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Accessibility and Readiness of Government Schools of West Bengal for Children with Special Needs: An Explorative Study

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Abstract

Inclusive education is a fundamental right that ensures equal learning opportunities for all children, including children with special needs (CWSN). Government schools play a crucial role in providing accessible and effective education. This exploratory study evaluates the accessibility and readiness of 104 government schools in West Bengal's Medinipur Division, selected through stratified random sampling by assessing physical infrastructure, assistive technology, human resources, and training. Using a semi-structured observation checklist aligned with the Rights of Persons with Disabilities (RPwD) Act, 2016, and UDISE+ 2023-24 NEP structure, data were collected through direct school visits from February to May 2025. Results indicate a drastic policy-practice discrepancy. Less than 30% of schools had basic physical access. More importantly, 72% did not have special educators, and less than 10% used therapists or professionally trained support staff. There was a severe shortage of high-tech assistive technology, which has greatly restricted educational involvement. Although there were isolated best practices, systemic challenges such as a lack of proper infrastructure, human resources, and specialised human resources remain. The paper highlights the high urgency of specific interventions, increased assistance to assistive devices, mandatory and ongoing teacher training on inclusive pedagogies, and strict adherence to the requirements of the RPwD Act. The need to fill these gaps is necessary to convert government policy into practice of providing equitable educational inclusion to CWSN.

Keywords: Inclusive Education, government school, children with special needs, exploratory study

Introduction

Inclusive education is a growing trend and an important contemporary issue worldwide, emerging primarily in the 20th century. It represents a 'zero rejection policy' in the education system, but it does not fully reflect the idea of inclusive education. Inclusive education holds profound meaning and purpose; it implies heterogeneous grouping, appropriate support services for children with diverse needs, decentralized instructional models, teachers with strongly positive attitudes towards inclusion, and an environment where no student feels isolated or segregated from the mainstream. Every individual should have the opportunity to reach their potential. As Anita Julka states, "Inclusive education means all learners, young people with or without disabilities, being able to learn together in regular schools (NCERT, 2005). An inclusive class may have, amongst others, CWSN, gifted children, children from remote or nomadic

populations, children belonging to religious or linguistic minorities, or children from disadvantaged groups."

In the 21st century, including CWSN in mainstream education remains a critical concern. CWSN refers to those who require assistance due to physical, mental, emotional, or developmental challenges that may affect their ability to learn, communicate, or function independently. Several international and national laws and guidelines, such as the Salamanca Statement (1994), National Curriculum Framework (2005), Right to Education Act (2009), Rights of Persons with Disabilities Act (2016), and National Education Policy (2020), strongly advocate for the education of children with special needs. These documents stress the importance of including all children in the education system. However, inclusion is not merely about enrollment; it necessitates curriculum adaptation, inclusive teaching methods, and fair assessment strategies. This requires the presence of special educators and training for regular teachers to foster a truly inclusive learning environment. According to the National Curriculum Framework of Teacher Education (2009), in-service teachers need training. Moreover, the RPwD Act (2016) as well as the National Education Policy (2020) mandate that schools make reasonable accommodations for children with special needs.

Review of Literature

Although there are robust policy systems, their implementation remains a major obstacle. Previous studies highlight the challenges of introducing inclusive education. In Mohapatra's (2015) study, no inclusive schools could be found in the state of West Bengal, despite the support of this state. Research by Mukherjee and Bera (2017) revealed that physical and infrastructural barriers, and the researchers of Taneja-Johansson et al., (2021) found that teachers often encountered the inability to satisfy different needs, though they were discussed in terms of limits, not opportunities. A study by Bunch and Valeo (2004), Kwame (2022), and Roberts and Lindsell (1997) shows that inclusive schooling has positive social and behavioral developmental outcomes. Chanda & Behera's (2018) study in West Bengal uncovered significant differences in teachers' attitudes across various school settings.

From the literature, it is evident that while numerous studies have investigated inclusive education, most focus on curriculum, evaluation systems, and teacher attitudes, with few examining the on-the-ground reality of physical infrastructure, assistive devices, and human resources and training. This study aims to address this gap by exploring the following questions: What are the primary accessibility features (i.e., physical infrastructure and assistive technology) and readiness (pedagogical) barriers limiting the effective inclusion of children with special needs in government schools of West Bengal, and how do these barriers impact student participation? What are the existing discrepancies between policy recommendations and the current status of government schools according to the RPwD Act, 2016? By investigating these specific areas, this research seeks to provide a concrete assessment of the tangible resources available and highlight the critical implementation challenges that persist beyond policy rhetoric.

Theoretical Background

This study is grounded in three interconnected theoretical frameworks that justify its focus on infrastructure, assistive technology (AT), and human resources.

First, the Social Model of Disability posits that individuals are disabled not by their impairments but by societal and environmental barriers. This model, which underpins the RPwD Act (2016), shifts the responsibility from the individual to adapt to making the environment accessible. This study's audit of physical infrastructure (e.g., ramps, toilets) directly measures the adoption of this model, where deficiencies represent a failure to remove disabling barriers.

Second, Universal Design for Learning (UDL) provides the pedagogical framework for inclusion. UDL advocates for designing flexible learning environments from the outset to accommodate all learners. Assistive technology is a tangible application of UDL principles, providing multiple means of engagement, representation, and expression. The scarcity of Assistive Technology (e.g., screen readers) found in this study indicates a system reliant on a rigid "one-size-fits-all" approach, contradicting UDL and hindering meaningful participation.

Finally, Ecosystemic Theory emphasizes that successful inclusion depends on the alignment of all subsystems within a school. The physical environment (infrastructure), technological environment (AT), and human environment (trained staff) must work in synergy. The systemic failures documented across all three domains reveal a critical misalignment within the educational ecosystem, where the absence of one component (e.g., no staff to maintain AT) renders others ineffective, thus preventing the realization of true inclusion.

Objectives of the Study

1. To explore the accessibility and readiness of government schools of West Bengal for children with special needs with respect to -
    i. Physical Infrastructure
    ii. Assistive Technology
    iii. Human Resources & Training
2. To identify the existing gaps between policy recommendations and the current status of government schools of West Bengal, according to the RPwD Act, 2016.

Methodology of the Study

Method

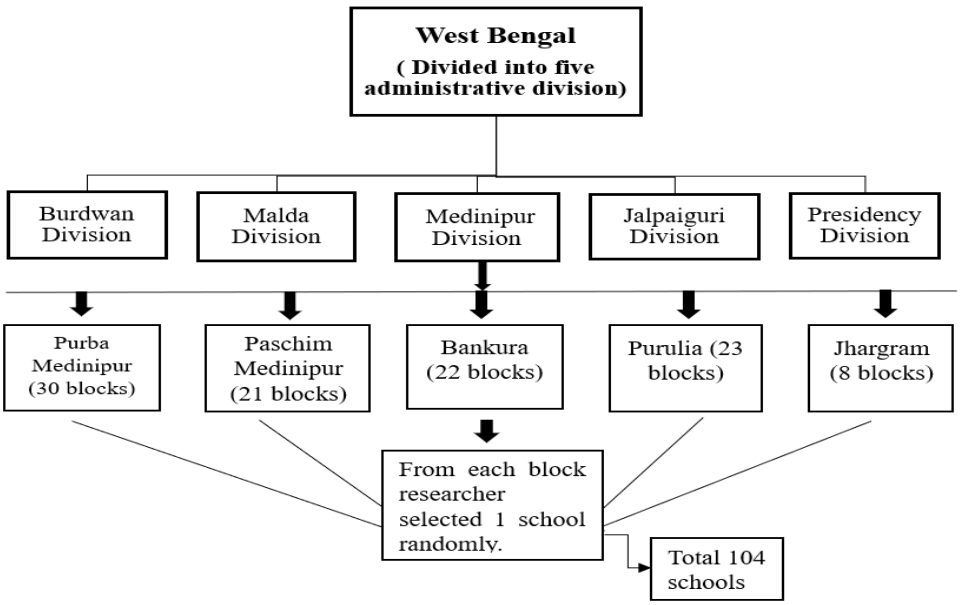
This study employed an exploratory study design to conduct a detailed audit of accessibility and readiness in government schools of West Bengal.

Population of the study

West Bengal, an eastern state of India, is administratively divided into five divisions: Burdwan, Malda, Medinipur, Jalpaiguri, and Presidency. In this study, the Medinipur Division was randomly selected. This division is divided into five districts, such as Bankura, Purulia, Purba Medinipur, Paschim Medinipur, and Jhargram. These consist of administrative blocks: Purba Medinipur (30), Paschim Medinipur (21), Bankura (22), Purulia (23), and Jhargram (8). The researcher selected one school from each block randomly. This division was selected since it is diverse in terms of socio-economic, cultural, and geographical backgrounds, and this aspect presented a good environment to address the objectives of the research.

Sampling Procedure

The government schools in the five districts of Medinipur Division were used to take a sample of 104 schools. The stratified random sampling was used to obtain fairness in the representation of schools in various contexts. Two practical considerations, namely, accessibility of the institutions and their desire to take part in the study, also influenced the sampling process.



Although these criteria put some limitations on the level of generalizability, they make fieldwork possible and allow the researcher to immerse themselves in the chosen locations. The design is in line with the fact that the study is exploratory in nature and focuses more on contextual richness and subtle insights as opposed to a representative scale.

Tool for Data Collection

The data were collected by the researcher using a semi-structured observation checklist based on the provisions of the Rights of Persons with Disabilities (RPwD) Act, 2016, and the NEP framework of UDISE+ 2023-24 NEP structure. The checklist was designed in three major areas.:

1. **Physical Infrastructure**: Ramp, Pathway, Tactile Guide Path, Designated Parking, Main Entrance, Doors, Corridors, Stairways, Lift/Elevator, Accessible Toilets, Toilet Door, Grab Bars, Wash-basin, Changing Table, Door Width, Maneuvering Space, Adaptable Furniture, Lighting, Acoustics, Resource Corner, Evacuation Plan, Tactile Warning Strips, Auditory & Visual Alarms.
2. **Assistive Technology (AT)**: Availability and functionality of devices for children with special needs, especially Children with Visual Impairment, Children with Hearing Impairment, Children with Locomotor & Orthopedic Disabilities, and Children with Intellectual & Developmental Disabilities.
3. **Human Resources & Training:** CWSN is provided with Special Educators, Regular Teachers who have been trained in the practices of inclusive education, Therapists, Staff trained in basic use and maintenance of Assistive Devices, and an Individualized Education Plan (IEP).

Data Collection Procedure

The researcher made one-day site visits in 104 schools within the sample in a four-month fieldwork period (February- May 2025). The first-hand data collection in the form of a semi-structured observation checklist was used in these visits to ensure uniform and comprehensive evaluation in all places.

Data Analysis

An analysis was carried out to assess the current infrastructure and resources based on their availability and condition. The data collected was systematically summarized and presented in a format to identify and highlight gaps in compliance with the standards set by the Rights of Persons with Disabilities Act, 2016.

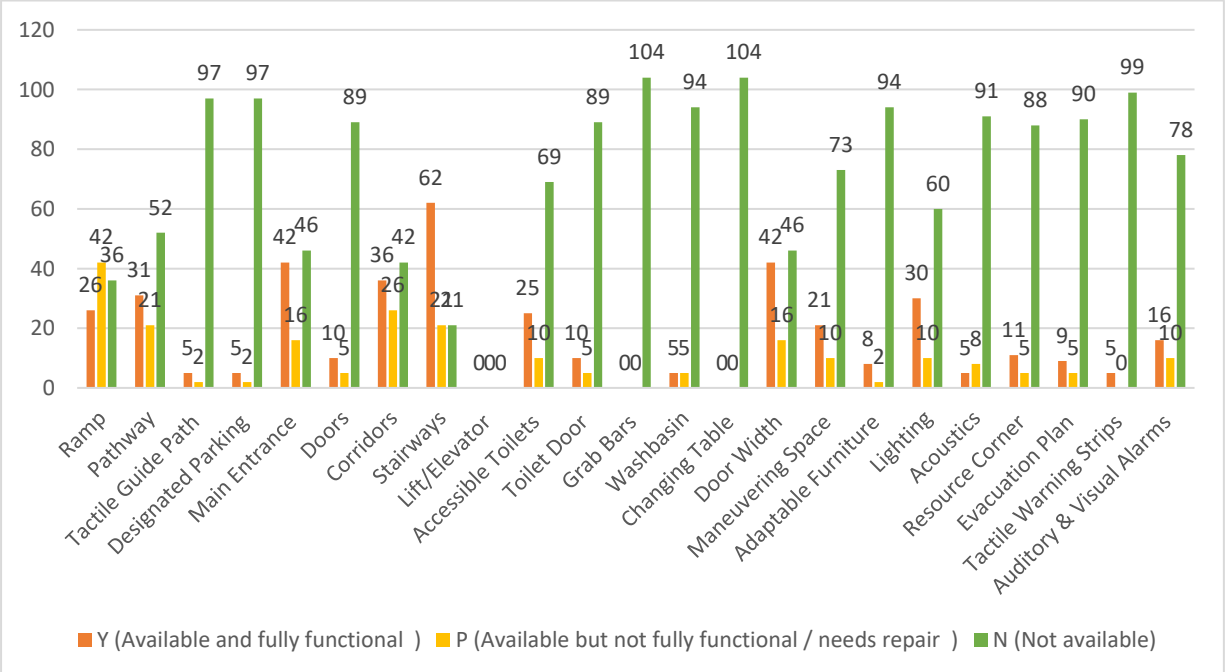
Analysis and Interpretation of Data

Objective 1: To explore the accessibility and readiness of government schools of West Bengal for children with special needs.

Findings on Physical Infrastructure

The document provides a detailed assessment of the physical infrastructure in schools, evaluated against the standards outlined in the RPwD Act (2016) and the UDISE+ report (2023-24) in relation to the NEP structure.

Figure No.-1: Physical Infrastructure



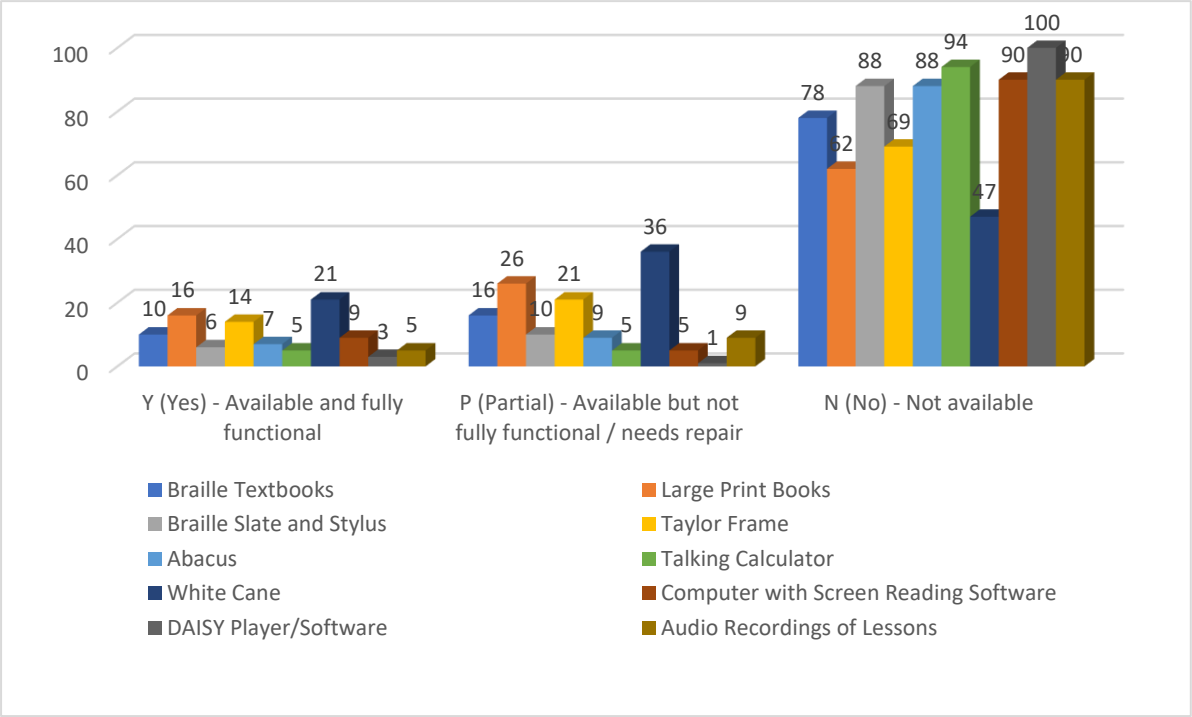
The chart highlights that basic accessibility features are largely missing in most schools. For instance, only about 25% have ramps and none have elevators; 60% have stairs but usually without handrails; and just 24% have accessible toilets (with 0% having grab bars/changing tables). Entrances (40%) and corridors (35%) are rather wider, but not many schools provide the maneuvering space with a wheelchair and adjustable furniture. Emergency facilities are nearly nonexistent (only around 9% of them have evacuation plans, and 15% of them have alarms). In

brief, the data indicate structural gaps: most standards of barrier-free infrastructure in schools score very low, which means that children with disabilities have to struggle with serious physical barriers. policymakers would observe that the requirements of the RPwD Act are not fulfilled in schools.

Findings on Assistive Technology & Learning Resources

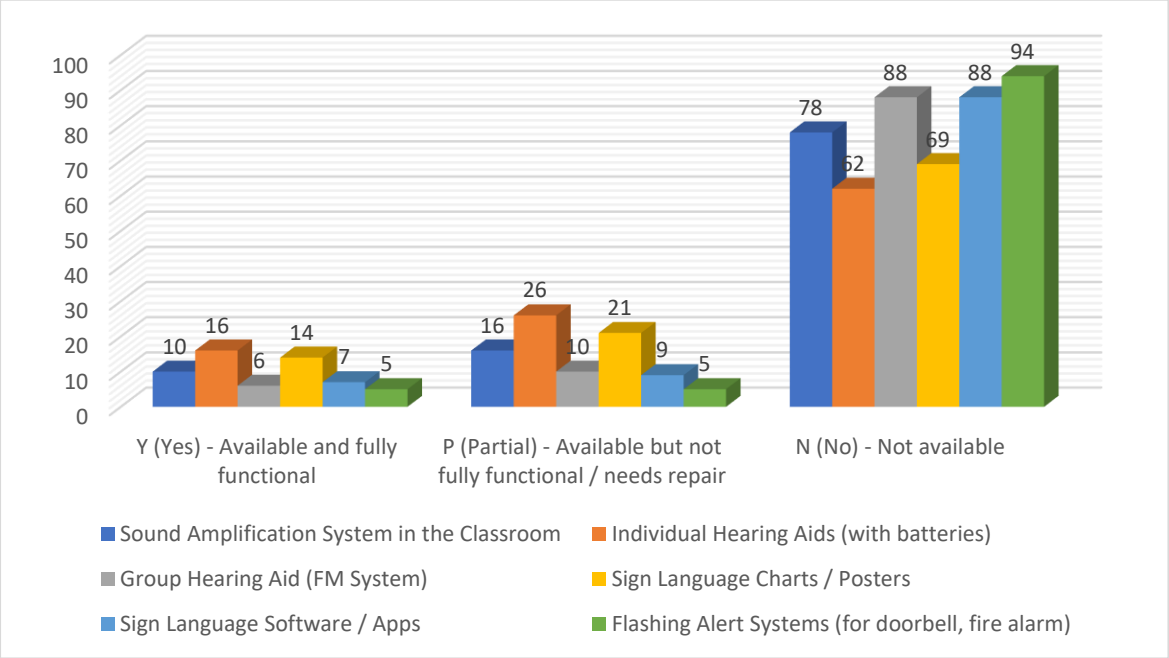
For children with visual impairment, assistive learning resources were highly limited across the 104 schools assessed.

Figure No.-2: For Children with Visual Impairment



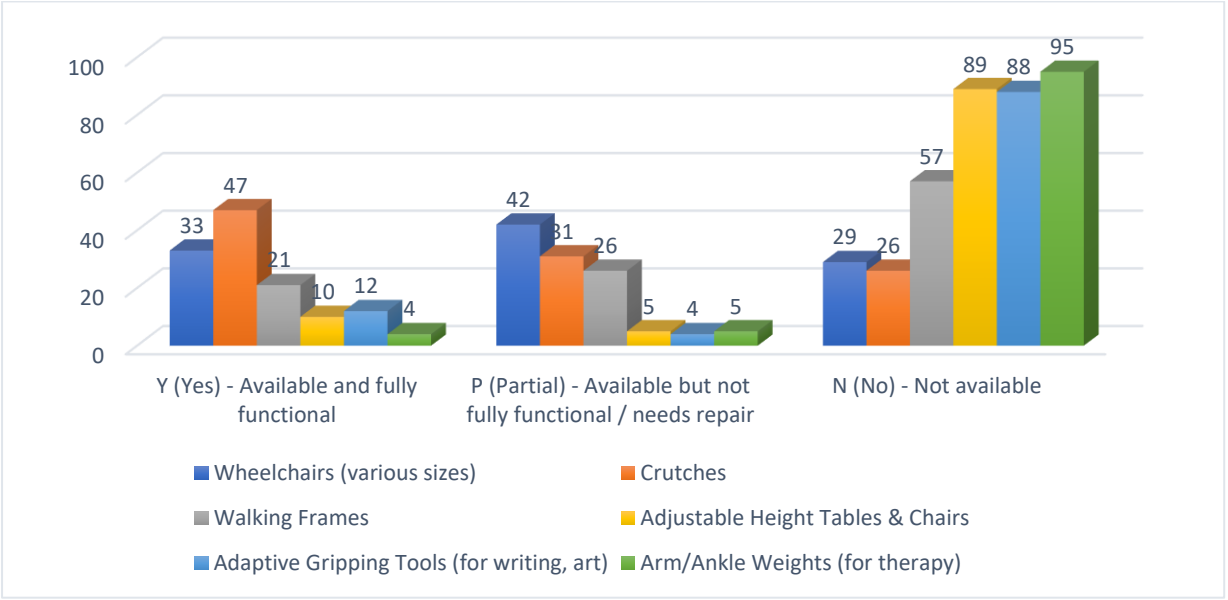
This chart highlights a marked disparity: *No-tech, low-tech aids* (such as white canes, slates, and styluses) are moderately present, but *high-tech or curriculum aids* are almost absent. For example, 59% of schools have Braille slates, but only 9% have screen readers and <5% have audio recordings of lessons. Talking calculators (22%) and white canes (20%) are more common than sophisticated devices like DAISY players (3%). Nearly half of the schools lack even basic Braille textbooks. This pattern suggests that schools largely rely on minimal, low-cost accommodations. The policy implication is clear: high-tech assistive devices are critically scarce, so visually impaired students lack full access to the curriculum.

Figure No.-3: For Children with Hearing Impairments



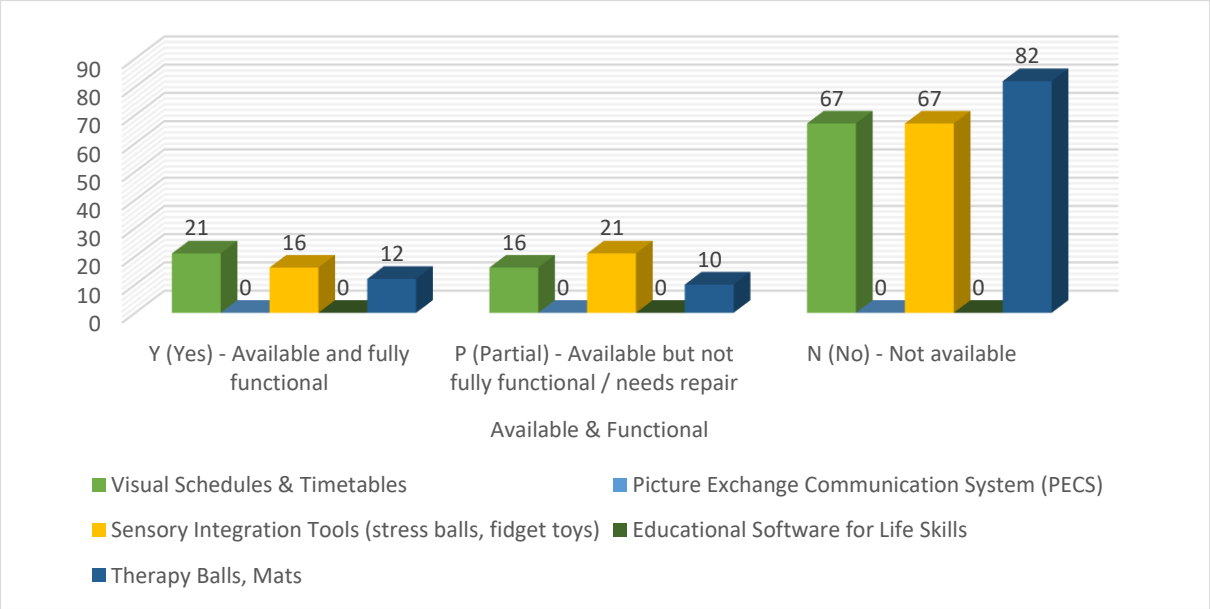
The visual confirms extremely limited support for hearing-impaired students. Only about 10% of schools have any sound amplification, and while 15% have hearing aids, many are non-functional. FM systems or group aids appear in only 6%. Support services like sign-language posters or software are present in roughly 7–13% of schools, and flashing alerts for safety are almost non-existent (5%). In sum, the chart reveals that almost no school provides reliable auditory accommodations, leaving these students at a severe disadvantage in classroom participation and safety. This gap suggests an urgent need for investment in even basic hearing support tools.

Figure No.-4: For Children with Locomotor Disabilities



As seen in this chart, there are only moderate mobility aids. Indicatively, the number of schools with wheelchairs (but in poor condition) and crutches is 32% and 45%, respectively, and only 20% have walking frames. Adaptive gripping tools and adjustable tables/chairs are very uncommon (10-12%). Other therapeutic appliances (e.g., weights) are virtually nonexistent (4 out of 100 arm/ankle weights). Concisely, although there are students who can get minimum aid (e.g., crutches), most institutions do not have extensive support resources (no therapy equipment, a small number of posture-adjustable furniture). This implies that locomotor-impaired students would probably be unserved in most schools, and is indicative of a lack of equipment and personnel training in mobility requirements.

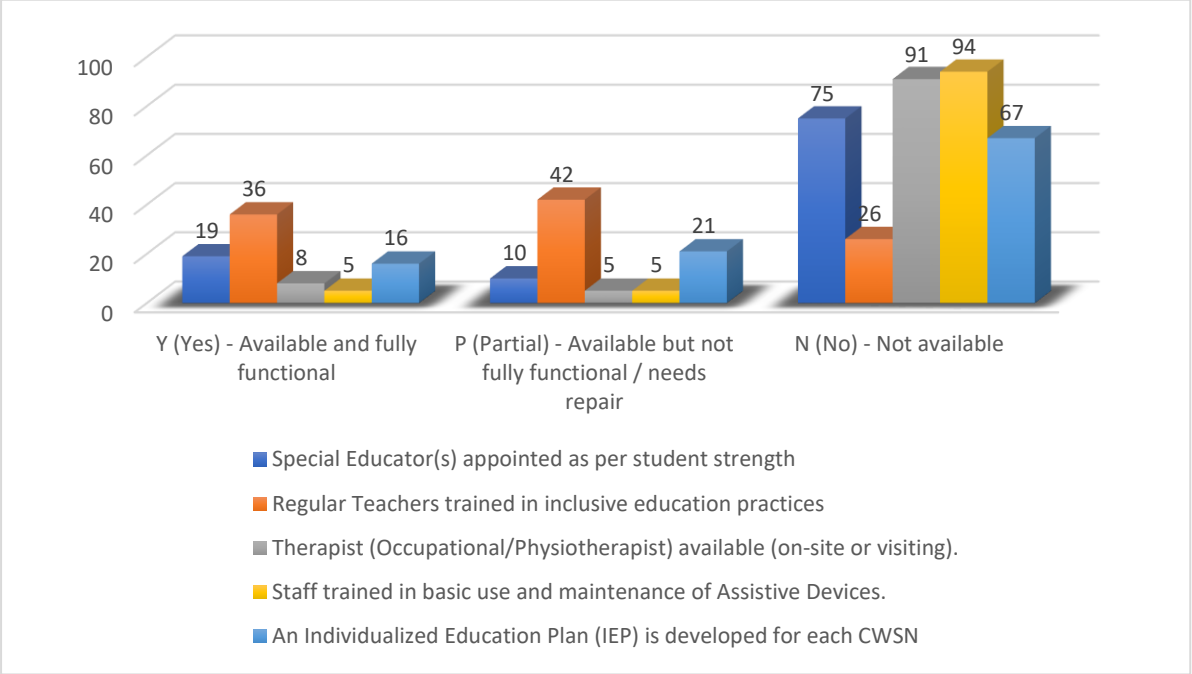
Figure No.-5: For Children with Intellectual Disabilities



The chart highlights a critical lack of specialized support for intellectually disabled students. Visual schedules are used by only 20% of schools, and sensory tools by 15%. Therapy balls/mats appear in about 11–12% of schools. Critically, none (0%) have PECS or educational software for life skills. This means structured communication systems and adaptive software (often essential for severe disabilities) are completely missing. In effect, most schools offer no specialized learning or therapeutic materials for these students, indicating a glaring service gap. Even basic aides like schedules or sensory aids are under 25%. The broader pattern (seen across all charts) is that intellectual disability support is neglected in almost all government schools.

Findings on Human Resources & Training

Figure No.-6: Human Resources & Training



This chart clearly shows that staffing is the weakest area. The percentage of schools with any special educators is only 18% which implies the non-existence of special educators in 82% of schools. Teachers have inclusive-education training (mostly theoretical) in only 35% of schools. Occupational/physical therapists are present in only 8% of schools, and just 5% have staff trained to maintain assistive devices. Even IEPs (a core requirement) exist in only 15% of schools. These low percentages indicate severe under-preparation of most teachers and administrators, who are neither trained nor supported to meet CWSN needs. The lack of specialized personnel and planning tools (like IEPs) will severely limit any inclusion efforts, regardless of physical infrastructure or devices. Policymakers should infer that in-service capacity-building is urgently needed, along with resources.

Objective 2: Gaps between Policy Recommendations and Ground Reality

The analysis reveals a significant gap between the mandates of the RPwD Act, 2016, and the actual conditions in the schools studied. The Act mandates a barrier-free environment. However, the absence of elevators (for multi-story buildings), grab bars in restrooms, tactile warning systems, and tailored emergency plans constitutes a major compliance failure. This directly impedes the mobility, safety, and independence of CWSN.

Furthermore, there is a significant gap in the digital divide. While low-cost, low-tech AT is sometimes available, high-cost, high-tech AT that is crucial for accessing the curriculum (e.g., Braille printers, JAWS software, sign language tools) is almost entirely missing. This violates the Act's principle of providing reasonable accommodation and access to education.

Moreover, the consistent lack of essential resources across all schools points to a systemic failure in planning and budgeting at the administrative levels. The non-availability of therapy spaces, lack of trained specialists and teachers, further highlights a lack of holistic planning for the

diverse needs of CWSN. Thus, the financial limitations seem to be the root of these gaps, the lack of technical skills to support advanced AT, and the absence of control mechanisms that would confirm the legal adherence.

Discussion

The results of this study correspond with the findings of the previous study by Mukherjee and Bera (2017) and other researchers, and they have proved that the infrastructural and resource barriers were the most prominent barriers to inclusion in the Indian setting and especially in government schools. Lack of basic AT results in an "inclusion deficit," in which CWSN are physically present but are not provided the equitable access to learning because it is not appropriste supported.

Even the massive difference in the access to low-tech and high-tech AT shows the existence of an important problem: the idea of inclusion is often viewed through the minimalistic prism of understanding it as simple compliance (i.e., a ramp) instead of the willingness to engage in learning (i.e., a screen reader). This echoes the findings of Taneja-Johansson et al (2021), where teachers felt ill-equipped to handle diverse needs; the lack of tools directly contributes to this predicament.

The universal absence of mandated features suggests a fundamental lack of awareness and prioritization of inclusivity in school safety and design protocols. The severe shortage of human resources, the weakest link identified, can be attributed to a lack of dedicated posts for special educators in government staffing norms and teacher training that remains overly theoretical with no practical, hands-on components.

This study moves beyond curriculum and attitude research, providing tangible evidence of the resource gaps that hinder policy implementation. The findings can be powerfully interpreted through the study's theoretical frameworks: the lack of infrastructure is a failure of the Social Model; the lack of AT contradicts the principles of UDL; and the misalignment between all three domains (infrastructure, technology, people) exemplifies the breakdown predicted by Ecosystemic Theory. It suggests that without addressing these foundational barriers, other efforts towards training teachers or adapting curricula will have limited impact.

Conclusion and Recommendations

This study concludes that government schools in the studied sample are critically unprepared to provide inclusive education as envisioned by the RPwD Act, 2016. The gaps in physical infrastructure and assistive technology are profound and systemic, preventing the realization of true inclusion.

For policymakers at the state and district levels, it is essential to strengthen accountability and resource provision by implementing mandatory annual accessibility and resource audits using standardized RPwD Act checklists, establishing centralized assistive technology (AT) pools at the district level to provide schools with shared access to high-cost devices on a rotational basis for better cost-effectiveness and maintenance, and ensuring earmarked funding within school grants so that inclusive infrastructure and AT receive specific, non-negotiable budgetary allocations rather than being overlooked in general funding.

For school administrators, immediate action is required to close safety and accessibility gaps by developing tailored emergency evacuation plans for CWSN and installing low-cost but high-impact features such as grab bars in restrooms and tactile warning strips in hazardous areas. In addition, schools should actively pursue community engagement, collaborating with NGOs and corporate social responsibility (CSR) initiatives to mobilize funds and support for procuring essential assistive technology devices and infrastructure improvements, thereby creating safer and more inclusive learning environments.

For teacher training, it is crucial to move beyond theoretical sensitization and integrate practical, hands-on modules into both pre-service and in-service programs, enabling teachers to gain direct experience in the use and basic maintenance of common assistive technologies. This approach will not only build teacher confidence and competence in supporting CWSN but also ensure that available resources are effectively utilized and sustained in classrooms.

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