



INCLUSIVE EDUCATION THROUGH OPEN AND DISTANCE LEARNING FOR INDIVIDUALS WITH DISABILITIES IN INDIA

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Abstract: Higher education is an essential component of overall development of a human being. It is also an avenue of self-actualization for most people in the learning process. However, the vast majority of prospective students are denied access to higher education, especially the disabled individuals, due to limited space. National Education Policy (NEP) 2020 envisions ensuring equitable access and inclusion in higher education. Open and Distance education therefore becomes the viable option, as it accommodates millions of students who can study from the comfort of wherever they live or work. This necessitated the establishment of the Open and Distance Learning (ODL) education, which provides highly accessible and enhanced quality education.

ODL also increases manpower development and general literacy. The flexible operation of the Open and Distance education gives the learner the greatest possible control over time. The Open and Distance learning movement has opened the horizon of students, thereby re-shaping what they learn and how they access learning.

Despite the advantages of the Open and Distance Learning (ODL), individuals with disabilities are still marginalized and socially/educationally excluded. Therefore, Open and Distance education can integrate the disabled maximally, if stakeholders develop educational facilities and curriculum in Open and Distance Learning (ODL) that can enhance teaching and learning for the individuals with disability in India.

Index Terms - Inclusive education, Open and Distance Learning, Disabilities, NEP 2020, Curriculum for Persons with disability

I. INTRODUCTION

Higher education is an essential component of overall development of a human being. It is also an avenue of self-actualization for most people in the learning process. However, the vast majority of prospective students are denied access to higher education, especially the disabled individuals, due to limited space. National Education Policy (NEP) 2020 envisions ensuring equitable access and inclusion in higher education. Open and Distance education therefore becomes the viable option. It has provided the platform for educational rehabilitation, especially for the differently able students. Distance education provides distinct advantages for many students with disabilities by offering access to educational opportunities that may not be present at many conventional universities. Ommerborn (1998) in an extensive review of distance education programs worldwide for students with disabilities notes similar findings, emphasizing that in addition to improving access, it is equally important to ensure that students with disabilities receive the support they require to ensure success in their studies. Disability-specific services are an important contributor to success in post secondary education for students with disabilities. Studies show that post secondary students with disabilities who receive appropriate support services persist in their studies and graduate at the same rates as their non-disabled counterparts (Horn & Berkold, 1999).

The open and distance learning system had started in India and worldwide to relieve the pressure on institutions of learning, following the traditional system of education. According to the Commonwealth of Learning (2004), most ODL systems have a philosophy that aims to remove barriers to education, allow students to study what they want, when they want, where they want. There have been many attempts to define both open and distance learning. A recent discussion of these terms described them as ‘approaches that focus on opening access to education and training provision, freeing learners from the constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners.’ (Moore and Tait, 2002,) UNICEF (2009) states that “The term ODL or open and distance learning is frequently used as an umbrella term to cover educational approaches that reach learners in places that are convenient or accessible to them, provide learning resources for them, or enable them to qualify without attending school or college in person, or open up new opportunities for keeping up to date no matter where or when they want to study.” According to UNICEF (2009), given the right policy and infrastructural framework, ODL can support five areas in basic education, including educational provision in conflict and disaster areas:

- providing para-formal or alternative schooling systems
- supporting successful transition to, and performance within, formal schools
- raising quality by providing ready-made educational resources (formal or non-formal)
- providing networks and training for intermediaries (e.g. teachers, broadcasters, mentors)
- providing communication for development strategies (e.g. health, school readiness advocacy).

The Open and distance learning systems provide flexible time, location and are self-paced, thus fitting into irregular schedules which are suitable for children and young people with disabilities. Technology-mediated distance learning via computer networks increases learning opportunities because it bypasses the physical difficulties. Some students may have needs in navigating around campus and the extra equipment that may need to be separately housed on campus. It is more than ever clear that open and distance learning will be an important element of future education and training systems.

However, this feeling became stronger during the Covid-19 pandemic as we moved to an online model of learning and now widespread recognition that the way forward is to make greater use of open and distance learning (ODL), whether in the form of print-based distance learning courses, interactive audio/video, computer-based learning or web-based learning. These methods offer more education for the same unit of resource, easier access and higher quality than can be obtained by traditional methods in countries with poorly financed education systems.

Despite the advantages of the Open and Distance Learning (ODL), individuals with disabilities are still marginalized and socially/educationally excluded. Therefore, Open and Distance education can integrate the disabled maximally if stakeholders develop educational facilities and curriculum in Open and Distance Learning (ODL) that can enhance teaching and learning for the individuals with disability in India.

Objectives of the Study:

To highlight the issues of open and distance learning for students with disabilities.

To list out emerging concerns and basic recommendations for further discussion/analysis by the subject experts and policymakers.

Methodology Used: In the present study, the descriptive method of study was used.

Tools used: The investigator used the secondary sources as a tool to collect the information.

ODL Education & Rehabilitation of Students with Disabilities:

According to Rights of Persons with Disabilities Act, 2016 there are twenty-one types of disabilities. Among all the disabilities, students with disabilities have difficulties in accessing the general classroom, Inaccessible Materials to students with various medical and psychological issues become a problem in the education of various types of disabilities. Especially, it becomes a barrier in the education and rehabilitation of students with disabilities. Activities of daily living like accessing in public transport. Difficulties in accessing

public transport and public buildings have a substantial effect on the ability of the disabled people to participate in educational, sociocultural, economic, and sport activities. Apart from their disability, the attitudes of others towards them, their own and their families' outlook play an important role in their perception of selves. All this leads to social exclusion of the persons with disabilities and sometimes-social exclusion of other members of their family as well.

MHRD (2006) in its Sarva Shiksha Abhiyan (SSA) framework clearly states, "SSA will ensure that every child with special needs, irrespective of the kind, category and degree of disability, is provided education in an appropriate environment. SSA will adopt zero rejection policy so that no child is left out of the education system. It will also support a wide range of approaches, options and strategies for education of children with special needs" To enhance the education levels, the Govt. Of India has started a programme on 'Inclusive Education for Disabled at Secondary Stage (IEDSS)', which was approved in September 2008. The Scheme is 100% centrally funded. This scheme is proposed to be subsumed under 'the Rashtriya Madhyamik Shiksha Abhiyan (RMSA)' under the 12th Plan. Therefore, open and distance learning systems provide flexible time, location and are self-paced thus fitting into irregular schedules, which is suitable for children and young people with disabilities. Technology mediated distance learning via computer networks increases learning opportunities because it bypasses the physical difficulties some students may have in navigating around campus and the extra equipment that may need to be separately housed on campus. 'It is more than ever clear that open and distance learning will be an important element of future education and training systems.' (Moore and Tait, 2002,). Further, 'There is now widespread recognition that the way forward is to make greater use of open and distance learning (ODL), whether in the form of print-based distance learning courses, interactive radio, computer-based learning or web-based learning. These methods offer more education for the same unit of resource, easier access and higher quality than can be obtained by traditional methods in countries with poorly financed education systems.' (Moore and Tait, 2002).

Issues in Open and Distance Learning for Students with Disabilities:

Printed materials: Students who have visual impairments such as blindness or low vision are unable to read textbooks & various printed materials provided to them. Therefore, such types of issues can be resolved by providing audio recordings of the print materials, Braille text, large text, or e-text according to the needs of the student. The various websites in internet are not accessible for students with disabilities. The online content, which provides important information in various issues, provides problems to the students with disabilities. Therefore, colleges, universities should design programmes, which use accessible websites for the persons with disabilities.

Curriculum Reformation: The major transformation is required in curriculum for the various types of disabilities. The curriculum should be accessible by all the students at any time. Various disabilities experts should be consulted before the final approval of the curriculum. This will help them to achieve maximum from the curriculum.

Advancement in Technology in Various Colleges and Universities: The basic technology upgradation is required for the advancement in various study-centres in colleges and universities. Therefore, it can help to achieve the various goals of the students with disabilities.

More Open Universities especially designed for Students with Disabilities: The number of open universities should be increased so that the facilities for the various types of students with disabilities can enrol themselves in large numbers.

Implementation of Acts and policies: Proper and uniform implementation of various acts and policies should be seen. The newly envisaged Rights of Persons with disabilities act should be followed for various kinds of disabilities. Fewer Opportunities in Employment: the employment opportunities should be increased in the job sector. Therefore, this will motivate more number of students with disabilities to enrol in the higher education.

Website Accessibility: the websites of all the educational institutions should be accessible for every kind of student with disabilities. Therefore, more participation can be seen in the education system.

Proper Examination Systems: Examination reforms are required in ODL systems as well. Keeping pace with technological advances and knowledge generated in the areas of pedagogies and evaluation, modifications/adaptations are required. **Non-availability of Disability Rehabilitation Professionals:** There is a huge scarcity of the disability rehabilitation professionals like special educators, audiologists, therapists, counsellors especially in the north-eastern states of India. The rehabilitation professionals are very much important in providing education and rehabilitation to both the students and the parents or guardians of the students with disabilities.

Low Enrolment of Persons with Disabilities in ODL Courses: There is very scanty no. of students in the various ODL courses. As most of the institutions do not have proper infrastructure for enrolment of various kinds of students with disability. Therefore, they are unable to enrol for the higher education, as they are not able to cope up with the general system of education.

Strategies for Students with Disabilities in ODL: According to Hendriks (2009), one of the primary concepts of ODL is to offer students learning at anytime, anywhere. Therefore, all ODL resources must be designed to afford students with disabilities maximum opportunity to access distance education resources anytime, anywhere without the need for outside assistance (e.g. sign language interpreters, aides, etc.). ODL resources must generally be designed to provide “built-in” accommodation (i.e., closed or open captioning, descriptive narration) and/or interface design/content layout, which is accessible to “industry standard” assistive computer technology in common use by persons with disabilities. Whenever possible, printed information should be provided in the alternative format preferred by the student (that is, Braille, audio tape, large print, electronic text, MP3, DAISY). When choosing between possible alternative formats or methods of delivery, consideration should be given to those methods which are adequate for short, simple or less important communications. These may not be equally effective or appropriate for longer, more complex, or more critical material. Access to ODL courses, resources and materials include the audio, video and text components of courses or communication delivered via existing and emerging technologies. Access includes the audio, video, multimedia and text components of Websites, electronic chat rooms, e-mail, Open and Distance Learning Accessibility to Learners with Disabilities instructional software, CD-ROM, DVD, laser disc, video-tape, audio tape, electronic text and print materials. ODL courses, resources and materials must be designed and delivered in such a way that the level of communication and course-taking experience is the same for students with or without disabilities.

Universal Design for Learning (UDL): Universal Design for Learning (UDL) refers to a process in which a curriculum (goals, methods, materials and assessments) are intentionally designed to offer flexible and inclusive approaches that can be customized and adjusted for individual needs. The key components of UDL are to ensure flexibility and accessibility in the ways information is presented, the way students respond or demonstrate knowledge and skills, and the way they are engaged in the learning process (e.g. with the course content, interactions with peers, and instructors etc.). Other components being to reduce the barriers in instruction by providing appropriate accommodations, supports and challenges while maintaining high achievement expectations for all students (UNESCO). The process in which a curriculum (goals, methods, materials and assessments) are intentionally designed to offer flexible approaches, can be customized and adjusted for individual needs.

Assistive Technologies:

Assistive or enabling technology includes devices, tools, hardware, or software, which enable partially, people with disabilities to use the computer. It presents an alternative way to access the content on screen, command the computer or process data. Specific adjustment software or devices for manipulating the computer include:

- Screen reading software (speaks displayed text and allows simulating mouse actions with the keyboard)
- Screen magnification software (for enlarging the content of the screen)
- Braille display (for displaying Braille characters)
- Alternate input devices (e.g. Screen keyboard)
- Special keyboard (to make data entry easier),
- Keyboard enhancements and accelerators (like Sticky Keys, Mouse keys, repeat Keys, Slow Keys, Bounce Keys, or Toggle Keys),
- Mnemonics and shortcut keys,
- Alternative pointing devices (e.g., Foot operated mice; head mounted pointing device, or eye tracking systems).

- Software converting Sign language to text and visa-versa

These aiding technologies can be either devices or equipments (hardware) e.g. Braille, or software applications e.g. screen reading software. The conversion of sign language to text or text to sign language involves several steps and technologies, including the use of a camera, the Mediapipe library, feature extraction, data points, image matching, RNN algorithm, gesture verification, and gesture classification. However, these technologies do not seem sufficient for providing full support to people with disabilities. Web content providers should also participate in the inclusion process by making arrangements that allow particularities of people with disabilities to be taken into account when creating web content.

Recommendations:

- While Educational Institutions must recognize that teaching and learning provision should accommodate the needs of students with disabilities as disability-specific interventions, it is also important to introduce and implement policies, procedures and standards that respect accessibility, inclusion-based solutions for all students and Universal Design for All (UDL). The various areas to address are Enrolment, Needs-assessment, Strategy and internal disability policies and content, Integration of Open Solutions, Removal of barriers, Training, Efficacy, Support services.
- The instructors should ensure that students are able to access content, required learning resources, guide them through the course to achieve the expected learning outcomes. They are familiar with needs of students with disabilities and able to propose necessary adjustments and modifications.
- Legislative and policy direction provided to institutions and instructors. It is also important to ensure that disability and accessibility aspects are equally mainstreamed within educational settings (from early childhood to higher education, including ODL, in formal and informal education in a lifelong learning perspective).
- ICT and Assistive Technologies (AT): The maximum usage of the Information Communication Technology and various software applications for students with disabilities should be used by different institutions. The usage will enhance the enrolment by fulfilling the exact needs of persons with disabilities. The use of software's like AAC Communicator, Divyang Sarathi etc. will enhance the participation level in the open schools and universities.
- The training and the learning materials to be provided according to the needs of the various students with disabilities. For example, the students with visual impairment should be provided Braille books and software's like JAWS & DAISY, Also Interpretation in Sign Language for students with Hearing Impairment) which will enhance the learning levels and enhances the participation level as a whole in the learning systems.
- Proper implementation of various Acts and Policies should be introduced in the institutions. The advent of Acts like 'Rehabilitation Council of India Act, 1992', 'Persons with Disabilities Act, 1995', 'United Nations Convention on Rights of Persons with Disabilities, 2006', 'Rights of Persons with Disabilities Act, 2016' etc. should be implemented by respective State Governments for the upliftment of Students with Disabilities.
- Various educational institutions should start with the introduction of 'Needs-based courses and curriculum'. The universities should take a leading role in this respect for the better educational rehabilitation of students with disabilities. Emphasis should be provided for vocational and skill based courses in the development of persons with disabilities. Due to the lack of the skill-based courses, the students with disabilities are not able to participate in higher education.
- A number of teaching training courses and programmes are needed in various educational institutions right from primary level. It is the responsibility of the schools, colleges, universities for understanding the needs of the students with disabilities. Therefore, various long term courses and short-term programmes should be conducted by schools, colleges, and universities for the upliftment in the process of ODL

• Rehabilitation Council of India recommends for starting research for understanding the needs and efficacy of different distance education programmes for students with disabilities. With the advent of Research, job oriented ODL courses should be provided to the students with disabilities. This will attract more students to opt for the ODL courses.

Conclusion:

As the various acts and policies are regularly pressing for achieving various educational rights for persons with disabilities, the Open and distance learning plays a very important role to achieve and fulfil their educational dreams. The realization of goals of persons with disabilities education is based on the differentiation and individualization of teaching. Information Communication & technology is an important support for education of students with disabilities. The technology framework of e-environment for students with specific disabilities includes assistive technology and e-learning/e-teaching technology etc. Therefore, it is the responsibility of the concerned authority to fulfil the basic rights and needs of students with disabilities. Hence, various reforms are required by several institutions to include the students with disabilities to complete the dream of Education For All (EFA). A nation will be developed only when it fulfills, especially, the educational needs of everyone, including students with disabilities.

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