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NEQMAP Thematic Review

Equitable Learning Assessments for Students with Disabilities

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ABSTRACT

Asia-Pacific is home to 690 million persons with a disability. Persons with disabilities experience lower educational opportunities as children and therefore also face fewer opportunities as adults. Children with disabilities experience barriers to participating in education that result in enrolment rate drops of up to 53 per cent between primary and secondary education, making it increasingly difficult for persons with disabilities to secure employment. Low participation rates and other barriers have a serious impact on the learning achievement and learning outcomes of learners with disabilities.

This thematic review provides an overview of the existing inclusive education policies and practices in the region and specifically focuses on learning assessment of children with disabilities at the school level. By examining extant literature, it discusses key areas that influence the participation of children with disabilities in learning assessments and provides region-specific cases to elaborate on the challenges faced by education systems in assessing learners with disabilities. The review suggests that countries need to focus on integrating children in mainstream education, strengthening teacher education and permitting disability-specific accommodations to ensure assessment accessibility to children with disabilities.

KEY WORDS

learning assessment, inclusive education, inclusive assessment, special needs, disability, Asia-Pacific

INTRODUCTION

In Asia and the Pacific, 690 million men, women and children, accounting for 15 per cent of the total population in the region, live with some form of disability. The number is expected to rise over the next decades as a combined effect of population ageing, chronic health conditions, natural disasters, road traffic injuries, poor working conditions and other factors (UNESCAP, 2018). Their inclusion is crucial to the realisation of the international goals to ensure that no one is left behind. Five of the 17 Sustainable Development Goals (SDG) include explicit references to persons with disabilities: education (SDG 4), employment (SDG 8), inequality (SDG 10), sustainable cities and communities (SDG 11) and global partnership (SDG 17).

Regarding the education goal, Target 4.5 specifically states “by 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, *including persons with disabilities*, indigenous peoples and children in vulnerable situations” (UNESCO, 2015). Yet, children with disabilities have lower school attendance rates, are less likely to complete primary and secondary education. In general, children with disabilities experience lower educational opportunities leading to fewer opportunities as adults (UIS, 2017; UNESCAP, 2018).

In 2015, countries committed to the promise of leaving ‘no one behind’ by ratifying the Sustainable Development Goals (SDG)—a renewed impetus to create a more equal and inclusive society. Similarly, the Incheon Strategy to ‘Make the Right Real’ (2013–2022) in Asia-Pacific reiterates the need for providing equal educational opportunities to persons with disabilities and without (UNESCAP, 2012). Education systems in Asia and the Pacific are striving to include children with special needs in mainstream education. International commitments coupled with national policies are advancing inclusion of children with special needs, including those with disabilities, in general schools.

Purpose

This thematic review investigates how countries in the Asia-Pacific region are assessing the learning of students with disabilities to inform teaching and learning methods and distil data for system-level decision-making. Within the region, countries have unique education systems—the policies and challenges for inclusion vary and so does the level of readiness and progress. This thematic review attempts to highlight some of the cross-cutting factors that affect the inclusion of children with disabilities in learning assessments and provides recommendations for effective implementation of inclusive learning assessments.

In the context of integrating the education of children with special needs, most countries continue to have dual systems, where segregated schools and general schools both serve the needs of children with disabilities depending on the nature of their needs. This review focuses on four key areas that affect the inclusion of children with disabilities in classroom, national, and international assessments.

These are:

- ▶ National policies
- ▶ Teacher education
- ▶ Assessment accommodations
- ▶ Curriculum and pedagogy

Methodology

The thematic review presents desk-based research on inclusive learning assessments for children with disabilities in the Asia-Pacific region. Background research and review of literature was conducted on policies, teacher education, and curriculum and pedagogy of inclusive education for children with disabilities in the region. Targeted desk-based research was carried out to understand the different testing accommodations used to ensure that students with disabilities are included in learning assessments in different country contexts.

Limitations

Due to the limited timeframe, there was no scope for primary research. The entire study is based on desk-based research and a three-day consultation workshop. In particular, in-depth research on country-specific policies could not be conducted within the available time.

There is a lack of quantitative data available on the education of children with disabilities. Either quantitative data is completely unavailable, or recent quantitative data is hard to come by. Further, disaggregated data on education of children with disabilities is even harder to find. Statistically, there is a lack of common understanding of the concept of inclusive education that hampers the collection and availability of education data of children with disabilities (CWD) (WHO & World Bank, 2011; Clarke & Sawyer, 2014; UNESCAP, 2018).

Due to the complex nature of the topic, there is also a limited availability of extant research on inclusive learning assessments in the region. In the Asia-Pacific region, the concept of inclusive education is evolving, and hence most of the accessed literature focuses on policies of mainstreaming or teacher education; inclusive learning assessments are a relatively new idea. Further, in many countries of the region, school education systems continue to focus on classroom-based formative assessments; in such countries, national assessments are a recent development and participation in international assessments is varied. Thus, robust assessments that can gather system level data on learning outcomes of all students, including students with disabilities, continue to remain a complex subject for education stakeholders.

And finally, the term 'special education' is a broad term, and includes children with disabilities and with 'other needs – for example, through disadvantages resulting from gender, ethnicity, poverty, war trauma, or orphanhood' (WHO & World Bank, 2011, p. 209). The educational advancement of specific groups is the responsibility of different ministries and departments within each country. This poses a challenge in aggregating information from multiple sources.

BACKGROUND ON CHILDREN WITH DISABILITIES

Overall, persons with disabilities are less likely to have attended school than persons without disabilities. Persons with disabilities experience lower educational opportunities as children and therefore also face fewer opportunities as adults. Persons with disabilities are more likely to be out of school or to leave school before completing primary or secondary education (UIS, 2017). Children with disabilities experience barriers to participating in education that result in enrolment rate drops of up to 53 per cent between primary and secondary education, with 82 per cent of those being in mainstream schools. Even for children who enter secondary education, the compounded effect of this disparity is carried into later years, making it increasingly difficult for persons with disabilities to hold comparable levels of educational attainment (UIS, 2017; UNESCAP, 2018).

Studies have also found that it is difficult for children with disabilities to succeed in large classroom sizes (common in Asia) without adequate academic and learning support (Walker & Musti-Rao, 2016). There is also significant attendance gap between children with disabilities and without in developing countries compared to developed and rich countries (WHO & World Bank, 2011).

Overall, children with disabilities are on average more than twice as likely to be out of school as children without disabilities. Disabled children are less likely to complete primary education than non-disabled children, and as a result children with disabilities are also less likely to continue their education at higher levels of education. The disparity is even more difficult for girls who are disabled, as they are much less likely to be in school or complete schooling than disabled boys (UIS, 2017).

Policies on inclusive education for persons with disabilities

Article 24 of the UN Convention on the Rights of Persons with Disabilities stipulates that countries must take steps to ensure that persons with disabilities access an inclusive, quality and free primary and secondary education on an equal basis with others in the communities in which they live (UN, 2006).

With regards to inclusive education, there is no country that has a fully inclusive education system. For instance, the education system in the United States of America has both children with disabilities studying in an integrated system and also provides necessary specialised placements (UNESCAP, 2012; Clarke & Sawyer, 2014). Similarly, in Hong Kong (SAR China), students with disabilities are educated in a range of special schools apart from regular schools that offer a whole-school approach (Forlin, 2010).

In the Asia-Pacific, a region with an estimated 0.2 per cent to 8.1 per cent CWD, the transition to inclusive education has been slow (Wu-Tien, Ashman, & Young-Wook, 2008; Forlin, 2010). On a positive note, there is a greater awareness than before among governments in Asia-Pacific regarding the opportunities of educating children with disabilities in mainstream education rather than segregated settings (Forlin, 2010).

Integration of persons with disabilities into mainstream education

Countries in the Asia-Pacific region are undergoing a transformation, moving from educating children with disabilities in segregated settings to including them in regular schools. However, it is only in recent decades that education systems have paid attention to the need to ensure that children with and without disabilities attend the same classroom, follow the same curriculum, and participate in the same learning assessments.

Apart from government efforts, nongovernment organisations have enabled the inclusion of children with disabilities in many low-income developing contexts. For instance, in Bangladesh, Sightsavers has been working with local partners in the Hasnabad region to strengthen the capacity of teachers and ensure their commitment towards the inclusion of visually impaired children in regular schools (UNESCO, 2017). Similarly, the National Association for the Blind is an Indian NGO that runs a special school-cum-resource centre to support the education of the blind. It provides residential facilities to visually challenged young children and supports their integration in the mainstream education system, besides providing resource support to them all through their school years and assisting them in gaining access to the curriculum (NCERT, 2006). Schools can also support each other; in the resource school model in Hong Kong (SAR China), special schools and general schools support new schools attempting to implement inclusive education in a whole school approach (WSA).

In Hong Kong (SAR China), both policymakers and practitioners agree that there should be 'one curriculum for all'. This means that students with and without disabilities are 'exposed to, and taught with, the same curriculum with universal aims and instructional objectives, for fulfilling each of the learners' life-long goals in the inclusive community' (Lian, Tse, & Ching Li, 2007, p.7). The SAME (Systematic Approach matching Mainstream Education) system in Hong Kong (SAR China) ensures that students with mild to severe intellectual disabilities have access to the central curriculum (Forlin, 2010).

Despite significant progress, countries in the region continue to struggle to establish fully inclusive education systems. Children with mild to moderate disabilities are enrolled in general schools but those with severe disabilities are still educated in segregated schools in many cases. In a dual system, special schools often provide additional support in the transition of students with disabilities from segregated to general schools. As more and more students with disability start receiving their education in mainstream schools, it is likely that the need for inclusive pedagogies and assessments will increase. It is only through consolidated and coordinated efforts—government, nongovernment, and private sector—that this transition to inclusive education in the true sense (curriculum, teaching and learning, and assessment) and not just integration is possible. Partnerships can contribute to areas of professional development of teachers, awareness generation among parents and communities, integration of students to mainstream education, and supporting general schools becoming resource centres.

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Teacher education and training

Teacher education reforms have been slow to incorporate the philosophy of mainstreaming inclusive education. Even when teachers receive training on inclusive education, there are tensions between the emphasis on greater inclusion and the need to succeed in traditional exams (Forlin, 2010).

To give an example, in Hong Kong (SAR China), it was only after 2007, with the launch of the 5-year teacher professional development framework on integration, that one in ten teachers in a school would complete the Basic Course on Catering for Diverse Learning Needs (30 hours) or other courses available on teaching children with specific disabilities. However, the number of teachers trained under the programme is 10 per cent of the teaching workforce in Hong Kong (SAR China) (Sin, Tsang, Poon, & Lai, 2010). There are specific training programmes for special educators, with a Bachelor of Education (BEd) special needs course being offered from 2003 onwards. From 2007, Master courses were available for special educators, with Doctorate courses available from 2008. Despite reforms, many regular teachers and newly qualified teachers (NQTs) are dissatisfied with the pre-service training and feel that they are unprepared for teaching in inclusive classrooms (Yeun, Westwood, & Wong, 2004; Forlin, 2010).

The Republic of Korea has online-based teacher training courses on special and inclusive education that are recommended to in-service general education teachers but the participation still remains low. Special educators in the Republic of Korea do not have a general education license, perpetuating a strong divide between special education and general education (Kim, 2005; Song, 2016).

In Japan, mainstream teachers are assigned to special educational needs and disabilities (SEND) classes with basic training on assistive aids. National Institute for Special Education Centers located in prefectures across the country conduct trainings for new teachers, who receive one dedicated training (lecture) session on SEND. The curriculum focuses on understanding Learning Disability (LD), Attention-Deficit/Hyperactivity Disorder (ADHD) and other learning difficulties, teaching instructions for children with special needs, and the creation of Individualised Education Plans (IEP). These teachers who complete the course are expected to go back to their respective regions and lead LD education in the area. In addition, the Japan Dyslexia Society,¹ a civil society organization, is now introducing a project for teacher training for dyslexic children with special emphasis on reading and writing in Japanese.

1 <https://www.npo-edge.jp/about/englishpage>

In high achieving Singapore, mainstream teachers work with special educators to address the educational needs of children with disability. The rigour and duration of training mainstream teachers are absent in the requirements for becoming a special educator, who have to complete only one-year Diploma in Special Education (DISE) to join general schools as a special educator or join special education schools. Moreover, special educators receive less remuneration manifesting the importance placed on mainstream education over special education (Walker & Musti-Rao, 2016).

Studies undertaken in India have noted that teachers in regular schools are not adequately trained to implement targeted education programmes for children with disabilities (Myreddi & Narayan, 2000). In a study conducted in 2013, it was found that 70 per cent of teachers in mainstream schools neither had training or experience in teaching students with disabilities (Das, Kuyini, & Desai, 2013).

Not just teachers, but school leaders also have to undergo extensive and continuous training in inclusive education. School leadership is responsible for creating an inclusive school environment and encouraging teachers to pursue inclusive teaching and learning practices. Many schools are moving towards a whole school approach (WSA) and school leadership has an important role in the successful implementation of this concept. Leaders are responsible for collaboration and knowledge-sharing (both within schools and with school clusters), professional development of teachers, reducing barriers, and protecting students with disabilities from discrimination.

UNDERSTANDING ASSESSMENT FOR CHILDREN WITH DISABILITIES

A wide range of assessments are used to understand the learning levels of students including those with disabilities. Different kinds of assessment methods are applied by teachers to measure the learning of students – a formative or summative approach, a norm-referenced or criterion-referenced test, a self-assessment or peer assessment (Bourke & Mentis, 2014). The choice of assessment tool depends on the purpose of the assessment and the same tool can be used for a summative or formative outcome (Bourke & Mentis, 2014). Geoff Masters (2014) defines the fundamental purpose of assessment as establishing and understanding ‘...where learners are in an aspect of their learning at the time of assessment. This usually means establishing what they know, understand and can do...’

At the system level, assessments for accountability have two functions—provide data on individual student achievement and system-level data that compares performance of schools, districts, states, and national educational outcome (Cumming & Dickson, 2013). The latter is in the form of national and international assessments that are used to diagnose the health of education systems and benchmark performance. The evidence gathered from assessments is used in decision making: teachers use the insights to inform their teaching methods and planning of lessons, and policymakers and governments use the evidence to improve student achievement and learning outcomes (Masters, 2014).

Assessing learners with special needs

In equitable and fair school education ‘...students’ special needs and unequal socioeconomic backgrounds are recognised and resources (for example, teaching expertise) are distributed unequally in an attempt to redress disadvantage due to personal and social circumstances.’ (Masters, 2018). This view of equity in education can be applied to assessments; students with disabilities need accommodations or alternate forms of assessment that provide evidence of their learning and help education systems address their learning needs through improved and targeted pedagogies.

Learners with special needs require a range of pedagogical practices and diverse assessment approaches that can ‘better inform and summarise their learning’ (Bourke & Mentis, 2014, p. 394). As education systems move from educating children with disabilities in segregated settings to mainstream settings,

educational systems, schools, and teachers have to ensure that the learning of children with diverse education needs is measured and that their progress is reported suitably.

At the school level, teachers have to ensure that multiple assessments are used to cater to the learning needs of all students; in other words, that the assessments are inclusive. For instance, a study in 2010 found that in New Zealand, 24 assessment approaches are used by teachers to test students with high needs (Bourke, Mentis, & Todd, 2010; Bourke & Mentis, 2014).

Similarly, countries recognise the need to ensure that diverse learning needs of students, including those with disabilities, are addressed. Some countries in the Asia-Pacific region, such as Australia, have explicit provisions that clearly outline that children with disabilities have to be included in all aspects of mainstream schools including assessment.

'We practise inclusive education, whereby, to the extent possible, students with disability enrol in mainstream schools and participate, with assistance, in mainstream education. Expectations that students with disability will be included in and able to participate in all educational activities, including assessment, are established not only in policy but also in legislation'

(Cumming & Dickson, 2013, pp. 5-6).

Others, such as Philippines Order 55, reflects the Philippines efforts at reforming learning assessments to include children with special education needs (UNESCO Bangkok, 2018).

Classroom assessments

Research has found that teachers face major problems in assessing written tests and oral examination for children with disabilities. The kind of accommodations that they usually include involve extended time for writing the tests or answering oral examinations. They also make test adaptations based on the impairment of the child such as different fonts, larger spaces between lines or prints, extraction of too difficult or inappropriate tasks, etc.) (Hussu & Strle, 2010). Moreover, teachers draw less data from normative assessments (PAT/psychometric tests) as CWD don't have ready access to the content and it does not directly inform teachers of the students' learning or the teaching needs (Bourke & Mentis, 2014).

Brookhart and Lazarus point out that accommodations and scaffolding are useful in giving access to students with disabilities to formative assessments (Brookhart & Lazarus, 2017). Porter, Robertson & Hayhoe highlight the importance of student involvement in classroom assessments in certain types of learning contexts such as further education (Porter, Robertson, & Hayhoe, 2000). Further, teachers also need to take special care in presenting the instructions, ensuring some of the test questions test minimum standard of knowledge, and the assessment schedule is planned with students and arranged in advance (Hussu & Strle, 2010).

National assessments

National assessments either exclude children with disabilities or include them through accommodations. In total exclusion, the assessment does not include special educational needs and disabilities (SEND) children. In alternate systems, alternate assessment tools with different assessment criteria are used for SEND children instead of the state-wide assessment. In accommodated systems, accommodations or changes (response rate, scheduling, setting etc.) are made within the assessment but assessment criteria remain the same (Ireland, UK, US). And in universally designed systems, a single assessment that is able to measure the learning of all students without the need for accommodations should be able to measure learning of all students (Douglas et al., 2016).

Testing accommodations

Adjustments made in the methods of testing, and modifications such as timing, setting, presentation, response, and scheduling are known as accommodation. Accommodations make assessments accessible

and relevant to all children in a mainstream setting, and reflect the accurate and comprehensive ability of SEND students (Abedi, 2009; Sperotto, 2013). Assessment accommodations ensure that children with special needs have access to learning assessments.

'The ideal accommodations would function like a corrective lens, offsetting the disability related impediments to performance and raising your estimate of student's proficiency to the level it should be. This would make the scores obtained by students with disabilities comparable in meaning to the scores obtained by other students'

(Koretz, 2008, p. 289).

Thus, assessment accommodation would also mean providing the SEND students with technologies that provide them the same opportunities in the assessment as other children (for instance, blind test takers have access to Braille exam texts etc.) (Panzavolta & Lotti, 2012).

In Brunei Darussalam, existing literature recognises the importance of adapting test instruments (both psychological and educational) to accommodate the special needs of learners with disabilities and gives preference to criterion-referenced assessments rather than norm-referenced tests. Also, explored is the scope of introducing informal assessments into the education system—'continuous assessment; experimental assessments; observational assessments; learning assessments; parental assessments; peer assessments; self-assessments; portfolio assessments; and project assessment'. Research also leans towards professional learning of teachers. School counsellors in Brunei Darussalam might need to organize workshops to help train regular teachers on the use of adapted tests as well as informal assessments and explain why it is important to do all these things. Further to all the above adaptations, special emphasis may be required on continuous assessment (Mundia, 2009, p. 13).

Studies reveal that in Malaysia, there is a lack of assessments that can measure the learning difficulties of children in integrated programmes. 'An alternative assessment system to measure the outcome of education for students in these programmes needs to be put in place. Alternative assessments could be based on individual progress as monitored in the child's individualised education plan (IEP) or other forms of routine assessments as appropriate' (Lee & Low, 2014, p. 53).

Hong Kong (SAR China) follows a whole school approach that encourages mainstreaming of children with special needs. Shifting to inclusive education is not easy as it involves 'developing appropriate government and school policy; providing relevant support; enabling academic and social inclusion; changes to curriculum, pedagogy and assessment; preparing new teachers and improving existing teachers' skills in adapting instruction; modifying curriculum and classroom management; and developing functional multi-agency collaboration to support all students' (Forlin, 2010, p. 177). Studies suggest that there is a need for professional learning of teachers that prepares them to tackle these changes. Nonetheless, there are opportunities for assessment reform where children with special needs can participate.

'Specific attention is paid to students having access to the same (but differentiated) curriculum as their mainstream counterparts with assessment on similar criteria and the provision of accommodation for need'

(Forlin, 2010, p. 178)

In Singapore too, accommodations are available for students with disabilities such as extra time, larger fonts, use of keyboards etc. However, there is a stigma associated with the use of such accommodations as students' transcripts have a note on them saying that the results were obtained under special conditions (Walker & Musti-Rao, 2016).

Australia's National Assessment Program—Literacy and Numeracy (NAPLAN) is a high-stakes assessment for schools, as resources are allocated to schools based on its results. Various test accommodations are available for students with disabilities such as scribes, assistive technology, extra time, rest breaks, large print, screen readers, Braille, coloured overlays, oral sign support, reading to students (ACARA 2011, 17–19).

However, the use of accommodations such as extra time and reading is restricted—it should not compromise the assessment conditions nor the rigour of the assessment standards (ACARA 2011, 13–14). Students practice the NAPLAN tests as these are high-stakes for schools but modified practice tests are not available for students with disability. There is a recognition that students with all forms of disabilities should be able to participate but those who need accommodations outside the ones that are available for NAPLAN are unable to take the test. Students with intellectual disability are exempted from national and international assessments in Australia (Cumming & Dickson, 2013).

The Philippines has reformed its assessment systems to include Learners with Special Educational Needs (LSEs) in their national assessments by offering accommodations. These include accessible testing rooms, double time, flexible rules allowing breaks, personal assistants to support walking, moving or climbing, assistance from qualified sign language experts, alternative test forms, (Braille, large fonts etc.) and suitable test furniture. Since 2018, they have been using a multi-faceted assessment tool to assess children with signs of learning disabilities in early age (UNESCO Bangkok, 2018).

In India, there is an emphasis on school-based assessment that continuously assesses children through classroom-based assessments. Policies and practices are slowly evolving to accommodate the diversity in Indian classrooms (Julka, n.d.). Since 2018, India's Central Board of Secondary Education (CBSE) extends concessions to Persons with Benchmark (40 per cent disability of any kind) Disabilities for Class X & XII Examinations. The XII examinations in India are high-stakes school leaving examinations and the scores determine college entry for students. Special provisions include scribes, separate rooms, special examination centres, and assistive technology such as portable video magnifier, use of computers for typing answers, for viewing the question in the enlarged font size, for listening the question, provision of reader, relaxation of attendance, flexibility in choosing subjects, provision of alternate questions, and separate questions as an alternate to practical examinations (CBSE, 2018).

In Bhutan, students with and without disability participate in assessments such as the Bhutan Secondary Examination for Certificate (BSEC) and Bhutan Higher Secondary Examination for Certificate (BHSEC) (Dorji, n.d.). In Bangladesh, disability as a topic has not been included in the assessment guidelines yet. Although the government has introduced 15 minutes extra time to persons with disabilities in examinations, it is yet to be institutionalised and strengthened (Khan & Anisuzzaman, 2011).

To give an example from outside the region, under USA's No Child Left Behind (NCLB) Act, schools are allowed to test students with disabilities using alternative assessments when accommodations fail to support inclusion; USA is one of the few countries to mandate that:

'If grade-level expectations are not appropriate, students with disability may be assessed using alternative assessments against modified achievement standards aligned with state curriculum expectations or their Individual Education Plans'

(Department of Education (DoE), 2007).

In international assessments such as the Programme for International Student Assessment (PISA), in which many Asian countries participate, students whose disability makes it difficult to test or requires intensive resources (those with functional and intellectual disabilities) are excluded. Similarly, students whose disability prevents them from participating or performing in PISA are usually exempted. Nevertheless, the exclusion rate is limited to 5 per cent in compliance to sampling specifications (Martin, Mullis, & Foy, 2008; Martin, Mullis, & Kennedy, 2007; Mullis, Martin, Kennedy, & Foy, 2007; Cumming & Dickson, 2013). In the US education system, a UH (*'Une Heure'*) instrument is used to test students with disabilities studying in mainstream schools. UH instruments have half the number of items than regular instruments, provide more time to students for each item, the items are more suitable for children with special needs and are administered in small groups. Besides, a UH questionnaire containing trend questions from the general questionnaire is administered in small groups and students are allowed more time to respond (National Centre for Education Statistics, n.d.).

RECOMMENDATIONS

Teacher education

Teachers are at the heart of quality education for children with or without disabilities. Teachers can alter the learning experience of children through improved pedagogies and well-designed assessments. Undoubtedly, adequate and quality pre-service and in-service teacher training can improve the efficiency of education systems and learning outcomes of all students, including those with disabilities. This is especially critical for resource-scarce developing countries where the teaching workforce is the most powerful resource within the system. (UNESCO, 2017).

Studies indicate that when teachers support inclusion as a principle they are unsure if their training has prepared them well enough to deal with inclusive classrooms (Woolfson, 2018). To strengthen inclusive education, B Ed and M Ed courses must include extensive modules on the education of children with disabilities. Subsequently, in-service and refresher training will ensure that teachers possess the skills necessary to respond to the diverse needs of learners and have the confidence to teach in inclusive classroom settings. Similarly, as learning assessment is a complex subject, it is important to include specific courses on learning assessments with a particular focus on the development of robust assessments that accommodate the needs of children with disabilities.

Teachers also need support from an external resource pool (experts, non-governmental organisations, special educators, and special schools) and internal expertise who can guide them in practical classroom issues related to the education of children with special needs and their assessments. For instance, in 2009, Thailand had 76 Special Education Centres that supported the integration of children with disabilities in regular schools (Clarke & Sawyer, 2014). Likewise, strong professional learning communities can provide a platform for teachers to discuss their inclusive practices, new ideas, and challenges in catering to the needs of children with disabilities.

In the context of learning assessments, studies have found that in addition to formal assessments teachers also conduct informal assessments based on their 'judgements, stereotypes and prejudices about disability' or simply their beliefs (Woolfson, 2018). Training and development of teachers should also focus on breaking stereotypes, eliminating prejudices, and negative beliefs. These beliefs, which may reflect beliefs about people with disabilities held by wider society, need to be examined by education professionals to ensure that they are not barriers to effective teaching of children with SEND in inclusive settings.

Testing accommodations

As pointed out earlier, while some countries have well-established policies to support inclusion in national assessments through accommodations, others in the region are at initial stages of reform, and accommodations are a relatively new subject. Participation of children with disabilities and higher needs in assessment means that when systems report their education outcomes, they provide a complete picture instead of a partial one.

In countries that are strengthening their learning assessments, including many in South Asia, such reform gives them an opportunity to ensure that their new assessment frameworks are inclusive and that assessment samples include children with disabilities. Many countries already have accommodations for high-stakes tests such as school leaving examination, but will need to ensure that examinations at all levels are inclusive as they proceed.

Not just national assessments or school leaving exams; accommodations are equally necessary for classroom assessments where teachers can assess learning of students continuously for formative purposes. Along with that education systems have to explore the scope for introducing alternative assessments, drawing from learnings of countries that have implemented them.

Moreover, schools have to consult with parents of children with disabilities while deciding about accommodations required to assess their child. Thus, parents need to be well-informed and aware of both the disability of their child and the kind of assessments offered in school.

Funding

The availability of incentives and adequate funding also encourages schools to promote the education of children with disabilities and build capacities of teachers. For instance, in the Hong Kong (SAR China) education system, there are three levels of support that are available to students with special needs studying in regular schools. In tier 2 support, schools receive HK\$ 10 000 (GBP 833) per student per year, to support students with learning difficulties such as dyslexia. In tier 3 support, schools are provided HK\$ 120 000 (GBP 10 000) for the first one to six students that have severe learning difficulties and require individual intensive support in form of an individual education plan and short-term placement in special schools. Additional funding is also available for engaging teaching assistants to run errands such as photocopying, preparing materials, child health issues etc. (Rose and Forlin, 2010). Australia invested AUS\$ 200 million over two-and-a-half years to train teachers in various areas including adaptation of curriculum and assessment for students with disabilities (Cumming, Dickson, & Webster, 2013).

Funding might not have a direct implication on inclusive assessment but it is a cross-cutting need, and as illustrated in the examples above, governments have encouraged mainstreaming inclusive education by provision of incentives and financial support to schools. Moreover, funding is a critical factor in the delivery of high-quality professional learning programmes to strengthen the capacities of teachers in teaching children with disabilities in mainstream settings.

More importantly, funding at all levels of education, government or nongovernment bodies, should be inclusive. A budget that is responsive to inclusion should focus on strengthening teacher capacity, pedagogy, curriculum, school infrastructure and environment, and assessments. Technical changes are impossible without financial investments from all financial stakeholders.

CONCLUSION

In the Asia-Pacific region, it is estimated that some 690 million persons with disabilities face several barriers to employment, political participation, education, and social protection (UNESCAP, 2012). Disability and poverty are linked to each other and people with disabilities and their families have higher chances of experiencing economic and social disadvantage than those without disability. Disability is a development concern, and education of children with disabilities can be advanced through multipronged policies and strong partnerships between development actors (WHO & World Bank, 2011).

Most countries in the Asia-Pacific region are undergoing a transition from segregated schooling of children with disabilities to inclusive education. The process involves reforms in curriculum, pedagogies, and learning assessments. While some countries focus on formative assessment of children with disabilities, others that have well-established national assessments or a history of participating in international assessments attempt to include children with disabilities through accommodations. However, children with severe disabilities or those who cannot be accommodated are usually exempted from participating in national and international assessments.

When considering the inclusion of children with disability in learning assessments, it is not surprising to find that the matter cannot be studied in isolation, and that one needs to consider the matter holistically from the larger perspective of inclusive education. Systemic changes and policies in education provide the background to the inclusion of children with disabilities in learning assessments. It is important to realise that full inclusion is possible only when the stigma and negative attitudes that underpin the transition are eliminated using targeted media and outreach campaigns.

To improve learning for every child, inclusive assessments are essential, to provide education stakeholders with robust data on the learning levels of all students for evidence-based decision making. Thus, the study suggests that system level programmes need to ensure mainstreaming of education of children with disabilities, provide teacher education with a focus on inclusion and specific modules on assessments, funding that incentivises and supports institutions promoting inclusion including evidence gathering on the learning of students with disabilities, partnerships with non-governmental organisations that support inclusion and provide access to a resource pool of assessment experts and ensure that leadership at all levels supports inclusion and uses inclusive assessments for evidence-based decision making.

In-depth country-specific research remains necessary to highlight national and local challenges in adopting inclusive education, including the development of inclusive assessments and accommodating students with disabilities in current learning assessments. Also, further research is required to develop an understanding of double disadvantage; education of girls with disabilities or education of children with disabilities belonging to ethnic groups and their inclusion within assessments in the Asia-Pacific region.

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