Every learner matters: Unpacking the learning crisis for children with disabilities

WORLD BANK GROUP

Inclusion international

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Contents

Acknowledgements

The paper 'Every learner matters: Unpacking the learning crisis for children with disabilities' is the result of collaboration between the World Bank's Social, Urban, Rural and Resilience Global Practice and Leonard Cheshire, and was funded with support from Inclusion International.

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The team is immensely grateful to the valuable contributions received from experts who prepared detailed case studies for this paper. In particular, Jody Carr (Former Minister of Education, New Brunswick, Canada), Marie Schoeman (Technical Lead – Inclusive Education, Leonard Cheshire), Dr. Nidhi Singal (Reader in Education, University of Cambridge) and Richard Reiser (Managing Director of World of Inclusion Ltd).

The team would also like to express its gratitude to colleagues who shared valuable insights during consultations and discussions for this paper. In particular, Ramya Vivekananda (Senior Education Specialist, Global Partnership for Education) and the members of the focus group discussion held at Inclusion International's 17th World Congress in Birmingham, UK; namely, Fatma Wangare (Inclusion Africa, Regional Coordinator), Gordon Porter (Director, Inclusive Education Canada), Jan Siska (Expert, Charles University), Nafisa Baboo (Senior Director Inclusive Education, Light for the World), Paula Federica Hunt (Senior Technical Consultant, Catalyst for Inclusive Education) and Rolando Jr. Villamero (Expert on Mission on Inclusive Education-UNICEF Kenya/Joseph P. Kennedy Jr Foundation) Sian Tesni (Global Advisor for Education, CBM) Tiziana Oliva (Executive Director – International, Leonard Cheshire) and Jaleel Odoom (National Coordinator, Inclusion Ghana).

The team acknowledges and thanks the peer reviewers: Connie Laurin Bowie (Executive Director, Inclusion International), Deepti Samant Raja (Disability and Development Consultant, World Bank), Diane Richler (Chairperson, Catalyst for Inclusive Education), Hanna Alasuutari (Education Specialist, Global Thematic Lead of Inclusive Education, World Bank), Inés Elvira B.de Escallón (Expert Advisor, Catalyst for Inclusive Education), Marguerite Clark (Senior Education Specialist, World Bank), Najat Yamouri (Senior Social Development Specialist, World Bank), Mari Koistinen (Senior Social Development Specialist, World Bank), Michael Crawford (Lead Education Specialist, Global Thematic Lead of Curriculum, Learning and Instruction, World Bank) and M. Yaa Oppong (Senior Social Development Specialist, World Bank).

The team is also grateful for the support of Maitreyi B. Das (Practice Manager – Social, Rural, Urban and Resilience Global Practice), Cristian Aedo (Practice Manager, Education Global Practice) and Omar Arias (Practice Manager, Education Global Practice) to advance knowledge in breaking down barriers and promoting the inclusion of children with disabilities so that they can participate meaningfully in society.

Abbreviations

CLA	Citizen Led Assessments
CRPD	Convention on the Rights of Persons with Disabilities
CTPD	Continuous Teacher Professional Development
DFID	Department for International Development
DHS	Demographic Health Survey
EARC	Education Assessment Resource Centers
ECD	Early Childhood Development
EGMA	Early Grade Math Assessment
EGRA	Early Grade Reading Assessment
ESP	Education Sector Plan
GPE	Global Partnership for Education
IEA	International Association for Evaluation of Educational Achievement
IEP	Individualized Education Plan
ILO	International Labour Organization
MICS	Multiple Indicator Cluster Survey
NCERT	National Council for Education Research and Training
PAL Network	Peoples' Action for Learning Network
PASEC	Programme d'Analyse des Systèmes Educatifs de la CONFEMEN
PIRLS	Progress in International Reading Literacy Study
PILNA	Pacific Island Literacy and Numeracy Assessment
PISA	Program for International Student Assessment
PISA-D	PISA for Development
SACMEQ	Southern and East Africa Consortium for Monitoring Education Quality
SEA-PLM	South East Asia Primary Learning Metrics
SEN	Special Education Needs
TIMSS	Trends in International Mathematics and Science Study
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-UIS	UNESCO Institute for Statistics
WDR	World Development Report

Foreword

Today in many countries, there has been some progress made in including children with disabilities in education; however, the barriers around ensuring educational access, meaningful participation, equal and personalized learning opportunities remain. Despite the rapid school expansion and push to improve the quality of education in recent years, the experiences of children with disabilities to access quality education remain unchanged.

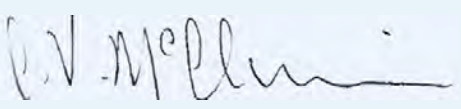
The marginalization of children with disabilities is compounded by a dominant perception of disability as a disadvantage which is exacerbated by assumptions that suggest school is a medium for socialization and not necessarily for learning when it comes to children with disabilities. Denying children with disabilities the right to education reinforces commonly held attitudes and plays into societal norms that espouse diminished capacity, disadvantages, and exclusion. Today, out of the 64 million primary school-age children (UNESCO-UIS, 2018) who are not in school, many are children with disabilities. In low and low-middle income countries, around 40% of children with disabilities are out of school at the primary level and 55% at lower secondary level (UNICEF, 2016). Children with disabilities who do enrol are far less likely to complete school than others. Evidence also suggests that children with disabilities are not learning and that school completion rates have dropped considerably over the years. Accordingly, this points to a 3% literacy rate for adults with disabilities – with 1% of women with disabilities being literate (Rousso, H. 2013).

Responding to the spirit of the 2030 Agenda for Sustainable Development and its focus of leave no one behind, the paper *'Every Learner Matters'* establishes the learning crisis for children with disabilities and presents evidence of how and why children with disabilities are being left behind. Aligned with the message of the World Bank's 2018 World Development Report: Learning to Realize Education's Promise, this paper argues that for children with disabilities, the focus needs to shift from school access to prioritizing learning. This paper examines education systems and the importance of measuring learning achievement for children with disabilities to respond appropriately to the needs of students. Assessments are needed to promote learning and equip teachers with appropriate skills to address classroom diversity, and not exclusively as a tool to measure what is taught. Similarly, it is vital to ensure participation for children with disabilities in high-stakes regional and international assessments, which guide education policies and can direct national budgetary allocations in education.

Across the world, the numbers of children with disabilities are growing, particularly with increased awareness of learning and other types of invisible disabilities. This requires education systems to be ready for teaching a diverse range of children with disabilities. If we continue at the current pace, we will fail millions of children with disabilities and will not meet Sustainable Development Goal 4. There is a need for differentiated curriculum, more individualized learning plans, and teachers who have been trained to teach children with varied learning needs.

We know from some good examples of inclusive classrooms where teaching strategies are designed to meet a range of needs that all children have better learning outcomes. This paper, the result of a collaboration between the World Bank (Global Social, Urban, Rural and Resilience Global Practice), Leonard Cheshire and Inclusion International, makes an essential contribution to the discourse about inclusive education by tackling the misconception that 'access' means 'inclusion'. Only when classrooms, schools, and education systems are designed to meet the needs of a diversity of learners, can we hope to realize the goal of 'inclusive and equitable quality education' for all.

We are confident that this paper will ignite global discussion on promoting learning participation and achievement of students with disabilities and foster further research in this space. Its recommendations provide an important starting point for accelerating efforts towards inclusive education worldwide.



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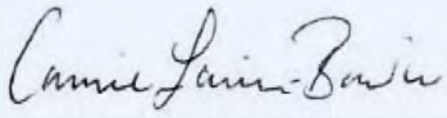

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Background

The right to education is one of the most important rights for persons with disabilities. It directly impacts the successful enjoyment of all other rights protected by the Convention on the Rights of Persons with Disabilities (CRPD) (UN, 2006). Article 24 of the CRPD – the right to inclusive education – safeguards the right of children with disabilities to equitable quality education. It underscores inclusive education as central to achieving high quality education for all learners, including those with disabilities. Sustainable Development Goal (SDG) 4 (UN, 2015) upholds a similar vision: to promote inclusive and equitable access to quality learning. This vision is operationalized as the demand to "ensure that all boys and girls complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes" in regular mainstream schools (UN, SDG Goal 4). Member states endorsing the SDGs have committed to transforming education systems to focus on the most disadvantaged, especially those with disabilities.

The global school expansion in the past few decades has led to tremendous gains in school access and enrolment (WDR, 2018). However, many children remain excluded from the school experience. Children with disabilities, in particular, are affected disproportionately. The disadvantage that children with disabilities face to enrol in school, to participate meaningfully and to learn successfully is yet to be fully assessed, understood, and addressed. Initial attainment of school access continues to be a significant challenge for most children with disabilities (S. Mizunoya, 2018). Most children with disabilities never attend school, have high drop-out rates, poor school attendance and poor school completion rates. Their learning gains are lower than their peers (Rose, P. Singal, N. 2018, Male C, Woden Q. 2017). UNICEF (2013) estimates that only five per cent of children with disabilities ever complete school. Thus, children with disabilities continue to be the largest group of children excluded or disadvantaged at all levels of education.

Definitions of disability

Disability is a complex, dynamic, multi-dimensional and contested phenomenon.

Definitions of disability vary across contexts. Therefore there are contextual variations in methodologies applied to measure disability.

However, the definition of disability introduced in the Convention on the Rights of Persons with Disabilities signals a break from the past narrow and mostly medically defined notions of disability. It states that disability is an 'evolving concept', resulting from the interaction between persons with physical, mental, intellectual or sensory impairments and various barriers (such as attitudinal and environmental barriers) that hinder their full and effective participation in society on an equal basis with others.

Source: United Nations Convention on the Rights of Persons with Disabilities (2006)

Providing access to quality education on an equal basis with others is a challenge. Estimates suggest that there are 263 million primary and lower secondary age children (UNESCO, 2018) who are not in school, out of which 64 million are primary school age children (UNESCO, 2018). Even where children can access school, many of them leave school without having learned anything worthwhile. The World Bank's recent World Development Report (WDR, 2018) identifies the issue of poor learning and achievement as a 'crisis'. The reports makes a detailed case for using data to understand learning achievements amongst learners, using evidence as a mechanism to improve classroom learning and aligning stakeholders to bring systemic change in education systems (WRD, 2018).

Faced with the challenges of learner diversity in the classroom, poor quality teaching, low levels of learning and achievement amongst all learners, interest and awareness in inclusive education has increased. Inclusive education brings a dual opportunity by not only aiming at 'achieving high-quality education for all learners, including those with disabilities' but also the development of equitable, inclusive education systems with the provisions of supporting the individual needs of all students, including children with disabilities (Article 24 CRPD, 2006).

However, at the level of implementation, inclusive education faces challenges connected to ideals, intention, and practice. Conceptual understanding of inclusive education is weak. Semantics around inclusive education add to the confusion, leading to its interpretation as a system-wide reform strategy only for promoting the education of children with disabilities – and sometimes as an alternative for special education. Within the low-income country context, mechanisms to operationalize inclusive education from the planning down to classroom teaching level are not well explored, and are often lacking in political, monetary, capacity and resource backing.

The misinterpretation of inclusive education rests in the history of various models of education used for children with disabilities – special schools, integration and mainstreaming. Inclusive education is not about teaching children in special schools, which leads to segregation. Nor is it about integration, which places children with disabilities in mainstream schools without the necessary support, or in a manner which does not take into account their particular needs. Inclusive education is concerned with:

- **Supporting access** to schools, not just in terms of location and physical accessibility – but through access to learning material and technologies, by following the principles of Universal Design for Learning[1] and having resources available to the teachers and students for specific needs such as differentiated instruction, Braille, sign language, hearing loops and speech to text.

1. **Universal Design for Learning (UDL)** approach recognizes that each student learns in a unique manner. UDL consists of a set of principles providing teachers and other staff with a structure for creating adaptable learning environments and developing instruction to meet diverse needs of all learners. It involves creating engaging classroom environments, maintaining high expectations from all students while allowing for multiple ways to meet expectations, flexible ways of learning, flexible curriculum, empowering teachers to think differently about their own teaching and focusing on educational outcomes from all, including children with disabilities.

- **Supporting participation**, by ensuring the availability of a safe, learner-friendly environment, language (mother tongue, sign language) and communication technologies.

- **Supporting achievement** of all students through quality teacher training and capacity building. Equipping teachers with an adaptable curriculum, teaching strategies and training in Universal Design for Learning, and ensuring support and resources for specific needs are available to teachers and students (UNESCO-IBE 2016).

Core features of inclusive education *(Adapted from Article 24, General Comment, CRPD)*	
Whole systems approach	Strengthen the capacity of education systems to reach out to all learners.
Whole educational environment	Transformation in education culture, policy and practice in all formal and informal educational environments to achieve inclusive education at all levels.
Whole person approach	Recognition of the capacity of every individual to learn and set high expectations for all learners, including students with disabilities. Accommodate diverse requirements and identities of individual students, together with a commitment to remove the barriers that impede that possibility.
Supported teachers	Focus on teachers and all staff within the education eco-system to receive education and training on values and competencies to accommodate diverse learners and build inclusive learning environments.
Learning-friendly environment	Schools as welcoming spaces for all. Focus on creating accessible environments where everyone feels safe, supported, stimulated and able to express themselves, with a strong emphasis on involving students themselves in building a positive school community.
Respect for value and diversity	Focus on the full and active participation, accessibility, attendance and achievement of all students, especially those who, for different reasons, are excluded or at risk of being marginalized.

Inclusive education is therefore concerned with developing **single systems of education** which are aligned and responsive to the needs of all students. International frameworks confirm that having parallel systems of education – such as special schools or integrated schools – can be costly and lead to administrative inefficiencies (Salamanca, 1994; CRPD, Article 24, General Comment on Inclusive Education). Collaboration across sectors (family, health, social protection, gender, social inclusion, education and finance) is essential to building effective inclusive education systems.

Even though the principles of learning and development are universal for all children, including children with disabilities, opportunities remain unequally unavailable. Even when opportunities are available, mechanisms of generating systematic information on how many children with disabilities are in school, what they are learning, what skills they have and how quality can be improved to address learning needs, are minimal.

Focus of the paper

This paper was developed by the World Bank in partnership with Leonard Cheshire and Inclusion International. It is an attempt to add knowledge to the current understanding of the importance of learning achievements, with a focus on children with disabilities. While the premise is that inclusive education refers to the inclusion of **all** children, the focus of this paper is on children with disabilities. The aim of the paper is to:

- Provide an evidence-based review of educational participation of children with disabilities.
- Establish a case for focusing on learning achievements for students with disabilities.
- Take stock of current mechanisms of measurement of learning outcomes and review their inclusivity.
- Explore evidence of practice and systems which promote disability-inclusive learning for all.

Intended audience

The intended audience for this paper is professionals engaged in education, disability inclusion, inclusive education and learning assessments at the global, regional and national level. The paper is intended to present a forward-thinking approach to ensure that under the mandate of SDG 4, children with disabilities are not left behind and have equal opportunities in education participation, learning and achievement.

Structure

The paper begins by presenting a comprehensive review of the effect disability has on schooling.

Section 1 explores the intersectionality of disability with other forms of marginalization and establishes the evidence of children with disabilities being worst affected. The section further lays out the global evidence of access, participation and learning achievement of children with disabilities. It also explores the factors which contribute specifically towards the learning gap for children with disabilities.

Section 2 argues the vital role of assessments in ensuring quality education for all, including children with disabilities. It provides a review of the inclusiveness of international and regional assessments, as well as household-based assessment frameworks, which are often used for monitoring SDG 4 and shape the educational policies and agenda.

Section 3 presents a way forward, explaining how assessment should not be viewed as tool to measure what children have learnt, but should inform what and how children can learn.

Section 4 presents four case studies on different aspects of inclusive education. Case studies range from inclusive household-based assessments in Pakistan, to improving teacher education and promoting inclusive education in South Africa and Canada to the current system in UK for capturing learning data from children with disabilities.

Section 5 provides a conclusion and actionable recommendations.

Methodology

Criteria for considering documents for this review

The research team developed a set of inclusion criteria as well as a set of exclusion criteria to guide the search for and use of materials in the paper:

Types of document

This review has included peer-reviewed journal articles, government policy documents, reports from national and international agencies, human rights conventions, research reports, documents from non-governmental organizations and census reports.

All written documents were required to be available in full text in English. Newspaper articles, pamphlets, and other documents were excluded from the search. Documents in languages other than English and those where only an abstract was available were excluded.

The authors acknowledge that the paper used data and literature available in the English language, and is not representative of views on inclusive education reflected in French, Spanish and Arabic literature and academia.

Content

All documents were required to relate to disability and education with an emphasis on inclusive education. Specific terms included in the search were: assessment, learning outcomes, disability, quality of education, intellectual disability, reasonable accommodation, transition and training of teachers. An effort was made to locate literature representing low and middle-income countries as well as those from the Global North. Documents which referred to all stages of education from early childhood development (ECD) to tertiary or vocational education were included.

Documents that only referred to education in separate, special education settings were excluded from the review. Another exclusion criterion was documents that just referred to adults with disabilities in education.

Inclusion and exclusion criteria for the literature review

	Included literature	Excluded literature
Document type	Peer-reviewed journal articles Research reports Human rights conventions Official documents and reports from UN bodies Policy documents Census reports	Documents with only an abstract available Documents not in English Theses Newspaper articles
Topic areas	Inclusive education Learning outcomes Learning crisis Disability Intellectual disability Quality of education Global (high, middle and low-income countries) Assessment Reasonable accommodation Transition Capacity of teachers/training of teachers	Exclusive focus on special education Exclusive focus on adults with disabilities in education

The authors acknowledge the selection bias as only documents available in English were selected for this review, due to limited multi-lingual capacity within the team.

Search methods for identification of literature

The search for literature was conducted electronically using electronic databases, Google Scholar and the online library of the World Bank. EBSCOHost and ProQuest were the primary electronic databases used in the search. The search also included specific websites of international organizations and UN bodies known to be involved in education and disability activities. General searches on Google using the keywords mentioned in section 2.1.2 elicited some documents. A process of snowball sampling also elicited some data, where the reference lists of articles already obtained suggested further literature. The searches were limited to documents published from 2000 onwards (the date of the adoption of the Dakar Framework and Education for All). A total of 64 documents were identified as suitable for use in the review.

Data analysis

A matrix was developed in Excel to analyze all the documents. Each document was entered into the matrix according to the global region represented in the study/report. The countries were specified for those documents focusing on one to four countries. Data was entered into the matrix according to what was found on each keyword or closely related term. The process enabled the researcher to determine country, regional and global similarities and differences with regards to each topic. After this initial analysis, a further set of tables was developed to group relevant documents on particular themes within the topics.

"Within an educational context, access, participation and learning achievement is highly dependent on an understanding of not only how the functional limitations of a student might impact on his/her progress, but also of the wide range of barriers that needs to be addressed at the education system level, within school, classroom and social context."

Article 24. General Comment on Education, UNCRPD (2016)

Section 1
Disability and its effect on schooling

1.1 Intersectionality of disability in education

Before unpacking the crisis in education for children with disabilities, it is essential to assess the impact that childhood disability has on schooling. Poverty, gender, ethnicity, disability and location (urban/rural) are widely acknowledged as strong factors causing inequality in both access to education and learning (WDR, 2018). However, due to the multi-dimensional nature of disability, its intersectionality with different kinds of marginalization can create multiple levels of disadvantage. A prior assessment of these dimensions and their impact on school access and learning achievement is therefore necessary.

1.1.1 Disability and poverty

Little is understood with regards to the specificity of the intersection of poverty, education, and disability (Palmer et al. 2015). However, the World Bank's household survey in 2008 on poverty and disability trends did find evidence that adults with disabilities typically live in poorer than average households (Filmer F. 2008). Although school-age people between 6-17 years old with disabilities did not live in systematically wealthier or poorer families than other people of their age, in all countries studied they were significantly less likely to start school or to be enrolled at the time of the survey.

A case study by Banks & Zuurman (2015) involving in-depth interviews conducted with 23 families in Malawi found poverty to be a dominant theme. Poverty served as a primary reason for not being in school, missing classes, or having difficulties with learning. In addition, studies have found that disability in itself comes with extra costs, both direct and indirect (Palmer et al. 2015) – pointing to a dynamic of low and unstable income, combined with the direct additional costs of disability, as the cause of economic difficulty for individuals and families.

In Leonard Cheshire's 'Bridging the Gap' research in four African countries (Leonard Cheshire, 2018), one of the main reasons identified for children with disabilities being out of education was the extra cost of schooling incurred by persons with disabilities. Inability to pay fees was also the reason commonly cited in the literature for leaving school before completion (#costingequity IDDC, Light for the World, 2016).

The UN Flagship Report on Disability and Development (UN, 2018) states that students with disabilities are sometimes obliged to stop attending school because of financial barriers. Quoting from four countries in 2010, on average 17 per cent of students with disabilities stopped attending school because it was too expensive. Inaccessibility of schools and environment and lack of access to technology were also identified as barriers.

A 2005 World Bank study tentatively concluded that 'disability is associated with long-term poverty in the sense that children with disabilities are less likely to acquire the human capital that will allow them to earn higher incomes' (World Bank, 2005). A subsequent 2008 World Bank household survey suggested a worrisome vicious cycle of low school educational attainment and subsequent poverty among persons with disabilities in developing countries (Filmer F. 2008). Inability to start or complete school education makes entering the workforce very difficult.

This cyclical relationship between disability and poverty results in a scenario where persons with disabilities are usually amongst the poorest of the poor (Singal 2008).

1.1.2 Disability and gender

Analysis disaggregated by sex in the Leonard Cheshire Disability Portal (2018) showed some striking gender-related results. The data revealed a wider gap between the rate of girls with disabilities completing primary school compared to boys with disabilities, with boys achieving higher completion rates than girls. In the UNESCO report (UNESCO, 2018) the data revealed that women with disabilities are less likely to reap the benefits of formal education than men with disabilities, thus experiencing a double disadvantage by being female and a person with disability.

Significant gender disparity exists in school attendance, with girls representing two-thirds of the total number of children out of school, (IDDC & Light for the World 2016). However, in low and middle-income countries, women and girls with disabilities encounter further disproportionate barriers to educational opportunities. The World Bank WHO World Report on Disability (2011) shows 50.6 per cent of males with disabilities have completed primary school, compared with 61.3 per cent of males without disabilities. Females with disabilities report 41.7 per cent primary school completion compared to 52.9 per cent of females without disabilities, a difference of 8.9 per cent between males and females with disabilities. Research conducted by Rousso (2003) for UNESCO found that the literacy rate for adults with disabilities is 3 per cent, and for women with disabilities it is even lower at 1 per cent (Ortoleva S, undated).

1.1.3 Disability and location

There is little evidence regarding the intersecting effects of disability and location on education. Findings that do exist are not consistent. According to UN Enable in 2006, four of every five persons with disabilities live in rural areas in developing countries (UN, 2006). Further evidence from the ILO (2011) states that children with disabilities are often excluded from education. The problem is often more pronounced in rural areas, where education and training services are limited and hard to access. Rural schools and training centres are scarce. They lack the necessary electricity, assistive devices and connectivity,

classrooms can be overcrowded and their training approaches are often not geared towards accommodating learner diversity.

Leonard Cheshire's 'Bridging the Gap' household survey research found that in Zambia there was no significant variation in numbers of children with disabilities out of school between rural and urban settings (Leonard Cheshire, 2018). However, in Kenya, the household survey found that the gap of children with disabilities out of school was more significant in urban than rural areas: 30 per cent of children with disabilities were not in school in urban areas compared to 5 per cent of their non-disabled peers; in rural areas the figures were 13 per cent and 4 per cent respectively. In Uganda, higher levels of increased stigma towards disability within rural communities were found, as well as practical challenges such as terrain, transportation, and the centralization of specialist services. However, the differences in figures between rural and urban school attendance in Uganda were not discussed (Leonard Cheshire, 2018).

In their #CostingEquity report (2016), IDDC and Light for the World describe significant barriers between rural and urban areas citing Lao as an example. They also identify stigma as stronger in rural areas, and a disparity in rural-urban spending.

1.1.4 Disability and conflict

Persons with disabilities, particularly children, are among the most adversely affected during conflict situations or when natural disasters strike (Bakhshi et al. 2018). They are less able to flee, can get separated from their caregivers, and have poorer psychological well-being than other children in the same context. Girls are at a higher risk of sexual violence (Bakhshi et al. 2018). Bakhshi et al. (2018) also identify how in a conflict setting, such as Darfur, the education system is often destroyed, leaving millions of children out of school. When schools do exist, a myriad of challenges impact on the teaching-learning process: poor quality teaching, overcrowded classrooms, lack of facilities and resources and very little support for teachers. Schools often lack equipment, educational materials, and trained teachers.

Although the above facts are known to some, they are not widely known. There is scant literature specific to the inclusion of disabled children in education in conflict and post-conflict situations (Miles, S. 2013). Bakhshi et al. 2018 state that humanitarian workers often have preconceived ideas that children with disabilities cannot learn alongside others and need special education structures and specific interventions.

In a protracted conflict context, promoting education requires a lot of external effort to ensure access and positive learning outcomes for all children, including children with disabilities. Improving learning outcomes and mental wellbeing of vulnerable children in conflict, crisis, and protracted crisis contexts requires multi-level and multi-pronged interventions within and outside schools (Bakhshi et al. 2018).

1.1.5 Disability and conflict – refugees

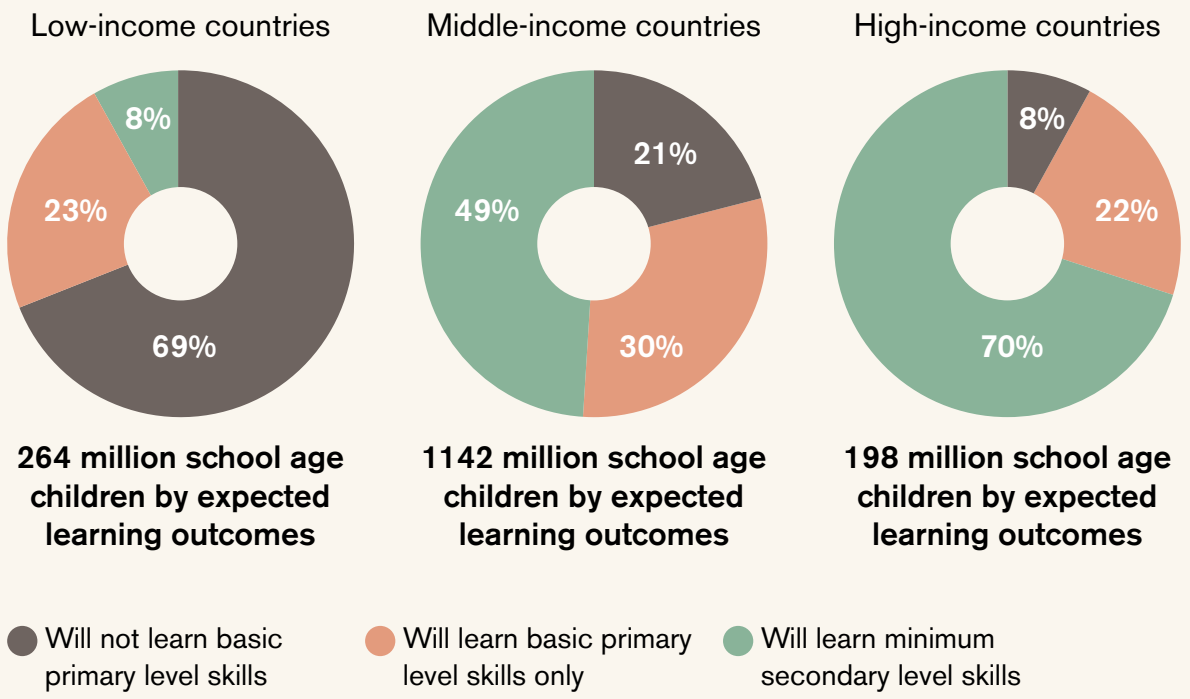
As with the conflict context, there is a lack of research on disability in the context of displacement. However, the background paper for the Global Education Monitoring Report (2019), which captures research in six countries, presents the diverse experiences of displaced migrants in different displacement settings, and also provides some figures.

Refugee children are five times more likely to be out of schooling than non-refugee children. Only 50 per cent have access to primary education, compared with a global level of more than 90 per cent. As they get older, the gap becomes a chasm: 22 per cent of refugee students attend high school, compared to 84 per cent of non-refugee peers. At the higher education level, just 1 per cent of refugees attend university compared to 34 per cent globally. The situation facing those with disabilities is considerably worse (GEM, 2019). In the poorest countries, education is beyond the reach of any child with a disability, much less children with disabilities who are also refugees.

1.2 Children with disabilities and the learning crisis

In the recent past, the international discourse has been shifting from school access to what children are learning in school. The World Development Report (World Bank, 2018) recognizes the progress accomplished in past decades in school enrolment and calls for an emphasis to address the 'learning crisis.' Evidence from the report on learning achievements has dispelled the myth of 'in school, will learn'; noting that education systems have been unsuccessful in delivering quality education for children (WRD, 2018). The discourse has shifted from school availability and access, to learning achievement and outcomes. The sharp focus on learning outcomes provides a clear forward strategy for the international education agenda, but also runs a risk of generating more educational inequality and disparity.

Figure 1. From access to learning crisis



Source: Education Commission projections (2016)

For children with disabilities, the learning crisis is two-fold; education access and equity on the one hand, education quality and learning on the other. School access continues to be a challenge for most children with disabilities. The Education Commission Report (2016) estimated that close to one quarter to one half of children with disabilities are not in school, representing up to one third of the overall out of school children.

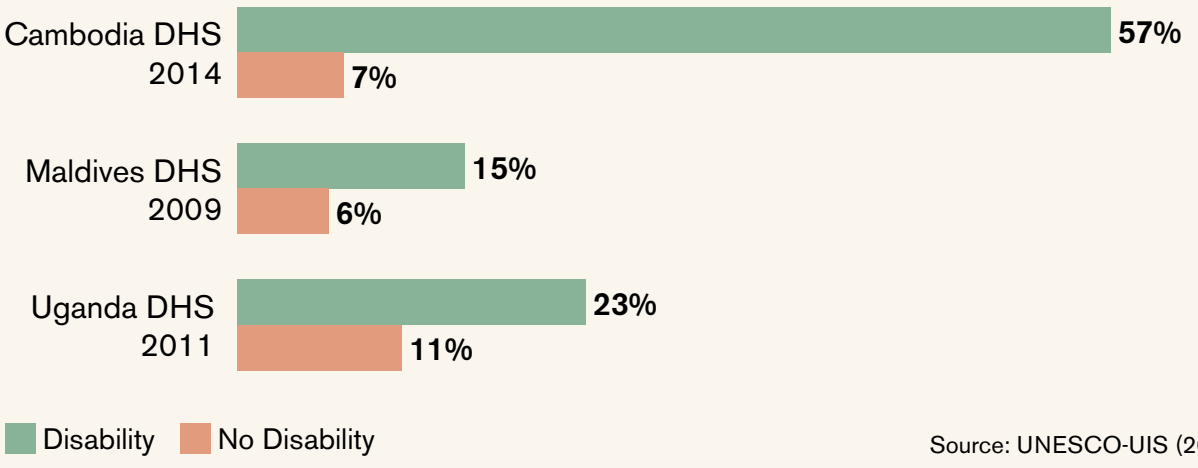
A recent analysis of 49 countries by UNESCO-UIS (2018) reveals that children with disabilities are less likely ever to attend school. They are far less likely to complete schooling, have fewer years of education, and are less likely to possess basic literacy skills. Exclusion of children with disabilities from education has contributed to widening the literacy gap between girls and boys with disabilities and their non-disabled peers. The following section presents research-based evidence of the learning gap between children with disabilities and their non-disabled peers on some key education indicators, focusing on access, participation and learning achievement.

1.2.1 The disability gap in school access and enrolment

A small but growing evidence base has established the disability gap in school access and enrolment. Mizunoya, Mitra, and Yamasaki (2017) analyzed datasets from 15 developing countries. They concluded that attainment of initial access to education for children with disabilities is a significant challenge. In 7 out of the 8 countries examined, more than 85 per cent of primary school age children had never attended school (Mizunoya, S. Mitra, S. Yamasaki, I. 2017).

The UNESCO Institute of Statistics (2017) analyzed data from Demographic Health Surveys (DHS) from 3 countries (Cambodia, Maldives, and Uganda) which used the short set of disability questions by Washington Group. The datasets explored school attendance by disability status. The study found out of school rates to be higher for children with a disability (UNESCO-UIS, 2017). The most striking amongst these was Cambodia where every second child with a disability is not in school (UNESCO-UIS 2017).

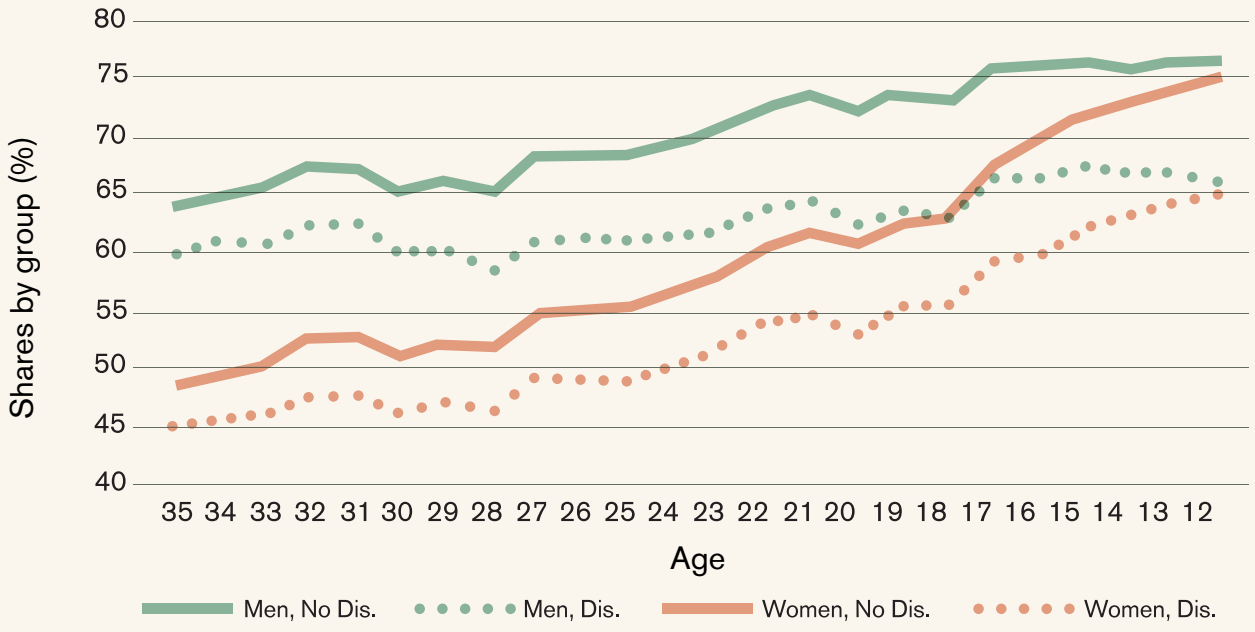
Figure 2. DHS based out-of-school rate of children (primary school) using Washington Group questions, by disability status



Source: UNESCO-UIS (2017)

The Global Partnership for Education and World Bank Report (2017) on Disability and Education analyzed census data from 19 countries. The report found that among children aged 11, the likelihood of having ever enrolled in school was 13 percentage points lower for children with disabilities compared to children without disabilities (Male. C, Woden. Q, 2017). Exploring disability gaps in educational attainment and literacy, the paper further argues that while the enrolment rate of children with disabilities has increased over time, there is a widening gap in rates of enrolment between children with and without disabilities. The census data used identifies a difference of 13.15 per cent in the number of boys with disabilities ever enrolled in education compared to boys without disabilities. The enrolment gap between girls with and without disabilities is 12.7 per cent. A World Bank report (2018), exploring school enrolment and learning achievement among children with disabilities in 13 countries across Sub Saharan Africa concluded that many children with disabilities never enrol in school. The census data identified that among 12 year olds, the likelihood of having ever enrolled in school was ten percentage points lower for children with disabilities compared to children without disabilities. The study concluded that with time, the enrolment gap between children with and without disabilities has been growing (Wodon, Q. et al. 2018).

Figure 3. School enrolment using data from 11 censuses by age and group (%)



Source: World Bank (2018)

1.2.2 The disability gap in school participation (completion)

UNESCO-UIS (2018) reports that there is a significant gap in primary completion rates between children with and without disabilities. In the five countries where there was sufficient data, 73 per cent of children without disabilities complete primary school in Cambodia, Colombia, the Gambia,

Maldives, and Uganda. Only 56 per cent of children with disabilities finish primary school in these countries. The overall figures for completion of lower secondary school also show a continuing gap between children with and without disabilities (53 per cent completion rate for adolescents without disabilities in comparison to 36 per cent for adolescents with disabilities).

Male and Wodon (2017) report that although there has been an increase in primary completion rate amongst children with disabilities over time, they have made smaller gains in completion rates than their peers without disabilities. Boys with disabilities are 17.6 per cent less likely than boys without disabilities to complete primary school. The difference between girls with and without disabilities is 15.4 per cent. Similarly, the gap in secondary completion rate between children with and without disabilities has grown (14.5 per cent for boys and 10.4 per cent for girls).

In all 22 countries (low, middle and high-income) for which UNESCO had data (UNESCO, 2018), the mean number of years of schooling completed was less for persons with disabilities than for those without disabilities. In most cases, gender also affected the number of years of education completed. Leonard Cheshire (2018) found that average completion rates for primary school for children with disabilities and children without disabilities were 48 per cent and 70 per cent respectively. On secondary school graduation, the figures were 21 per cent and 32 per cent respectively (from disaggregated data for these indicators for 35 countries).

1.2.3 The disability gap in achievement of literacy outcomes

In examining literacy rates, UNESCO (GEM, 2017) highlighted the fact that there are no globally agreed standards for reading and maths, although the UNESCO Institute for Statistics is working on developing a system for comparability of results. In all the countries where an adult literacy rate was reported on by UNESCO (2018), persons with disabilities were less likely to be literate than their peers without disabilities.

In most countries, the literacy rate amongst women with disabilities was less than that of males with disabilities or either gender without disabilities. For example, in Ghana, 47.5 per cent of adult females with disabilities were literate compared to 66.4 per cent of adult males with disabilities, and an overall literacy rate of 71.4 per cent for adults without disabilities.

Male and Wodon (2017) report that while there has been a significant gain in literacy for girls with disabilities over time compared to boys with disabilities, the gap in literacy rates between persons with and without disabilities has widened over time – with a 16.2 per cent difference in literacy rates between boys with and without disabilities. Similarly, the gap in female literacy rates has increased to 15.5 per cent between those with and without disabilities.

In a study examining developments in the education of children with disabilities in India and Pakistan, it was noted that children who were "physically challenged" (the characteristics of this group is not described, nor is the term defined in the data used by the author) did markedly worse on an assessment of reading comprehension than their peers without disabilities (Singal, 2016).

Although making the transition from one phase of education to another is not necessarily synonymous with a high quality of education, it is an indicator of attainment of learning outcomes by the child making the transition. The World Development Report (WDR, World Bank, 2018) highlights gaps in completion rates, particularly at the primary school level, and frequently enrolment figures are significantly less at secondary school than at primary level (World Bank, 2018).

Children with disabilities are less likely than their peers without disabilities to make transitions at all levels of education, from pre-school through to tertiary level, as evidenced by enrolment figures from Plan International (2013). For example, in Zimbabwe, only 10 per cent of girls with disabilities sponsored by the organization were in secondary or tertiary education, while 19 per cent of sponsored girls without disabilities were enrolled in secondary or tertiary education. In Colombia, 35 per cent of sponsored boys without disabilities were enrolled in secondary or tertiary education, while the figure for boys with disabilities was 23 per cent.

1.2.4 Missing disability data regarding the learning crisis

Various authors point out that data from several countries may not accurately reflect the situation of persons with disabilities in relation to education. De and Singal (2016) highlight the difficulties with official figures of enrolment of children with disabilities in education in India. These authors cite the annual report of the Ministry of Human Resource Development for 2014-15, which has an impressive rate of 97 per cent of children identified with disabilities as being enrolled in school. However, this masks the fact that there is likely a very low rate of identification of children with disabilities in the country. According to De and Singal, many children with disabilities may be invisible both in the classroom and community, with teachers unaware of, or unable to identify, individuals with disabilities in their classes.

In a similar vein, DFID and UKAID (2010) describe the under-reporting of disability globally, in some cases due to the stigma of having a child with a disability. In the study Better Education for All, Inclusion International (2009) claims that many national household surveys grossly underestimate the number of children with disabilities, in part because many children born with disabilities are not registered in developing countries. Estimates of the percentage of children with disabilities who are in school are basically an incorrect, underestimated number of children with disabilities identified, thus presenting an inflated picture of enrolment of children with disabilities in school. Disability-disaggregated data is also not available in several countries, making it impossible to track the learning outcomes of children with disabilities.

The Disability Data Review Report[2] (Leonard Cheshire, 2018) provides a snapshot of globally available data on persons with disabilities across four thematic areas (inclusive education, economic empowerment, technology and innovation, and stigma and discrimination), using 16 indicators. The Disability Data Portal Project (Leonard Cheshire, DIFD, 2018) collated and analyzed disability data from 40 countries. Data sources for the analysis primarily included the Demographic Health Surveys (DHS) and some national household surveys.

Results highlight some interesting data gaps. Out of five education-related indicators,[3] data on indicator 4.2.2 (participation in organized learning pre-primary age) was most limited. The study reiterated that girls and boys with disabilities are falling behind and not learning at the same rate as their peers. The study points out that comparisons of the outcome gap between persons with and without disabilities are affected by dated data methods used for identification of persons with disabilities; specifically, the questions used in surveys and censuses and the different data collection methodologies used by different countries over time. This affects the reliability and accuracy of the data for comparison.

In summary, it is very well established that children with disabilities are being left behind in getting counted, being identified, accessing quality education and participating in learning. The review of the literature presented above makes a detailed case of exclusion and identifies different levels within the education ecosystem which aggregate the issue. If the global community is to deliver on its commitment to 'leave no one behind', data is an essential contributor to the process.

2. www.disabilitydataportal.com

3. Five Education Indicators for Disability Data Review (Leonard Cheshire, 2018) include:
   SDG 4.1: School Completion Rates (Primary and Secondary)
   SDG 4.2.2: Participation rate in organized learning
   SDG 4.3.1: Participation rate of youth and adults in informal and non-formal education
   SDG 4.5: University completion rates
   SDG 4.6.1: Proportion of population in a given age group achieving at least a fixed level of proficiency in functional literacy skills

1.3 Factors contributing to the learning gap for children with disabilities

The learning gap experienced by children and adolescents with disabilities can be related to several issues that affect the availability and quality of education.

1.3.1 Policy

In a review conducted of national reporting on Article 24 of the CRPD by member countries, it was noted that most countries (68 out of 86) made explicit reference to the right of persons with disabilities to education in their constitutions, laws and or policies (Lang, R. et al. 2017). However, very few countries explicitly included definitions of terms related to disability and education, such as people/persons/students with disabilities, children with special needs, inclusive education or special education, in their constitution, laws and/or policies. Similar findings were reported in the disability stocktake study conducted by Global Partnership for Education (GPE, 2018) where 17 countries defined inclusive education in their education sector plans. In these instances, the language was heavily influenced by the CRPD and/or the Salamanca Statement and Framework of Action. However, the implementation was predominantly along the lines of segregated or special schooling.

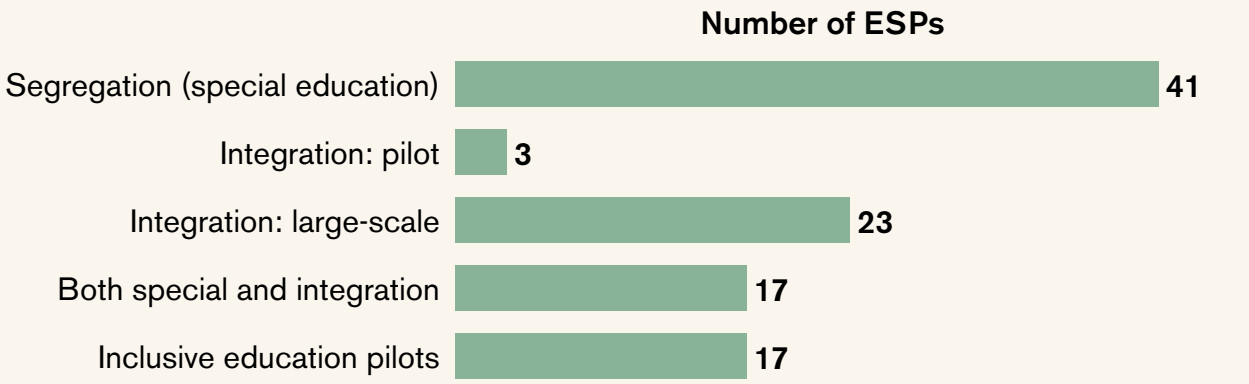
While most countries make a narrative reference to the right of persons with disabilities to education, there is huge diversity in the way national laws and policies interpret the right to education. As a general trend, the areas addressed include: infrastructure, specific curricula, educational resources, training of teachers in special education, and raising awareness. Both studies (Lang, R. et al. and GPE) highlighted a pattern of slotting education interventions to address education for children with disabilities.

These include:

a. Inclusive education pilots: regular schools with inclusive education projects
b. Integrated schools: regular schools with differentiated groups (special education needs classes or units)
c. Special schools: catering to students with sensory, intellectual, motor, psycho-social or communication disabilities or specific language disorders
d. In-hospital schools/classrooms: for children with high support medical needs
e. Home teaching

The GPE disability stocktake report (2018) provides further insight. Out of the 51 countries reviewed, at least 41 are focusing on segregated approaches to education for children with disabilities. The review also demonstrated that inclusive education was mostly seen as an experiment/pilot and 'integrated schools' are being used as a preferred strategy to address the education of children with disabilities.

Figure 4. Country approaches to education for children with disabilities



Source: Global Partnership for Education (2018)

1.3.2 Identification and initial assessment of children with disabilities

As highlighted in the Incheon Declaration and Framework for Action, there were approximately 59 million children of primary school age and an even higher number of adolescents out of school globally (UNESCO-UIS, 2015). Disability has been one of the leading causes of educational exclusion (The Impact Initiative, 2018). Therefore, in the quest to achieve positive learning outcomes for children with disabilities, it is important to examine the **processes** that affect the enrolment of children with disabilities in inclusive education.

The literature describes several assessment processes that are used to screen, identify and place children with disabilities either in inclusive or segregated educational settings. In the developing country context, most of the time screening or assessment happens only when the teacher starts noticing that the child is not learning. Static, standardized psychometric testing is used in several European countries to assess children with disabilities who plan to enter school. These tests generally focus on children's deficiencies rather than their potential, leading to reduced expectations of the child (Lebeer et al., 2011). These authors claim that static psychometric testing can lead to barriers to learning, especially if the results are used in a deterministic way which can affect the teacher's attitude to and prediction of the child's capacity to learn. Low expectations of the performance of children with disabilities are often linked to low educational attainment according to Sperotto (2014), who recommends that children with disabilities benefit from teachers having high but realistic expectations of their capacities. Watkins (2007) warns that a focus on diagnosis, labelling, and categorization in the initial assessment of a child (linked to the medical model of disability) is likely to increase segregation of children with disabilities rather than promoting inclusion in mainstream education.

In conducting an international review, Desforges and Lindsay (2010) identified that there is a need to assess factors within the child as well as factors in

the environment in an initial assessment. This will ascertain the resources required and help to plan for teaching a child with a disability. These authors suggest that cognitive ability (eg approach to learning, the speed of processing, concentration, and resistance to distractibility), self-perception in relation to educational achievement, and relationships with peers are essential aspects of an initial assessment of factors within the child.

The European Agency for Development in Special Needs Education promotes an educational approach to assessment that looks at the child's strengths and uses assessment information to inform strategies for teaching and learning (Watkins, 2007). The Policy on Screening, Identification, Assessment, and Support of the South African Department of Basic Education guides schools and school districts to assess not only intrinsic factors in the child, but also to examine barriers to learning in the child's home and school environment (Department of Basic Education, 2014). The initial assessment draws up a learner profile, and there are procedures to determine the level and nature of support a child will require in the education system. This process is applied to all children with additional support needs, not only children with disabilities. This emphasizes that support is integral to delivery of quality education for all.

Similarly, in the study of Lebeer et al (2014) in 6 European countries and the British Virgin Islands, the authors recommend that the assessment of a child with a disability before enrolment should include information on aspects of the environment that facilitate or are barriers to participation and modalities, materials and technical equipment that promote learning. Such information when used by the school and teachers can lead to improved quality of education.

In Armenia, children with disabilities entering school undergo medical, psychological and pedagogical assessments to assist in determining which curriculum would most benefit the child and to develop their Individualized Education Plan (IEP) (Bridge of Hope, 2015). Although recommendations are made, it is the parents who have the final say in the placement of their child. Parents also have a central role in the development of the IEP. According to Watkins (2007), in most countries in Europe multi-disciplinary teams are involved in developing the IEPs of children with disabilities. However, the role of parents is not always emphasized or described. This can result in a lack of recognition of the critical role they have to play in the ongoing support of their child.

There are a variety of problems associated with the initial assessment and enrolment of children with disabilities in education that are described in the literature. Geldenhuys and Wevers (2013) relate that teachers in a mainly rural province of South Africa complained of not having the equipment to conduct (an impairment-based) initial assessment of children with disabilities. They were therefore unable to determine the level of learning support that was required. In South East Asia, Grimes et al. (2011) report that children with complex disabilities from remote rural areas are often unable to have an initial assessment or their disability screened because of difficulties in carrying or transporting these children to distant schools where the evaluations take

place. In Kenya, Education Assessment Resource Centers (EARCs) also do not involve teachers in the assessment process, and consequently do not translate the assessment results into actionable steps and strategies to be applied by teachers in the classroom.

Although the problems are different, Latimier and Šiška (2011) describe several instances in Europe in which children with disabilities are not enrolled in mainstream education. For example, in Greece children with disabilities are permitted to enrol in mainstream schools with support after educational and interdisciplinary assessments. However, this rarely happens for children with severe intellectual disabilities or complex disabilities. In France, children with disabilities can be denied access to mainstream education if no special needs assistants are available, even if the assessment certifies the child as suitable to enrol in an ordinary school. In the Czech Republic and in Slovakia, Special Education Centers assess children with disabilities, give a pedagogical diagnosis and a recommendation of placement which is essential for enrolment. In spite of this, it is the school principal who decides whether to take a child with an intellectual disability into a regular school or not. There are no independent appeals processes regarding the enrolment of the child.

In summary, a majority of countries still apply assessment systems that have the purpose of determining eligibility for admission to regular schools. The practice goes against the prescripts of Article 24 of the CRPD, which prohibits the exclusion of persons with disabilities from the general education system, including any legislative or regulatory provisions that limit their inclusion based on their impairment or its 'degree'.

Identifying students with disabilities

The global trend towards using the Washington Group (WG) on Disability Statistics Short Set of Questions in national censuses and surveys to identify persons with disabilities has gone a long way towards standardizing measurements in terms of functioning difficulties and how these place people at risk of restricted participation. Large scale national training of recorders and involvement of statisticians in government statistics offices have raised the quality of data and data tracking over multiple years. This in its turn promises to strengthen government planning for provision of cross-cutting services to persons with disabilities.

The WG/UNICEF Module on Child Functioning and Disability, which is currently being developed and tested, further promises to improve the quality of data being collected on children between the ages of 2 to 17 years by reflecting on different developmental stages. All these developments make rigorous comparison across countries possible (UNESCO-UIS 2017) and also allow for integration into program monitoring and data collection on the extent to which persons with disabilities are benefiting from programs (DFID 2015). If persons with disabilities are involved in every stage of the process when research is being commissioned, the likelihood is also greater that results will be more reliable and that barriers could be addressed more effectively (DFID 2015).

The systems (Education Management Information Systems) and processes of identifying and assessing children with disabilities at school level, however, remains problematic. In spite of the shortage of trained professionals in middle to low income countries, there is still an over-reliance on medical diagnostic assessments, which provide little or no information on the kind of support required in school to enhance learning and mostly result in exclusion, 'referrals' and 'placements' in segregated educational settings. Processes to support schools and teachers on how to identify not only the level and nature of support required by learners, but also the contextual barriers that prevent their inclusion and participation in learning. Support to schools can be enhanced if there is closer collaboration between Health and Education support services and if teacher professional development includes rigorous training on early identification of learning difficulties and developmental delays and on the intervention strategies to accommodate diversity in the classroom. Parents and caregivers should be involved in all decision making about the support to be provided to their children. They should also become partners in the support of their children, including combatting stigma and promoting safeguarding and protection against abuse.

1.3.3 Teachers and quality of education for children with disabilities

"Teachers matter. Indeed, they matter as much as or probably more than government policy. No matter how clear our vision of what we want to achieve and how schools and services should develop, progress depends on the attitudes, knowledge, skills, and understanding of all those who are in day to day contact with children with disabilities." (Mittler 1991).

The most frequent reasons given for poor quality education of children with disabilities were related to the training or performance of teachers (Bakhshi et al., 2017; Carew et al., 2018; ElSaheli-Elsage & Sawilowsky, 2016; Geldenhuys & Wevers, 2013; Singal, 2008; University of Tirana, 2016). Evidence at sector planning level is highlighted in the Global Partnership for Education's disability stocktake report (GPE, 2018) evaluating the responsiveness of 51 Education Sector Plans (ESPs) of low-middle income countries towards the education of children with disabilities. GPE's Developing Country Partners (DCPs) acknowledged the lack of trained teachers as a barrier to the education of children with disabilities. Despite this, only seven ESPs had a specific focus on conducting training on inclusive education pedagogy at the pre-service training level. Interestingly, 19 ESPs articulated in-service training as a priority, but only five mentioned developing training modules on inclusive education (GPE, 2018).

A study of inclusive education in Albania cited insufficient training of teachers as a problem (University of Tirana, 2016). Similarly, in Lebanon, ElSaheli-Elsage & Sawilowsky (2016) identified that both pre-service education of teachers and provisions for continuing professional development were inadequate to enable teachers to differentiate the curriculum in the classroom. Two studies conducted in India found that teachers struggled to cope with diversity in the classroom (Bakhshi et al., 2017; Singal, 2008). The Global Campaign for Education (2016) indicated that in Kenya there could be problems with referral of children with disabilities to the Educational Assessment Resource Centers (EARC) by teachers and parents. There are several difficulties with these centers, that should be giving individualized support plans for children and indicating the support that the child needs. For example, limited resources at the EARC and lack of funding for the staff to follow up children and ensure that their teachers are giving them the support that they require. Two issues affecting the quality of implementation of inclusive education in rural South Africa were the large class sizes and the lack of IEPs for children experiencing barriers to learning (Geldenhuys & Wevers, 2013). Teachers reported that in classes with over 40 children they found it challenging to give opportunities to those children who experienced barriers in participating meaningfully in the class.

Class size is, to varying degrees, a challenge across most low-income countries. The issue of class size, in combination with poorly trained teachers, makes it difficult to deliver quality education for all children, irrespective of whether or not they have a disability.

In many low-income countries, there are also no systems in place for continued teacher professional development (CTPD). Ongoing development of inclusive pedagogical skills in all teachers is not yet a priority for most governments. In most countries, there is a perception that teacher training for inclusive education remains the responsibility of a specialized center or teacher training college which has to train teachers on the various areas of 'special needs' of each category of impairment. The result is that general teacher practice never fundamentally changes so that they can view their task differently and more inclusively.

There is also limited understanding or evidence of how teachers who have specialized knowledge, acquired through training at specialized centers, can make this knowledge available to teachers through mentorship and training programs on an outreach basis.

One factor contributing to the present slow development in educational services for children with disabilities is the belief that it is so unique. Terms such as 'special' education and 'special' teachers have made this area so 'special' that it is seen as a field only for highly qualified specialists of whom there are very few, especially in developing countries. There is too much mystification concerning the skills required to work with disabled children. Many of these skills – not all – can be learned comparatively quickly by families, volunteers, community workers, and staff without formal qualifications. Skilled professionals are, however, needed to provide leadership, staff training, and support (Mittler-Serpell, 1984).

In summary, investment in teacher training is a 'low hanging fruit' which can make learning available and meaningful for all students. Providing teachers with training on classroom management and pedagogical skills will benefit all students in the class, not only those with disabilities. However, as the evidence suggests, it is often overlooked. Training of teachers in inclusive pedagogy during pre-service, as well as in-service training, is an opportunity which should be valued, leveraged and used effectively. Teacher education at the pre-service level is especially critical. Teachers trained in inclusive pedagogy from the start are more likely to use skills of identifying, assessing and responding to diverse learning needs in their classrooms. Training at multiple time points should be available to teachers receiving in-service training, instead of just one. There is a need to rethink the role of special educators, rehabilitation professionals and other 'specialists' whose unique skills can be channelled to provide pedagogical as well as learning and classroom support.

Why are learning opportunities limited for children with disabilities?

"The causal link between disability and access to school is not a simple linear relationship but multidimensional and includes multiple factors." (Bakhshi, Babulal, Trani. 2017)

Low expectations – society holds shallow expectations for and from children with disabilities; they are not expected to learn, contribute, and create value. These systemic problems intrinsically inhibit opportunities for young learners.

Attitudes – a large body of research indicates that the attitudes of parents, teachers, and communities regarding the ability of disabled children to learn and achieve are of vital importance in creating or denying opportunities. Parental issues associated with low expectation and aspiration, shame, protection from bullying, pressure from school and other parents to keep the disabled child at home can also influence outcomes for disabled children. (UNICEF, 2014)

Community and culture – characteristics and culture of a community are instrumental in creating the human and social capital for its children (Alam, 2015). Community factors such as cultural beliefs and practices can influence educational attainment and achievement. In some communities, disability is equated with evil and bad omens, resulting in the hiding of children from the public view. Negative beliefs and practices towards disability reflect lack of knowledge and can impede productive participation of children with disabilities in community.

Economics at the household level – parents may decide that educating a child with a disability is not in the economic interest of the family (UNICEF 2014). This decision links to the perception of low economic return on investment in education (Lamichanne, K. 2013) and realities of low employment opportunities for persons with disabilities (Trani, J.F. Loeb, M. 2010).

Cost of schooling – often, families of children with disabilities must pay more fees compared to families of children without disabilities. Parents must incur the additional cost of transport, classroom assistants and therapists (if available). Availability of such services does not necessarily improve the quality of education but becomes a determinant in decision making for families.

School environment – a resource-constrained school environment contributes to children with disabilities not learning. Inaccessible school facilities, materials, lack of teacher's capacity to respond to diverse learning needs, an inflexible curriculum and lack of aids and assistive devices can considerably limit the learning experience of a disabled learner.

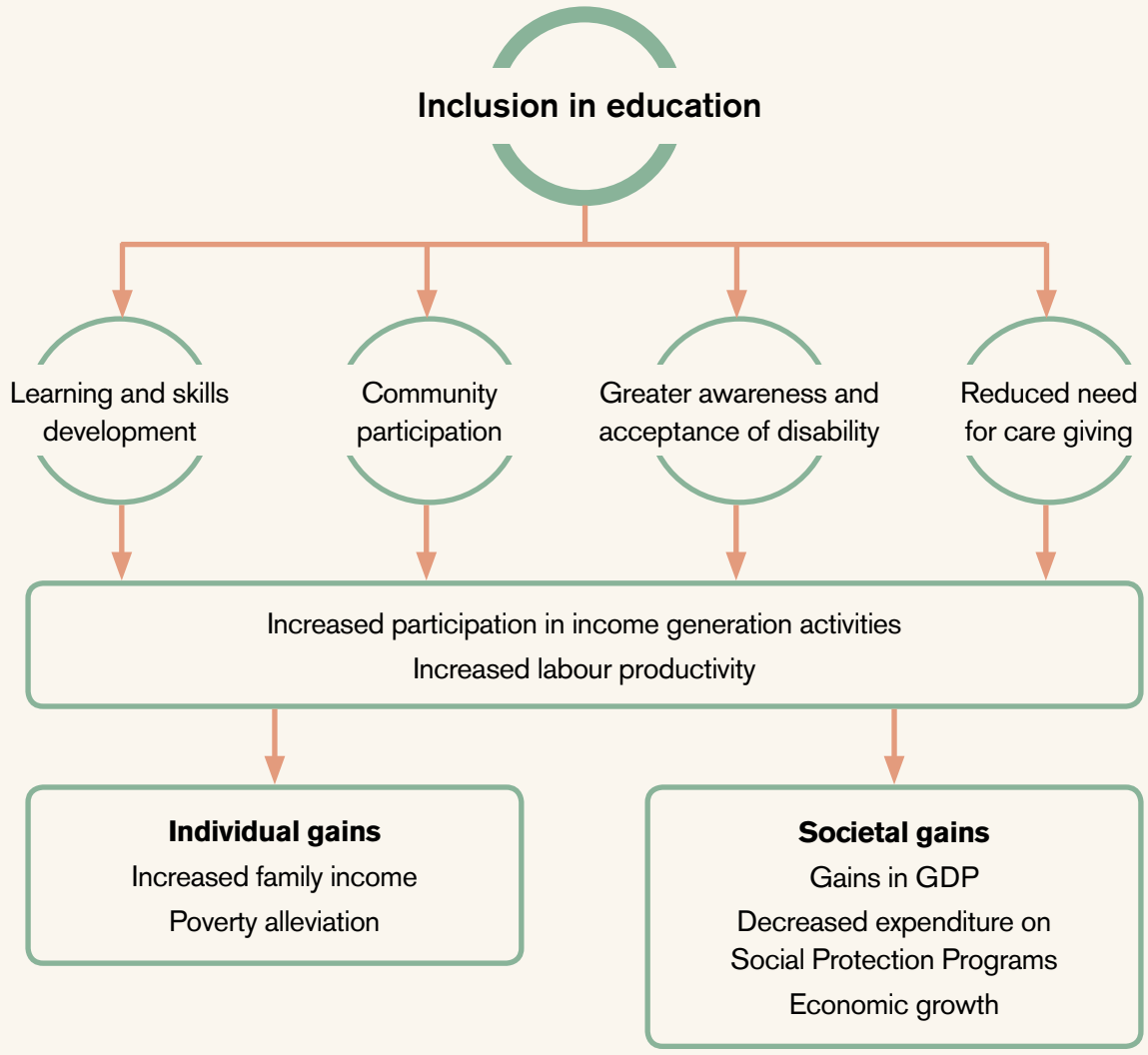
Education systems – policies and plans concerning education of children with disabilities often do not get the financial support to action and implement activities. In a recent study on disability published by the Global Partnership for Education (2017), only 19 out of 51 countries had ESPs that include aspects related to disability and inclusive education. Many of them did not allocate any budget to the activities nor did they have a monitoring and evaluation mechanism for tracking implementation and progress.

Cross-sectoral coordination – in many countries, education for children with disabilities is not covered under the Ministry of Education. The task of education for children with disabilities comes under the aegis of Ministries such as Social Justice or Social Welfare, which leads to the exclusion of children with disabilities from any mainstream education policy provision. Lack of inter-ministerial collaboration and planning results in creating access barriers (GPE 2017) resulting in separate 'welfare schemes' for children with disabilities.

1.4 Why is addressing learning outcomes for children with disabilities important?

The 2030 Agenda for Sustainable Development, specifically SDG 4, commits all countries to ensure equal opportunity in access to quality learning opportunities at all levels of education from a lifelong perspective. There is also a new focus on the **relevance of learning outcomes** both for the world of work, as well as for citizenship in a global and interconnected world. This is particularly explicit in target 4.5, which aims to eliminate gender disparities and "ensure more equitable access to all levels of education and vocational training for vulnerable populations including persons with disabilities and indigenous peoples."

Figure 5. Inclusion in education: a pathway to economic gains



Source: Adapted from Banks, L.M. and S. Polack (2014)

For all children and youth with disabilities, irrespective of category, the implications of improved learning outcomes and acquisition of meaningful knowledge and skills in inclusive educational environments have immense economic benefits. These include improved social and employability skills, reduced welfare costs and dependency on family members, together with increased potential for productivity and wealth creation (Peters, S. 2003). Enrolling and retaining children with disabilities in school has the potential to lift individuals and their families out of poverty and marginalized existences (HEART 2014).

Moreover, the **economic and social costs of exclusion from education are high** as it pushes people into long-term poverty through loss of opportunity, foregone income, lack of access to other services and the high cost of out of school children. In Bangladesh, foregone income due to lack of schooling and employment, both of persons with disabilities and their caregivers, is estimated at US $1.2 billion annually, or 1.74 per cent of Gross Domestic Product (GDP) (World Bank, 2008). It is also estimated that the cost of out of school children is greater than the value of an entire year of GDP growth in nine countries, namely Burkina Faso, Côte d'Ivoire, the Gambia, Lesotho, Liberia, Mali, Nigeria, Senegal and Yemen (Thomas, M. Burnett, N. 2013).

Measurement plays a critical role in improving the quality of education. The Learning Metrics Task Force (UNESCO 2013) outlines the importance of measuring learning by highlighting its purpose at different levels of the education system. At a classroom level, assessment helps teachers to modify instruction. At the school level, assessment results help school principals and school management committees to improve school resources and learning experience. At the municipal/government level, measurement of learning helps in understanding the overall performance of the education system and developing policies to improve learning.

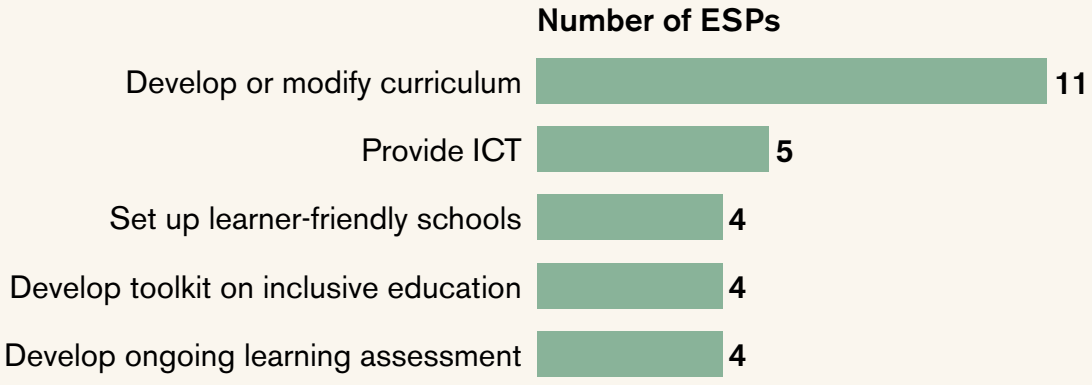
At the heart of SDG 4 lies the notion of quality education. Quality education is outlined in SDG 4 as the availability of a safe, inclusive learning environment (SDG 4.A), increasing the availability of qualified teachers (SDG 4.C). However, at the very core of the definition of quality is the achievement of a minimum proficiency skill level in the learning domains of reading and mathematics. At specific ages (for example (a) in grades 2/3; (b) at the end of the primary; and (c) at the end of lower secondary), students should be able to demonstrate skills as per the level of commonly acknowledged levels of learning in the relevant domain.

At the broader systems level, one of the mechanisms of measuring learning and monitoring progress is conducting learning assessments. The Good Practice Note on Learning Assessment (ACER-UIS, 2017) highlights that learning assessments not only establish the knowledge and skill (domain specific) of a sample population, but also monitor progress over time, investigate associations between context and achievement, and disaggregate achievement between sub-populations. This makes them a suitable mechanism to track progress towards achievement of SDG 4.

Successful achievement of SDG 4 is dependent upon reaching a common goal for quality learning for all children irrespective of gender, location, socio-economic status or disability. However, there is very little consolidated evidence about what children with disabilities are learning in schools. Conservative estimates suggest that in low-income countries only 5 per cent of children with disabilities access schools (UNICEF, 2013). Even if 5 per cent were in school, there is no clear way of establishing their learning gains in a way that feeds into larger education system evaluation, planning and development. Recent research has also pointed out that there is limited data which establishes the type of knowledge and skills students with disabilities are acquiring by attending school.

At the sector planning level, evidence from the recent stocktake on disability carried out by the GPE on how countries prioritize inclusive education and children with disabilities in their education sector plans (ESPs) suggests that only 24 out of the 51 ESPs (47 per cent) addressed education of children with disabilities (GPE, 2018). The report further notes that improving learning outcomes for children with disabilities was not discussed directly in any ESP. However, four countries (Guyana, Nepal, Nicaragua, and Kenya) have plans to measure learning achievement of children with disabilities by aligning their assessment methodologies and adjusting the assessment according to the student's learning style (GPE, 2018).

Figure 6. Improving quality of learning for children with disabilities

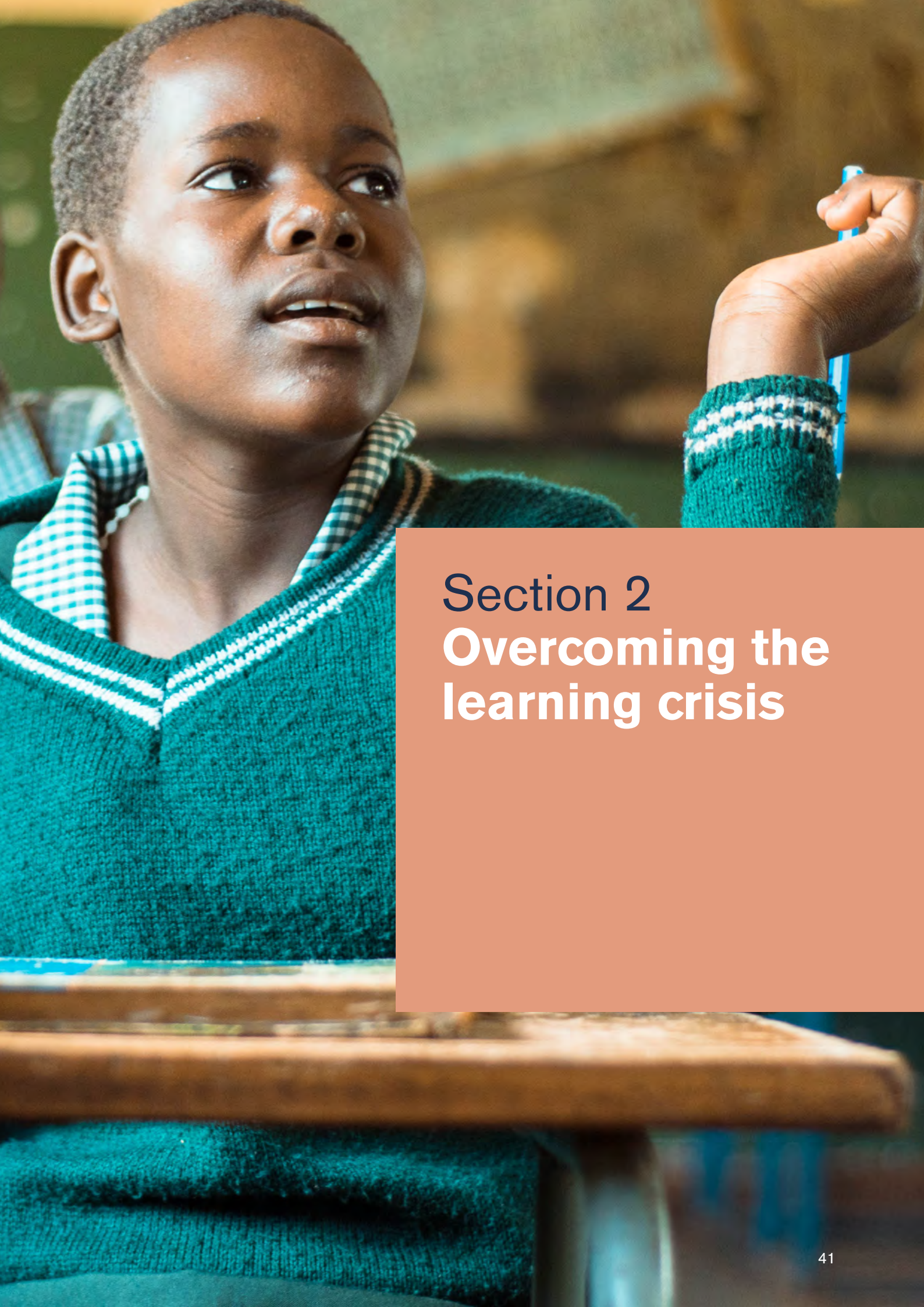


Global Partnership for Education (2018)

Data regarding opportunities to access school and learning for children with disabilities is critical, not only from a standpoint of understanding and establishing the magnitude of inclusion or exclusion of children with disabilities from the education eco-system. Data from assessments can create feedback mechanisms for teachers as well as students with disabilities concerning classroom planning, lesson organization, recognition of support areas for learning, resources required and teacher support. It can create opportunities to comprehend the learner experience of a student with a disability compared to their non-disabled peers. It also has the potential to direct political will and financial resources, influence teacher development, and lead to investments in materials and support to address and achieve quality learning for all.

The inclusivity of assessment frameworks must also be examined. Not only because their results are used to track the progress towards the achievement of SDG 4, but also because results from assessments have increasingly exercised the minds of national politicians leveraging data and results for policy change and educational reform. Not including children with disabilities denies them the opportunity of building a case for targeted interventions to address inequality in education.

The lack of understanding of the learning gains and challenges for students with disabilities leads to omission from the planning and budgetary processes. This has cascading effects, leading to exclusion from policy planning, financing and implementation as well as service provision and support for children with disabilities. Tackling the learning crisis for children with disabilities will require a thorough diagnosis of not only the causes of exclusion but also the recognition of opportunities for inclusion to generate information for the successful realization of the SDGs.



Section 2
Overcoming the learning crisis

The World Bank's World Development Report: Learning to Realize Education's Promise (World Bank, 2018), identifies the assessment of learning as the first step to be taken to address the learning crisis. The report emphasizes the value of data on student learning and school performance and the impact it can have on education policy and service delivery. It highlights that information from assessments can provide evidence which can not only influence and motivate system-wide changes to education, but can also guide and provide direction for action by teachers and schools to improve the quality of education.

In the global discourse, unpacking 'quality education for all' has been a topic of much research and discussion. Global targets on education (SDG 4) have raised legitimate questions not only about children accessing school but also about how they are learning and what they are learning. Growing investment in measuring the health of the education systems by way of learning assessments is pitched as a critical solution (World Bank, 2018). In their policy working paper, Patrinos. H et al. (2013) outlined learning assessments as the first of the six necessary components[4] critical for planning quality and reforming education systems. The authors argue that for improving the quality of education, countries must know where their education system stands, and that assessment of current learning levels is the foundation of education planning and reform (ibid).

What information does data on learning provide

- **Who is not learning**
- **Why are they not learning?**
- **What are the learning gaps?**
- **Where are the resources most needed?**
- **Channel scarce resources where they are needed the most**

Adapted From UNESCO-UIS (2018)

The 2018 UNESCO-UIS Data to Nurture Learning Report underscores a similar sentiment – to improve quality of learning for all, data on learning achievement covering all students is critical. A lack of learning data impedes educational progress, and the best measure of educational inequality is the differences in learning levels between different groups of students.

There is a growing body of evidence that establishes the effect of poverty, location, gender, and ethnicity on learning achievement. However, the impact of disability on school access, participation, and performance needs much more attention.

Data on the number of children with disabilities and their performance (or lack of) has a system-wide effect. In an education eco-system, data and evidence drive critical decisions to make education available and accessible to learners.

4. Integrated Approach to Quality Education (6As) include Assessments, Autonomy, Accountability, Attention to Teachers, Attention to Early Childhood Development and Attention to Culture.

What are learning outcomes?

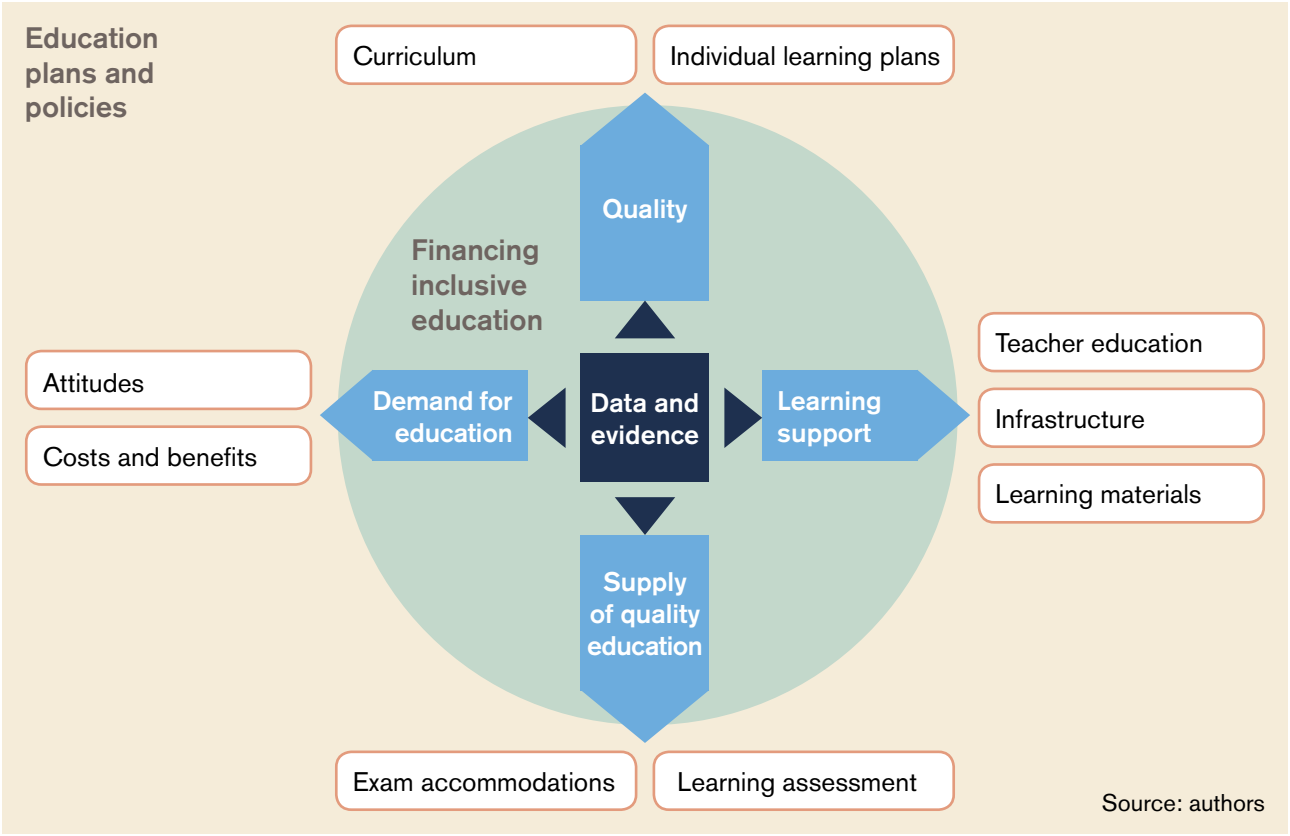
Under the broader umbrella of an education curriculum, learning outcomes outline what teachers and learners should know and do. Learning outcomes are statements that describe what learners will know and will be able to do (Lesch, S. 2008). In other words, 'expected learning outcomes define the totality in information, knowledge, understanding, attitudes, values, skills, competencies, or behaviors a learner should master upon the successful completion of the curriculum' (UNESCO-IBE 2013). Experts highlight that for learning outcomes to improve, coordination is essential in the execution of the intended curriculum (official guidance), implemented curriculum (what teachers and learners do) and the attained curriculum (what learners learn) (UNESCO-IBE 2013).

Education systems primarily focus on skills-based aspects of the curriculum: reading, writing, and arithmetic, when there are other equally important aspects of the curriculum. Measurement of learning is often limited to the three Rs, when children develop competencies across several domains of learning. Nearly all international, regional and national assessments collect data on students' skill.

The UNESCO Learning Metrics Taskforce (2013) highlights the seven learning domains, which are essential knowledge and skills all children and youth need for future lives and livelihoods. These learning domains include: physical well-being, socio-emotional, culture and the arts, literacy and communication, learning approaches and cognition, numeracy and mathematics, science and technology.

Source: UNESCO 2013. Summary Report. Towards Universal Learning: Recommendations from the Learning Metrics Task Force. IBE-UNESCO. 2013. Curriculum and expected learning outcomes – Brief 1.

In resource-constrained environments, an understanding of the size of the target population and their performance affects every aspect of service delivery. Due to lack of data, education planners cannot make informed decisions to allocate resources to improve school learning environments for children with disabilities. The lack of any data around learning levels and needs of students with disabilities leads to poor support mechanisms. Education planners do not know where and what kind of targeted support is needed. This means that learning materials, teacher training programs, curriculum, infrastructure and assistive technology are not made available to address diverse needs.

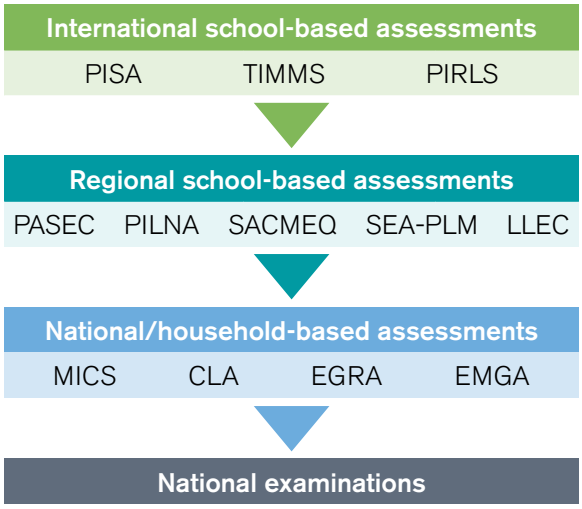


Therefore, the no-support eco-system creates an environment of limited access, reduced participation, and non-achievement for children with disabilities. The poor school environment further reduces the demand for education for children with disabilities, not only from the families but also from the persons with disabilities themselves. This claim is confirmed by research regarding children with disabilities being less likely to stay in school than their non-disabled peers (UNESCO-UIS, 2017). The lack of presence of children with disabilities on paper, ie in numbers, and otherwise, affects decisions related to education financing, as well as the impetus for more extensive policy mechanisms to be developed by countries. Hence, within the education system, an invisible cycle of exclusion is created.

This section explores how learning achievement of students with disabilities is currently being measured. Are school-based and household-based learning assessments capturing data on performance and learning achievements of children with disabilities? What kind of data is being collected to understand the learning needs of children with disabilities?

2.1 Learning assessments

Large scale learning assessments describe student achievement in a specific area of learning across the education system. Large scale assessments are conducted at the national level, regional level and/or international level.



Regional learning assessments measure specific learning domains across different countries within a geographical region. They are often a subset of a large-scale learning assessment program. Examples include PASEC, PILNA, SACMEQ, SEA-PLM, LLECE.[5]

International learning assessment measures provide data on student performance across domains and countries, thereby providing a comparative measure on the performance of education systems. International assessment programs like PISA, PISA-D, TIMMS, and PIRLS[6] fall under this category.

The purpose of international learning assessments is articulated to be the following (Addey C. et al 2017):

- Generate internationally comparable evidence for education policy
- Global governance in education
- Shaping understanding of value across nations

Several countries use school-based national or international assessments at various grade levels to measure performance and achievement in reading, writing, numeracy, and science. Data from school-based/household-based assessments is used to report on progress towards achievement of targets of SDG 4.1[7] (UNESCO, 2017). School-based assessments provide system-level information on classroom and school environments, and sometimes home environments. Household-based surveys provide information regarding families and enabling environments. Together, school-based assessments and household-based learning assessments provide a snapshot of how children around the world are learning (UNESCO-UIS, 2018).

5. Regional Learning Assessments:

   PASEC – Programme d'Analyse des Systèmes Educatifs de la CONFEMEN
   PILNA – The Pacific Islands Literacy and Numeracy Assessment
   SACMEQ – The Southern and Eastern Africa Consortium for Monitoring Educational Quality
   SEA-PLM – South East Asia Primary Learning Matrix
   LLECE – Latin American Laboratory for Assessment of the Quality of Education

6. International Learning Assessments:
   PISA – Program for International Student Assessment
   PISA-D – PISA for Development
   TIMMS – Trends in International Mathematics and Science Study
   PIRLS – Progress in International Reading Literacy Study

7. SDG 4 – Target 4.1.1

Benefits of comparability, alignment, and procedural quality place the three international assessments (PISA, TIMMS and PIRLS) on top of the order of evaluations used for reporting towards SDG 4.1. Additionally, data from these three assessments have global coverage representing 76 per cent of the population (UNESCO-UIS, 2018). Adding information from the five regional assessments, followed by national assessments/household-based assessments and national exams, expands coverage for the student population.

2.2 International school-based assessments

Program for International Student Assessment (PISA)

PISA evaluates education systems worldwide by testing the skills and knowledge of 15 year old students. Since 2000, PISA has been providing internationally comparable evidence on learning outcomes in reading, maths, and science. It is conducted triennially in around 80 countries.[8] The assessment focuses on how students can apply their knowledge to real life situations and problems, rather than testing knowledge.

PISA has articulated a long-term goal of widening access to assessments for students with disabilities. It aims to be as inclusive as possible (OECD).

However, the progress on this front is limited, and so far, PISA has offered limited accommodations to students with specific kinds of disabilities. Populations excluded from the test sample include children with multiple disabilities, as well as intellectual disabilities, on the assumption that students with intellectual and multiple disabilities access only special schools, which are further excluded from the overall school samples.

Program for International Student Assessment (PISA)

Triennial survey designed to assess students' ability to apply knowledge and skills in key subject areas and to analyze, reason and communicate effectively (PISA, 2015a).

Learning domains: reading, maths, science, collaborative problem solving and financial literacy

Age assessed: 15 years old

Focus countries: high and middle-income
- 79 countries participated in 2018 round
- PISA for Development (PISA-D) – First round in 2018. This will include out of school children in low income countries (Bhutan, Cambodia, Honduras, Senegal, and Zambia)

Source: OECD 2015

8. PISA Cycles – 2000, 2003, 2006, 2009, 2012, 2015, 2018.

Disabilities which are considered functional enough to be viewed as a part of the test sample are limited by the PISA-approved test accommodations which are available to the students. Student accommodations which are 'fit for PISA' are those that "pose little to no threat to the overall test validity" (OECD, 2011). This includes accommodations such as extended time, rest periods, dictation of answers, graphics modification of test booklets, adaptive furniture or tools and so on. Sign language interpretation, use of Braille and paraphrasing are not encouraged by PISA as accommodation mechanisms, even though they are the most commonly used.

Many countries which take PISA have education systems transitioning towards the inclusion of all students in classrooms. Special schools which cater to a specific disability (for example, schools for the deaf and blind) are still prevalent and sometimes are one of the only avenues of education for many children with disabilities. In the note 'Improving Access to PISA for Students with Disabilities and other Special Education Needs' (OECD, 2011), OECD points out that "placement of students in special schools suggests that they are unable to cope with daily academic requirements." These schools are excluded before they are even considered for inclusion.

Excluding students with disabilities on the basis of the type of school or the accommodations used does not do full justice in gathering data about students with disabilities and reporting on their progress. To address this exclusion, PISA provides an optional test instrument for children called the Une Heure (UH) Booklet. The booklet is used in schools catering to students with special needs or who are functioning at a lower academic level (OECD, 2015). However, the information on the booklets, analysis of scores and results has limited availability.

Categories of students with disabilities under PISA

1. **Functional (physical):** includes a wide variety of conditions such as sensory (vision and hearing) impairments, motor disabilities, and health-related needs (chronic conditions/illnesses)
2. **Cognitive:** includes specific learning disabilities (eg dyslexia, dysgraphia, dyscalculia) and other cognitive disabilities (eg ADHD, deficiencies in visual perception, memory, or executive functions)
3. **Insufficient language proficiency:** limited proficiency in the assessment language, for example, non-native speakers and students who have received only a few years of instruction in the assessment language
4. **Mental (emotional) disabilities**
5. **Intellectual disabilities:** significant cognitive delay
6. **Others:** mixed disability or unique conditions

Source: OECD (2011)

Based on the inclusion criteria outlined by PISA to improve assessment access for students with disabilities (OECD, 2011), it is crucial to reflect whether most of the children with special needs who take the test are students with mild learning difficulties such as dyslexia, dysgraphia, ADHD, or non-native language speakers.

For example, PISA classifies students with disabilities into six categories (see box on page 47). It identifies students in categories 1–3 as those with mild to moderate disabilities who are most likely to be integrated within regular schools. It further notes that only 2-3 per cent of students (in any test cohort) have special education needs. Students with learning disabilities (eg dyslexia, dysgraphia, dyscalculia etc.) can constitute as much as 10 per cent of the test population. In the effort to be inclusive, PISA mandates that the overall exclusion of students with disabilities from the test population should not exceed 5 per cent of the total sample. This means that the 10 per cent population with learning disabilities may need most of the test accommodations, and therefore is the category most reflected in the overall test population. While this is true for developed countries, in developing countries, due to limited assessment and diagnosis mechanisms, only a small percentage of the test population will be eligible for accommodations. The rest of the students with disabilities might be excluded due to either the category of disability, education setting, accommodations used for learning or severity of disability – therefore leading to gross under-representation.

The exclusion criteria and the recommended accommodations skew the results by showing or projecting results which may not be necessarily representative of the sub-populations of students with disabilities, and inversely over-represent children with mild learning difficulties.

International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS)

Administered by the International Association for Evaluation of Educational Achievement (IEA), TIMSS and PIRLS are international assessments designed to assess achievement in mathematics and science (TIMSS) and reading (PIRLS) at primary level grade 4 (TIMSS and PIRLS); and lower secondary level grade 8 (TIMSS only). The studies are designed to understand student learning and achievement, observe trends and review the policies and practices which are associated with student achievement.

Like PISA, the sample design guidance for TIMSS and PIRLS strives to maintain a 95 per cent participation rate of the student population (Grade 4 and 8). It allows for an exclusion rate of 5 per cent of the target population. As highlighted in the methods and procedure in TIMMS (Laroche, Joncas, and Foy, 2015) students who attend small schools (ie those with a very small student population) or who have intellectual disabilities can be excluded from the test population.

TIMSS and PIRLS

School-level exclusion criteria:

- Inaccessible due to geographically remote location
- Extremely small (four or fewer students in the target grade)
- Grade structure different from the mainstream curriculum
- Schools providing instruction only to students with functional disabilities, intellectual disabilities and/or non-native language speakers

Source: IEA – Methods and Procedures in TIMSS, 2015

In other words, exclusions are allowed at the whole school level as well as individual level. As indicated previously, special schools, with small class sizes, are still prevalent in many parts of the world. They are frequently the only means of education available for some students with disabilities, often catering to a specific subset, such as a school for blind or deaf children. Students in special schools follow the same national curriculum, with accommodations such as Braille, sign language or adapted furniture – and are as competent as their peers without disabilities. However, irrespective of abilities, students with disabilities attending special schools are consistently excluded from TIMSS or PIRLS.

The exclusion criteria are also applied at the individual level. TIMSS 2018 report elaborates ‘situations’ where students with special needs are included in regular classes or attend special classes in ordinary schools. Such a ‘situation’ requires another level of exclusion to reach an effective target population (Olson and Martin, 2008). Hence, students with disabilities are carefully and systematically weeded out from the test population.

TIMSS and PIRLS

Individual-level exclusion criteria:

- **Students with functional disabilities:** students who have physical disabilities such that they cannot perform in the PIRLS and/or TIMSS testing situation.
- **Students with intellectual disabilities:** students who are unable to follow instructions.
- **Non-native speakers:** students who are unable to read or speak the language(s) of the test and would be unable to overcome the language barrier in a test situation.

Source: IEA – Methods and Procedures in TIMSS, 2015

Although the methods and procedures guidelines (TIMSS, 2015) state that students with functional disabilities who can perform should be included in the test, there are no specifications regarding students' participation using test accommodations. In the same vein, it is suggested that students with learning disabilities (such as dyslexia) should be accommodated in the test situation; yet no further guidance is available on the same.

2.3 Regional school-based assessments

Programme d'Analyse des Systèmes Educatifs de la CONFEMEN (PASEC)

PASEC is designed to study the levels of efficiency and equity in education systems (PASEC 2015). The test, administered in Francophone West Africa to Grade 2 and Grade 6 students, measures performance in the domains of reading and maths.

The issue of collecting data specifically on students with disabilities is not yet holistically addressed in PASEC evaluations. In the 2014 round, an attempt was made to identify children with visual and hearing disabilities in regular classrooms and their access to assistive devices. The questionnaires captured information via questions regarding difficulties in seeing and hearing from Grade 6 students. The information was self-reported by the Grade 6 students (PASEC-2015).

The reported data highlights a large proportion of students reporting to have difficulty in seeing (21.9 per cent) and hearing (16.3 per cent), with only a few declaring any use of eyeglasses or hearing aids. The report notes that the self-reporting of difficulties in seeing and hearing in a classroom could be due to a myriad of reasons, such as being far away from the teacher or blackboard, large class sizes, overcrowding or noise – and is not necessarily due to an impairment (PASEC 2015). It is also possible that students do not understand the question well, and this could further lead to confusion in the answers. Moreover, the PASEC sample consists of all schools in a country that follow a 'normal' curriculum.

Analysis by the World Bank (2018) on the same PASEC 2015 data-set (for ten countries) demonstrated that children with hearing and seeing difficulties performed poorly compared to their peers who did not identify themselves as having visual or hearing problems. Children with hearing difficulties performed worse than students with self-identified visual impairments. The report also presented the analysis of PASEC teachers responses (Grade 2 and Grade 6) on questions related to perceptions of reasons for student drop-out, and topics of in-service training that has been received. The responses from teachers highlight a

Programme d'Analyse des Systèmes Educatifs de la CONFEMEN (PASEC)

Countries: Benin, Burkina Faso, Burundi, Cameroon, Congo, Côte d'Ivoire, Gabon, Guinea, Madagascar, Mali, Niger, Democratic Republic of Congo, Senegal, Chad and Togo

Grades assessed: grade 2 and grade 6

Next round: 2019

Learning domains: reading and maths

Source: PASEC (2015)

lack of infrastructure for students with special needs as one of the reasons leading to some students dropping out. On the question of in-service training received, less than one in ten teachers in both Grade 2 and Grade 6 declares having received training on inclusive education (disability or others) (World Bank, 2018).

While it is fair to state that the analysis mentioned above does not provide a comprehensive picture of school access and learning levels of students with disabilities, it does make a case for inclusion of students with disabilities in the test population. Even a few statistics from PASEC are useful to illustrate the challenge that remains (World Bank, 2018) and quick measures which can be taken by countries to enable diversity inclusion in classrooms.

The next round of PASEC is scheduled for 2019, and it will be interesting to see if the assessment will try to capture the information regarding students with disabilities.

South East Asia Primary Learning Metrics (SEA-PLM)

SEA-PLM is a set of regional learning metrics that conducts assessments of Grade 5 students in the domains of reading, writing, maths and global citizenship. The first round of data collection took place in 2018. The assessment is expected to generate data on student performance in 11 countries across the South East Asia region, aligned with their national curriculums.

SEA-PLM proposes to include as many students as possible to provide statistically complete coverage of national target populations. The student exclusion criteria, like other international assessments, includes categorizing students on the basis of disability type and the level of severity.

It will be interesting to see the extent to which results from SEA-PLM will include information and data on children with disabilities.

Southeast Asia Primary Learning Metrics (SEA-PLM)

A set of regional learning metrics developed to assess students in reading, writing, mathematics and global citizenship.

Countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam

Grades assessed: grade 5

Learning domains: reading, writing, maths and global citizenship

Exclusion/Inclusion of children with special needs in SEA-PLM

Special education needs	Exclude if…	Include if…
Functional disability	The student has a moderate to severe permanent physical impairment. Cannot participate in the SEA-PLM testing	The student can respond to the assessment with accommodations (within reason)
Intellectual disability	The student has cognitive, behavioral, or emotional disability such that in the opinion of the qualified staff the student cannot participate	The student can respond to the assessment. Exclusions should NOT be solely based on poor academic performance
Limited language experience	The student meets all of the following criteria: • Is not a native language speaker in the assessment language • Has limited proficiency in the assessment language • Has received less than one year of instruction in the assessment language	The student can respond to the assessment and meets only one or two of the criteria
Other	The student cannot respond due to other reasons	The student can respond to the assessment

Source: SEA-PLM

Southern and East Africa Consortium for Monitoring Education Quality (SACMEQ)

SACMEQ is a collaborative network of ministries of education which conducts assessments and monitors quality of learning and achievement amongst learners in member countries. SACMEQ assessments are informed by policy concerns identified by departments of education for each member country.

Since 1996, SACMEQ has conducted four nationally-representative, school-based surveys in member countries.[9] The assessment focuses on testing numeracy and reading skills at grade 6 level. The assessment collects extensive information on the school and home environment. A wealth of data collected is on **school characteristics** (such as location, enrolment, resources, learning environment), **pupil characteristics** (such as age, attendance, gender, nutrition, socio-economic status) and **teacher characteristics** (such as age, gender, qualifications, in-service training, performance and their views on school infrastructure and management) (SACMEQ III).

Despite having an elaborate set of data disaggregation and indicators, the SACMEQ assessment does not collect any information regarding students with disabilities. The assessment is carried out only in 'normal' schools which follow a 'normal curriculum.' Hence the consortium does not have any data related to students with disabilities – for enrolment, participation or achievement.

Southern and East Africa Consortium for Monitoring Education Quality (SACMEQ)

Countries: Angola, Botswana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Uganda, Zanzibar, Zambia, Zimbabwe

Grades assessed: grade 6

Learning domains: reading and maths

Source: SACMEQ

9. SACMEQ I (1996), SACMEQ II (2000), SACMEQ III (2007) and SACMEQ IV (2013).

Pacific Island Literacy and Numeracy Assessment (PILNA)

PILNA provides data on literacy and numeracy skills of students who have completed four and six years of formal primary education. PILNA is administered every three years in ten languages.

PILNA does not capture information regarding students with disabilities in the data collection process. The test administration is standardized throughout the participating countries, with the exception of test language, which is in the local language.

Participation of students with disabilities in the assessment is limited as there are no accommodations provided for students with disabilities during the administration of the test.

Pacific Island Literacy and Numeracy Assessment (PILNA)

Countries: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tuvalu and Vanuatu

Grades assessed: grades 4 and 6

Learning domains: literacy and numeracy

Disability-inclusive status of large-scale learning assessments

International/regional assessment frameworks	Learning domains assessed	Includes children with disabilities?
PISA	Reading, maths, collaborative problem solving, financial literacy	Partly
PIRLS	Reading	No
TIMMS	Maths and science	No
PASEC	Reading and maths	Partly (only in 2015)
PILNA	Reading and maths	No
SACMEQ	Reading and maths	No
SEA-PLM	Reading, writing, maths, and global citizenship	Plans to include

Source: Authors

2.4 Large scale household-based assessments

Citizen-led assessments

Citizen-led assessments (CLA) are large scale household-based assessments used to measure essential reading and numeracy competencies amongst children. This model of assessing children first emerged in India in 2005 as a form of advocacy and awareness raising to promote practical community and policy changes towards quality teaching and learning. The citizen-led assessment started with the Annual Survey of Education (ASER) in India. The network has expanded to become the People Action for Learning (PAL) network, and now includes a South-South learning exchange initiative between several countries, including Pakistan, Bangladesh, Nepal, Afghanistan, Kenya, Mali, Tanzania, Senegal, Nigeria, Ghana, Cameroon, Mozambique Uganda, and Mexico.

Because of the household-based rather than school-based nature of the survey, data collection includes children who have never been enrolled in school and those who have dropped out, as well as children attending school. Although the design of the survey facilitates the collection of data on the learning outcomes of children with disabilities who may not be in school, Singal (2015) points out that ASER does not provide adapted assessment tools for children with disabilities, thus potentially negatively affecting the data. For example, the paper-based tools used to assess such basic competencies as recognizing numbers and letters may not be available in Braille. Also, ASER does not disaggregate data according to disability. However, ASER (Pakistan) has been making the case for capturing disability prevalence data using the CLA format since 2015 (Bari, F. et al. 2018). The survey includes seven critical questions on health and functioning which are drawn from the Washington Group Short Set of Questions and insights from UNICEF-MICS child functioning module.

In Pakistan, the format of CLA has also been piloted to measure the educational status of children with disabilities concerning school enrolment and learning outcomes (Singal 2017). ASER learning assessment tools measure the learning assessment for students with disabilities. The assessment instrument has high potential for capturing data not only regarding prevalence and school enrolment patterns, but also developing understanding and awareness of the actual literacy and numeracy levels of students with disabilities both in and out of school.

Multiple Indicator Cluster Survey (MICS)

MICS is an international household survey program developed and supported by UNICEF. MICS is designed to collect estimates of critical indicators that are used to assess the situation of children and women. In 2016 the 6th round of MICS was launched, which includes a module on Child Functioning (disability). The module developed by UNICEF and the Washington Group allows for identification of out of school children with disabilities. The child functioning module covers children and youth within the age group of 2-17 years and assesses functional difficulties in domains such as vision, hearing, communication, comprehension, learning, mobility and emotions. The module has undergone extensive cognitive testing in India, Belize, Oman, Montenegro, and USA and field testing in Samoa, El Salvador, and Serbia. Additionally, MICS 6 includes a functional learning module to capture the basic literacy and numeracy of children aged 7-14, including out of school children.

As countries adopt the use of the Child Functioning Module in their survey cycles, it is expected that more comprehensive data on children with disabilities and their learning outcomes will become available through MICS Surveys.

Early Grade Reading Assessment (EGRA) and Early Grade Math Assessment (EGMA)

Commissioned and promoted by the United States Agency for International Development (USAID), EGRA and EGMA are assessment tools designed to assist low-income countries in conducting a quick diagnosis of student learning outcomes (RTI 2016). The purpose of the assessment is to report on the foundational levels of students to inform stakeholders about the strengths and gaps in teaching and learning in early grades (RTI 2016). UNESCO-UIS Data to Nurture Learning Report (2018) notes that an open-access approach to sharing instruments and data sets has accelerated the use of EGRA and EGMA, particularly in the global south. By 2016 EGRA had been administered in close to 70 countries and translated into 120 languages (RTI 2016).

EGRA and EGMA are individually administered oral tests (guided by assessor) that check the foundational skills of children in reading and maths. The EGRA test assesses skills such as letter recognition, letter-sound knowledge, phonemic awareness, familiar word reading, unfamiliar word reading, and oral reading fluency. EGMA assesses skills like counting, number identification and simple operations.

USAID's prioritization of reading programs and a strong disability focus has led to EGRA being adapted for students who are blind or have low-vision, as well as deaf and hard of hearing students. The EGRA-Braille test has been adapted on paper and tablets, pre-tested, piloted and validated in India, Lesotho, and the Philippines. The test for deaf/hard-of-hearing students is being adapted for a project in Morocco using Moroccan Sign Language (USAID, ND).

In conclusion, a critical barrier to improving access and learning of children with disabilities is the lack of data to allow a better understanding of the number and types of reported disabilities. In the absence of accurate and timely data, interventions and policy solutions for children with disabilities are unable to respond adequately to the scale and complexity of the situation. According to the 2016 UNESCO Institute for Statistics (UIS) Assessment of Readiness to monitor progress towards achieving SDG 4 targets, only 19 per cent of the 121 surveyed countries reported having data on the disability status of children. In practice, this means millions of children with disabilities are left out of education planning due to poor data collection and a lack of knowledge on how to include them in education planning and implementation.

The review demonstrates that the implementation and practices related to some of these high-stakes assessments can be discriminatory towards children with disabilities and may lead to segregation in educational placement, rather than inclusion (Davies, 2012; Graham, Herbert & Harris, 2011; Watkins, 2007). International assessments, such as PISA, TIMMS, PIRLS etc. are used to rank countries and schools, and compare particular grades and classes within schools to the national minimum standards. Pressures to compete internationally have led to many measures that act as barriers to the inclusion of children with disabilities. Children with disabilities who are seen as a risk to high scores have been excluded. Such an assessment creates an incentive to stream children with disabilities into special education.

Section 3
Looking ahead – assessment *of* and *for* learning in the inclusive school and classroom

While the issues of reasonable accommodation and the range of skills to be assessed may be similar in large-scale and classroom assessments of children with disabilities, this section of the paper explores additional possibilities and concerns with assessment of and for learning in the classroom.

3.1 What should be assessed?

UNESCO and Education 2030 (2017) recommend that a comprehensive assessment should focus on the curriculum and how each learner can learn within that curriculum. However, various authors suggest that assessment of children with disabilities needs to go beyond the traditional boundaries of areas assessed for children without disabilities. The National Deaf Children's Society and the National Sensory Impairment Partnership (2015) suggest that to identify a learner's strengths as well as identify difficulties, assessment should cover personal, social and emotional development together with measuring performance in the curriculum. According to these authors, personal, social and emotional development can be affected by a child's deafness (eg how they express their feelings). Therefore, evidence of the child's progress in this regard is necessary to inform decisions about the support the child may need, including in the classroom.

The Impact Initiative (2018) reports on a project in India and Pakistan that assesses the literacy, numeracy, non-verbal reasoning, social and personal skills of children with disabilities. This data enabled the researchers to identify who was in school and who was learning. Unfortunately, no information was available on the methods used in this assessment. In the context of children with intellectual disabilities in particular, Inclusion International (2009) recommends the use of learner-centered approaches to assessment that recognize multiple intelligences and measure children against their individual goals. The IEP of a child with a disability should guide their formative and summative assessments (Sacks & Halder, 2017; Watkins, 2007). In Armenia, Bridge of Hope (2015), describes how for children with individual education plans, the exams at the end of basic education (9 grades) are the basis for that child's IEP targets. The results of these exams will enable the child to go to high school or pursue vocational education.

3.2 What methods of assessment can be used?

The literature suggests a variety of ways that can be used to assess learning outcomes and inform the teaching of children with disabilities. However, in several countries, the use of exams has proved to be problematic. In Afghanistan, the use of standardized exams led to a high drop-out rate of children with disabilities (UNESCO, 2009). Kochung (2011) also reports that the rigid exam system and the high weighting of exams within Kenyan higher education was a barrier for students with disabilities at the tertiary level. In interpreting and explaining Article 24 of the CRPD, the Committee on the Rights of Persons with Disabilities (2016) is clear that standardized assessments should be replaced with multiple forms of assessment that are flexible and cater to the needs of children with disabilities.

In a study conducted by Bourke and Mentis (2014) in New Zealand, a survey identified 24 different approaches to assessment being used in inclusive education in the country. Teachers valued methods such as observation in the classroom and collecting samples of children's work more highly than traditional assessment methods. The authors also noted that teachers tended to use criterion-referenced tests rather than norm-referenced tests for children with disabilities. Bourke and Mentis (2014) propose the use of a 'learning story' for both formative and summative assessment. The learning story is a collection of evidence that showcases the child's learning over time. It involves the child and combines information from different assessments. It may also contain information gathered from contexts outside of the school. In a large European study, Lebeer et al. (2014) explored dynamic assessment that would involve a test-intervention-retest process.

With regards to young children with disabilities at the pre-school level, the Division for Early Childhood (2007) in the United States mentions that multiple methods should be used in the assessment, including repeated observation and rating skills and behavior in play, social interactions, and caregiving routines. According to the Division for Early Childhood, young children with disabilities, in particular, may need more and possibly a variety of opportunities to respond in assessments. The Global Partnership for Education (2018) highlights a number of good practices concerning assessment for children with disabilities. For example, in Guyana, Nepal, Kenya, and Nicaragua there are plans to align assessment methodology with children's learning styles, although this has not been implemented yet. The Inclusive Education Policy in Ghana has a focus on making assessment procedures accessible and equitable for all.

3.3 Differentiation of assessments

In South Africa, differentiation of assessments, as well as the possibility of alternate assessments, are part of the policy landscape. For example, an assessment can be differentiated for a particular child by focusing only on key concepts or by scaffolding assessment activities (Department of Basic Education, 2011). Also, three forms of alternate assessment should be available in ordinary schools, depending on the support needs of the child, thus enabling assessment and support to be tailored to the individual needs of the child. The alternate assessment for grade-level attainment of knowledge allows for the format or procedure to change, such as the use of Braille. The assessment for the modified achievement of knowledge, for example by children with moderate intellectual disabilities, assesses knowledge at a more functional level. The third form of alternate assessment (especially for children with intellectual disabilities) is based on a reduced breadth, depth, and complexity of knowledge. Although official documentation recommends and describes the differentiation of assessment, Geldenhuys, and Wevers (2013) found that teachers in their sample in the Eastern Cape province of South Africa tended to evaluate children using uniform assessment standards and uniform modes of assessment. According to the authors, this may have stemmed from the teachers' perceptions that children with disabilities in the ordinary classroom must perform at the same cognitive and physical level as the other children in the class. The educators in their study displayed negative attitudes towards assessment differentiation, wanting to assess the learning outcomes of all children in the same way.

3.4 Reasonable accommodation in assessments

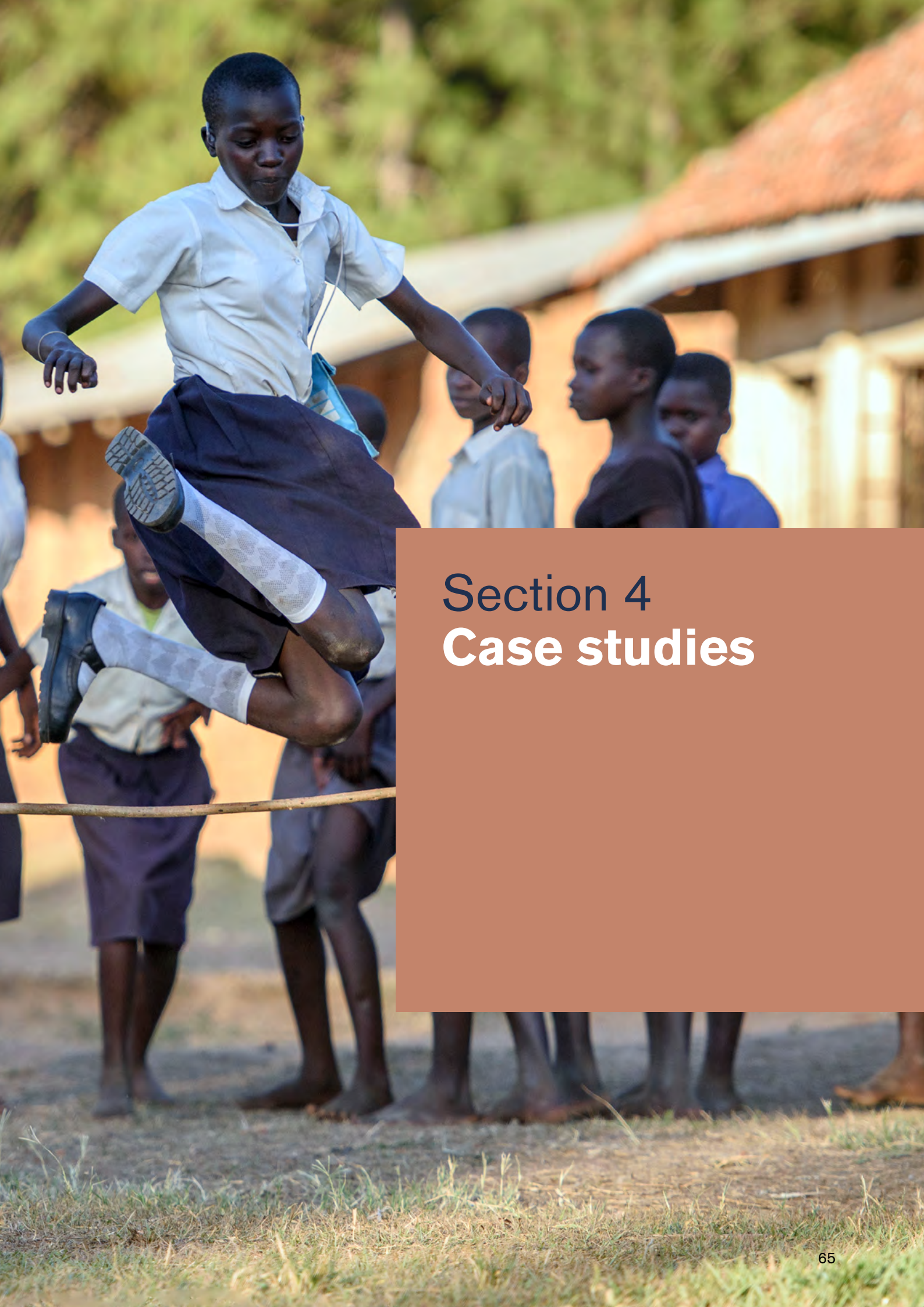
For assessment of learning outcomes of children with disabilities to be equitable, reasonable accommodation needs to be provided (Committee on the Rights of Persons with Disabilities, 2016). Where such reasonable accommodation is unavailable, the rights of children with disabilities may be infringed. For example, UNESCO (2009) reports that in Afghanistan blind children are unable to have their exams in Braille. Also, in Afghanistan, deaf children struggle to prepare for exams because there are insufficient coded signs to cover all the concepts and language needed for the school curriculum.

In contrast in Uganda, there are some examples of good practice around the provision of reasonable accommodation in assessments. Depending on the needs of children with disabilities, they may be given extra time during tests or exams. A person can also be made available to sign for a hearing impaired or deaf learner (Enable-Ed & Uganda Society for Disabled Children, 2017). Children with sensory impairments in the UK are entitled to a range of reasonable accommodations for exams, depending on their individual needs.

These accommodations range from supervised rest breaks and extra time to scribes, electronic papers and British Sign Language interpreters (Cobb & Simpson, 2017).

3.5 Assessment *for* learning informing teaching

One of the purposes of assessment (particularly formative assessment) is to guide the teaching of a child with a disability. In the early 2000s, a program of learning and assessment for children with disabilities was implemented in parts of India. The Joyful Inclusion program consisted of sequenced learning outcomes based on the NCERT curriculum that a child could follow at her own pace. Linked to the program was the Joyful Inclusion Pack, a curriculum-based criterion-referenced checklist that assessed the learning outcomes of the child. The Joyful Inclusion Pack was a functional ability assessment tool that could be used by teachers for regular planning (Rao & CBR Network, 2003). The checklist included assessment of Braille usage, orientation and mobility, remedial learning and the ability of adolescents to live in the community (UNICEF, 2003). The targets in the checklist allowed for achievement at different rates, thus making them attainable by any child. A study of good practices relating to the implementation of the Joyful Inclusion program in six schools in Karnataka, India, identified that the learning levels of all children improved in the classes where the methodology was implemented (UNICEF, 2003).



Section 4
Case studies

4.1 Measuring learning outcomes of children with disabilities: a case study from Pakistan

Dr. Nidhi Singal

Recently the SDGs have put the education of children with disabilities at the forefront of the global agenda. Building on a range of international declarations and commitments, SDG 4 has been most powerful in highlighting the need for quality education. For far too long, the international aid and research communities (Singal, 2018) have focused on access to schooling. Increasing enrolments of children with disabilities in school is important, but it is not sufficient.

In some Southern countries, while enrolment figures of children with disabilities have begun to suggest a small increase, significant concerns remain about the quality of schooling, with little knowledge of learning gains made. To understand the impact of schooling on children with disabilities, there is a need to include them in learning assessments. Globally, learning assessments have been crucial in highlighting issues of schooling quality. However, information in relation to children with disabilities is unavailable, either due to the fact that they do not collect data on a child's disability (data disaggregation tends to be only in relation to age and gender), or more often these tests are conducted in schools, where many children with disabilities might not be present, or attending regularly. Additionally, the lack of adaptations to learning assessments to make them appropriate for children with disabilities is also a significant issue.

To address some of these concerns, the focus has been on encouraging organizations conducting learning assessments, at a regional/national scale, to collect assessment data in a manner which can disaggregate learning outcomes by disability. It is a small, and in many ways inadequate, but vital step that is important for the following two reasons:

1. By introducing simple questions on disability/difficulties, we can see the differences in learning outcomes for children who are identified as having a difficulty/disability in comparison to others who are not classified as such.

2. The tests are very simple, drawing on basic content knowledge in the areas of numeracy and literacy. While learning in school leads to a whole range of essential and diverse gains, which the current large-scale assessments do not capture, nonetheless the ability to perform basic literacy and numeracy tasks must be central to any learning experience.

Based on analysis of household data collected in 2015 as part of the Annual Survey of Education (ASER) conducted in rural Punjab in Pakistan, findings of a study conducted by Singal et al., 2018 highlighted that children who were

identified by their carer/mothers as having moderate to severe disabilities were less likely to be attending school. These children also had lower levels of learning on basic reading and mathematics tasks, than their peers identified as not having any difficulties in functioning. More importantly, findings also suggest that being a co-resident/sibling in a household with a child with moderate to severe disabilities was associated with lower levels of basic reading and numeracy for the co-residents/siblings compared to other children. These findings are from 14,573 rural households in Punjab province, which covered 36,076 children in the 5-16 years age group. The questionnaire used included questions on functioning as proposed by the Washington Group on Disability Statistics and assessment tests. The assessment test involves simple literacy and numeracy tasks (with no adaptations made), and has been developed and used over a number of years by members of the PAL (People's Action for Learning) network across many Southern countries.

Somewhat similar results, indicating low levels of learning among children identified as having moderate to severe disabilities, compared to their non-disabled peers, were noted in a study of 1,050 randomly-selected households across 30 villages in 3 districts in Punjab province, Pakistan (Singal and Malik, 2018, Bari et al., 2018). Based on analysis of data collected for 1,549 children in the 8-12 years age group using the Washington Group Child Functioning Module for Identification and ASER-type learning assessment tools, the overall levels of learning the basics in literacy and numeracy were particularly low for children identified as having moderate to severe disabilities. However, contrary to expectations, a sizeable proportion of children with disabilities were found to be in school. Children with disabilities were learning the basics in numeracy and literacy (when compared to children identified as having disabilities but not in school), but their chances of learning the basics in literacy, in particular, were more constrained relative to their peers in the context of overall significantly low levels of learning.

Evidence from the two studies above indicates that while children with disabilities might be more successful in entering school compared to previous years, this does not guarantee learning. Growing evidence focusing on teaching and learning processes in the classrooms, even though gathered primarily through interviews and few observational studies, clearly highlights that these poor learning outcomes are mostly due to the lack of meaningful participation in learning opportunities for children with disabilities (Singal, 2015). For example, Manzoor, Hameed, and Nabeel (2016) conducted a survey which gave voice to 433 previously unreached children with disabilities and their parents. The study took place across all tehsils in the districts of Sheikhupura and Kasur; the study sought to identify the causes of children being out of school. It revealed that (in ranked order): (i) lack of school readiness (ii) lack of an inclusive admission policy (iii) poverty (iv) child health conditions (v) distance from home to school and (vi) overprotection of children with disabilities were the main reasons for being out of school. They also noted that although existing special schools in both districts were providing their services through curriculum adaptation, adaptive assessment techniques, teacher training,

students' leisure, and recreational activities, they did not have the capacity to accommodate all the unreached children at the tehsil level, given limited staff, budgets, and physical infrastructure, and inadequate transport facilities. Another survey undertaken by Pasha (2012), covering 300 teachers across 75 public and private primary schools in Lahore, Pakistan, highlighted that schools are currently unprepared to include children with disabilities due to various factors. The barriers included lack of clear admission policies, little knowledge among school administrators regarding how to implement inclusive education, inaccessible school infrastructure and the absence of professional development opportunities for teachers to implement inclusive education.

4.2 The South African journey towards inclusive education: successes and challenges

Marie Schoeman

The South African Government introduced a national policy on Inclusive Education in 2001 with a 20 year implementation trajectory. At the time that the policy was launched, the country was in the first decade of the new democratic post-Apartheid era. Inclusive education was seen as a means through which transformation in education could be realised, moving a deeply fragmented and segregated schooling system into one integrated system which embraces social justice, equity and quality. Inclusion was intended to improve educational opportunities for all children, not only children with disabilities and a critical focus was placed on removing barriers to learning and development which could be social, pedagogical, systemic and economic. Inclusive education was part of the ideal of building the new rainbow nation, positively embraced by most South Africans.

Over a period of 18 years several catalytic policies and strategies were developed to ensure that the whole education system would have inclusivity as a core principle. One of the innovative supporting policies has been the Policy on Screening, Identification, Assessment and Support (2014) which was developed through a consultative process over a period of ten years involving teachers and disability rights holders from a wide range of contexts across all nine provinces.[10] The policy guides the establishment of a support system for districts, schools and teachers aimed at improving access to quality education for vulnerable learners and those who experience barriers to learning, including children with disabilities who are out of school and those in schools who are not being supported. The identification and assessment process is placed in the hands of teachers who are required to centrally involve parents and learners in any decision making related to the nature of support that the learners should receive and where they should be receiving it. Outplacement into a segregated learning site is discouraged. The banner under which the policy was introduced was bringing support to learners rather than taking the learners to where the support is. Since 2015 training on the policy has, together with knowledge on curriculum differentiation, been made central to the national policies on teacher education at both initial teacher education level, as well as continued professional development with the intention of having trained all 440,000 teachers in all 24,000 schools in the country on the application of the policy by 2021.

10. Department of Basic Education (2014) *Policy on Screening, Identification, Assessment and Support*, Pretoria.

Another important feature of the Policy on Screening, Identification, Assessment and Support is that it does not define support narrowly as external interventions by professionals, delivered in specialized sites through one on one interventions, but looks at the broader context of the school and the learner to determine systemic, social and other barriers which need to be addressed. Essentially, the assessment process is to determine how the curriculum can be made accessible by the teacher in their day to day teaching practice.

Other systemic measures that are intended to scaffold the implementation of the assessment policy are the establishment of transdisciplinary district-based support teams, as well as school-based support teams. Financing and human resourcing norms[11] have been introduced to locate these health professionals at district level rather than in special schools as was previously the case. The school-based support teams that have now been established at more than 10,000 schools have proven to be one of the most effective mechanisms to ensure the introduction of inclusive cultures, policies and practices at schools through teamwork and a contextual problem-solving approach.

Improved data tracking systems, embedded in the general Education Management and Information System (EMIS), that monitor ongoing application of reasonable accommodation resulting in improved levels of participation and quality learning outcomes of children with disabilities, is seen to be critical. In recognising this, the system truly recognises that inclusive education is a guiding framework for quality education for all learners, which is the central goal of the 2030 Education Agenda.

11. Department of Basic Education (2018) *Draft Guidelines for Resourcing and Inclusive Education System*, Pretoria.

4.3 Dynamic inclusive learning: case of New Brunswick, Canada

Jody Carr

Canada has a decentralized education system devolved to each of the 13 individual provinces and territories. The federal government has no responsibility for education; the individual Ministries of Education voluntarily collaborate through the Council of Ministers of Education.

In New Brunswick, schools embrace dynamic, inclusive learning where all children of all abilities and backgrounds form relationships by learning together within their neighborhood schools and are supported to achieve success in common learning environments.

Dynamic, inclusive learning, when adequately supported and implemented, ensures high-quality and e-quality learning for all children. Moreover, every student has equal access to high-quality classroom teaching. Accommodation for learning is provided in the common learning environment. Only when the provision of intervention is not available in this shared environment, will alternative and individualized settings with appropriately trained professionals be provided outside the classroom.

New Brunswick began with basic legislation in 1986 that integrated all children and 'special' educators within mainstream schools. Small private special education schools were closed, and all children were integrated within mainstream schools. Much progress was made over 25 years, transitioning from special self-contained classrooms in mainstream schools by providing an inclusive and adaptable curriculum, assistive technology, and robust assessment.

In 2013, New Brunswick implemented a review of inclusive education, resulting in a new policy (Policy 322) for inclusive education and modifications to the Education Act. The province also invested in additional practicable education support, allowing for a transition away from the remaining contained special classrooms within schools.

Policy 322 is based on the principles of equitable access and the duty to accommodate found in the UN Convention on the Rights of Persons with Disabilities. Policy 322 includes the requirement to provide teacher training and classroom support and the principles of Universal Design for Learning. Policy 322 aims to ensure that any individual pull-out from class is normalized and fluid, thus stipulating that when a child leaves the classroom, it is for individual intervention and learning and usually temporary, and can be in small groupings of up to three children.

In terms of measuring learning in New Brunswick, all students, not just those with identified disabilities, are encouraged to demonstrate their knowledge in a variety of ways, offering an alternative to the typical paper and pencil testing. This might include, for example, oral presentations, student-led conferences, video creations, artistic expressions, and other means. This acceptance of varied ways to demonstrate learning ensures students still meet expected learning outcomes while respecting individuals' strengths and capacities.

Policy 322 ensures that inclusive education is not a simple program or add-on. There are no special education teachers, special classrooms, or special schools. Students attend their neighborhood school based on their age and geographic location. Each child is promoted from grade to grade based on their age grouping. A child is held back from promotion very rarely and only after very careful consideration and consultation.

The principal of the school provides assertive leadership and sets the tone for a positive, inclusive environment. Classroom teachers embrace the concept of building capacity within their students to self-regulate their behavior and learning, becoming more of a facilitator of learning rather than a lecturer. The classroom teacher works with the school-based Education Support Teacher – Resource and other specialist teachers. This inclusive education resource teacher works mostly with classroom teachers to assist and coach them on how to improve their UDL practices, to help co-teach or help address particular learning and behavior needs. They also assist in obtaining additional support for educators and students from internal school specialists and outside agencies for physio, psychological, numeracy, behavior, literacy, etc.

Assessment and reporting of learning outcomes is the primary responsibility of the classroom teacher. Outcomes or the broader goal for academic learning are not slotted into the specific silos of reading, writing, and mathematics. Using the principles of UDL educators are given the flexibility to measure the learning outcome based on alternative modes of demonstrating learning that best suits a student. Measurements are always individualized based on realistic outcomes tailored for each child. Sometimes this assessment of the present state of knowledge is done by a team of professionals who can accurately and realistically set outcomes which can be achieved in a timely manner. The availability of a Personal and Individual Learning Plan is guaranteed in legislation which must be a living document that is updated and evaluated regularly.

The literacy and numeracy achievement levels are tracked and shared from one teacher to the next. If a child cannot be universally accommodated the classroom, the teacher and resource teacher would develop individual accommodations, and a student may eventually have a modified program. Their learning is still based on the curriculum, but at the level the student is at, with set goals and progress being measured by the classroom teacher and resource teacher.

The provincial ministry conducts standardized learning assessments across schools and participates in international assessments such as PISA. Students

who are exempt because of a significant disability are still counted as not meeting the standard. The results inform budgeting and planning at the provincial and district level.

Our school system recently implemented a new attendance tracking tool that is used by schools to monitor when and how often a student is excluded from learning due to their disability or behavior.

Other assessments relied upon include the pre-school student development tool, early public health assessments, school-wide health and wellness evaluations, and professional psycho-ed/behavior assessments.

4.4 Learning outcomes of children with disabilities in the UK

Richard Reiser

All four countries in the UK – England, Wales, Scotland and Northern Ireland – have policies of compulsory education for children with disabilities and their non-disabled peers. The law in all four countries supports mainstreaming. Government data relating to special educational needs shows that over 80 per cent of children with disabilities are educated with their peers. Generally, children with disabilities are in mainstream education, and annually move up grades with peers.

However, there is variation on the amount of segregation for those with statutory assessed needs; Scotland (0.93 per cent), Wales (0.97 per cent), England (1.53 per cent) and Northern Ireland (1.82 per cent) of all pupils. In England, changes within the education system such as the introduction of league tables and statutory tests, and changes to the curriculum in the last ten years, have seen a move away from inclusion to increased segregation. In 2001, 39.9 per cent of assessed pupils were not in mainstream education. By 2018, this had gone up to 52 per cent of a larger number.

All countries have increasingly introduced testing, which has narrowed the curriculum but has less impact where teacher assessed, and individual school results are not published. In England, phonics at age 6, reading, writing and numeracy at age 7 and reading, writing, maths and spelling, punctuation and grammar tests at age 11 are nationally administered. There is increasing teacher assessment and moderation at 7, but not at 11. The gap in results for pupils with disabilities is large and widening in outcomes – 44 per cent for phonics (59 per cent EHCP) at 6, 55 per cent for reading (70 per cent EHCP) at 7, 52 per cent for reading, writing and maths combined (62% EHCP) at 11. Whilst a wide range of reasonable accommodations are offered, there are challenges with the breadth of the curriculum. No compromises are offered within testing on competency standards.

There are still many primary schools with good inclusive classroom practice. However, there are some challenges arising for children with disabilities resulting from the move away from collaborative child-centred education to competitive normative goal-based assessment.

Section 5
Conclusions

Overall this paper highlights that the education of children with disabilities needs attention beyond access to education. Although children with disabilities have started going to school, they are far behind their peers in every aspect – enrolment, school completion and learning outcomes. The learning crisis for children with disabilities is exacerbated by underestimation of the numbers of children with disabilities in the education system due to lack of well-established screening and identification methods. Not all censuses include questions on disability to capture relevant data. If they do, the nature of questions is such that certain types of disabilities, such as intellectual disabilities, are frequently not identified.

Practices of labelling and categorization of children using an impairment focused psychometric testing approach can create barriers to learning, partly by creating low expectations. The practice, still prevalent widely, also contributes to segregation and exclusion, as deficit-based assessment reduces the likelihood of an inclusive placement. A conscious shift to conducting education-based assessments for all children is necessary to address the learning crisis for all children.

National, regional and international assessment used to measure learning outcomes can be discriminatory towards children with disabilities. National and international assessments tend to focus on limited aspects of a school curriculum, particularly literacy and numeracy. The Global Education Monitoring Report 2017-18 warns that such national and international assessments may have the effect of narrowing the curriculum, not only because of the limited aspects of the curriculum that are assessed but also because there is a tendency of teachers to spend much classroom time teaching to the test (UNESCO, 2017). This can have the effect of children with disabilities, who are encouraged not to participate in the assessment, being excluded from teaching time.

New developments are starting to take place with regards to broadening the range of skills to be assessed in international assessments. The Impact Initiative (2018) recommends that education systems should evaluate participation in education as an aspect of measuring quality. The World Bank (2018) discusses three types of skills as being the necessary outcomes of education – cognitive, socio-emotional and technical skills. Social and emotional skills include conscientiousness, interpersonal trust, motivation, and self-esteem. The OECD concurs that such skills are necessary to meet Target 4.7 of SDG 4:

"By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and culture's contribution to sustainable development." (UNESCO et al, 2015, p.21)

Concluding recommendations

Promoting access to education

- **Strengthen national policies and increase funding, recognizing inclusive education as a key to quality and equity in education:** Governments should recognise that funding that is redirected towards resourcing inclusive education and establishing systems for ongoing building of capacity of schools and teachers (universal design for learning and multi-level teaching), will raise the standard for all learners including children with disabilities, and reduce early school leaving.

- **Improve data collection:** National education management and information systems (EMIS) should integrally track not only enrolment of children with disabilities (both in special and in mainstream settings), but also their learning progress throughout their schooling years, as well as their transition to post-school education. The EMIS system must include indicators to track availability of reasonable accommodation and not only categories of impairment. Learner tracking systems must be aligned between Health, Social Welfare and Education so that no children fall between the cracks.

- **Include out of school children with disabilities:** Learning assessments must reach those out of school or those who are not in the public education sphere. Household-based citizen-led assessments provide a good example of modified tests to reach out to all types of learners with disabilities. The UNICEF MICS-6 Survey, with modules on child functioning and learning achievement, will also make it possible to collect information about children with disabilities as well as measure their learning outcomes. Several countries have already used both modules as part of their surveys. More results will be available in the upcoming global report on learning and equity (MICS-EAGAL Global Report 2020). Data analysis should be conducted keeping the contextual intricacies of the region, as disability issues are context-specific.

- **Engage all relevant stakeholders:** We need better mechanisms within education projects for engaging and promoting participation of stakeholders from inside and outside the education system in the identification and prioritization of desired learning outcomes. For example, parents and families of children with disabilities must be supported so that they can understand the value of their children having an education and their learning outcomes measured.

Promoting educational participation

- **Improve the learning environment:** Achievement in learning is dependent upon the learning opportunities available to children in an environment which promotes learning. The curriculum needs to be developed in a way that ensures equitable acquisition of desired competencies for all students including children with disabilities. Governments need to reflect on the extent to which they have facilitated the necessary learning and teaching environment conducive for the elimination of educational exclusion based on disability and attaining the desired learning outcomes.

- **Promote an educational, not medical, approach to initial assessment:** An educational, rather than a medical, approach to initial assessment should provide information that can guide teaching and learning strategies. Initial assessment is important for all children to develop individualized education plans to create conducive learning environments. Teachers and parents should be centrally involved in this process and the involvement of professionals should be mainly directed to sharing information on how learning can be made accessible, such as through the use of assistive technology, and mentoring of teachers on inclusive pedagogy.

- **Develop teachers' skills and competencies:** There needs to be investment in training teachers at the pre-service and in-service level on all aspects of inclusive education such as inclusive pedagogy, classroom management, use of materials and technology, differentiated assessments, and addressing social and academic aspects of learner diversity in class. Teachers need to be well supported not only by resources but also a network of trained professionals, knowledgeable lead teachers, community-based workers and school administrators. Teachers benefit from learning opportunities where they can see inclusive education in practice, observe, learn, and share. Teacher trainings should target skill enhancement but also target setting up networks of support for students and teachers.

Promoting learning achievement

- **Improve understanding of learning outcomes:** There is a need to critically reflect on how the desired learning outcomes are (both short-term and long-term) currently understood, conceptualized (ie as standards, competencies, learning objectives). Do the national education policies and programs reflect the collective thinking around the importance of learning for children? Which domains of learning should be considered? How should the curriculum be adapted according to learning needs while setting high expectations for all learners? How should learning outcomes be measured? How can measurement of learning improve education quality?

  There is a need to provide guidance and information for policymakers on how to consider disability when selecting indicators to track progress in education

participation, completion and learning, and ensure that national education plans are inclusive of those indicators.

- **Understand the definition of disability:** In spite of progress, different countries adopt different definitions of disability and categorization of its types. Assessment questionnaires can pick up on students with disabilities if they include a question aligned with the national disability identification criteria. It is important to consider the countries' adopted definition of disability and the existing early identification processes run by either ministries of health or education. Both have implications for understanding who the learners with disabilities are that need additional support to attain the anticipated learning outcomes, and also consider any required changes within the existing learning assessment mechanisms.

- **Develop inclusive large-scale learning assessments:** These must be inclusive of children with disabilities. Accommodations must be available for children during tests so that they can participate meaningfully in comparable testing along with their peers. Accommodations can widen access for students with disabilities and other special education needs and promote inclusivity of large-scale learning assessments. Accommodations such as dictation of answers, audio presentations, graphic modifications, word processors, adaptive furniture or tools, large print, magnifiers, special fonts, use of Braille, extended time and rest periods should be considered. Governments must realise that proof of progress in learning by children with disabilities is an indicator of the effectiveness and equity of the system as a whole.

  Since large-scale learning assessments are also used to track progress towards SDG 4, student and school exclusion criteria in large-scale assessments should be reconsidered. A blanket assumption that children enrolled in special schools have limited abilities needs to be strongly reconsidered. In many low-income countries, while inclusive education is being promoted, special schools are still predominant. It must be noted that exclusion of children with disabilities from assessment systems results in their exclusion from curriculum, hence exclusion from learning – thereby reinforcing the status quo of low expectations and under-achievement. This results in gross under-education of children with disabilities, laying down the foundation of the vicious cycle of poverty and disability.

- **Assessment for all:** Although assessment mainly focusses only on the child (his/her learning attainment, educational needs and learning styles), assessment of the environment is also critical so as to determine psychosocial, physical and economical barriers to participation and ensure that appropriate support mechanisms are in place. The Washington Group of Disability Statistics along with UNICEF have been working on a module to assess the inclusive environment of a school.

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