BRIDGING BARRIERS
MAKING EDUCATION INCLUSIVE FOR CHILDREN WITH DISABILITIES

Policy Brief

By Institute of Development and Economic Alternatives (IDEAS)

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Introduction

The Sustainable Development Goals recognize the importance of ensuring inclusive and equitable education in order to improve standards of living. Specifically, SDG 4 aims to eliminate barriers in accessing quality education by reducing gender disparities in enrollment, and providing equal access to all levels of education for marginalized communities, including indigenous people, those living in conditions of extreme poverty, and children with disabilities. While there has been significant headway in increasing access for girls and children from poor households, children with disabilities continue to face numerous barriers to inclusion and full participation. As a result, children with disabilities are less likely to attend schools or complete primary education and are more likely to remain illiterate when compared to children without disabilities (UN SDG Report 2018).

This policy brief aims to:

- Examine the presence of children with disabilities in the education landscape of Pakistan
- Discuss possible constraints to educating children with disabilities
- Discuss how curriculums and assessment material have been adapted for use by children with disabilities

Key Policy Messages

1. There is a need to generate high quality data on the prevalence of disability to identify children who require additional support and to address challenges they face in access and learning

2. Teachers have an integral role to play in making the classroom environment inclusive for children with disabilities and conducive to learning through differentiated teaching strategies

3. Focus should shift towards reforming curriculum and assessment to facilitate children with severe disabilities
Inclusion in General Education

Inclusion, in the context of education, means that children regardless of their abilities, gender, race and socio-economic status have access to high quality instruction and support, to be able to meet the needs of the education curriculum. Current national policies and international debates are focused on including more and more children with disabilities and special education needs in mainstream classrooms. Article 25-A of the constitution guarantees the right to free and compulsory education to all children between the ages of 5 – 16 years, regardless of gender, ethnicity and disability. Pakistan has also signed onto the United Nation’s Convention on the Rights of Persons with Disabilities (UN-CRPD) and expressed commitment to meet Sustainable Development Goals, which reaffirm the government’s intention to ensure fundamental human rights and freedoms of all persons with disabilities. In addition to education being an unequivocal right of children with disabilities, the benefits of inclusive education are manifold:

Social Benefits:
Inclusion in classrooms allows interaction among a diverse group of children from a very young age. This fosters more social acceptance as children with disabilities develop more robust relationships with their peers (McCarty, 2006). Children with disabilities may also learn to act appropriately in social settings, surrounded by children without disabilities. According to Daniel and King (2000), the classroom mimics mainstream society, while providing a safe, supportive environment for children with disabilities to adjust and thrive in. Additionally, there is a greater chance that children without disabilities will learn how to be more tolerant and accepting of differences in an inclusive environment, spending more time working cooperatively and understanding students with differing abilities (Kavale and Forness, 2000).

Educational Benefits:
Children with disabilities and special needs, placed in general education classrooms, will be exposed to richer, age-appropriate curriculum, while receiving individualized instructional support. This may allow children to make academic progress without the hindrances that occur in isolated settings (McCarty, 2006). With academic advancements being made from an early age, children with disabilities will be able to better realize their potential and set themselves on a trajectory to become productive members of society. In addition, teachers are also likely to shift away from traditional pedagogies as they experiment with diverse teaching practices in order to engage with students of varying physical and cognitive abilities.
Identifying children with disabilities

There is currently a lack of knowledge regarding incidence of disabilities, prevalence rates, and types of disabilities among school children and the population in general. In recent years, considerable progress has been made in developing internationally accepted methodologies in identifying persons with disabilities. These methodologies use surveys, rather than medical testing and diagnosis, in order to bridge this knowledge gap (Rose et al., 2018).

In Pakistan, due to the advocacy efforts of disability groups and human rights activists, the Supreme Court stipulated for the National Census of 2017 to collect additional information on the disability status of each respondent. While this was considered a victory by many, this is a mere acknowledgement of the existence of persons with disability in society—without any consideration for the type and severity of disability.

Keeping in mind the UN-CRPD, the Washington Group has developed a more sophisticated set of questions on disability that include physical, mental, intellectual or sensory impairments which may hinder the full participation of the individual as productive members of society (Washington Group Disability Statistics). Historically, asking ‘yes/no’ questions on disability has resulted in disabilities being reported in low numbers. Asking a diverse range of questions covering not only the incidence of physical impairments, but also whether children have any difficulties in carrying out social and cognitive functions, presents a more holistic picture of the factors hindering the integration of children into mainstream education.

In 2016, ASER Pakistan and the ‘Teaching Effectively All Children’ (TEACh) research project adopted the Washington Group’s disability questionnaires to identify children with disabilities in Pakistan. ASER collected information on a condensed set of questions on disability, focusing on queries about physical impairments and cognitive functioning. For the TEACh project, the Washington Group’s full set of child-functioning questions for children ages 5 to 17 years was administered to mothers/primary care-givers of children ages 8 to 12 years.¹ This survey was conducted in three districts in Punjab. Following the success in adapting the detailed questionnaire to Pakistan’s context, ASER 2018 administered the full set of Washington Group’s Child Functioning Module to a representative sample in 5 districts across Punjab and Sindh (Lahore, Multan, Bahawalpur, Hyderabad and Karachi). A short-set of disability questions was administered to a larger sample across Pakistan. The data from this exercise suggests that approximately 15% of the sampled children have some form of difficulty that could prevent them from fully integrating into mainstream education (Table 1).

¹ Washington Group’s full-set of questions include difficulty in seeing, hearing, walking, self-care, being understood within and outside the house, learning, remembering, controlling behavior, focusing, accepting changes to routine, making friends, being worried and being sad.
<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Sample</th>
<th>Details</th>
<th>Disability Prevalence</th>
<th>Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population Census 1998</strong></td>
<td>Census</td>
<td>Total Population</td>
<td>-</td>
<td>2.49 %</td>
<td>3,286,630</td>
</tr>
<tr>
<td><strong>Population Census 2017</strong></td>
<td>Census</td>
<td>Total Population</td>
<td>-</td>
<td>0.48 %</td>
<td>Less than 1,000,000</td>
</tr>
<tr>
<td><strong>World Report on Disability 2011</strong></td>
<td>Survey</td>
<td>Pakistan</td>
<td>-</td>
<td>13.4 % (based on WHS 2002-04)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Disability Evaluation Report - Pakistan Poverty Alleviation Fund 2012</strong></td>
<td>Survey</td>
<td>23 UCs – 7 districts- 80000 Households</td>
<td>PPAF Disability Survey (Medical Examination)</td>
<td>8 %</td>
<td>-</td>
</tr>
<tr>
<td><strong>TEACH Survey 2017</strong> ²</td>
<td>Survey</td>
<td>1549 (8-12 Years) in Central Punjab</td>
<td>Washington Group – CFM</td>
<td>11.2 %</td>
<td>174 (Moderate/Severe)</td>
</tr>
<tr>
<td><strong>ASER 2018</strong></td>
<td>Survey</td>
<td>119,398 (3 – 16 Years)</td>
<td>Washington Group – Short Set</td>
<td>3.56 %</td>
<td>4251 (Mild/Moderate/Severe)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8,345 (5 – 16 Years) in 5 districts</td>
<td>Washington Group – CFM</td>
<td>15.2 %</td>
<td>1274 (Moderate/Severe)</td>
</tr>
</tbody>
</table>

As reported in Table 1, using both medical examinations and detailed surveys allows for comparable estimates of the prevalence of disability among the population. However, conducting medical examinations at a national level can be quite an expensive and laborious process. Surveys such as the Washington Group’s disability modules adapted by ASER and TEACH can hence be adapted for efficient and cost effective collection of data and identification of persons with disabilities.

² The incidence of disability for both TEACH and ASER 2018 does not include whether the child was reported to be ‘sad’ or ‘worried’ -
Incidence of Disability and the Educational Landscape

While ASER Reports a 15.2% incidence of disability amongst the children sampled, TEACH reports 11.2% incidence of difficulty in the same competencies. This difference may be occurring due to the larger age bracket captured in the ASER data.

More boys are reported to have some form of disability as compared to girls; 16% of the boys in the sample present with moderate to severe difficulties in one or more of the aforementioned areas, compared with 14% of the girls. There appears to be no significant difference in the incidence of moderate to severe disabilities among children belonging to the poorest households, compared with those in the richest households. However, richer households seem to be more sensitive in reporting mild disabilities, with a 25% incidence as compared to 15% in the poorest households. (Figure 1)

Figure 1: Incidence of disability according to gender and poverty (Data source: ASER Child Functioning Module 2018)

The ASER 2018 CFM data reports that approximately 19% of children in the sample are out of school. Among these, 70% are children who have never been enrolled in formal education, and 30% have dropped out owing to reasons such as poverty, the law and order situation, relocation due to flooding and, shutting down of schools. While it may be the case that children are unable to access and attend schools owing to some form of disability, ASER has not reported disability as a reason for children dropping out of school.

A wealth index was generated using the assets that were found in the child’s household. Children were then divided into 4 groups based on their index score. Bottom 25% of the children have been considered as the poorest, while top 25% are considered as the richest in the cohort.
Are children with disabilities enrolled in formal education?
Approximately 18% of the children with moderate to severe disabilities are reported to be out of school. Many of these children face difficulties in seeing, hearing, and walking which could hinder their access to schools and learning materials if schools are not equipped with appropriate aids (Rose et al, 2018). The fact that a large majority of the children reporting being disabled are currently enrolled in formal education can be taken as a positive sign regarding the inclusion of children with disabilities and special educational needs in mainstream classrooms.

More girls with moderate to severe disabilities are currently not enrolled in schools as compared to boys of the same cohort. 22% of girls with moderate to severe disabilities are not in school, while only 14% of the boys do not attend (Figure 2). Furthermore, in the poorest wealth bracket, 37% of girls with disabilities are out of school compared to only 20% of the boys. This phenomenon could be suggestive of the fact that parents are willing to invest more in the education of boys, as compared to girls, and often do not think it is worthwhile to go through the hassle of accommodating and facilitating girls, with physical or social and emotional difficulties, to attend school.

Figure 2: For children with moderate to severe difficulties, breakdown according to gender (Data Source: ASER CFM 2018)

Where are children with disabilities going to school?
Of the children who are currently enrolled in general education, 67% are enrolled in government schools, 27% are enrolled in private schools, while the rest attend madrassahs and non-formal education. Reassuringly, approximately 63% of the children with moderate to severe disabilities are attending mainstream government schools.
14% of children are enrolled in special education institutes being run by the government, or the private and NGO sector. Most commonly, children in special education schools report having moderate to severe difficulties in seeing, walking and self-care, which may hinder access to regular schools. A large proportion of these children are also reported to have moderate to severe psycho-social difficulties such as accepting changes to routine (35%) and controlling behavior (46%).

Figure 3: Where are children with moderate to severe disabilities going to school? (Data source: ASER CFM 2018)

Assessing learning outcomes in children with disabilities
While a significant number of children with disabilities are currently enrolled in schools, the question of whether or not they are able to acquire any literacy and numeracy competencies remains to be addressed. ASER Child Functioning Module 2018 does not test children on literacy and numeracy skills. TEACH data, on the other hand, assesses children using the ASER basic literacy and numeracy test. The findings suggest that learning outcomes for children with disabilities are lower than those without disabilities, regardless of whether they are in school or out of school (Rose et al., 2018).

It is important to note that access to schools and effective learning may be constrained by the intersection of disability and other challenges such as gender and poverty. However, it is necessary to ensure that all children from disadvantaged backgrounds who make it to schools are provided with high quality, inclusive education.
**Constraints to Inclusion**

In theory and at a policy level, inclusion in the classroom is appealing, but ultimately, implementing inclusive education comes down to changing the educational landscape in schools and classrooms. As the ASER data has suggested, many children with disabilities are enrolled in general education classrooms. While higher enrollment is encouraging, it is not a guarantee of a stimulating environment promoting learning and interaction. In order to make schools supportive for a diverse group of children, resources need to be allocated to not only bring about changes to the school infrastructure, but also to train teachers in how to engage in inclusive settings, secure assistive devices, and adapt curriculum and assessment materials to be suitable for children with special educational needs.

Successfully implementing inclusion in mainstream government schools in Pakistan would be require the following constraints to be addressed:

**I. Lack of Physical Infrastructure**

Lack of adequate facilities and assistive technologies in schools leads to high rates of drop-out, as well as stunted rates of learning. To make schools inclusive would mean to make them ‘disability friendly’ with the provision of ramps, assistive technologies, and amenities such as toilets for disabled children. Schools will also need to hire assistive staff to aid children with disabilities to be able to make their way around the school premises.

**II. Lack of adequate teacher training:**

In order for inclusion to be successful, teachers should feel confident in dealing with students with disability in an academic and personal capacity. Current professional development and teacher training programs do not instruct teachers on how to implement inclusive practices in classrooms. Therefore, while teachers display positive attitudes towards integration, they often feel as if they are not properly equipped to plan and adapt lessons for students with disabilities, or to address the social and emotional needs of students with special needs (Pasha, 2012; Ehsan, 2018).

In addition to changing teacher attitudes towards inclusion, teachers would also have to be trained on the use of assistive technologies; such as visual aids for children who face difficulties in hearing, and braille, to teach children with impaired vision. A majority of teachers in primary schools across the country are currently not equipped to use differentiated curriculum and learning materials for teaching, assignments and assessments to meet the needs of disabled students (Pasha, 2012). Therefore, it would be necessary for the national teacher force to undergo extensive training in the best practices of inclusive education, as well as specialized training to teach children with audio and visual impairments and learning difficulties.
III. Adapting curriculum and teaching methodologies.

While there are benefits to exposing children with disabilities to a standardized, age-appropriate curriculum being taught to their peers without disabilities, it may also be argued that it is a disservice to both groups. Children with disabilities may not be able to keep up with the pace of their peers, which may become a demotivating experience for them. On the other hand, by slowing down and simplifying curriculum and teaching methodologies, teachers may become bogged down with the need to accommodate children with special needs. As a result, children without disabilities might not be able to reach their full potential. Therefore, an adapted curriculum and teaching methodologies would ensure that learning takes place at a competitive pace in the classroom. Relevant testing material would also have to be developed in order to ensure that children with disabilities are not put at a disadvantage because of difficulty in accessing and attempting assessments.

ASER 2018 – Adapted tools

It is important to assess children with severe disabilities using modified and accessible assessment material as regular paper-based tests may not work. In 2018, ASER experimented with adapting and testing assessment tools for children with audio and visual impairments, between 5 and 16 years of age. Non-profit organizations working towards providing access to education to children with disabilities ‘Deaf Reach’ and ‘Sight Savers’ were engaged in order to convert the existing assessment material into Pakistan Sign Language (PSL), Braille, and suitable audio tests. Multiple rounds of rigorous quality control and review were conducted in order to ensure that all components of the tests were in sync.

The adapted tools were piloted in 20 special education schools across Punjab and Sindh. The study focused on private schools in Punjab, and government and private schools in Sindh.

Testing through Pakistan Sign Language

Teachers from special education institutes were engaged and trained by ‘master trainers’ fluent in PSL. These trainers were responsible for explaining how the testing material should be used, and training teachers to facilitate children with disabilities during the testing activity. Videos were developed for training, and manual tests were administered to the 106 children from classes 1 to 5 who were randomly selected for testing.

Testing through Braille and Audio

Adapting the ASER assessments into Braille involved an extensive process of converting pictures into stories and changing the presentation of questions (subtraction and division) into a form that could be recognized by blind students. Experts were engaged to extensively review the tools and suggest changes
to make the assessment more easily interpretable. Teachers were then provided with a training manual in both ink-print and in braille. 90 children from classes 1 to 7 were selected for testing.

**Learning outcomes**

The success of these assessment tools for children with disabilities can be measured through their learning outcomes and ability to perform in assessments. Overall, children with disabilities, who are currently enrolled in special education schools, are performing quite poorly in both Arithmetic and Urdu assessments that have been adapted to their disability needs (Figure 4).

**Figure 4: Performance of blind/deaf students in ASER adapted tools**

It is also interesting to note that children tested through Braille outperformed children tested through the Pakistan Sign Language, in both numeracy and literacy competencies. Nearly 87% of blind children were able to recognize numbers between 1 and 9, while 77% of the deaf children were able to achieve the same competency in PSL. Higher level of arithmetic competencies, i.e. 2-digit division was even harder for children to attempt in PSL, with only 3% of the deaf children being able to successfully solve questions as compared to 39% in Braille (Figure 5). Performance in Urdu shows even more pronounced differences, with none of the children being able to read stories in PSL, and only 19% being able to recognize letters (Figure 5).
Low levels of learning amongst children being tested in Braille and PSL suggests that while it is beneficial to test children according to their disability needs, efforts need to be made to improve the quality of instruction and learning in special education schools.

The Way Forward: Key Messages

The analysis of existing literature and ASER 2018 data provides us with three key messages for Pakistan’s context:

**Need for robust data**
To make effective policies regarding inclusive education, there needs to be a sound understanding of the prevalence and types of disabilities affecting children in the country. Research has shown that the full set of Washington Group’s child functioning questions provides sensitive and reliable estimates of the incidence of disability which can be disaggregated across gender, ethnicity and socio-economic status. It is necessary to include these questions in education statistics surveys and collect this information annually in order to provide the support that children with disabilities require in schools.

**Making classrooms more inclusive**
Compared to children without disabilities, those with functional difficulties are more likely to not enroll, and at a higher risk of dropping out of schools. However, there are a significant number of children with moderate to severe disabilities who are enrolled in general education. To make the classroom more conducive for learning for all, there is a need to foster a more tolerant and
accepting environment in schools. The role of teachers in normalizing the presence of children with disabilities in classrooms is important. Focus needs to shift to adequately training teachers and socializing them to not only employ differentiated teaching strategies for children with different types and severity of disabilities but also provide continued emotional support.

**Reforming Special Education**

Although inclusion in classrooms is crucial to integrating children with disabilities into society, providing additional physical and learning support in normal school settings can be quite challenging. As discussed earlier, a significant number of children with moderate to severe disabilities opt for special education schools. These schools are equipped with assistive technologies that might make the learning experience more accessible and better for children with debilitating disabilities such as deafness and blindness. Based on student performance in the adapted ASER tools, the quality of learning in many of these schools is poor. The provincial School Education Departments and Special education departments need to take ownership of special education policy reform and collaborate to mitigate the learning gap between children with and without disabilities. This process would require extensive reform to special education which should include:

- Providing awareness about special education for timely enrollment in special education schools – this will stimulate and facilitate learning amongst the disabled from young ages thereby reducing the disadvantage that they might face later on;
- Modification of curriculum so that it is more sensitive to the pace and needs of children with disabilities;
- Extensive teacher training for special education including the use of braille and Pakistan sign language. Teachers should be trained to effectively deliver the modified curriculum in the designated medium of instruction;
- Adaptation of assessment materials to make them more accessible to children with disabilities to allow them to compete with children of their age at a national level.

While there has been significant progress in recognizing the space that children with disabilities have in schools and in society at large, considerable efforts still need to be made in order to ensure that these children are identified, accommodated in schools and provided with quality education.
Works Cited


United Nations Sustainable Development Goals Report 2018