

# A STUDY OF CHALLENGES AND OPPORTUNITIES OF EMPLOYMENT FOR PERSONS WITH INTELLECTUAL DISABILITIES IN DIGITAL ERA: A REVIEW

Nidhi Khurana, Ram Shanker Saxena

E-Mail Id: khurananidhi9999@gmail.com, rssaxena@amity.edu

Amity Institute of Rehabilitation Science, Amity University Uttar Pradesh, Noida, India

**Abstract-** With the advent of age of digital technology, the landscape of employment has been revamped which has led to substantial shifts from traditional model of employment to a more progressive and dynamic model. This study explores the impact of technological transition on the employment inclusion for Persons with Intellectual Disabilities (PWID). The methodology employed a comprehensive narrative review of literature from a broad range of existing writings which has presented an understanding of dynamics between the digital developments and the work engagement for PWID. The present study reveals two facets which included opportunities comprising of prospects of remote employment, shorten the travel time, versatility in nature and has broadened career prospects. However, the other facet draws attention to various challenges including lack of digital training, inaccessible technological systems and support among others. The review concludes that the coordination between the designing and utilization of technology and participation of PWID plays a crucial role in the promotion of Digital Accessibility in employment. Future recommendations include in-depth study about the sustainability of technological systems, factors which are affecting the participation, and the reach of the utilization.

**Keywords:** Employment, Persons with Intellectual Disabilities, Digital Accessibility.

## 1. INTRODUCTION

### 1.1 Intellectual Disability

*“Intellectual disability, a condition characterized by significant limitation both in intellectual functioning (reasoning, learning, problem solving) and in adaptive behavior which covers a range of every day, social and practical skills.” (RPWD ACT 2016)*

Intellectual Disabilities can be described as a disability wherein there is a considerable impediment to cognitive activity as well as adaptive competencies including relational, societal and functional proficiencies.

Intellectual Disability can be further organized and understood by different subdivisions which are based on level of mental capacity, learning related, clinical features and requirement driven.

Persons with Intellectual Disabilities may encounter various obstacles in multiple domains of life, namely learning, work and community inclusion. These difficulties are complex, however, can be overcome by systematic and structured learning environment, use of technology and digital tools and fostering an inclusive environment

### 1.2 PWID and Employment

#### 1.2.1 Employment

Employment plays a crucial role in an individual's life given that it promotes participation in society, happiness in oneself and most importantly an understanding of individuality. Apart from being able to grow individually as a professional, Employment provides a medium for a person to be able to contribute to your nation's growth and eventually on a global level. In recent years the definition of employment has been shifted from just a source of existence to a vital means through which an individual can bring their expertise to make a difference to communities.

#### 1.2.2 Models of Employment for PWID

Models of employment for PWID comprises of a range of practices which focus on enhancing the opportunities for employment as well as foster workplace inclusion. Government jobs provides a well-organized and a stable form of Career Avenue. Open or competitive employment presents a space for the individuals to compete whereas traditional or family-based employment provides a protective environment. Supported employment proposes individualized assistance including skills training and development while a well monitored work space is being offered under sheltered employment. Self-employment offers the opportunity to run the business on their own while Group Employment offers the advantage of handling the complex work processes as a group. Apart from these, various

Corporate Social Responsibility (CSR) and Community based initiatives have also become part of overall employment framework to facilitate the inclusion of PWID (Venkatesan, 2021).

### 1.2.3 Need for and Importance of Employment for Persons with Intellectual Disabilities

- Self- sufficiency and Economic Independence: Employment increases independence and financial security for people with intellectual disabilities (PWID) by helping them become financially strong.
- Social Integration and Respect: By involving PWID into work environment and eliminating prejudice and bias, employment builds social inclusion.
- Individual Growth and Capacity Building: Programs and strategies to promote skill development.
- Quality Improvement of Life: By equipping PWID with structure, goal, and an understanding of participation, equitable employment strengthens their quality of life.
- Reduced Reliance on Public Assistance: Employment encourages monetary independence, and this diminishes an individual's future dependability on social services.
- Advocacy of Diversity in the Working Environment and Inclusion: Employment promotes workplace diversity and inclusion by fixing social obstacles and fostering.

(Source: Ministry of Social Justice & Empowerment, Department of Empowerment of Persons with Disabilities & National Action Plan for Skill Development of Persons with Disabilities)

### 1.3 Accessibility

The design of goods, services, spaces, and digital platforms with accessibility in mind allows people with disabilities to interact with them to the fullest extent possible, irrespective of their capacity. It encourages equality of opportunity and inclusivity in public areas, transit, and education. It makes sure that every individual can browse across the globe without facing problems through the addition of features including keyboard navigation, screen readers among various others. Societies that embrace accessibility empower people with impairment and promote diversity.

*“The Central Government shall, in consultation with the Chief Commissioner, formulate rules for persons with disabilities laying down the standards of accessibility for the physical environment, transportation, information and communications, including appropriate technologies and systems, and other facilities and services provided to the public in urban and rural areas.”*

(RPWD ACT 2016)

### 1.4 Digital Accessibility

*“The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect.”*  
(Tim Berners-Lee, W3C Director and inventor of the World Wide Web)

The basis for developing and designing of the digital tools, devices and systems should be such that all individuals irrespective of how diverse their hearing, visual, mental and other significant capacities are, they are able to access and interact with it fully. When the digital world become accessible to all, Digital Accessibility can be attained.

*Access to information and communication technology*

*The appropriate Government shall take measures to ensure that,—*

- i) all contents available in audio, print and electronic media are in accessible format;*
- (ii) persons with disabilities have access to electronic media by providing audio description, sign language interpretation and close captioning;*
- (iii) electronic goods and equipment which are meant for every day use are available in universal design*

(RPWD 2016)

Global guidelines for web accessibility are established by the W3C Web Accessibility Initiative (WAI), which makes sure digital material is readable by all users, especially those with impairments. According to Indian Regulations, specific accessibility standards for digital content are provided, which prioritizes the needs of those with impairments while simultaneously improving usability for all end users.

## 2. OBJECTIVES

- To ascertain the challenges of employment of PWID in Digital Era
- To explore the opportunities of employment of PWID in Digital Era

## 3. RESEARCH QUESTIONS

- What are the challenges of employment of PWID in Digital Era?
- What are the opportunities of employment of PWID in Digital Era?

## 4. RESEARCH METHODOLOGY

The study follows comprehensive narrative review of literature as methodology.

#### 4.1 Review of Literature

He & Qi (2024) investigates job stability for people with impairments in today's digital age, analyzing potential, challenges, and solutions to increase employment security. The study identified challenges such as inadequate government assistance and unequal access to knowledge. The review also identified many potential for legislative support, technological empowerment, and Internet training. However, current research has not completely examined the inadequate workplace policy security and disparity in access to technological information. The study suggests the swift development of digital technology presents new possibilities as well as challenges for disabled workers, such as policy safeguarding, working remotely, and professional education. But these possibilities are offset by constraints that include poor workplace policy safety, limited access to digital data, and insufficient human capital focus. To overcome these challenges, it is essential to investigate digital technology trends, construct support for employment processes, provide tailored training for skills, and promote an accessible workplace.

Murphy et al., (2024) has explored the relationship between digital systems, bodily health and mental well-being. The fundamental emphasis of the study was given to analyses into if individuals with intellectual disabilities encounter any setbacks using thematic review of literature. The study was conducted during COVID 19 pandemic and has collected data by engaging the participation of 216 participants which included 109 as female participants and 103 as male participants, the remaining participants didn't reveal. The study used focus groups as well as interviews to gather the data. The study's result reported that most of the participants live in their domestic residence, owns mobile phone, computer etc. and were in good physical as well as mental health, few issues were noted in vision, hearing and participants from France were impacted by isolation and loneliness at a greater level and few discrepancies were there on the usage of technology for health and support services. The findings also shed light on how discernibility and complexity of the content and social network platforms acted as constraints and how accessible documents and guidance from close ones served as promoters. The scope of the study was impacted by factors of limited and biased information because of the impact of the pandemic. To conclude, the study provided a detailed understanding about the collaboration with technology and how it helps individuals with intellectual disabilities to build on their self-esteem and lead an independent life. For future studies it is recommended that digital training should be explored to understand its factors and importance for the building of knowledge and management of technology.

Roche & Simovic (2023) investigated the variety of academic studies undertaken in the subject of distant work chances. The primary emphasis has been on the financial aspects of telework. The study used literature analysis as a methodological tool to precisely define questions. The analysis was conducted in the final month of 2022, using a data collection of 34 out of 78 selected papers available on Google's academic search tool beginning in 1995. The results of multiple studies that have been executed for Individuals with disabilities in the workforce reveals multiple recurring patterns, including job access hindrances, stereotypes associated with individuals with disabilities, key influence of public strategies, and the need for improved education. The research have also shed light on the advantages of remote work, such as reduced travel time, increased professional and personal harmony in relationships, expanded career options, and other comparable perks. Future exploration prospects may include understanding the causes for participation and rejection, investigating the organization and usefulness of technology development in connection to specific requirements and capacities, and deploying more structured instruments. The literature review helps to better recognize study gaps and potential research subjects for people with impairments in the context of remote work.

Ferreria et al., (2023) investigate the involvement of individuals with intellectual and developmental impairments, as well as other stakeholders, in the development and design of a model for the digital platform "Hilives". The study has adopted a user-focused strategy by integrating different techniques of data collection, which include interviews, usability tests, and questionnaires. The population sample included in the first phase of study are 48 in number and in the second phase of study are 29 in number which consists of Individuals with Intellectual and Developmental Disabilities, Higher Learning Institutions and corporations. According to the findings presented that by making Individuals with Intellectual and Developmental Disabilities who are the end users participate in the creative process of planning delivered an accessible platform which comprises easy to use points of contact and understandable text. However literature highlights various challenges such as there has to be constant upgrading of the mediums and making sure that the platform processes are conforming to the benchmarks set. There is research gap in the current literature namely non-representative size of sample and in the utility function in the actual experience. The reviewed literature concludes that individuals with intellectual and developmental disabilities plays a crucial role across all the phases of designing and implementing so as to cater to the individual requirements. Future studies should be conducted to analyses the sustained outcomes of the technological tools to promote the participation of individuals with intellectual and developmental disabilities in further education and employment.

Paul et al., (2022) examines how individuals with intellectual and Developmental Disabilities employ technological tools and devices in their work environments. The exploration employed descriptive analysis framework to build research structure. Comprehensive thematic analysis was systematically utilized to interpret the data. Adults with Intellectual and Developmental Disabilities and their family members participated in the study discussion group. The results indicated at the emergence of four key themes namely use of wireless systems, enablers and blockades of technological utilization at workplace and standards and results connected with implementation of technology. The reviewed literature concludes that by placing need-based technology at the workplace, it can create a variety of benefits and most importantly accessibility for the workforce with intellectual and Developmental Disabilities. Future studies should explore the range of technology and their scope of application in aiding Adults with Intellectual and Developmental Disabilities

Sube&Bühler (2022) examines the model factors which are required for the employing technological resources for professional training and employment rehabilitation of Individuals with Intellectual Disabilities. Data collection was done by carrying out eleven semi-structured interviews which were done in a group setting in the form of video-based conferences. The study involved the participation of Individuals with Intellectual Disabilities as well as community service contributors. The key findings from the study indicated that after the global health crisis of COVID-19 happened, it has impacted the routine operations at various levels. The findings have also reported that various benefits are presented by the utilization of technological tools, namely gaining interactive knowledge, attainment of technological abilities and achieving a sense of independence and confidence. On the other side, it has also been revealed that technological involvement is still lagging behind in the rural places. The study highlighted the importance of collaboration between the physical resource, human workforce and the supervisory panel to create an environment of openness and coherence. The involvement of trained experts who can tailor-made strategies for individuals with intellectual disabilities has also been underlined.

Damianidou et al., (2018), has done extended analysis to investigate the influence of technological systems on the facilitation of work outcomes for individuals with Intellectual and Developmental Disabilities. Single-case experimental framework which was undertaken during the years 2004 to 2016 was taken as the data set for analysis involving the population of individuals with intellectual and developmental disabilities using the percentage of non-overlapping data (PND) to analyses the program across the job contexts. According to the analysis of data, the results indicated noteworthy variations in the outcomes of use of digital tools among visual and auditory inducing, different variations in computing devices and actual and artificial settings. The results also shed light on substantial association between accessible design and the forms of digital tools being present. However, the study was limited to data set between 2014 and 2016 which restricted the reach for advanced innovation. The reviewed literature concludes how diverse technical systems as well as their layout can impact the repercussions related to employment for individuals with intellectual and developmental disabilities. Future research should do in-depth analysis on the utilization of digital tools in real world contexts.

## 5. FINDINGS

The study brings to light significant challenges impacting the employment of Persons with Intellectual Disabilities in the modern digital landscape. These are -

- A major barrier to accessibility is the gap in the technological skills and proficiency which further impacts the ability to manage and use employment portals and technological systems.
- Further to that technological systems lack components of Universal Design which affects usability including complexity of information.
- Moreover, rural areas face inadequacy of digital devices which limits accessibility in the initial stage only.
- Also, inconsistency in data and observations has been found for remote work avenues.
- Further negative labelling and discrimination have compounded the intensity of the challenges faced by PWID.

Despite the challenges, Digital Age has open doors to various opportunities. These are as follows-

- The advancements in technology have led to various benefits including expanded employment horizons, reduction in commute time, and most importantly there is an improvement in work life balance.
- Especially remote work provides the element of accessibility and can mitigate discrimination provided there is proper guidance and training.
- Specifically designed digital systems and platforms supported by sustained government policies and regulations boost the participation of PWID in employment.

## CONCLUSION



The study showcases the dual nature of challenges as well as opportunities that the intersection of digital technology and the employment of PWID unveils. An All-inclusive framework should be developed and followed which includes the equal participation of employers, PWIDs and other related human resources. Strong technical support system plays a crucial role in promoting the inclusive practice. Further the digital era when paired with equitable and all-encompassing guidelines and regulations can activate PWIDs fully to participate in modern employment practices.

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