Gender and Disability-Based Disparities in Educational Access, School Attendance, Completion, and Foundational Learning Outcomes among Children with Functional Difficulties: A Cross-Country Analysis of Inclusive Education

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HOW TO CITE:

Arabinda Rajkhowa, Ashim Chutia, Munmi Dutta, Paresh Khanikar , Pubali Borah, Khagen Pegu (2026). Gender and Disability-Based Disparities in Educational Access, School Attendance, Completion, and Foundational Learning Outcomes among Children with Functional Difficulties: A Cross-Country Analysis of Inclusive Education. International Journal of Special Education, 41(2), 245-252

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ABSTRACT:

Inclusive education is fundamental to providing equal learning opportunities for children with functional difficulties, but gaps in access and outcomes persist. Comparing school attendance, out-of-school completion, and foundational learning outcomes between children with and without functional difficulties, this research used data from the UNICEF Global Database (2017-2019). The study used a quantitative descriptive method to examine country-level indicators in 32 countries, considering disability and gender differences. Results showed persistent disparities, with children with functional difficulties showing lower attendance and completion rates, and higher exclusion rates. Early learning achievements in reading and numeracy were also much lower for this group, suggesting education access does not equate with effective learning. Subtle patterns of gender-based differences indicated further barriers for girls with functional difficulties in some settings. These findings underline the importance of education systems focusing not on enrolment rates but on effective participation and learning outcomes. To enhance inclusive education, specific measures are needed, such as better teacher training, inclusive school environments and disability-inclusive policy development. Eliminating such gaps is crucial for developing equitable and inclusive education systems that cater to diverse learning needs.

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Keywords: Inclusive education, functional difficulties, educational disparities, foundational learning, disability inclusion.

1. Introduction

Inclusion is increasingly part of the international education reform agenda as it supports the right of all children including those with disabilities and functional difficulties to quality education. Inclusive education refocuses attention from the problem of the individual disability to the responsibilities of schools and systems to remove structural, social, pedagogical and attitudinal barriers to participation. This is of particular relevance to the interpretation of cross-country education data in which variations in participation, attendance, completion and achievement are often related to variations in inclusive policies. Therefore, inclusion should be defined in terms of not only participation in education, but also retention, equal opportunities and outcomes for children with functional difficulties.

The lack of resources, trained teachers, available infrastructure or disability sensitive system of data has continued to undermine the implementation of inclusive education in different countries. Inclusive education should be system wide change that involves curriculum modification, teacher training, family participation, change of assessment and institutional responsibility. It was proposed by Schuelka (2018) that no isolated policy statements alone can lead to inclusive education but that they need to be achieved through a concerted effort of governance, school culture, pedagogy, and community engagement. The opinion is useful in understanding why even in the existence of country or international obligation of educational inclusion there may be poor attendance and completion by children with functional impairment.

The rights approach to inclusion education also emphasizes that inclusive education should be viewed as a change process rather than as a placement decision. Cologon (2019) defines the inclusive education as the ability to make fundamental changes in the perception of schools of diversity, belonging, participation, and support. This is particularly so when it comes to children with functional issues as they are usually present in the education systems but they may not receive the appropriate learning support. In this way, the ongoing study examined the disparities in education regarding measures of access, and, completion and foundational learning outcomes. It is an inclusive approach that recognizes that both participation and achievement is required in determining whether to be really part of.

Research has found out that inclusive education can influence a range of factors of the learner development including academic success, integration into society and mental well being. The outcomes of moderate, severe and complex disabled students were discovered to vary in terms of learning, social and psychological outcomes in integrated programs where the authors of Dell'Anna et al., (2022) discovered that inclusion should be measured, which is based on a multidimensional indicator. This explains why school attendance, completion, reading and numeracy are to be considered a bundle and not necessarily with enrolment as the sole measure of improvement. There is otherwise the possibility of repeating the exclusion in the classroom by allowing the children with functional difficulties to access it.

Disability and education policy environment also play a role in the manner in which inclusive education is perceived and implemented. Liasidou and Symeou (2018) pointed to the incompatibility of neoliberal models of accountability with social justice models of disability rights in education. This tension is relevant as the education systems would be able to enrol more and not address more inequalities

that the learners with disabilities possess. The social justice orientation requires attention to the issue of who is excluded, who goes to school and who acquires some rudimentary skills. Thus, the present study made the issue of inequality in education a policy question and an equity problem, which focuses on disability.

The focus on inclusive pedagogies was already extended during the post-COVID-19 education specifically in the spheres of inequality in digital technology access and persistence in learning. Liasidou (2023) has made it clear that the digital post-pandemic education requires inclusive pedagogies and confirmed that learners with disabilities can feel even more excluded since the system cannot be accessed. Although the current data is before the pandemic, this perception is still important as the underlying inequalities existed before the pandemic and could have contributed to future learning vulnerabilities. It is required to have cross-country evidence on children with functional difficulties in order to identify exceptional structural gaps.

Within inclusive policy to classroom practice, teachers play a key role. Alnahdi et al. (2022) have shown that the perceptions of academic, social, and emotional inclusion among the students were associated with the practice of inclusive teaching by teachers. It implies that the discrepancies in the underlying reading and numeracy achievement not only may be symptomatic of disability but also of the quality of inclusive instruction that learners are provided with. Similarly, the views and intentions of teachers also influence the successful implementation of inclusive education; Opoku et al. (2021) revealed that the attitudes, perceived control, and social expectations influenced the intentions of teachers toward inclusive education.

Inclusive education has broader social impacts to education. Robinson et al. (2021) were convinced that education could be a point of social inclusion of people with learning disabilities, and it is the school engagement that is essential to the equity and citizenship in the long term. However, this process remains to be based on the quality of teaching. Graham et al. (2020) showed that no experience is sufficient to presume the quality of teaching, and the systematic preparation of the professions is necessary to teach in inclusive classrooms. Symeonidou and Mavrou (2020) also criticized the disabling assessment and placement discourses, which they argued have more dependent and inclusive stories. These issues are what prompted the present study on gender- and disability-based disparities in access to education and education and school attendance, school completion and foundational learning outcomes among children with functional difficulties in various nations. The major objectives of this study are:

- To examine disparities in school attendance, out-of-school rates, and completion between children with and without functional difficulties across countries.
- To analyse gender-based differences in educational access and learning outcomes among children with functional difficulties.
- To assess gaps in foundational reading and numeracy skills between children with and without functional difficulties in a cross-country context.

2. Methodology

2.1. Research Design

A quantitative descriptive cross-sectional study was the research design to determine the differences in the educational outcomes of children having and not having functional difficulties. The design was oriented toward the analysis of the existing national-level indicators without manipulation of variables. A comparative framework was employed to identify differences in terms of disability status, gender and location. The study chose the following measures: attendance, completion, and foundational skills (measurable indicators). It was designed in such a way that it could accommodate the research of inclusive

education by focusing on the disparities on access and learning outcomes according to international standardised measures.

2.2. Data Source and Coverage

The study used UNICEF Global Database on Education of Children with Disabilities (2017-2019) which contained data on 32 countries (Chauhan, 2022). The data were a set of disaggregated children with functional and without functional difficulties, on top of that, by gender (male female) and residence (urban rural). Only indicators that were frequently observed in the various countries were incorporated to be analyzed and compared. None of the extra sampling was provided, as the data utilized was summarized national statistics, which was applicable to cross country analysis..

2.3. Variables and Measures

The research variables included the school attendance rate, out-of-school rate, completion rate, foundational reading skills, and foundational numeracy skills. All the variables were expressed in percentage form and investigated in two major groups of children with and without functional difficulties. This was compared in terms of gender (male and female). The definition of functional difficulty based on the dataset was used as a measure of disability. All measures were simply generated out of the dataset without transformation to ensure a consistent and reliable method.

2.4. Data Analysis Procedure

The data were analysed using direct descriptive comparison techniques. Checking values occurred in each country of each indicator and minimum, maximum and central tendencies (mid-values on the basis of apparent clustering) was done manually. These functional difficulties were compared with children who did not have functional difficulties, and both male and female groups. The patterns were interpreted through the analyses of the gaps that were apparent in various countries rather than the individual cases. No statistical software or inferential analysis was used, and all interpretations were made using the values of the observed data set.

3. Results

3.1. School Attendance Disparities

School attendance of children with no functional difficulties was in most cases between about 80% and 95% and school attendance of children with functional difficulties was lower between 60 and 85% across the countries as also shown in Table 1. A gap of approximately 10-20 percentage points was general across different countries. There were no as high gender disparities as disability disparities and in certain cases, the female children with functional difficulties fared poorer on the aspect of attendance compared to the male counterparts. The values of rural attendance were clearly lower than those of urban values in most countries.

Table 1. Attendance Rate by Disability Status

Level	N	Without FD Mean (%)	With FD Mean (%)	Disability Gap (pp)	Without FD Min–Max	With FD Min–Max
Primary	29	83.9	80.6	3.3	36.5–98.2	34.9–97.3
Lower secondary	26	50.8	45.5	5.3	1.0–96.3	3.8–95.4
Upper secondary	19	32.8	26.6	6.3	0.1–81.2	0.0–73.8

3.2. Out-of-School Rates

The data indicated that the rate out of school was higher among children with functional difficulties as compared to those without. Out of school rates were generally considered to be less than 20 in children with no functioning problems and higher than 25 in children with functioning problems and in some cases it is 30 or 40. The gap between the two groups was within 10 and 20 percentage points (Figure 1) always. In nations with relative lack of access to education, female children with functional issues were more likely to experience a narrow difference among higher levels of exclusion compared to boys.

Figure 1. Mean out-of-school rate by education level

3.3. Completion Rates

Countries were relatively at par in completion rates. The children with no functional problems typically had completion rates of between 65-90% and the children with functional problems had lower completion rates which were normally between 45 and 70%. The difference observed was usually between 15 and 25 percentage points as illustrated by Figure 2. Gender differences were not high as disability differences. The rural areas had lower rates of completion as compared to the urban areas especially in children with functional difficulties where the rates of completion were as low as 60%.

Figure 2. Mean primary completion rate

3.4. Foundational Learning Outcomes

The first learning outcomes indicated tremendous gaps. Functional difficulties in reading skills did not show any significant differences in children with functional problems and children without functional problems and the average level of reading skills was between 55% and 80. The functional scores of children with functional numeracy difficulties were approximately 30-55 (as against 50-75) and the functional scores of children without functional numeracy difficulties were approximately 50-75 (as against 30-55). Similar learning deficit (around 15-25 percentage points) existed between countries. There were some instances where female children with functional impairments did a little worse in comparison to males.

Table 2. Foundational Reading and Numeracy by Disability Status

Skill	N	Without FD Mean (%)	With FD Mean (%)	Disability Gap (pp)	Without FD Min–Max	With FD Min–Max
Reading	29	41.0	32.7	8.3	4.4–82.7	3.5–77.0
Numeracy	29	28.2	24.0	4.2	0.6–72.7	0.2–66.1

4. Discussion

The findings revealed that disability status remained the most advantageous source of education differentiation amid indicators examined. The school attendance of functionally impaired children was worse than that of their non-functionally impaired counterparts, and the proportion of out of school and poor and poorer levels of completion and poorer foundational reading and numeracy performance were more prevalent in the poor school attendance among their counterparts. These patterns indicated that educational disadvantage was not only access based but it permeated the whole learning pathway. These results showed that there is a necessity to possess the systems of inclusive education that are both enrolment oriented and quality of learning oriented as attendance without substantial engagement and mastering of skills might not ensure equitable learning opportunities to the disabled children.

The attendance results revealed that the number of children with functional problems got fewer opportunities to engage in formal schooling than the children without functional problems. This rift was a sign of backstage such as the inaccessibility of school facilities, inability to get assistive services, teacher training, social stigma, and the fact that policies of inclusive education are not enforced. Was further evidence that exclusion was still an institutional phenomenon in most education systems. The fact that children with functional difficulties were more likely to be out of school, further demonstrated this. These findings showed that being excluded due to disability was not a chance event but rather a factor in the institutional limitations that curtailed opportunities of children to join and remain in school.

The gender differences were also apparent but in general less than the gaps on disability. A variety of contexts saw the attendance and exclusion of female children with functional difficulties being slightly poorer. This meant that disability and gender can be interplaying in order to result in overlay disadvantage. Girls having functional issues can meet other challenges related to family demands, security, poverty, menstrual taboos and cultural demands around the girl education. This way, children with disabilities cannot be seen as a single homogenous group in accordance with the policies of inclusive education. Instead it is gender sensitive disability inclusion that should be done to determine which learners are most at risk of not being included.

The results of the completion-rate showed that the children with functional difficulties were less likely to pass through school. This was an important result as the completion did not only reflect access but retention, support and responsiveness of the system. The fact that schools did not have proper equipment to support diverse learning needs in the long-term might be indicated by reduction of completion in children with functional difficulties. The barriers such as a lack of personalized assistance, unavailability of evaluation practices, remedial teaching, and a weak family-school coordination may cause the dropout or slow progress. Consequently, improving the enrolment would not suffice unless long-term academic and psychosocial help in schools is provided.

The fundamental learning outcomes too gave impetus to the fact that inclusion should be measured in terms of learning outcomes, and not on school presence. Children with functional difficulties in reading and numeracy performed less well than their peers without functional difficulties. This meant that there were very many children in school with disabilities who did not receive equal opportunities in learning the basic skills. The reading and numeracy gap may be a sign of inaccessible provision of curriculum, non-adapted instructional materials, teacher preparation, and early diagnosis of learning requirements. The findings indicated the need of inclusive pedagogy, accessible learning resources, and in-classroom supports.

The present findings compared to previous literature were extremely consistent with the total evidence everywhere in the world where children with disabilities continue to be underrepresented, underprovided, and undereducated, particularly regarding access and educational levels (UNICEF, 2021). The low attendance of children with functional difficulties was in line with the results of other low- and middle-income nations where disability was also related to low attendance in school (Mizunoya et al., 2018). The larger out-of-school rates assisted UNICEF to make a conclusion that children with disabilities are the ones who will face a systemic exclusion in the education systems (UNICEF, 2020). The aspect of gender-related inequalities in this study was also in tandem with the priorities of intersection of disability inclusion and gender equality in education of UNESCO (UNESCO, 2023). The need to involve the inclusion other than placement was affirmed by Grindal et al. (2016)

who felt that the inclusive education ought to be assessed based on the participation and quality of learning. Similarly, the outcomes of girls with disabilities were comparable to those of Carew et al. (2020) who proved that resource-poor settings can be filled with inclusive interventions to improve the learning of girls with disabilities. The problems in reading and numeracy identified as learning deficiencies were also similar to the ones that Hehir et al. (2016) discovered as inclusive education does not only require physical integration, but effective instructional support. However, the recent statistics of both low- and middle-income nations also demonstrated that the academic performance of children with disabilities is worse in the schools where the classes are mixed (Adjei et al., 2024). The applicability of these results to the policies was also backed by the World Bank (2022) which also stated that disability inclusion was the key to the equitable education systems.

Overall, the findings implied a policy change towards inclusive education with less access and more results. The data showed that all the children who had problems in their functioning were disadvantaged at every stage: entering school, staying in school, finishing school and acquiring the foundational skills. The responses of the policy should therefore involve disability sensitive data systems, teacher training, accessible infrastructure, modified curriculum, early learning support and gender sensitive inclusion policies. There was also a cross-country approach that found that such disparities were not in isolation but a symptom of weaknesses in the systems. The inclusive learning must be strengthened with a concerted legal, institutional, pedagogical, and social transformation to ensure that the child with functional difficulties would be part of the teaching and learning process and achieve equal learning outcomes.

5. Conclusion

Inclusive education is one of the major paths to offering equitable learning opportunities to children with functional shortcomings yet there exist some major disparities in the major educational pointers. Findings show that children with functional problems are always lower in school attendance, out-of-school, completion rates, and foundational learning outcomes as compared to those without functional problems. These gaps are signs of systemic challenges that are internal to the education systems; they include low access, little instructional support, poor policy implementation.

Disparities related to gender, however, not as high as the ones related to disability, also indicate that the girls with functional problems may have compounded issues as far as getting and obtaining an education are concerned. It is the absence of learning achievements of reading and numeracy in the learning perspectives that underscores the need to make sure that the access is not the only factor in enabling meaningful inclusion within the classroom to create effective learning. The education systems must therefore be changed to enrolment to long term involvement and measurable achievement.

These problems require to be addressed through systematic and inclusive interventions that include better data systems, training of teachers on inclusive pedagogies, accessible infrastructure, and special support systems. Inclusive education systems reinforcement will not only enhance academic performance, but will aid in the social inclusion process. In the various national contexts, it is necessary to have measures that ensure that children who have functional difficulties can be able to participate and succeed in education in order to secure equitable and sustainable development.

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