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POST-COVID-19 INCLUSION OF STUDENTS WITH DISABILITIES IN MAINSTREAM CLASSROOMS: CHALLENGES AND STRATEGIES FOR EFFECTIVE PARTICIPATION

Panchada Naidu

Research Scholar, Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan

Dr. Manju Sharma

Research Supervisor, Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan

ABSTRACT

The COVID-19 pandemic has had a significant impact on the inclusion of students with disabilities in mainstream classrooms, exacerbating existing challenges to providing equitable educational opportunities. Before the pandemic, inclusive education focused on integrating students with disabilities using individual education plans (IEPs) and support services. However, the transition to remote learning revealed significant barriers, such as technological divides, inaccessible digital platforms, and a lack of personalized support typically found in physical classrooms. This article examines the challenges that students with disabilities faced during the pandemic and proposes strategies for improving post-pandemic inclusion. Key strategies include using hybrid models that combine in-person and online learning, investment in assistive technologies, ongoing teacher training in inclusive pedagogy, mental health support, and active parent-teacher collaboration. These approaches seek to address the unique needs of students with disabilities, resulting in a more adaptable, accessible, and inclusive educational system. The study advocates for a shift in traditional educational practices to create a strong, supportive environment in which all students, including those with disabilities, can thrive in both virtual and physical learning environments.

Keywords: Inclusive Education, Students with Disabilities, Hybrid Learning Models, Assistive Technologies, Post-Pandemic Strategies

I. INTRODUCTION

The COVID-19 pandemic brought unprecedented changes to educational systems worldwide and significantly affected the educational experiences of students with disabilities. Before the pandemic, education systems were increasingly moving towards inclusive education, with an emphasis on ensuring that students with disabilities could participate in mainstream classrooms alongside their non-disabled peers. Inclusive education was based on the principle that every learner should have equal access to quality education, appropriate learning resources, social interaction, and opportunities for academic and personal development. Individualized Education Plans (IEPs), special educators, classroom accommodations, resource rooms, counselling, assistive devices, and individualized instructional strategies were among the major mechanisms used to support students with disabilities within mainstream educational settings. UNESCO (2020) emphasized the importance of inclusive education in reducing educational inequalities and ensuring that learners with diverse abilities were not excluded from mainstream educational opportunities.

However, the sudden closure of schools during the COVID-19 pandemic disrupted many of these established support mechanisms. Educational institutions rapidly shifted from face-to-face teaching to online and distance-learning modes. Although digital education enabled many students to continue their studies during school closures, it also exposed significant inequalities in access, participation, and educational support. Students with disabilities were particularly vulnerable because many online learning environments were not designed according to universal accessibility principles. Students who required specialized educational resources, individualized assistance, or continuous interaction with teachers often found it difficult to adapt to technology-mediated learning environments. The digital divide was therefore not limited to the availability of internet connectivity and digital devices; it also involved the accessibility, affordability, usability, and appropriateness of educational technologies (Keshavarzi et al., 2022; UNICEF, 2020).

Students with visual impairments, for example, encountered difficulties when educational websites, digital documents, presentations, and learning management systems were incompatible with screen readers or other assistive technologies. Similarly, students with hearing impairments frequently faced barriers when online lectures lacked captions, transcripts, sign-language interpretation, or other communication accommodations. Students with physical disabilities could also experience difficulties when digital platforms required complex physical interactions that were not compatible with their assistive devices. For students with learning disabilities, attention difficulties, intellectual disabilities, or

developmental disabilities, independent online learning could be particularly challenging because they often benefited from direct teacher guidance, structured routines, repeated explanations, visual supports, and peer interaction. Consequently, the transition to online education frequently increased dependence on parents and caregivers and reduced opportunities for independent participation (WHO, 2021).

The pandemic also disrupted the social and emotional dimensions of inclusive education. Mainstream classrooms provide students with disabilities with opportunities to interact with peers, develop friendships, participate in collaborative activities, and develop a sense of belonging. School closures and social distancing substantially reduced these opportunities. Prolonged isolation could contribute to loneliness, anxiety, frustration, reduced motivation, and disengagement from learning. Lee (2021) noted that the absence of regular social interaction and teacher support created additional challenges for students who depended on classroom relationships for academic and emotional assistance. Therefore, the effects of the pandemic extended beyond academic achievement and included students' social participation, psychological well-being, confidence, and sense of inclusion.

The reopening of schools consequently created a need to reconsider existing approaches to inclusive education. Returning students with disabilities to mainstream classrooms could not simply involve restoring pre-pandemic practices. Instead, educational institutions would need to identify the barriers created or intensified during the pandemic and develop flexible approaches capable of responding to diverse educational requirements. Thapa et al. (2022) highlighted the importance of flexible and accessible educational systems that could operate effectively across both physical and digital learning environments. Post-COVID-19 inclusive education therefore requires a broader understanding of inclusion, incorporating accessibility, technology, individualized support, teacher preparedness, mental health, family participation, and peer relationships.

The post-pandemic period provides an important opportunity to redesign mainstream classrooms around the principles of accessibility and learner diversity. Rather than treating disability-specific support as an additional or separate component of education, schools can integrate inclusive practices into everyday teaching and learning. Universal Design for Learning (UDL), differentiated instruction, flexible assessment, accessible digital resources, peer-assisted learning, assistive technology, and individualized support can collectively contribute to more inclusive learning environments. The objective should be to ensure that students with disabilities are not merely physically present in mainstream classrooms but are able to participate meaningfully in academic, social, and extracurricular activities.

II. CHALLENGES OF INCLUDING STUDENTS WITH DISABILITIES IN MAINSTREAM CLASSROOMS AFTER COVID-19

1. Digital Accessibility and the Digital Divide

One of the major challenges emerging from the pandemic is unequal access to digital technology. Although online education has become an important component of contemporary education, not all students have equal access to computers, smartphones, reliable internet connections, educational software, and assistive technologies. Students with disabilities may require specialized devices or software that are expensive or unavailable in their homes.

Furthermore, having access to a digital device does not automatically ensure accessibility. Websites, digital textbooks, learning management systems, videos, and online assessments may contain accessibility barriers. Screen-reader incompatibility, absence of captions, poor colour contrast, inaccessible PDFs, complicated navigation, and lack of keyboard accessibility can prevent students with disabilities from participating independently. Therefore, post-COVID-19 inclusive education must address both the digital divide and the accessibility divide.

2. Lack of Individualized Educational Support

Students with disabilities frequently require individualized support based on their specific educational needs. During traditional face-to-face education, teachers, special educators, therapists, counsellors, and support staff can provide direct assistance. During the pandemic, many of these services were interrupted or significantly reduced.

The return to mainstream classrooms therefore requires schools to reassess students' individual needs. Some learners may require additional instructional time, modified assignments, individualized explanations, alternative assessment methods, or classroom assistants. Without adequate support, physical inclusion may not necessarily result in meaningful educational participation.

3. Teacher Preparedness

Teacher preparedness represents another important challenge. Mainstream teachers may have limited training in disability-inclusive pedagogy, differentiated instruction, assistive technology, classroom accommodations, and behavioural support. The challenges became more complex during the pandemic because teachers were required to manage both digital and face-to-face learning environments.

Post-pandemic teacher training should therefore address not only conventional inclusive teaching practices but also digital accessibility. Teachers need to understand how to prepare accessible presentations, videos, worksheets, online assessments, and learning materials. They should also be able to identify individual learning requirements and collaborate with special educators and parents.

4. Mental Health and Social Reintegration

The transition back to school after prolonged periods of isolation may create emotional and behavioural difficulties. Students with disabilities may experience anxiety about returning to crowded classrooms, interacting with peers, following changed routines, or adapting to new expectations.

Some students may also have lost confidence in social interaction because of prolonged isolation. Consequently, reintegration should be gradual and supportive. Schools can provide counselling, peer-support programmes, mentoring, social-emotional learning activities, and opportunities for cooperative learning to facilitate students' adjustment.

5. Parental and Family Challenges

During school closures, parents and caregivers became increasingly involved in supporting children's learning. However, many parents lacked the educational training, time, resources, or technological knowledge required to provide effective support to children with disabilities.

The post-pandemic period should therefore strengthen communication between parents and schools. Parents can contribute important information regarding children's learning preferences, behavioural patterns, communication needs, assistive devices, and difficulties experienced at home. Such information can assist teachers in developing more effective individualized support strategies.

III. STRATEGIES FOR EFFECTIVE INCLUSION POST-COVID-19

1. Hybrid Learning Models

Hybrid learning can provide an important mechanism for supporting students with diverse educational needs. A hybrid model combines face-to-face instruction with carefully designed online learning opportunities. This approach can provide flexibility to students who experience difficulties attending school regularly because of physical, sensory, or other accessibility-related challenges.

For example, students with physical disabilities may benefit from accessing selected lessons remotely

when transportation or physical accessibility creates difficulties. Similarly, students who require additional time to process information may benefit from recorded lessons and digital learning materials that can be reviewed repeatedly.

However, hybrid learning will only support inclusion if online components are accessible. Schools should ensure that digital content is compatible with screen readers, includes captions and transcripts, provides alternative text for images, and can be navigated using assistive technologies. Zhang et al. (2021) suggested that flexible learning environments can contribute to greater responsiveness to diverse learner requirements.

2. Use of Assistive Technology

Assistive technology can significantly improve educational participation and independence among students with disabilities. Different technologies can be selected according to the learner's individual needs.

For students with visual impairments, screen readers, magnification software, Braille displays, and text-to-speech systems can improve access to digital content. Students with hearing impairments can benefit from real-time captioning, subtitles, transcripts, and sign-language interpretation. Students with physical disabilities may benefit from voice recognition, alternative keyboards, switches, eye-tracking technologies, and other alternative input devices.

For students with learning disabilities, text-to-speech, speech-to-text, electronic organizers, reading software, and multimedia learning resources can provide additional support. Schools should therefore assess individual needs before selecting assistive technologies rather than adopting a one-size-fits-all approach.

3. Universal Design for Learning

Universal Design for Learning can provide a strong framework for post-pandemic inclusive classrooms. Instead of designing instruction for an assumed average learner and modifying it later for students with disabilities, UDL encourages teachers to provide multiple ways of presenting information, engaging learners, and allowing students to demonstrate their knowledge.

For example, teachers can provide information through text, audio, images, demonstrations, and videos. Students may be permitted to demonstrate learning through written assignments, oral presentations,

projects, or digital submissions when appropriate. Such flexibility benefits students with disabilities while also supporting other learners with different learning preferences.

4. Continuous Teacher Training

Professional development should become a central component of inclusive education after COVID-19. Teachers should receive practical training in differentiated instruction, classroom accommodations, disability awareness, accessible digital content, assistive technologies, behaviour management, and inclusive assessment.

Training should also emphasize collaboration. Mainstream teachers should work with special educators, counsellors, therapists, school administrators, parents, and students to identify appropriate interventions. Regular professional development can increase teacher confidence and reduce misconceptions regarding the capabilities of students with disabilities.

5. Mental Health and Counselling Support

Schools should integrate mental-health support into their inclusive education programmes. Counsellors and teachers can monitor students for signs of anxiety, withdrawal, frustration, reduced motivation, or difficulties in social adjustment.

Peer mentoring can also be effective. Students with and without disabilities can participate in structured peer-support activities that promote friendship, cooperation, empathy, and mutual understanding. Such programmes can reduce social isolation and strengthen the sense of belonging among students with disabilities.

6. Strengthening Parent–Teacher Collaboration

Parents should be regarded as important partners in inclusive education. Regular communication between parents and teachers can help schools understand the student's learning needs and monitor progress.

Parents can participate in the development and review of Individualized Education Plans, contribute information regarding effective learning strategies, and provide feedback regarding challenges experienced by their children. Schools can also organize parent workshops covering assistive technology, home-based learning support, communication strategies, and emotional well-being.

7. Flexible Assessment Practices

Traditional examinations may not always accurately reflect the abilities of students with disabilities. Post-pandemic inclusive education should therefore promote flexible and accessible assessment practices.

Depending on individual needs, students may require additional time, accessible question papers, alternative formats, assistive technology, oral responses, modified tasks, or appropriate breaks. The purpose of accommodation should not be to reduce academic expectations but to remove unnecessary barriers that prevent students from demonstrating their actual knowledge and skills.

8. Development of Accessible School Infrastructure

Physical accessibility remains important even as digital education expands. Schools should provide ramps, accessible toilets, elevators where required, appropriate classroom seating, tactile indicators, accessible libraries, and safe movement pathways. Classroom environments should also consider lighting, acoustics, seating arrangements, and other factors affecting students with sensory or physical disabilities.

Accessibility should be incorporated into school planning rather than treated as an afterthought. This can help ensure that students with disabilities can participate independently in everyday school activities.

IV. ROLE OF PEERS IN INCLUSIVE EDUCATION

Peer relationships are an essential element of successful inclusion. Students with disabilities can benefit academically and socially when they participate in collaborative activities with their peers. Peer-assisted learning, cooperative projects, group discussions, sports, cultural activities, and student clubs can create opportunities for meaningful interaction.

At the same time, schools should promote disability awareness among all students. Awareness programmes can challenge stereotypes and encourage respect for individual differences. Teachers can create classroom cultures in which diversity is regarded as a normal and valuable aspect of the learning community.

Peer support should not, however, become a substitute for professional support. Students with disabilities should have access to qualified teachers and specialists while peers contribute primarily through social and academic cooperation.

V. IMPORTANCE OF SCHOOL LEADERSHIP AND POLICY SUPPORT

Effective inclusion requires institutional commitment. School administrators play a crucial role in ensuring that inclusive education policies are translated into practical action. School leadership should allocate resources for assistive technologies, teacher training, accessible infrastructure, counselling, special educators, and digital accessibility.

Schools should also establish mechanisms for regularly evaluating the experiences of students with disabilities. Feedback from students themselves should be considered when developing inclusive practices. This is particularly important in the post-COVID-19 era because students may have different experiences and preferences regarding face-to-face, online, and hybrid learning.

At the policy level, governments and educational authorities need to ensure that inclusive education is supported through adequate funding, accessibility standards, teacher-development programmes, and monitoring mechanisms. Inclusive education should not depend solely on individual teachers or schools but should be embedded within broader educational planning.

VI. CONCLUSION

The COVID-19 pandemic exposed and, in many cases, intensified existing inequalities in education. Students with disabilities experienced particular difficulties because many educational systems were not sufficiently prepared to provide accessible online learning, individualized support, assistive technology, and continuous social and emotional assistance. The transition to remote learning demonstrated that physical inclusion alone is insufficient; meaningful inclusion requires students with disabilities to have equitable opportunities to participate, communicate, learn, interact, and demonstrate their abilities.

The post-COVID-19 period therefore provides an opportunity to strengthen inclusive education by integrating lessons learned from the pandemic into mainstream classroom practices. Hybrid learning, accessible digital platforms, assistive technologies, Universal Design for Learning, differentiated instruction, flexible assessment, teacher training, mental-health support, peer mentoring, and parent–teacher collaboration can collectively create more responsive educational environments.

Most importantly, students with disabilities should be regarded as active participants in the educational process rather than passive recipients of support. Their experiences, preferences, challenges, and expectations should inform the design and implementation of inclusive education. A successful post-pandemic inclusive classroom will therefore be one in which diversity is recognized, barriers are

systematically removed, and every student is provided with meaningful opportunities to achieve academic, social, and personal development. Such an approach can contribute to a more equitable, accessible, and resilient education system capable of responding effectively to future disruptions as well as the continuing needs of diverse learners.

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