant Commission has issued the regulations titled as the University Grants Commission (Redress of Grievances of Students) Regulations, 2019 vide it Gazette Notification on May 06, 2019, wherein the provision of constituting Students Grievance Redressal Committee (SGRC) at the collegiate, departmental, institutional and university level has been introduced. Also, an appointment of an Ombudsman to hear appeals thereupon has also been made a statutory requirement. Since the grievances lodged by persons with disability need immediate attention, the HEIs should make specific provisions to resolve the grievances of persons with disability routed through SGRC particularly around

issues addressed in these guidelines. HEIs must ensure an active and accessible grievance handling mechanism for persons with disabilities. Information about the GRM should be provided on the website of the HEIs and grievances should be accepted by email as well. All the grievances must be resolved within 15 days of the submission of such grievances. Efforts must ensure that the grievances of a particular type should not come again in observation. The record of such grievances must be maintained and be made available to the higher authorities on demand. The regulations shall be updated to include the provisions related to persons with disabilities during the next revision. [Ref: UGC (Redress of Grievances of Students) Regulations 2019].

Non-compliance of any provisions of the present guidelines shall invite punitive action under the relevant provisions of law including the UGC Act,1956.

8.5 General Provisions

8.5.1 Repair/Maintenance of the Equipment or devices

The HEIs shall have a proper record of the equipment, devices etc. provided to the persons with a disability and the know-how of such devices/equipment. Persons with disabilities should be trained on effectively using the equipment. These need to be repaired and maintained timely without any delay. A list of empanelled vendors must be prepared so that different departments can use the same.

8.5.2 Record Maintenance

All the specific needs required by the persons with a disability must be recorded by the HEIs through a designated cell/unit/person at the time of admission. The persons with disabilities must be assisted in preparing such submissions. It would help the institutions to identify the needs and the action plan to assist such a student in need. A proper consolidated record of facilities provided and other information related thereof must be maintained by the establishments.

8.5.3 Capacity building of the Staff/Faculty/Students

The designated Staff must be provided with proper training workshops to understand the needs of students with disabilities and should be sensitive towards providing the required resources/services at the time of entering the particular unit.

9

Inclusive Campus Life

9

Inclusive Campus Life

Achieving an inclusive campus life in an HEI requires a comprehensive approach that considers how to fully embrace the students, faculty and staff with disability by changing the culture and not only ensuring accessibility and providing need-based specific accommodations but also creating an environment of respect and dignity for effective inclusion of diversity.

Besides meeting various statutory compliances, creating a feedback system from the students, staff and faculty with disabilities on various barriers will greatly help in strengthening the inclusive campus life of the persons with disabilities.

9.1 Guiding Principles for an Inclusive Campus

Each HEI should adopt and declare guiding principles of inclusion that promote equity, access, opportunity and the rights of persons with disability in higher education and contribute to reducing discrimination against them.

The HEIs should be guided by the principle that all persons who experience disability have:

- the right to access and participate in education.
- the ability to learn and
- the right to exercise their voice, choice and control in managing their own educational experiences.
- the right to develop to their fullest potential and to be active valued citizens in the community.
- the right to an appropriate and adequate allocation of resources to enable their right to access and participate meaningfully in education.
- the right to be safe – physically, emotionally, culturally and socially and to be treated respectfully.

9.2 Preparing HEIs campus for inclusion

The leadership at HEIs / universities should focus on the following to prepare for larger inclusive life on the campus:

9.2.1 Right attitudes to disability

Campus culture is shaped by the attitudes of administration and faculty and the lens through which disability is viewed by the various stakeholders of HEIs. Even when students do not experience outright hostility, many continue to face barriers such as generalizations and stigma. HEIs leadership at all levels needs to get involved to counteract common biases against persons with disabilities while creating an inclusive campus climate.

9.2.2 Creating a climate of inclusion

Students benefit from a diverse, inclusive campus climate, which helps prepare them for the world of work and civic and community engagement. Creating a fully inclusive climate is an ongoing journey of enhancing the understanding of disability inclusion thus it will always be evolving and changing and requires constant dialogue and involvement of persons with disabilities.

9.2.3 Constant reinforcement of inclusive culture

The HEI leadership at all levels shall be engaged in leading, messaging, and measuring improvements in inclusion. All staff should see their role in, and contribution to, inclusiveness. On-the-ground action among faculty, staff, and students need to happen in tandem with support at the level of the President, Director, Dean, Vice chancellor, or Provost who embrace disability diversity and the spirit of inclusion consistently and publicly.

9.2.4 Use of right language in the campus

The language used to refer to disability and people with disabilities can be limiting. One way to change detrimental attitudes or stigma toward disability is to intentionally use more inclusive language that dignifies people's images and expectations. Using positive images of students with disabilities from different backgrounds can also help to familiarize disabilities. Talking about disability and using inclusive language starts with how we define socially constructed concepts such as disability, diversity, and inclusion.

9.3 Accessibility in Residential Accommodation / Hostels

The HEIs should incorporate accessibility based on universal design in the campus residential accommodation and hostels such as step-free entrance, wider doors, accessible toilets, lowered controls. Existing accommodation should be made accessible by retrofitting and preference be given to allot ground floor accommodation to persons with disabilities on the campus. Faculty with disabilities, staff having a spouse with disabilities, or children with disabilities should also be allocated accessible accommodation in that preference.

It is equally important to ensure an inclusive model for room allotments in hostels for persons with such disabilities that they are well distributed into the hostel environments. This shall, however, be possible only when a hostel is designed or retrofitted for universal accessibility features.

9.4 Guest Houses

All Guest Houses or guest accommodation facilities in the HEIs shall be designed/ retrofitted and managed with universal design-based access features so that it remains accessible to the diversity of guests with disabilities. It implies developing accessibility and inclusion as core concepts in the delivery of the same.

9.5 Conference Facilities / Common Facilities

All common facilities and conference facilities in the HEI campus should be accessible complying with architectural accessibility and ICT accessibility so that all persons with disabilities can participate in them without any discrimination on an equal basis with others.

9.6 Physical / Cultural / Sports Promotion in universities

HEIs should not only ensure accessibility in physical spaces for culture, leisure and sports but also ensure inclusion of various sports disciplines for persons with disabilities for preparation and organize events in partnership with national sports bodies such as Blind Cricket, Paralympic Committee etc. This has the potential to shatter myths about disabilities and provide an opportunity for persons with disabilities to express themselves in disciplines other than education. HEIs could also run sports courses at various levels.

9.7 Inter college/ inter-university activities

HEIs should promote, support and organize inter-college and inter-university, inter-institution activities involving persons with disabilities in different subjects.

Such activities, competitions should not always be among persons with disabilities but persons with disabilities should be encouraged and given opportunities to participate in all such activities and competitions on an equal basis with others.

9.8 International University Exchange Program.

Persons with disabilities shall be encouraged and given opportunities to participate in and travel for international university / academic exchange programs. For undertaking travel, reasonable accommodation, accompanying person/carer support where needed and other specific support sought by persons with disabilities should be included as part of the program and be funded so that they also can utilize such opportunities as available to non-disabled persons on the campus.

10

Governance and Monitoring of Accessibility and Inclusive Practices

10

Governance and Monitoring of Accessibility and Inclusive Practices

The governance and monitoring of accessibility and inclusive practices in HEIs shall be done in two folds. Firstly, the institutions / universities shall develop its administrative framework for planning and implementation through an expert/advisory committee vis-a-vis through a designated cell or unit inside the institute. Secondly, accessibility and inclusive practices should gain further impetus as significant parameters in the assessment for ranking and accreditation purposes.

Self certification for accessibility in compliance of the provisions of the RPWD Act 2016 followed by third party assessment shall be carried out periodically (on an annual basis) by the respective HEIs and reports / certification thereof shall be uploaded on their official websites.

For an overall governance and monitoring of progress of implementation of accessibility and inclusive approaches, the University Grants Commission shall review the same twice an year through a competent committee constituted under it's mandate.

10.1 Accessibility and Inclusive Practices through Institutional Governance

a) HEIs need to create inclusive institutional culture by framing suitable accessibility and inclusive policies internally and implement these policies for inclusive practices. The process needs to ensure whether the initiatives are in the right direction and achieving the desired results and also suggesting necessary modifications and adaptations. Precisely, some of the primary best practices consist of constituting a competent advisory board, aligning strategies with goals, being accountable and responsible, following the code of ethics, defining roles and responsibilities, and dealing with grievances effectively (as detailed out in 8.4 above). Therefore, to facilitate the students with disabilities effectively, there is a requirement of a unit that may oversee the effective implementation of the policies and programs for their benefit.

b) Considering the need of having a resource centre cum implementation unit in HEIs, the University Grant Commission has already undertaken certain initiatives to empower the students with disabilities. The initiatives include schemes of assistance to universities/colleges for Higher Education for Persons with Special Needs (Differently- abled Persons) (HEPSN) and the creation of Equal Opportunity Cell (EOC). With the passing of RPWD Act 2016, the responsibilities of the HEIs have been increased beyond the activities and facilities that were part of HEPSN and EOC scheme. Now the HEIs have to strengthen the unit that is responsible for implementing accessibility and inclusive practices on the campus. For strengthening the Equal Opportunity Cells/Enabling Units, the HEIs shall follow the guidelines prescribed by UGC from time to time in strict compliance to the role and functions defined for such cells/units. A person with disability should preferably be the coordinator/convenor of such a cell/unit.

c) Each HEI must develop its own action plan preferably for five years with a clear vision and a year-wise accomplishment. An expert, advisory or coordination committee must be appointed that meets on a regular basis under the chairpersonship of the head of the institution/university. The committee shall include students and faculties/staff with diverse disabilities, parents/caregivers, Organisations of Persons with Disabilities, NGOs, disability / accessibility experts and others as deemed fit. The activities of the committee along with the goals achieved must be highlighted on the HEI / University websites/social media with evidence.

d) The cell/unit responsible for implementing accessibility and inclusive practices would also serve as a resource centre. As per the need of the persons with disabilities, whether they are students or faculty or staff, the unit serving as a resource centre should provide additional rehabilitation services as much as possible under the guidance of the expert/advisory committee. This centre may train volunteers to support persons with disabilities as buddies in the area of sign language, use of assistive devices and technologies or support them as a reader to a person with a visual disability or assist them in their mobility in case a person with a locomotor disability needs support. The cell/unit should facilitate the participation of persons with disabilities in all activities of the institution including participation in sports, social, cultural and corporate life of the campus.

e) Each HEI needs to develop its own administrative framework to undertake action in this area. This must include the procurement policies (ICT, AT, Civil Infrastructure). It is expected that HEIs undertake self-assessment on an annual basis of their inclusive practices and accessibility audit.

10.2 Accessibility Assessment for Accreditation and Ranking of HEIs / Universities

This section focuses on accessibility and inclusive practices as parameter in Assessment Framework for Accreditation and Ranking of HEIs. Besides the pursuit of rankings, accessibility assessment is required to be an integral part of an enabling framework for creating inclusivity for education.

10.2.1 Institutions of higher education in India are required to respond for their quality of teaching, research and facilities through various assessment frameworks. The government effort at quality assessment in the education sector at the national level was first initiated with the creation of the **National Assessment and Accreditation Council** (NAAC – for colleges and universities) and the **National Board of Accreditation** (NBA – for technical and professional institutions) in 1994. Further, The National Institutional Ranking Framework (NIRF) was approved by the government in 2015 to rank institutions across the country. Several criteria and indicators have been developed to provide a base for assessment and accreditation. Most of these indicators reflect academic, administrative, infrastructural, financial and human resources. For example, NIRF broadly covers "Teaching, Learning and Resources," "Research and Professional Practices," "Graduation Outcomes," "Outreach and Inclusivity," and "Perception".

10.2.2 It is noted that inclusivity and accessibility dimensions are still an evolving aspect and will get greater emphasis with awareness and understanding in the assessment, accreditation and ranking process of HEIs. NAAC has a small weightage to this aspect and it covers (i) built environment with ramps/lifts for easy access to classrooms, (ii) Divyangjan friendly washrooms, (iii) Signage including tactile path, lights, display boards, and signposts, (iv) Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment, and (v) Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading, font enlargement, etc.

Whereas, NIRF covers a few aspects having three questions only under 'Facilities for Physically Challenged Students' such as

(i) Do your institution buildings have Lifts/Ramps?
(ii) Does your institution have provision for walking aids, including wheelchairs and transportation from one building to another for students with disabilities?
(iii) Do your institution buildings have universally accessible toilets for students with disabilities?

The National Board of Accreditation (NBA) is yet to consider accessibility components as an important parameter for assessment. The accessibility and inclusive practices in the HEIs are beyond the current parameters included in their assessment process.

10.2.3 Thus, NAAC, NBA and NIRF need to consider broad aspects of accessibility and include them in their assessment, accreditation and ranking process. It may be recommended to include Accessible ICT, Use of Assistive Technology, Mobility Infrastructure, Built Infrastructure, Accessible Curriculum, Teaching and Learning, Accessible Assessment and Examinations, Resources and Services to promote Inclusive Campus Living. This guideline document may be referred to for this purpose.

10.2.4 Each HEI / University shall exert to get itself assessed and certified for accessibility for it's information systems, infrastructure systems and services rendered by itself. Accessibility assessment mechanisms shall continue to be developed and standardised for diverse category and scale of institutions.

10.2.5 The present guidelines shall be treated and considered as supplementing the existing guidelines, acts, ordinances, statutes issued from time to time to make the system robust and inclusive for persons with disabilities.

Higher Education Institute/University

An Open Book

Symbolic representation for diverse disabilities and human diversity

Cover Design Concept

The cover conceptualises the theme of simplicity, clarity and inclusivity in higher education institutions/universities.

The eight icons in the front and back cover represents the idea of diverse disabilities and human diversities as a key drivers to inclusion on educational campuses.

The open book at the rear side reflects an idea of openness as an approach to embrace accessibility and inclusion in the institutions/universities as represented through a connecting built form.

The pastel red shade of the background embeds the philosophy of warmth and groundedness as the base to support inclusivity.

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Ministry of Education
Government of India

विशवविद्यालय अनुदान आयोग
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Quality Higher Education for All