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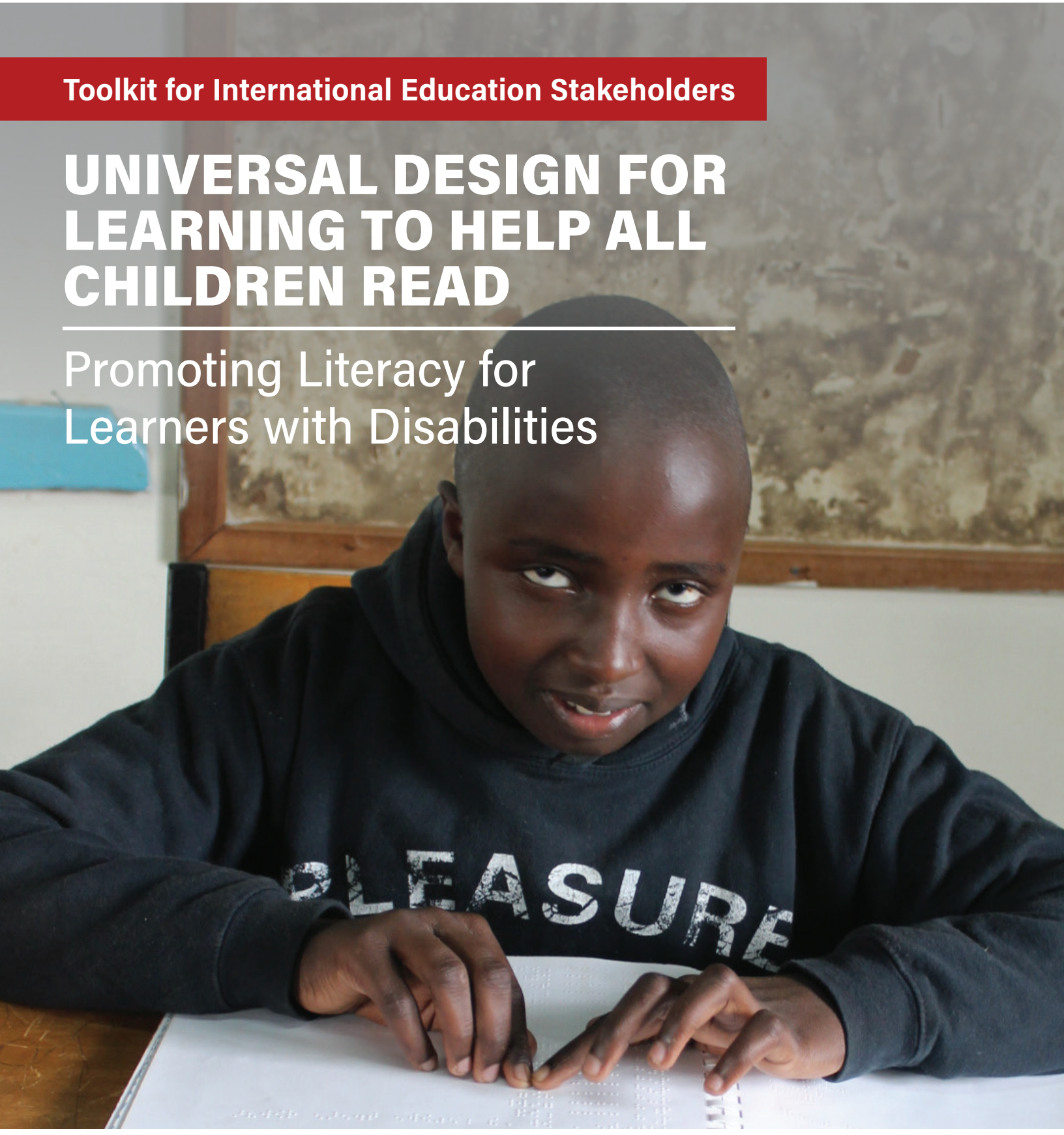
Toolkit for International Education Stakeholders

UNIVERSAL DESIGN FOR LEARNING TO HELP ALL CHILDREN READ

Promoting Literacy for Learners with Disabilities



Acknowledgments

The authors would like to thank all of the individuals who helped conceptualize, support and review the production of this toolkit. Thank you to the members of the Global Reading Network (GRN) and Josh Josa, Leah Maxson, Rebecca Rhodes, Nate Haight, and Eirini Gouleta of the USAID education team for their constructive support and guidance.

We would also like to thank The Global Reading Network secretariat at the University Research Co., LLC (URC), and particularly Deepa Srikantaiah, Richard Felty, John Micklos, Jr., Corinne Sirni, Amy Pallangyo, and the Project Director Jennifer Gerst who have worked tirelessly to perfect this product. This resource was developed by Reading within Reach (REACH), which is supported by the U.S. Agency for International Development (USAID). REACH works to facilitate the development, dissemination and application of evidence-based resources, research and practices to increase the impact, scale and sustainability of early grade reading (EGR) programs. As its Secretariat, REACH also provides support to develop and sustain the Global Reading Network, an interactive hub and resource repository to connect and mobilize stakeholders interested in early grade reading.

The authors also thank the African Disability Forum, Ola Abu Alghaib, Jean Andrews, Susan Bruckner, Jennae Bulat, Susan Copeland, Eileen Dombrowski, Julie Durando, Brent Elder, Ines Escallon, Craig Geddes, Kristen Layton, Linda Mason, David McNaughton and Chandra Whestine. Without a doubt, your inputs strengthened and richened this toolkit. Member organizations of the International Disability Alliance also contributed generously of their staff and resources to bring this toolkit to fruition.

Thank you also to the participants of the Experts Meeting held on May 1, 2018 at the World Bank who provided suggestions and contributions to the toolkit. Special thanks to the individuals who helped develop handouts for the Experts Meeting on their areas of expertise, which have been directly incorporated into Chapter 4 of the toolkit.

Also, we would like to dedicate the toolkit to our children with disabilities—Jack Ewing, Jay Turnbull (1967-2009) and Ramón and Teófilo Torres Morán—who represent children with complex support and complex communication needs, multiple disabilities and deaf/hard of hearing and who all obtained literacy skills. You are by far our best and most influential teachers and prove that all children can and should receive literacy instruction.

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Toolkit for International Education Stakeholders

UNIVERSAL DESIGN FOR LEARNING TO HELP ALL CHILDREN READ

Promoting Literacy for Learners with Disabilities

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This toolkit was made possible by the support of the American people through the United States Agency for International Development (USAID). This report was prepared by the USAID-funded Reading within Reach (REACH) initiative, implemented by University Research Co., LLC, for USAID's Office of Education (E3/ED), under Contract No. AID-OAA-M-14-00001, MOBIS#: GS-10F-0182T.

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SUGGESTED CITATION: Hayes, A., Turnbull, A., and Moran, N. (2018). UNIVERSAL DESIGN FOR LEARNING TO HELP ALL CHILDREN READ: Promoting Literacy for Learners with Disabilities (First Edition). Washington, D.C.: USAID

Contents

Abbreviations

AAC	Augmentative and alternative communication
AAP	American Academy of Pediatrics
ACR GCD	All Children Reading: A Grand Challenge for Development
ADHD	Attention Deficit Hyperactive Disorder
APA	American Psychiatric Association
ASL	American Sign Language
ASER	Annual Student Experience Review
BCC	Behavioral change communication
CBM	Christian Blind Mission
CRC	Convention on the Rights of the Child
CRPD	Convention on the Rights of Persons with Disabilities
CSI	Cognitive strategy instruction
DDST	Denver Development Screening Test
DFAT	Department of Foreign Affairs and Trade (Australia)
DFID	Department for International Development (Great Britain)
DPOs	Disabled Persons Organizations
EBD	Emotional and behavioral disorder
ECD	Early childhood development
ECI	Early childhood intervention
EDC	Educational Development Center
EGRA	Early Grade Reading Assessment
EiE	Education in Emergency
EMIS	Educational Management Information Systems
FNCDP	Fiji National Council for Disabled People
GIZ	German Federal Ministry of Economic Cooperation and Development
IDA	International Disability Alliance
IDEA	Individuals with Disabilities Education Act
IDC	Inclusive Development Center
IEP	Individualized education plan
IFC	International Classification of Functioning
LCD	Leonard Cheshire Disability
JICA	Japan International Cooperation Agency
LMA	Learning Media Assessments
LMICs	Low-and-middle-income countries
M&O	Mobility and Orientation
MOEs	Ministries of Education
MTSS	Multi-Tiered Systems of Support
NCDB	National Center Deaf-Blindness
NGOs	Non-governmental organizations
NLTS2	National Longitudinal Transition Study
NORAD	Norweigian Agency for Development Cooperation
OT	Occupational Therapist
PECS	Picture Exchange Communication System
PT	Physical Therapist
PTSD	Post-traumatic stress disorder
READ	Reading for Ethiopia's Achievement
RTI	Research Triangle Institute (RTI) International
SDGs	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
SLP	Speech and Language Pathologist/ Therapist
SMART	Specific, Measurable, use Action words, Realistic and Time-limited
SRGB	School-related gender-based violence
UDA	Universal Design for Assessments
UDL	Universal Design for Learning
UNICEF	United Nations Children's Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
VICTAR	Visual Impairment Centre for Teaching and Research
WASH	Water and sanitation for health
WFD	World Federation of the Deaf
WHO	World Health Organization

Preface

Children with disabilities are among the world's most marginalized learners, and are disproportionately affected by the global learning crisis.[1] Over 100 million children with disabilities worldwide are deprived of a meaningful education, leaving them without marketable skills and with little possibility of pursuing further education.[2] Learners with disabilities represent a significant percentage of the 387 million primary-age children around the world who are unable to read, write, or do math.[3] The human and dollar cost of this exclusion is significant. Countries lose billions of dollars of potential income when people with disabilities are not educated or working.[4]

USAID's Education Policy,[5] and The U.S. Government Strategy on International Basic Education,[6] call for a world where education systems in partner countries enable all individuals to acquire the education and skills needed to be productive members of society. USAID recognizes that, in order to improve learning outcomes worldwide and to expand access to school for the most marginalized, we must prioritize the education of learners with disabilities. At USAID, we understand that disability-inclusive schooling improves educational outcomes for all. We also partner with our fellow U.S. government agencies to promote a holistic approach to education for students with disabilities, so that they can both attend school and learn essential skills for future study and employment.

USAID is firmly committed to ensuring that national governments and their donor and civil society partners, particularly Disabled Persons Organizations (DPOs) and the families of children with disabilities, have the resources they need to enable students with disabilities to learn to read. Reading is the foundational skill necessary for all other academic progress. Sadly, in many contexts, children with disabilities are unlikely to go to school, let alone learn to read. Yet, we know that, through knowledgeable collaboration between education authorities, schools, DPOs, parents, and communities, we can create learning environments where students with disabilities learn to read.

This toolkit is designed to provide educators and their partners with a first-of-its-kind resource to do just that. Readers will find here easy-to-use explanations of the principles of universal design for learning (UDL). UDL is an approach to instruction that prioritizes meeting the needs of learners with disabilities. When UDL is applied to reading instruction, both students with and without disabilities learn how to read and prepare themselves for lifelong success.

This work would not have been possible without the assistance of the Global Reading Network, University Research Co., LLC, and the many other expert partners from multiple donor agencies and education organizations who provided input. I am proud to endorse this toolkit as a milestone on the path to ensuring that all children with disabilities receive a high-quality and equitable education, whoever and wherever they are.

Julie Cram
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USAID, Bureau for Economic Growth, Education and Environment (E3)

1 UNESCO, "Leaving No One Behind: How Far on the Way to Universal Primary and Secondary Education" (Paris: July, 2016)
2 UNICEF, Children and Young People with Disabilities FACT SHEET (New York: May, 2013)
3 UNESCO, UIS Fact Sheet No. 46: More Than One-Half of Children and Adolescents Are Not Learning Worldwide (Paris: September, 2017)
4 Oxford Journal of Development Studies 42:3, "The Nexus between Disability, Education, and Employment" (London, England: 2014) 439-453
5 USAID, USAID Education Policy, Forthcoming
6 USAID, U.S. Government Strategy on International Basic Education, Fiscal Years 2019-2023 (Washington, DC: September, 2018)

Introduction

Literacy is a core component of daily life. Reading and becoming literate are the most important skills a child can learn, yet in many countries students are not acquiring literacy skills. In many sub-Saharan African countries, of all children who have been in school for five years only 40 percent obtain literacy (USAID, 2012). The United States Agency for International Development (USAID) is committed to improving learning outcomes for all primary school students, including students with all types and severity of disabilities.

One framework that USAID has used to promote literacy is the Five Ts (USAID, 2012) which include:

1. More time devoted to teaching reading
2. Better techniques for teaching reading
3. More texts in the hands of children
4. Teaching children in the mother tongue (a language they use and understand)
5. Testing children's reading progress

These goals and approaches equally apply to children with disabilities. Like everyone, students with disabilities require literacy skills to break out of the poverty cycle, access health services (Taggart and McKendry, 2009) and gain employment (deFur and Runnels, 2014). Literacy skills for students with disabilities also improve their ability to be a fully engaged citizen, and their ability for self-advocacy and self-determination (Downing, 2005). However, most students with disabilities in low-and-middle-income countries (LMICs) are either not receiving a quality education or are denied access to education altogether. It is estimated that only 10 percent of children with disabilities are enrolled in schools with only half this number completing primary school (Peters, 2003). Once in school, their teachers are often not appropriately trained to teach students with disabilities. Although there are no official worldwide statistics, it is believed that illiteracy rates for children with disabilities are significantly higher than for children without disabilities.

This toolkit helps provide evidence-based research on the "how" to educate students with disabilities while providing recommendations on how to build a holistic, multi-tiered model of supports within the general education classroom.

The suggested educational approaches highlighted in this toolkit can improve the learning for all children, including those who may need additional learning supports due to exposure to trauma, war and/or natural disasters.

By ratifying the United Nations Convention on the Rights of Persons with Disabilities (CRPD), governments worldwide are looking to strengthen educational services for students with disabilities. Many countries are looking to transition from a segregated educational system to one that promotes inclusion. Inclusive education[1] has sometimes been modeled as occurring in three waves: 1) addressing the questions of why education and where to educate, 2) learning how to meaningfully educate all students in an inclusive setting and 3) providing a school-wide, multi-tiered model approach that supports the learning and behaviors of students with and without disabilities with specialized instruction and supports (Turnbull et al., 2016). While many LMICs have fully accepted the concepts of "why" and "where" and have committed to providing inclusive education, most struggle with the second and third waves of inclusive education. This toolkit adheres to the CRPD, supporting inclusive education as the most appropriate educational setting for students with disabilities.[2]

The toolkit was developed through a participatory process. This involved:

- Input from educational stakeholders through the Global Reading Network. The Global Reading Network brings together donors, practitioners, government officials, national and international civil society organizations, and other stakeholders committed to improving reading outcomes for primary grade children around the world. With the support of USAID and other key donor and development partners, the Network collects, develops and disseminates evidence-based practices to increase the impact, scale, and sustainability of primary grade reading programs. For more information please visit the Global Reading Network webpage https://globalreadingnetwork.net.
- Expert interviews with more than 30 key stakeholders including academics, educational non-governmental organizations (NGOs), NGOs focusing on disability, DPOs, and representatives from Ministries of Education (see Annex A for a full list).
- An extensive desk review of more than 500 articles, documents, reports and books.
- Findings discussed during an Experts Meeting on Literacy and Learning held on May 1, 2018 at the World Bank with 40 in-person experts as well as comments and suggestions from more than 130 individuals participating virtually.
- Review of technical sections of the report by experts working in related fields.

Although this toolkit focuses on the needs and educational techniques and approaches to support literacy skills for students with different disabilities, these practices are also fundamental good teaching practices that can be applied with most students to improve literacy skills. Many students who may not have disabilities also struggle to read and write. The struggle to acquire literacy skills can be caused

1 Although some definitions of inclusive education include the inclusion of girls and all minorities (indigenous, ethnic and racial minorities), for the purposes of this toolkit, inclusive education is focused on the education of children with disabilities and their right to receive an education within the general education system.

2 Please see the textbox in section 1.3 for how inclusive education is defined for students who are deaf/hard of hearing.

by illnesses, exposure to trauma due to natural disasters, war or gender-based violence, and poverty. Children who cannot focus on their school work because they are hungry or afraid may exhibit the same characteristics and challenges in learning as a child with a disability. Although some interventions suggested in this toolkit apply only to one or more categories of disabilities, most suggestions support and improve the learning of all students with and without disabilities.

Purpose and Structure of the Toolkit

Providing evidence-based research and information on effective teaching techniques, this toolkit includes information on how to teach literacy skills to students with different categories of disabilities. It also addresses additional supports that promote literacy acquisition and how to best apply these theoretical approaches in practice. In particular, the toolkit highlights different literacy instruction, and supports using the Universal Design for Learning (UDL) to show the different ways students with different disabilities learn.

The toolkit is also based on the premise that all children can learn to read and should have equal access to quality instruction. As it is just as important to educate students with disabilities as it is to educate students without disabilities, it is equally important that no single category of disability is prioritized above others. The toolkit attempts to show the literacy needs of diverse learners, emphasizing the different approaches that may help students become literate.

Though the toolkit will provide some information on multiple aspects of literacy (grammar, spelling and writing), the techniques and interventions focus on the concept of reading consistent with USAID's priorities. The toolkit primarily focuses on early grade learning in primary school as early literacy skills are needed to achieve education in later years. The main audience for this toolkit is USAID Education Officers and implementing partners working in the area of inclusive education. This document may also be helpful to support Ministries of Education (MOEs), Disabled Persons Organizations (DPOs), teachers, and administrators in their efforts to improve education for students with disabilities.

Defining DPOs

Disabled Persons Organizations can be defined as organizations where people with disabilities provide leadership and constitute a majority, i.e., over 51 percent, of the staff, board, and volunteers. DPOs can include parent organizations (only ones representing children or individuals with intellectual disability) where the primary aim of the organization is empowerment and growth of self-advocacy of persons with disability. DPOs are organizations of, by, and for persons with disabilities.

Chapter 1 provides information about students with disabilities. Chapter 2 provides information on the supports and services that can be put into place to promote acquisition of literacy skills. Chapter 3 provides information on the phases of literacy for students with disabilities, specific instructional techniques using the framework of UDL and suggestions on how to monitor students' progress. Chapter 4 discusses how these recommendations can go from theory into practice in LMIC settings, with recommendations for funding practices as well as suggestions for a phased approach to move towards inclusive education systems. This is the first iteration of this toolkit; it is anticipated that future versions will be developed and released that build upon lessons learned and application of recommendations in LMICs.

This guide provides introductory information on the supports and services that promote literacy for all children. For many countries with emerging inclusive education systems, these recommended supports and services may be aspirational but can serve as examples of good practice that they can move towards. Implementing the recommendations within the toolkit will require incremental and sustained efforts by a variety of stakeholders. Developing an inclusive education system that serves the needs of all students takes time to develop and undoubtedly governments and other stakeholders will encounter several obstacles and challenges during implementation. However, the lack of existing programs, policies and structures should not serve as a deterrent for progress and change; it is important the foundations for inclusion are progressively and responsibly realized so that all students can learn. Annex B provides a self-reflection checklist that covers many of the items in the toolkit to help educational systems recognize possible gaps and areas for improvement.

Universal Design for Learning

Before engaging with this toolkit to support full inclusion of students with disabilities, it is critical to note that the approach detailed here is aligned with and supported by USAID's commitment to UDL. In any quality education program, UDL can support access, engagement, and higher quality instruction for all students, and thus is the backbone of all USAID-funded education programs. By further familiarizing yourself with UDL prior to engagement with this toolkit, you will be better able to understand the intrinsic value of a UDL approach for all learners.

Universal Design for Learning: Research Tells Us...

- Research on the benefits UDL to support student progress in literacy, math and science is beginning to emerge (Rao, Ok, & Bryant, 2014).
- Students who received instruction using UDL principles made significant gains in reading (Coyne et al., 2012).
- Early grade classrooms that used UDL and multi-sensory practices were shown to increase motivation and reading comprehension skills (Brand & Dalton, 2012).

Based on the architectural concept that accessible environmental changes help persons with disabilities and help all individuals (e.g., ramps in the sidewalks help people with strollers and rolling suitcases, etc.), the concept of UDL applies to learning. UDL is based upon the premise that there is tremendous variability in how children learn (Meyer, Rose, & Gordon, 2014); thus, it is important to develop learning environments, curricula, methods and materials that align with student learning differences. The focus moves from disability to variability. Although first introduced as a research-based framework to address the learning variability of students with disabilities, UDL has increasingly been applied to broad educational and cross-cultural applications. UDL is viewed very effective as it merges both neuroscience and learning sciences. Figure 1 provides a summary of the brain networks and the link to UDL principles.

Figure 1. UDL's Merger of Neuroscience and Learning Science

Brain Networks	UDL Principles
Affective networks enable students to engage with the environment consistent with their emotions and proactivity.	Multiple means of Engagement—the "why" of learning. How students are best motivated to learn.
Recognition networks enable students to perceive and understand input.	Multiple means of Representation—the "what" of learning. How students best receive information or learn information.
Strategic networks enable organization, action planning, implementation, and self-monitoring.	Multiple means of Action and Expression— "the "how" of learning. How students best express knowledge and what they have learned.

Source: CAST, 2018

The three means principles are of UDL are described as follows.

Multiple means of Engagement *(foster students' motivation in a variety of ways)*

The principle of engagement affirms that students are motivated and engaged in learning in a variety of ways. Thus, it is critically important to consider options for making learning purposeful and motivating for students. For example, during reading instruction students will vary in their preferences for reading topics, silent or oral reading comprehension work, reading individually or with peers, amount of time in a lesson, how and what feedback is provided, and many other options. Children with disabilities vary in attention span and often require different intensity of reinforcements. CAST (2018) points out that "Information that is not attended to, that does not engage learners' cognition, is in fact inaccessible." Students who experience Attention Deficit Hyperactive Disorder (ADHD), autism and intellectual disability who are taught through engaging and motivating instructional strategies are more likely to be successful with literacy.

Multiple means of Representation *(present information to students in a variety of ways)*

The principle of representation highlights the need to create various ways for students to learn. In teaching spelling, some students learn better by seeing things visually while others benefit from using auditory channels. Offering only one instructional option limits the accessibility of information. For example, students who are blind/low vision will need to receive the information orally or tactilely while students who are deaf/hard of hearing benefit from visual learning. CAST (2018) provides Book Builder, a free electronic platform that enables teachers to create personalized and engaging e-texts (with pictures, graphics and coaching avatars).[3] The key is to match students' learning strengths in "taking in" information with teachers' means of providing it.

Multiple means of Action and Expression *(enable students to express what they learn in a variety of ways)*

The Principle of Action and Expression focuses on how students show what they learn. Whereas the Principle of Representation focuses on input, the Principle of Action and Expression focuses on output. All students have different preferences, strengths and needs related to expressing what they

3 For more information on Book Builder, please visit http://bookbbuilder.cast.org

learn. For example, some students prefer to express learning through multiple choice questions, others prefer oral examinations, while others may do better when given the option to write. Writing and spelling are elements of literacy that particularly require multiple options for demonstrating mastery of knowledge. For example, Dragon Dictation is a high-tech example of children, as young as six, being able to demonstrate what they have learned without writing and spelling barriers.[4] Similarly, a low-tech option is sharing responses orally to a peer note taker. An additional example is students with and without disabilities may prefer to use sign language or AAC to express their thoughts and understanding of concepts.

CAST is an organization that has led the development of UDL.[5] In addition to Book Builder, their website is rich with resources that make it feasible for teachers to incorporate UDL for students with or without disabilities. Their free learning materials include authoring tools for developing UDL-based curricula and lesson plans, translation of books into an online interface providing alternatives in how information is presented, and templates for creating flexible materials.

Reflect on Your Context

What would be the logical next steps for your country to move towards using UDL in classrooms?

What do you see as the benefits of UDL?

How can UDL be incorporated into teacher training?

4 For more information on Dragon Dictation, please visit http://learningworksforkids.com/apps/dragon-dictation

5 For more information on CAST, please visit www.cast.org

Chapter 1: Background on Students with Disabilities

Special Education is a service, not a place.

To best understand how literacy instructional techniques for students with disabilities can be improved, it is important to understand the current situation of children with disabilities worldwide and the current status of education. Likewise, it is also important to understand how literacy can be expanded to apply to all students, including those with and without disabilities. This chapter of the toolkit:

- Describes the current situation of children with disabilities worldwide
- Explains how literacy can be expanded for all students, with and without disabilities
- Explains the different educational settings for students with disabilities
- Informs how the toolkit follows the CRPD to encourage transition from segregated to inclusive programs

1.1 The Situation of Children with Disabilities

Key Highlights

- Disability is a part of every country, region, ethnic and racial group, and socio-economic status, accounting for approximately 15 percent of any given population.
- Children with disabilities face various attitudinal, physical, communication and social barriers that impact their ability to receive quality education.
- Children with disabilities face additional multiple layers of discrimination due to ethnicity, gender, ethnicity, language, race, sexual orientation or socio-economic status.

More than one billion people, 15 percent of the world's population, have a disability. Eighty percent live in LMICs, including 150 million children (WHO, 2011). Most children with disabilities in LMICs have limited to no access to education. More than 25 million children from Sub-Saharan Africa and South Asian countries are completely excluded from the formal education systems (UNESCO Institute for Statistics, 2005). One research study supported by the United Nations Children's Fund (UNICEF) in 15 countries found that more than 85 percent of primary school-aged children who were out of school had never attended school (Mizunoya et al., 2016). Prejudicial stereotypes and discriminatory attitudes often serve as barriers limiting access to school and, for those who attend school, limit learning and access to content. Many individuals believe children with certain types of disabilities are "uneducable" and then further perpetuate this misperception with aligning discriminatory legislation or denying children with disabilities the opportunities to learn (UNICEF, 2013). Other families are less likely to enroll their child with a disability in school due to inaccessible facilities, lack of accessible

Recognizing Disability as a Social Construct

It is important to recognize that disability is a social construct which was established by society to construct a definition of disability that reflects social expectations of health and functionality (Jones, 1996). Similarily, the CRPD which states that disability is an "evolving concept and that disability results from the interaction between persons with impairments and the attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis as others" (United Nations, 2006). Because disability is socially constructed, the definition of disability varies by country and context. For the purposes of this toolkit, students with disabilities include those with:

- Communication disorders
- Intellectual disability and complex support needs
- Learning, emotional or attention disabilities
- Multiple disabilities
- Sensory disabilities (blind/low vision, deaf/hard of hearing and deaf-blind)
- Physical or mobility disabilities

transportation and the negative attitudes and bullying often experienced by students with disabilities in schools (WHO, 2011). Students with disabilities often require accommodations and additional services to support their learning. These supports and services are often not available to many children with disabilities worldwide.

Global Education of Students with Disabilities: Research Tells Us...

- In low-income countries, rates of vision and hearing disabilities are substantially higher than high-income countries (Kong et al., 2012; Stevens et al., 2013). Yet these children are significantly less likely to attend school compared to students without disabilities.
- As many as of 80 percent of students who are deaf worldwide receive no form of education (World Federation of the Deaf, 2018). Only 1-2 percent of students who are deaf have access to education in **local sign language** in LMICs (World Federation of the Deaf, 2017).
- Only 5-15 percent of students who require assistive devices and technologies to learn and function in society have access to them (WHO, 2017).
- Children with intellectual disability, **complex support needs**[6] and emotional disabilities are considered to be the group with the least access to education (Filmer, 2008; UNESCO 2004).

6 The term "complex support needs" incorporates needs of students who have developmental disabilities and need significant support but may not have an intellectual disability. A developmental disability can be defined as a long-term disability that can effective cognitive ability, physical functioning or both (National Institute of Health, 2018).

In addition to these barriers to learning, many students with disabilities experience discrimination and challenges based on issues related to gender, ethnicity, and socio-economic status. Additional information on multiple layers of discrimination follows.

- **Ethnicity and disability.** In many countries, ethnic minorities have less access to education. This is especially true for ethnic minorities with disabilities. Once in school, ethnic minorities are often misidentified and over-represented in special education systems. This is true within the United States and other countries (Anatasiou et al., 2017). For example, both New Zealand and the Province of British Columbia of Canada have high percentages of ethnic minorities needing special education services compared to non-indigenous populations (Gabel et al., 2009). Over-representation is even more prevalent in countries where there are associated stigmas and prejudices toward certain minorities. For example, in Macedonia, although Roma account for only 2.66 percent of the population, Romani students represent 46 percent of the special education population (European Roma Rights Center, 2012). This over-representation is often caused by racial bias, less access to prior education and disability identification tools that do not account for differences in the language that children use and understand.
- **Gender and disability.** Girls with disabilities are particularly vulnerable to marginalization. They are less likely to attend school than boys with disabilities. For example, the World Health Organization (WHO) World Report on Disability (2011) estimates that 50.6 percent of males with a disability have completed primary school, compared with 61.3 percent of males without a disability. Comparatively, only 41.7 percent of girls with a disability complete primary school compared to 52.9 percent of females without a disability. Inaccessible latrines are cited as a primary reason why girls with disabilities do not attend school, especially for girls who are menstruating (World Vision, 2014). Girls with disabilities are also more likely to experience gender-based violence, sexual abuse and exploitation (United Nations Secretary General, 2006). Literacy rates for women with disabilities are extremely low, compounded by excusion from adult literacy campaigns and outreach (Groce & Bakshi, 2011).

Bullying and Disability

Bullying is an issue that impacts all students in a classroom including those being bullied, those who bully and those who witness bullying. Students who are bullied are at an increased risk of depression or anxiety, health complaints and decreased academic achievement (United States Department of Health and Human Services). In the United States, students with disabilities at a minimum are twice as likely to be victims of bullying compared to students without disabilities (Rose, Monda-Amaya, & Eselage, 2011). It is likely that this percentage may be even higher in countries that hold dominant negative societal beliefs towards persons with disabilities. Because of this, it is paramount to integrate perspectives of child dignity and safety in all trainings and interventions. Focusing on dignity and safety, addressing personal or cultural biases, using respectful person first language, and deemphasizing labels are all ways to combat bullying and are highlighted throughout the toolkit. While the risk of being bullied should not be an excuse to not provide education of children with disabilities, it is important to recognize this heightened risk that students with disabilities may be victims of bullying and address and mitigate this issue to the maximum extent possible.

- **Poverty and disability.** There is an undisputed link between disability and poverty; both being a cause and consequence of each other. Barriers to education and literacy acquisition can result in less employment. Likewise, poor living conditions, lack of access to health care and malnutrition can increase the incidence of disability. Persons with disabilities were historically not included in national poverty assessments (Braithwaite & Mont, 2008). Persons living in poverty, including persons with disabilities, tend to have less access to reading materials and often enter school with weaker pre-literacy skills and vocabularies, which puts them at a marked disadvantage compared to students from more affluent families (Allington & McGill-Franzen, 2008).

Closer Look at Inclusion: The Cost of Inclusion Versus Exclusion

One question that arises when addressing education of children with disabilities is associated costs. Many countries have cited cost of inclusive education is the primary reason for delaying implementing educational reform that serves all children (Chireshe, 2013). It is important that countries budget for inclusion and recognize that transitioning to a system that serves all children has additional associated costs (e.g. professional development, assistive technologies, and paraprofessionals). However, after the initial investment costs, inclusive education is more cost effective than supporting segregated education (UNICEF, 2012). More than 100 studies have shown that maintaining a separate parallel education system for students with disabilities (with separate facilities, residential facilities and administration) is more expensive and less sustainable (McGregor & Vogelsberg, 1998). Most high-income countries dedicate between 12-20 percent of their education budget towards special education (Sharma, Forlin, & Furlonger, 2015). However, many services related to teaching students with disabilities can be implemented with no to little additional costs. Another innovative idea is working with the school and community to develop income generating activities to help supplement additional costs associated with education of children with disabilities. For example, in rural Kenya schools sold livestock and vegetables to help support the education of children with disabilities in their community (Elder, 2016).

It is important to recognize that there are associated costs with educating all students, but the costs of exclusion are, in the long run, more extensive, due to the lack of future employment and reliance on welfare. Research conducted by Christian Blind Mission (CBM) and the London School of Hygiene and Tropical Medicine found that that cost of exclusion is significantly more than the associated costs of inclusion. For example, the research found that Bangladesh loses an estimated US $891 million a year due to people with disabilities not receiving an education and thus not being able to contribute to the workforce (Banks & Polack, 2014). The International Labour Organization (ILO) estimates that as much as 7 percent of a country's Gross Domestic Product (GDP) can be lost due to excluding persons with disabilities in school and other services (Buckup, 2009).

There is also strong evidence that the return on investment for educating students with disabilities is significantly higher than those students without disabilities with the World Bank estimating return on investment to be two to three times higher (Patrinos, 2015).

Reflect on Your Context

In your country, do all children with disabilities go to school?

What additional forms of discrimination do girls with disabilities face?

Are persons with disabilities more likely to experience poverty? Why or why not?

1.2 Defining Literacy for Students with Disabilities

Key Highlights

- Traditional definitions of literacy may exclude persons with disabilities.
- A broader understanding of literacy is needed to include students with disabilities.
- It is important to support inclusive definitional principles for students with disabilities.

The USAID Landscape Report on Literacy uses the United Nations Educational, Scientific and Cultural Organization (UNESCO) definition of literacy provided within the Aspects of Literacy Assessment. UNESCO defines literacy as:

> *"the ability to identify, understand, interpret, create, communicate and compute using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve his or her goals, develop his or her knowledge and potential, and participate fully in community and wider society." (UNESCO, 2005, p. 21)*

Strict adherence to this or similar definitions focused on written and printed text exclude many students with disabilities. Literacy definitions need to allow for flexible, multisensory approaches and for students to use a variety of technologies (both low and high tech) to help them gain and communicate learning on an individual basis. It is important to recognize that there are many different ways to "read" and likewise, many different ways to express literacy skills that go beyond traditional oral responses. The belief that persons with disabilities who have complex support needs cannot acquire literacy often results in teachers not providing students with opportunities to learn literacy skills and thus becomes a self-fulling prophecy (Keefe & Copeland, 2011).

Literacy should instead be seen as the ability to use an appropriate and diverse set of literacy materials to learn concepts and be able to express those concepts through different means. These multisensory approaches allow for concepts to be received through print, braille, tactile and symbolic materials and allow students to communicate their knowledge through diverse means such as sign

language, oral expression and technology. This toolkit uses the broader definition of literacy more applicable to students with disabilities. The toolkit also supports core definitional principles of literacy proposed by Keefe and Copeland (2011, p. 97):

1. *"All people are capable of acquiring literacy.*
2. *Literacy is a human right and is a fundamental part of the human experience.*
3. *Literacy is not a trait that resides solely in the individual person. It requires and creates a connection (relationship) with others.*
4. *Literacy includes communication, contact, and the expectation that interaction is possible for all individuals; literacy has the potential to lead to empowerment.*
5. *Literacy is the collective responsibility of every individual in the community; that is, to develop meaning making with all human modes of communication to transmit and receive information."*

1.3 Educational Settings and Learning Outcomes

Key Highlights

- Educational settings not characterized by inclusion may exist in countries in which USAID works; only inclusive education is supported by the CRPD.
- Segregation and integration are not requisite steps to establish inclusion.
- Inclusive education for students who are deaf/hard of hearing signifies being in a communication-rich environment where they communicate directly with peers and teachers using local sign language.
- Students with and without disabilities have stronger educational achievements and social growth when educated in inclusive settings.
- Students without disabilities benefit academically when there are students with disabilities in their classroom as well as being more accepting of diversity as adults.
- Special education signifies the supports and services that help support education in an inclusive environment, not education in a segregated setting.

1.3.1 Understanding Different Educational Settings

To promote inclusive education, it is important to understand what inclusive education means, and to recognize the different settings for students with disabilities that are typically encountered around the world. This is relevant to literacy acquisition, as the setting often dictates access to literacy instruction and other content within the national curriculum. The General Comment 4 on Article 24 of the CRPD defines these settings as follows (United Nations, 2016, p. 4):

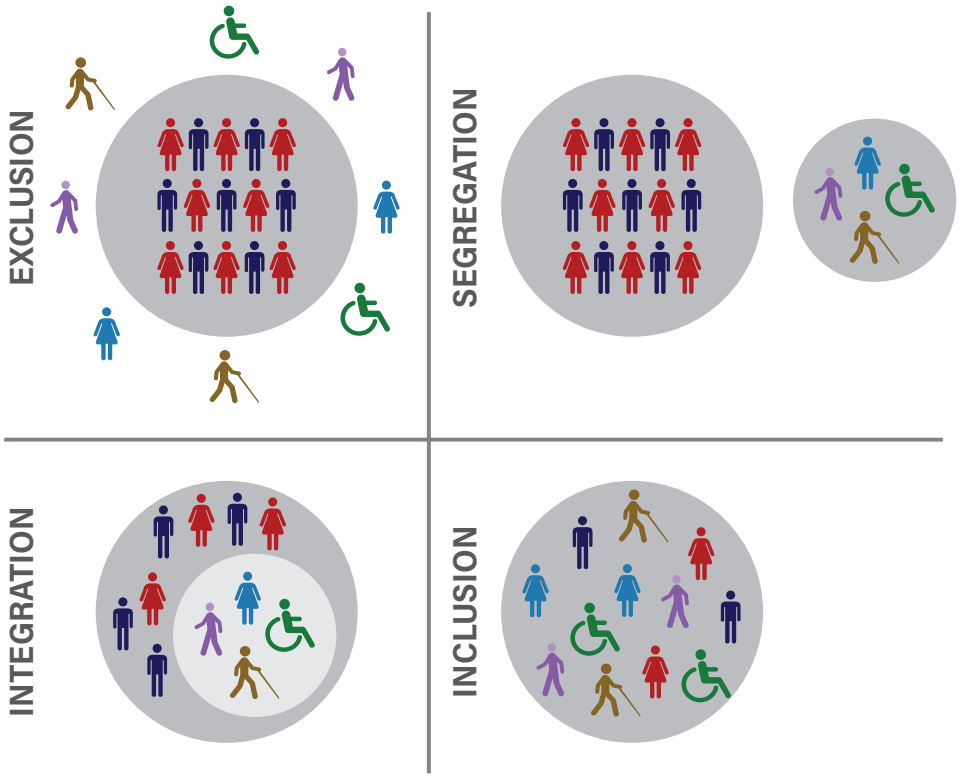
- *"**Exclusion** occurs when students are directly or indirectly prevented from or denied access to education in any form.*
- ***Segregation** occurs when the education of students with disabilities is provided in separate environments designed or used to respond to particular or various impairments, in isolation from students without disabilities.*

- ***Integration*** *is a process of placing persons with disabilities in existing mainstream educational institutions, as long as the former can adjust to the standardized requirements of such institutions.*[7]
- ***Inclusion*** *involves a process of systemic reform embodying changes and modifications in content, teaching methods, approaches, structures and strategies in education to overcome barriers with a vision serving to provide all students of the relevant age range with an equitable and participatory learning experience and environment that best corresponds to their requirements and preferences."*

Integration in many countries also refers to the practice of educating students with disabilities in the general education schools. In these settings, students with disabilities are required to spend the vast majority of their days in resource rooms or segregated classrooms for students with specific types of disabilities (e.g., classrooms for students who are blind, classrooms for students with intellectual disability). Figure 2 illustrates the four dimensions of exclusion, segregation, integration and inclusion.

It is important to note that segregation and integration are not requisite steps before inclusion can be provided to students. Nor does integration guarantee a transition from segregation to inclusion (United Nations, 2016). In addition, access to a general education classroom also does not mean automatic inclusion of children with disabilities. The goal of inclusion is not just physically getting children with disabilities into general education classrooms (Fosset, Smith, & Mirenda, 2003) but rather to "ensure that all students are learning and are challenged to learn to their maximum potential"

Figure 2. Four Dimensions of Exclusion, Segregation, Integration and Inclusion



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7 A/HRC/25/29, para. 4 and UNICEF, The Right of Children with Disabilities to Education: A Right-Based Approach to Inclusive Education (Geneva, 2012).

(Downing, 2005, pg. 38). Figure 3 describes the characteristics of what inclusion means and does not mean. Once in school, it is critical that all children receive specific instruction on literacy, numeracy, and other subjects established in the national curriculum.

Less than 2 percent of Finnish children with disabilities are educated in segregated schools (Jarvinen, 2007) and less than 1.7 percent of children with disabilities in Sweden are educated outside of the general education classrooms (Government of Sweden, 2012).[8] However, in most LMICs, education of children with disabilities still takes place in highly segregated settings outside of the education system. In many countries education is provided by NGOs with minimal oversight or engagement by the MOE. For example, in Morocco, almost all students identified as having a disability are educated by non-profit organizations, with the MOE only recently overseeing education and contributing to funding of the education of children with disabilities. Students in many of these segregated institutions receive minimal literacy instruction (RTI International, 2016). In Cambodia, students with disabilities are typically educated by NGOs with the MOE

Figure 3. Characteristics of Inclusive Education

Inclusion Means	Inclusion Does Not Mean
Students with disabilities attend their neighborhood/ village school or the school they would attend if they did not have a disability.	Students can only attend segregated schools or integrated classrooms that may or may not be near their local school.
No child is excluded based on type or degree of disability.	Only children with mild disabilities are allowed to be a part of inclusive education while those with higher support needs are required to be educated in segregated settings.
A natural proportion of students with disabilities attend each school and classroom.	Overloading classrooms with students who have disabilities or who are at risk.
Students with and without disabilities receive education to address their individual needs.	Jeopardizing the achievement of general education students through slower instruction or a less-challenging curriculum.
Each child is in an age-appropriate general education classroom.[9]	Students with disabilities are kept in early grades without the option of learning more complex concepts.
Special education supports are provided within the general education classroom.	Students with disabilities are placed in general education classrooms without careful planning and adequate support.
All members of the school stakeholders (administration, staff, students and parents) promote cooperative teaching arrangements, with school-based planning, problem-solving and ownership of students with and without disabilities.	Relegating special education teachers to the role of assistants in the general education classroom or assuming that the general education teachers will lead special education services and thus reduce funding for special education services.
Every student is accepted and regarded as a full and valued member of the class and the school community.	Isolating students with disabilities socially, physically or academically within the general education classroom.

Source: Adapted from Hayes & Bulat (2017) and McLeskey & Waldron (2000)

8 These figures do not reflect the estimated time that children with disabilities spend in the general education classroom versus self-contained classrooms but rather placement in segregated or general education schools.

supporting teacher salary and teacher training (Kalyanpur, 2016). While many countries have legislation that requires inclusive education, in reality, segregation remains the predominant practice in most countries.

Education is a fundamental human right for all children. Children with disabilities often require specialized services (access to specialists, accommodations, modifications to the curriculum and different instructional techniques) to reach their full academic potential. These specialized services are often referred to as special education services. Special education services are defined as the process of providing specially designed instruction at no extra cost to parents in order to meet the unique needs of students with disabilities (Turnbull, Turnbull, Wehmeyer, and Shogren, 2016). In the past, many people have misinterpreted special education services to mean that students with disabilities should receive their education in segregated places, including special classes, or special day or residential schools. Article 24 of the CRPD clearly requires that students with disabilities "can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live." Furthermore, the General Comments regarding Article 24 stipulate provision of specially designed instruction in general education classes:

> *. . .each student learns in a unique manner and involves developing flexible ways to learn: creating an engaging classroom environment; maintaining high expectations for all students, while allowing multiple ways to meet expectations; empowering teachers to think differently about their own teaching; and focusing on educational outcomes for all, including those with disabilities. . . Curricula must be conceived, designed and applied to meet and adjust to the requirements of every student. . . (p. 9).*

Special education services refer to the process of providing specially designed instruction within general education settings at no cost to parents in order to meet the unique needs of students with disabilities. It is important that special education services are a core component of general education systems, not a parallel system. However, since persons with disabilities represent a non-homogenous group, it is important that supports provided to promote literacy skills for students with disabilities are diversified. Not all techniques and supports work for all students (even for all students with the same disability diagnosis).

Reflect on Your Context

Where are children with disabilities educated in your country?

Do children with higher support needs have the opportunity to enroll in their local schools?

If there are segregated/special schools, are they also residential?

What do you think is the impact of living away from the family and community environment?

Do students who are deaf/hard of hearing have the ability to learn in a sign language rich environment?

9 In many LMICs, there are often overaged children in primary schools. Because of this, children with disabilities are not always be in age-appropriate classrooms. It is important that children with disabilities not be arbitrarily withheld in lower grades but be allowed to move forward in their education on an equitable basis as their peers.

Closer Look at Inclusion: Inclusive Settings for Students Who Are Deaf/Hard of Hearing

The inclusive environment or "least restrictive environment" for students who are deaf/hard of hearing does not always mean attending their local general education school. Communication through sign language is needed for students who are deaf/hard of hearing/deafblind to obtain language acquisition, communicate, and build literacy skills. It is vital that students who are deaf/hard of hearing/deafblind learn the same curriculum as other students, but from teachers who are fluent in sign language. As stated by the World Federation of the Deaf (WFD): "Inclusive Education for deaf children should be viewed from a wider perspective to include all factors of learning environment including, as noted in the CRPD, the cultural and linguistic identity of deaf people" (WFD, 2014).

For many students who are deaf/hard of hearing in LMICs the only educational options are:

1. Attend their local schools with minimal supports, or
2. Attend one of the few schools for the deaf which provides residential services; such schools are often far away from their homes.

Both scenarios present challenges. When students attend local schools, students who are deaf/hard of hearing are often not provided with sufficient supports in sign language and cannot communicate or engage socially with peers due to language barriers. This can create a scenario that is by far more isolating than inclusive. While attending schools for the deaf can allow for improved acquisition of sign language skills, in many LMICs these schools do not follow the national curriculum. Similarly, being removed from the family environment presents challenges, especially for very young children. Better options are to promote:

1. Co-enrollment schools, where students who are deaf/hard of hearing attend school alongside children who can hear, and receive a language-rich education, communicating with teachers and peers via sign language, or
2. Day schools for students who are deaf/hard of hearing, where students who are deaf/hard of hearing have same-age and cross-age peers who are also deaf, as well as adults who are deaf/hard of hearing conversational partners so they can develop full language within a language-rich education but still live with their families.

Students who are deaf/hard of hearing and their families require information to make an informed choice about the educational setting that works best for the child. This choice should not be made by medical authorities (WFD, 2014) or by the government/school district, as this is not aligned with the CRPD. Instead, the choice needs to be individualized, and the student's abilities and needs should be identified before placement is discussed. Issues such as "language acquisition, qualified personnel, direct language access, academic process, membership in a language community and participation in after-school programs must be discussed and quantified" (Tucker, 2010/2011. p 1). It is important that the needs of the individual student who is deaf/hard of hearing drive placement decisions. For more information on the WFD's position on inclusive education, please visit their policy paper at: http://wfdeaf.org/news/resources/5-june-2018-wfd-position-paper-inclusive-education/

1.3.2 Positive Impact of Inclusion for Students with Disabilities

There is a common misperception that students with disabilities learn better in segregated settings and that being educated in segregated schools or self-contained classrooms improves learning outcomes. This is false. Research shows that students learn best in inclusive settings.

Positive Impact of Inclusive Education on Students with Disabilities: Research Tells Us...

- Students with learning and behavioral disabilities educated in inclusive settings are twice as likely to attend postsecondary education when compared to peers in segregated settings (Rojewski, Lee, & Gregg, 2013).
- Students who are educated in inclusive settings are more likely to have improved individualized education plans quality, more student engagement, more likely to make friends, and have fewer challenging behaviors (Bui et al., 2010).
- Students with disabilities have the greatest access to the general education curriculum when they attend general education rather than segregated classes (Ryndak, et al., 2014; Wehmeyer & Shogren, 2017).
- Students with learning disabilities in 2nd grade inclusive classrooms made significantly more progress than their same-aged peers with disabilities in special classes. The achievement of students in special classes decreased significantly between the beginning and end of 1st and 2nd grade (Tremblay, 2013).
- Students with intellectual disability and autism make more academic progress in inclusive classrooms than segregated ones and they do not receive more systematic and individualized instruction in segregated classes (Kurth & Mastergeorge, 2012).

Closer Look at Inclusion and Individualized Instruction: Push-in Versus Pull-out

When students with disabilities need individualized instruction or related services (such as speech therapy or physical therapy), there are two ways this can be done: the push-in or pull-out method.

"Pull-out" method is where students with disabilities are removed from the classroom and provided instruction in a "resource room" or alternative space. When this takes place too often, students may miss valuable instructional time being offered to their peers and fall further behind in learning. This method can also interfere with a student's perception of belonging in the classroom and create negative stigma.

"Push-in" method is where students with disabilities receive special education services within the general education classroom. The special education teacher and general education teachers work together to ensure that children have access to the curriculum with minimal disruption.

Research shows that using only a pull-out method reduces a student's ability to read words correctly compared to using push-in or combined methods individualized for the student (Marston, 1996). As a result, many high-income countries are moving to push-in methods for special education instruction, while many LMICs, such as China and Jordan, are establishing systems that rely on the pull-out method (Hayes et al., 2018). While there may be situations where pull-out services are needed (for example, if a small group setting improves concentration), it is important to use this practice minimally, enabling as much time as possible with peers. As countries develop systems for children with disabilities, learning from what works will be a valuable tool.

Almost 40 years of research indicates that students with disabilities perform better in inclusive settings than segregated settings.

(Falvey, 2004)

Time spent in inclusive classrooms matters. When students are in integrated settings or self-contained classrooms, they have less access to the national curriculum and their time is often spent on non-academic instruction. There is a significant difference in instructional time between an inclusive and integrated setting. In integrated classrooms, 58 percent of time was classified as non-instructional versus 35 percent of time in general education classes (Helmstetter et al., 1998). Additionally, students taught in integrated (or self-contained) classrooms were less engaged and often more alone compared to inclusive settings (Hunt et al., 1994).

Time Spent in Inclusive Classrooms and Impact on Literacy: Research Tells Us...

- A National Longitudinal Transition Study (NLTS2) conducted with 11,000 students with disabilities in the United States found that more time spent in the general education classroom resulted in: a) fewer absences from school; b) fewer referrals for disruptive behavior; and c) better outcomes after high school in the areas of employment and independent living (Wagner et al., 2006).
- Students with Down syndrome showed higher reading scores when they spent more time in the general education classroom (de Graaf & van Hove, 2015).
- A significant positive correlation exists between expressive communication and reading and math skills with increased time spent in the general education classroom (Kleinert et al., 2015).
- A strong positive relationship exists between reading & math achievement and the number of hours preschool and elementary students spend in general education classrooms (Cosier, Causton-Theoharis, & Theoharis, 2013).
- Another study followed a girl with complex support needs who was initially taught in a segregated class for the first ten years of school. When she transitioned to an inclusive classroom at age 15, significant improvements in her reading, writing, communication and behavior were observed (Ryndak, Morrison, & Sommerstein, 1999).

An inclusive classroom in Kenya where both students with and without disabilities learn literacy skills. Photo credit: Leonard Cheshire Disability (LCD)

1.3.3 Positive Impact of Inclusion for Students without Disabilities

Students without disabilities also benefit from inclusive education. When promoting and establishing inclusive education programs in LMICs, it is important to stress the benefits of inclusive education for children with and without disabilities to ministry officials, teachers, administrators, parents and the community.

Positive Impacts of Inclusive Education on Students without Disabilities: Research Tells Us...

- Students without disabilities made comparable or greater gains in literacy and numeracy when taught in inclusive classes (Waldron, Cole, & Majd, 2001).
- Overall, there are positive or neutral academic outcomes for students without disabilities receiving an education in an inclusive class, with only a very small number of studies indicating poor outcomes (Kalambouka et al., 2005).
- Students without disabilities in inclusive classrooms made more progress in reading and math than peers without disabilities who were not educated with classmates with disabilities (Cole, Waldronn, & Maid, 2004).
- Students without disabilities educated in inclusive classes tend to be more accepting of diversity and have increased sensitivity to the needs of others (salend & Duhaney, 1999).

Chapter 1: Additional Online Resources and Information

Situation of Children with Disabilities

UNICEF. (2013a). Children and Young People with Disabilities: Fact Sheet. Retrieved from https://www.unicef.org/disabilities/files/Factsheet_A5__Web_NEW.pdf

UNICEF. (2013b). State of the World's Children 2013: Children with Disabilities. Retrieved from https://www.unicef.org/publications/index_69379.html

World Health Organization. (2011). World Report on Disability. Retrieved from http://www.who.int/disabilities/world_report/2011/report.pdf

Educational Settings

Bulat, J., Hayes, A., Macon, W., Ticha, R., & Abery, B. (2015). RTI school and classroom disability inclusion guide. Research Triangle Park, NC: RTI Press. Retrieved from https://shared.rti.org/content/rti-school-and-classroom-disabilities-inclusion-guide-low-and-middle-income-countries

Mariga, L., McConkey, R. & Myezwa, H. (2014). Inclusive Education in Low-Income Countries: A resource book for teacher educators, parent trainers and community development workers. Cape Town: Atlas Alliance and Disability Innovations Africa. Retrieved from http://www.eenet.org.uk/resources/docs/Inclusive_Education_in_Low_Income_Countries.pdf

Organization for Economic Co-operation and Development. (2009). Inclusive education at work: Students with disabilities in mainstream schools. Paris: OECD. Retrieved from http://www.oecd.org/edu/school/previousworkoninclusiveeducation.htm.

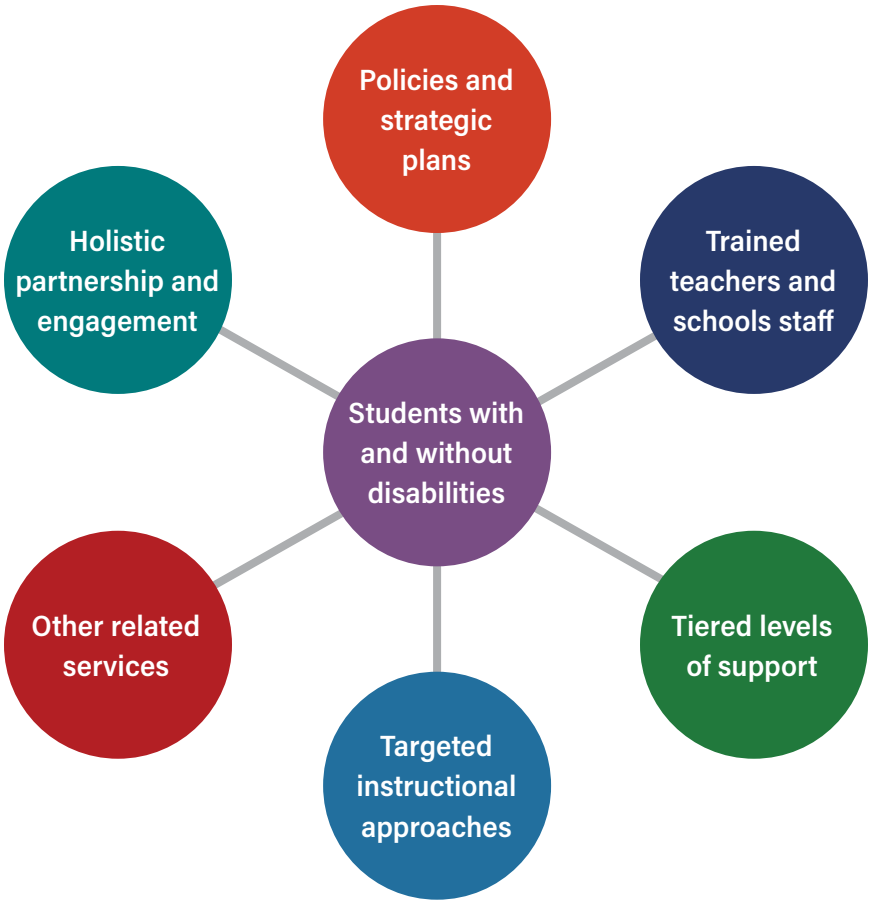
Stubbs, S. (2008). Inclusive Education: Where there are few resources. Oslo, Norway, The Atlas Alliance. Retrieved from http://www.eenet.org.uk/resources/docs/IE%20few%20resources%202008.pdf

UNESCO (2014). Teaching Children with Disabilities in Inclusive Settings. UNESCO Bangkok Office. Retrieved from http://unesdoc.unesco.org/images/0018/001829/182975e.pdf

Chapter 2: Establishing a Holistic Approach to Educating Students with Disabilities

Ideally, education is individualized and provides appropriate support that a child needs to learn. For education to be successful, it is important to offer a wide array of supports within a system that fully promotes inclusion. Ideally, this system provides a holistic approach to supporting students with disabilities. A holistic approach to inclusive education helps promote acquisition of literacy skills and ensures that students with and without disabilities have the supports they need to reach their full academic potential. Figure 4 shows the holistic supports for inclusive education.

Figure 4. Holistic Supports for Inclusive Education



This chapter of the toolkit:

- Provides background on relevant international and national policies and strategic plans
- Explains different settings for education and their impact on literacy acquisition
- Describes needs related to teacher training and developing different levels of supports
- Provides information on different instructional and teaching supports and their role in literacy acquisition
- Describes other related services that promote literacy skills
- Explains the important role of self-determination, families, DPOs and communities in inclusive education

2.1 Policy and Systems Support

Key Highlights

- There are several international policies and frameworks that promote the education of children with disabilities.
- For countries to be compliant with CRPD, it is important for national education policies and strategic plans to be consistent with the principle of inclusive education.
- In addition to designated inclusive education policies, countries should have inclusive education strategic plans which detail how the policy will be implemented and how, if needed, the countries can transition to an inclusive education system.

2.1.1 International Policies and Frameworks

The main policies and frameworks that specifically address persons with disabilities include:

- United Nations Convention on the Rights of the Child (UN CRC) (1989)
- The United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993)
- UNESCO Salamanca Statement (1994)
- The United Nations CRPD (2006)
- Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled (2013)
- Sustainable Development Goals (sDGs) (2015)

The UN CRPD tends to be the most influential international legal instrument related to the education of children with disabilities. It represents a paradigm shift from viewing disability as a charity or medical issue to viewing disability as a human rights issue. Article 24 on education clearly states that children with disabilities have the right to inclusive education and to receive the appropriate supports they need to learn. To help clarify expectations for implementing the education article of the CRPD, the CRPD Committee developed General Comment No. 4 on the right to inclusive education. The General Comment outlines common barriers to inclusion, the need to provide an individualized approach that focuses on the whole person approach to educating children with disabilities and the

need to provide a flexible curriculum. The committee also clearly states that governments need to commit to end educating children in segregated and integrated settings, and that maintaining parallel systems of inclusive education and segregated education is not compliant nor aligned with the CRPD (United Nations, 2016). Although the document does not specifically address literacy, it does provide additional information on the recommended supports to be provided to students with disabilities to improve and augment learning. See Annex C for a description of the different policies and frameworks.

To help ensure that national policies are implemented, it is important to also develop complimentary guidance documents for families, teachers and administrators.

2.1.2 National Inclusive Education Policies

Due in large part to ratifying the CRPD, many countries have developed or are currently developing specific laws mandating the education of children with disabilities. The quality of these laws varies significantly by country. Unfortunately, many legislations (such as Ghana, Jordan and South Africa) have reinforced segregation for students with disabilities that have higher support needs by only providing inclusion to students with "moderate" to "mild" disabilities. Other mandates have reinforced other discriminatory practices such as establishing residential institutions. For policies to be aligned with the CRPD, it is important that there is legislation supporting inclusive education for all students with disabilities, regardless of type or level of support needed.

According to UNESCO's Policy Guidelines for Inclusion in Education, national inclusive education should, at a minimum, achieve the following (UNESCO, 2009):

- *"Recognize inclusive education as a right;*
- *Identify minimum standards in relation to the right to education, including physical access, communication access, social access, economic access, early identification, adaption of curriculum, and individualized student supports;*
- *Identify minimum standards regarding the right to education and ensuring that families and communities are active participants in inclusive education;*
- *Ensure a transition plan for children with disabilities;*
- *Identify stakeholders and their responsibilities;*
- *Provide resources for children with disabilities; and*
- *Establish monitoring and evaluation mechanisms for ensuring that education is truly inclusive."*

2.1.3 National Education Strategic Plans

National strategic plans are a useful tool to detail how to translate policy into practice. In many countries—such as Afghanistan, Kazakhstan, Macedonia and the Republic of Georgia—the plan to implement inclusive education is part of a larger education strategy; other times the inclusive education plan is a standalone strategy, which is the case in Rwanda and Malta (Hayes & Bulat, 2017). These plans typically address how the country will transition towards inclusive settings, how general education and special education teachers will be trained, and how children will be appropriately identified to receive services.

In addition to developing specific inclusive education plans, it is important to address and include the education of students with disabilities in countries' general education sector plans.

Likewise, the World Report on Disability recommends that all inclusive education strategy plans should include the following elements (WHO, 2011, p. 217–218):

- *"Reflect international commitments to the right of disabled children to be educated;*
- *Identify the number of disabled children and assess their needs;*
- *Stress the importance of parental support and community involvement;*
- *Plan for the main aspects of provision, such as making school buildings accessible, and developing the curriculum, teaching methods and materials to meet diverse needs;*
- *Increase capacity by expanding the provision of training programs;*
- *Make sufficient funds available; and*
- *Conduct monitoring and evaluation and improve qualitative and quantitative data on students."*

It is important that these plans be developed in a participatory manner allowing input from DPO leaders representing various categories of persons with disabilities, parents of children with disabilities, teachers, NGO representatives working in this area and other relevant stakeholders.

However, even with strong policies and strategic plans, there continues to be a large gap between policy and practice, especially in low-income countries (Winzer & Mazurek, 2009). Stereotypes, prejudices and cultural barriers limit the ability of students with disabilities to access education, obtain literacy skills and reach their full academic potential. Inclusive education programs remain highly underfunded in many countries with the misperception of the need to educate "normal" kids before addressing the educational needs of students with disabilities. As a result, many children with disabilities are still not obtaining a quality education, including literacy skills.

Reflect on Your Context

What policies does your country have to promote inclusive education?

Is there a national strategic plan for education? If so, are the educational rights of persons with disabilities addressed and is it aligned with the CRPD?

How could policies be strengthened to improve learning for students with disabilities?

Impact of Inclusive Education Policy: Brazil Case Study

Historically, children with disabilities in Brazil were almost entirely educated in a segregated setting. In 2005, only 4.5 percent of public schools were accessible, and there were 2,650 segregated schools (Gabriel Limaverda, personal communication, February 16, 2018). In 2008, Brazil passed the National Policy on Special Education from the Perspective of Inclusive Education, which mandates the education of children with disabilities in their local general education classroom with additional specialized supplementary educational assistance. In 2011, Brazil developed the National Plan of the Rights of Persons with Disabilities: "Living without Limits." This plan developed specific plans and targets related to inclusive education including specific targets for accessible schools, accessible technology and accessible school buses. (Government of Brazil, 2014). A few of the outcomes of Brazil's shift towards inclusion include:

- Enrollment of children with disabilities in general education classrooms went from 145,141 (29 percent) in 2003 to 698,768 (79 percent) in 2014.
- 40,416 schools were retrofitted to be physically accessible.
- 2,304 accessible vehicles for transport were purchased.
- In 2015, persons with disabilities were provided with priority enrollment in professional education courses to increase teachers with disabilities in the school system.
- 20 sign language courses were created.
- 37 million USD was invested in assistive devices such as wheelchairs, braille printers, etc. (Zero Project, 2016).

Most formerly segregated schools in the country have been made into resource centers that also provide after-school support for students with disabilities (Gabriel Limaverda, personal communication, February 16, 2018).

2.2 Teacher Training and Tiered Levels of Support

Key Highlights

- Teacher attitudes have an impact on children with disabilities accessing inclusive education; thus, it is important to address negative stereotypes and discriminatory views within in-service and pre-service teacher training.
- It is recommended that inclusive education systems must consider a hierarchy of training supports and delineate between the roles of general education teachers, special education teachers and expert technical support. These teachers can then work together to implement inclusive education.
- Establishing a multi-tiered system of support can provide support for students with disabilities to improve learning outcomes.
- A team approach to inclusion that also engaged administrators/principals is an effective option to promote inclusion.

2.2.1 Teacher Attitudes

Teachers are critical in implementing effective inclusive education. Teachers' attitudes on inclusive education and their perceptions of persons with disabilities can have a huge impact on the acceptance of students with disabilities in the classroom (Avramidis & Norwich, 2002). These attitudes, especially when they are related to assumptions about student capacity to learn, can impact acquisition of literacy skills. Biased teacher perceptions may affect how the teacher interacts with students with disabilities and influence curricular or literacy activities they offer them. This access to information can, in turn, impact students' academic achievement (Paterson, 2007). For example, one study conducted in the Netherlands showed that when teachers held negative attitudes towards dyslexia, these teachers tended to give lower grades to those students related to spelling and spelling achievement (Honstra et al., 2010).

Teacher Attitudes: Research Tells Us...

- A 14-country UNESCO study conducted in high-, middle- and low-income countries indicates that in countries that require inclusive education by law, teachers expressed more favorable views on inclusive education (Bowman, 1986).
- General education teachers who receive additional support services have more positive attitudes toward inclusion than teachers without support services, who express concerns about their additional work load (saloviita & Schaffus, 2016).
- Special education teachers generally have more positive attitudes toward inclusion than general education teachers, and teachers with higher self-efficacy are more likely to report positive attitudes (Hernandez, Hueck, & Charley, 2016).

Students who have low vision learning literacy skills through the USAID Tusome program. Photo credit: Research Triangle Institute

Substantial research has also been conducted on teacher attitudes in LMICs, revealing similar outcomes to research conducted in high-income countries.

Teacher Attitudes in LMICs: Research Tells Us...

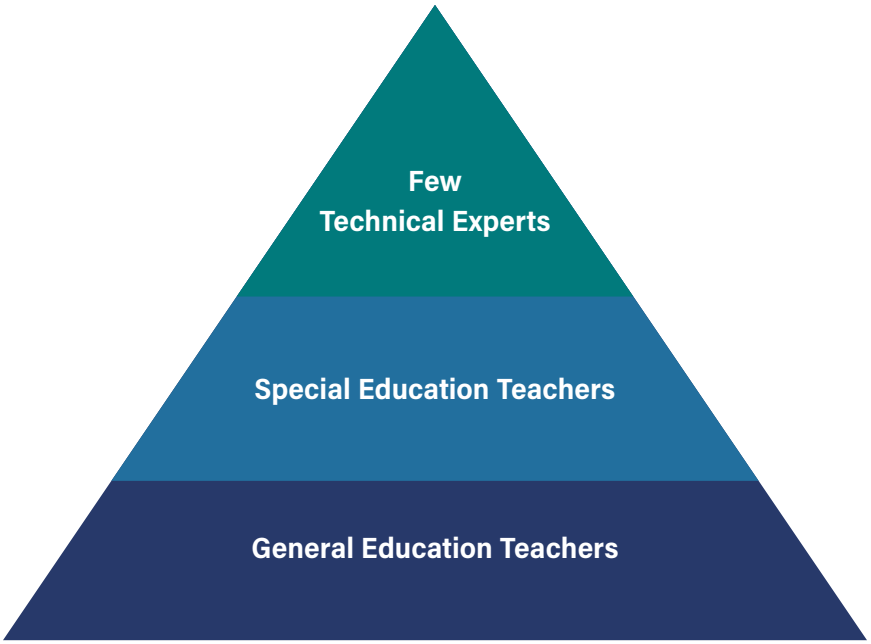
- In Egypt, teachers who had exposure to persons with disabilities in their personal lives were more accepting of including students with disabilities in their classrooms (El-Ashry, 2009).
- Teachers in South Africa reported that they expected students with a range of different disabilities to make stronger social gains, as contrasted to intellectual gains, in inclusive classrooms (Donohue & Bornman, 2015).
- In Cameroon, teachers held the same negative beliefs and discriminatory views of disability as held by the general population (Ekema, 2005).
- In Guyana, research conducted by Mitchell (2005) found that negative attitudes of teachers serve as a barrier for students with disabilities being educated in mainstream schools (Ajodhia-Andrews & Frankel, 2010).
- Teachers' attitudes don't have to change first in order for inclusion to begin and be successful. Inclusive practices can be implemented simultaneously as work is done to shift teacher attitudes (Elder, Damiani, & Oswago, 2015).
- In Botswana, teachers were positive about the concept of inclusive education; however, they had unfavorable attitudes toward implementing inclusion because of lack of professional development (Mukhopadhyay, 2014).

It is important to address possible negative attitudes of teachers and possible perceptions of the capacities of students with disabilities as part of all in-service and pre-service training. It is equally important to look at effective catalysts for social behavior change. One research study conducted by Giangreco et al. (1993) found that teachers were more likely to transition towards more positive attitudes of students with disabilities when they were a part of a collaborative team and received facilitation support from specialists.

2.2.2 Hierarchy of Teacher Training Roles and Supports

Inclusive education cannot be achieved through a single educator but rather by a group of dedicated educators, leaders, parents and students. In a truly inclusive system, a team approach is used that supports the education of students with disabilities. This allows different levels of expertise and supports to best respond to a student's unique needs while recognizing that no single individual can be responsible for inclusive education. UNESCO recommends a hierarchy of training opportunities that allow for diversification of skills and knowledge. Figure 5 provides a visual representation of the hierarchy of teacher support.

Figure 5. Hierarchy of Teacher Support



Source: Hayes & Bulat, 2017

Recommendations adapted from the UNESCO guide are listed as follows.

> *"All teachers should be trained on inclusive practices as they will undoubtedly have a child with a disability in their classroom at some point in time.*
>
> *Many teachers (ideally, at least one per school) should develop more comprehensive expertise on disability related to more common learning challenges and disabilities. These individuals can serve as an on-site resource and advisor to their peers.*
>
> *A few teachers should develop higher levels of expertise in the diverse challenges that mainstream teachers may encounter and serve as a consultant to those schools and teachers as needed" (Hayes & Bulat, 2017)."*

Too often, countries with emerging inclusive education systems only focus on training a certain set of teachers. For example, a country may focus on only training general education teachers to provide educational support for students with disabilities without training special education teachers and experts Conversely, some countries only work on supporting the skills of technical experts (see section 2.4). Too often, inclusive education systems lack access to special education teachers. Even in inclusive education systems, these teachers are vital to support students. In deaf education, the role of the deaf education teacher is paramount. Deaf education teachers can be linguistic and cultural role models and can function in schools as administrators, teachers, teachers aides, dorm parents and early child educators. Adults who are deaf/hard of hearing are a valuable resource for schools and are underutilized (Leigh, Andrews, & Harris, 2018, p. 115). It is recommended that training focus on the different types of teaching supports needed and ensure that each level of support is appropriately trained. Figure 6 provides information on the different roles of general education teachers, special education teachers and expert technical support to promote inclusion. It is important that all positions mentioned, including general education teachers, recognize that it is their role to educate students with and without disabilities (Finke, McNaughton, & Drager, 2009).

Figure 6. Key Duties of Teachers and Experts within an Inclusive System

General Education Teacher	Special Education Teacher	Expert Technical Support
▪ Provides daily instruction according to the national curriculum to all students in the classroom, including students with disabilities ▪ Monitors and evaluates progress of students with and without disabilities ▪ Works collaboratively with special education teacher to ensure students with disabilities are learning ▪ Communicates with parents ▪ Serves as a member of an individualized education plan (IEP) team (see section 2.3.1)	▪ Supports general education teachers in adapting the curriculum or assessments as needed ▪ Leads the IEP development and monitors achievement of goals ▪ Provides additional instruction either individually or as a co-teacher ▪ Collaborates with general education teachers and reaches out to experts as needed ▪ Communicates with parents	▪ Provides itinerant expert support to special education and general education teachers. ▪ Participates as an IEP team member as needed. ▪ Expertise can include: - General literacy - Behavior supports - Braille literacy - Augmentative and Alternative Communication (AAC) and communication support

Inclusive and Sustainable: Kenya Case Study

In Kenya, no or low-cost inclusive strategies is one key to boosting children with disabilities' access to education. Implementing "no cost" strategies involves utilizing existing resources in the school and community (Elder, Damiani, & Oswago, 2015). One of the effective practices was to support co-teaching to support students with diverse learning needs at their school.

In Kenya, teachers co-taught with colleagues from their campuses and neighboring schools; primary school teachers co-taught at the special school and vice versa. Elder and Kuja have found that "The approach and delivery of such lessons depended on teacher expertise on subject area content, the number of students in each co-taught classroom and teacher comfort with initiating a co-teaching model. Teachers from both schools paired up to support students in their respective classrooms depending on school schedules." (2018, p. 10) In the pilot, there was an apparent link between co-teaching practices and the increase of students with disabilities going to school for the first time. Co-teaching also helped dissolve barriers, both physical and attitudinal, between segregated/special schools and primary schools within the general education system.

Technical experts may support many schools and typically are only available in a specific school and for a specific student for a limited time. For example, a teacher for students who are blind is needed to help teach students braille literacy and to adapt learning materials. As not every inclusive school will have a student who is blind enrolled in the school each year, these teachers are most commonly itinerant teachers, serving many students in different schools on a rotating basis. The extent to which the teacher needs to work with students also fades over time as students develop stronger braille literacy skills, grow more accustomed to technology and become more independent. Kenya, Uganda and Malawi have introduced itinerant teachers to support students who are blind. These teachers usually focus on a cluster of 8-12 schools and support braille literacy skills, transcribe materials into braille and provide advice on how to best address the student's educational needs (Lynch & McCall, 2007). However, for this model to work, it is critical to sufficiently train itinerant teachers and ensure they are knowledgeable in the area in which they are providing support. It is also important that itinerant teachers receive a salary equal to other teachers as well as cover travel costs to ensure that teachers can support under-served areas. In addition to these teachers mentioned above, paraprofessionals or teacher assistants are also key in supporting the education of children with disabilities (see section 2.4.2).

Reflect on Your Context

Does your country have a hierarchy of teacher supports? If so, how is it working or how can it be strengthened? If not, how could this expertise be expanded to support the learning needs of students with disabilities?

2.2.3 Multi-Tiered Systems of Support for Instruction

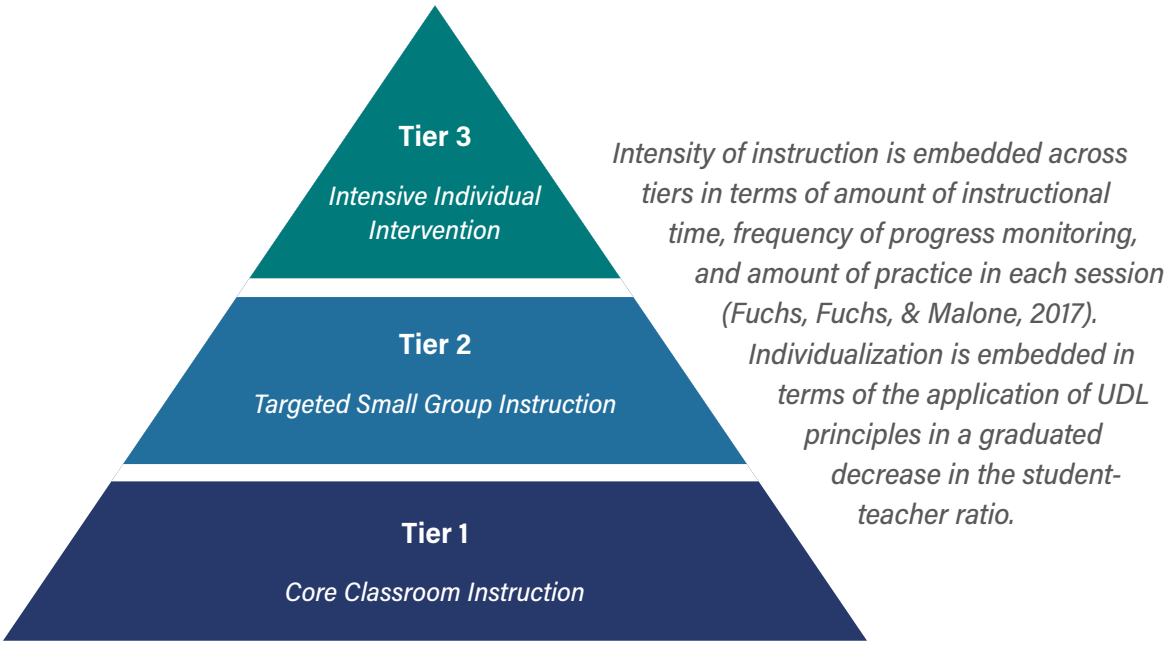
Multi-Tiered Systems of Support (MTSS) is a way to organize and deliver instruction to meet a variety of students' academic and behavioral needs. It brings together previous educational approaches, including Response to Intervention (Jimerson & Burns, 2016) and Schoolwide Positive Behavior Support (Horner & Sugai, 2015) into a holistic system. As applied to literacy, MTSS enables teachers to adjust the intensity of reading instruction based on each student's performance, while also providing class wide behavioral support.

The key features of MTSS include:

- Creation of a MTSS team for planning and implementation.
- Three tiers of increasingly intensive instruction.
- Use of evidence-based practices.
- Differentiated instruction through UDL.
- Regular screening and progress monitoring.
- Data-based decision-making by team.

As depicted in Figure 7, MTSS includes three tiers for instruction and support.

Figure 7. Three Tiers for Instruction and Support



Tier 1. In Tier 1, the first step is to screen all students for potential reading problems at the beginning of the year and again in the middle of the year. Approximately 80 percent of students will be able to make progress with core classroom instruction. This instruction follows a research-based curriculum and incorporates the three UDL principles in providing a variety of options for motivating students, providing information to students, and enabling students to express what they learn. Teachers monitor student progress to ensure that the core classroom instruction is effective.

Tier 2. Based on initial screening or the ongoing progress monitoring of Tier 1, teachers identify students who are not meeting expected benchmarks at the same level of proficiency and/or at the same rate as their peers. Teachers then move these students to Tier 2 instruction, which enables them to receive more intensive research- and UDL-based instruction on reading skills in small groups. Typically, about 15 percent of students need Tier 2 instruction, which involves 20-40 minutes of additional instruction 3-5 times per week, as well as additional progress monitoring. This instruction can occur either in a resource room or within a small group setting within the general education classroom while other students receiving Tier 1 instruction are working independently.

Tier 3. Approximately 5 percent of students will be identified through screening and progress monitoring as needing highly intensive instruction on a daily basis to promote development of reading proficiency. These students are best served in Tier 3, which is characterized by individualized instruction that is research- and UDL-based. At Tier 3, students receive approximately 1.5 hours of additional reading instruction per week. Similar to Tier 2 instruction, this intensive instruction takes place in either resource room or general education setting.

There are several advantages to providing MTSS (McIntosh & Goodman, 2016). Teachers can help all students before they fail by providing additional support. Each tier also provides different instructional intensities and techniques to match a student's unique needs. Additionally, the tiers are fluid, and students can move back and forth consistent with their literacy-based needs and progress. Finally, because comprehensive behavioral support is also part of MTSS, students have an opportunity to learn reading without being distracted by their own or their classmates' behavioral challenges. For many schools in LMICs, implementing a comprehensive MTSS approach may be challenging due to high class sizes, limited resources and the need for training on the provision of academic and positive behavioral supports. However, awareness of MTSS is helpful, as aspects of this approach can be adapted and applied. For example, schools may want to begin implementing a tiered reading approach before simultaneously implementing comprehensive positive behavioral supports. Similarly, in contexts where there are limited teachers and large class sizes, differentiated instruction might apply, but doing small group and one-on-one instruction may need to be addressed once resources or additional teacher support is available. MTSS may not be feasible in the initial stages of inclusion but is a goal which all schools can work towards.

Reading Remediation Support Using Response to Intervention Principles: Philippines Case Study

USAID Basa Pilipinas has been working with over 3000 public schools over the past five years to strengthen language and literacy instruction. In 2018, the Department of Education (DepEd) requested Basa to pilot-test a model for conducting reading remediation to support struggling readers in 25 schools. Implemented by the Education Development Center (EDC), Basa's Reading Remediation and Support Pilot (RRSP) adapted and incorporated Response to Intervention* principles. The pilot trained Grades 1 and 2 teachers to use RRSP tools to screen, assess and intensively support students struggling to read. In Tier 1, teachers were taught how to provide differentiated instruction while also conducting formative assessments to track students' progress. Approximately 20 percent of students who showed consistent challenges with different aspects of reading were then provided small group reading remediation outside of the instructional teaching hours (either after school or at lunch) – Tier 2. These students were further assessed and found to be struggling with phonological skills, with decoding and spelling, with vocabulary and comprehension, or with all domains of literacy. Teachers also noted that some students had additional challenges at home that may have affected their attendance, attention and performance in school. Students who continued to struggle even with small group intensive instruction were then provided with individualized instruction, thus moving from Tier 2 to Tier 3. Teachers who participated in the pilot project were provided with training, reading screening tools and sample lessons plans that could be used to demonstrate how reading instruction could be individualized. The approach focused on Mother Tongue reading in Grade 1 and Filipino reading in Grade 2.

Students participating in the intervention were given EGRAs as both a pre-and post-test to assess the effectiveness of this adapted Response to Intervention framework in the Philippines. Initial results of the study showed that the majority of students made significant reading gains when provided with more intensive and individualized supports. The Reading Remediation Support Pilot will be scaled by the project's partner divisions and shared as a resource with DepEd nationally via their official Learning Resource Portal. This project helps demonstrate that with specialized training and resources made available locally, Response to Intervention principles can be successfully adapted and replicated in other LMIC contexts.

* Response to Intervention uses the tiered framework explained in section 2.2.3 which identifies students who may need additional educational support and then provides students increasingly intense supports as needed to meet learning objectives. For more information visit the RTI Action Network http://www.rtinetwork.org

2.2.4 Role of Principals and Administrators

The role of principals is an important factor to ensure children are educated in an accessible setting. Principals are instrumental in creating a culture of inclusion and acceptance within schools (Hallinger & Heck, 2002). Principals often create the vision for the school, set the tone for acceptance of diversity and can help ensure that students with disabilities are acquiring literacy skills. For example, principals that have a strong knowledge of literacy acquisition for all tend to help teachers do their best and provide the best instruction (McGhee & Lew, 2007). Conversely, they often serve as a barrier to access, by denying students with disabilities enrollment in school. For example, in Madagascar, principals are reported to deny enrollment for children based on disability, a practice that has been increasing over the last few years (d'Aiglepierre, 2012). Ideally, principals, teachers, families and students work collaboratively to promote an inclusive environment for learning (Hunt et al., 2000). Principals can help foster and ensure inclusion by:

- Developing incentives for teachers to be inclusive in the classroom (for example, provide professional development opportunities and include inclusion as a core component of the annual review process for salary increase).
- Understanding and adopting the national laws related to inclusive education.
- Recognizing that discipline standards may need to be modified if a student is having behavior issues or is struggling due to his or her disability.
- Participating in IEP meetings.
- Integrating inclusion of students with disabilities as part of the School Improvement Plans.
- Conducting outreach to the community and parents to promote inclusion.

Role of Principals and Administrators: Research Tells Us...

- Principals in the United States that have positive attitudes on inclusive education were less likely to place students in the least restrictive environment (Praisner, 2003).
- In Israel, a strong relationship exists between principals' positive attitudes of inclusion and the positive attitudes of teachers at the same school (Hess & Zamir, 2016).
- In Ghana, positive attitudes and increased knowledge of inclusion for principals predicts the success of inclusive practices used within a school and if a student's needs are adequately addressed in an inclusive classroom (Kuyini & Desai, 2007).

2.2.5 Teacher, Administrator and School Staff Training

For a successful team approach to inclusion, it is vital that all teachers, administrators and other school staff receive training on inclusive education and how to support children with disabilities in the classroom. This training needs to go beyond introducing basic concepts and benefits of inclusive education to also focus on effective instructional approaches, including techniques to support literacy acquisition. It is important that teacher training also reflect the local reality of teachers within a country and avoid importing training without adapting it to the local context. Ideally, teacher training modules are developed in a participatory manner with local teachers, principals, MOE officials and subject matter experts. In addition, teacher training development and delivery can engage community disability leaders and families of children with disabilities who can provide lived experience of disability and are best positioned to offer information on their educational needs and supports (International Disability and Development Consortium, 2013). It is vital that teacher training be followed up with hands-on experience for teachers to use the skills they have learned related to literacy acquisition and slowly build confidence in their ability to provide inclusive education (Hayes and Bulat, 2017). Most teachers in LMICS do not receive any pre-service instruction on how to include students with disabilities in their classrooms or how to promote literacy skills for a diverse group of students. Most in-service training also does not address inclusive education or inclusive instructional approaches for literacy. For example, it would be helpful for general education teachers to understand that although they should provide phonetic instruction to all children in the classroom, some children with intellectual disability or learning disabilities may have challenges with rhyme detection but can still obtain literacy skills (Copeland & Keefe, 2007).

A 2012 global survey, distributed by UNICEF to teachers and teacher training professionals in LMICs, found that 33 percent of respondents reported that inclusive education is not covered in any of their pre-service or in-service teacher training courses. When training did take place, many respondents criticized the training, stating that the focus was too general, and there were few practical suggestions on how to educate children with disabilities in a general education classroom (Pinnock and Nicholls, 2012). The CRPD Committee's General comment no. 4 on Article 24 on the right to education (United Nations, 2016) provides guidance on content that should be a part of core teacher training. The document states:

> *"The core content of teacher education must address a basic understanding of human diversity, growth and development, the human rights model of disability, and inclusive pedagogy including how to identify students' functional abilities—strengths, abilities and learning styles—to ensure their participation in inclusive educational environments. Teacher education should include learning about the use of appropriate augmentative and alternative modes, means and formats of communication, such as [b]raille, large print, accessible multimedia, easy read, plain language, sign language and deaf culture, education techniques and materials to support persons with disabilities. In addition, teachers need practical guidance and support in, among others: the provision of individualized instruction; teaching the same content using varied teaching methods to respond to the learning styles and unique abilities of each person; the development and use of individual educational plans to support specific learning requirements; and the introduction of a pedagogy centred around students' educational objectives."*

It is important that all teachers receive training in inclusive education and effective instructional approaches. Likewise, it is beneficial for all teachers, including special education teachers and technical experts, to have access to literacy training.

For teachers to be able to best support students with disabilities in the classroom, it is important to go beyond the benefits of inclusion and begin to provide teachers with the effective instructional techniques they need (see section 3.4 for more information on instructional techniques). This includes understanding the unique needs and supports that different types of students may have related to literacy.

In the last few years, there has been a strong push—supported by international donors—toward improving early-grade reading skills for students. Unfortunately, this support has yet to benefit children with disabilities in any appreciable way. Typically, when literacy training takes place, these trainings do not include teachers of students with disabilities. This practice unfortunately only reinforces the concept of two parallel and unequal education structures—one for the general population and one for students with disabilities. For inclusion to be implemented, all teachers need to be competent to deliver literacy instruction. In cases where special education teachers have been included in trainings, there have been positive results. For example, a USAID early-grade reading project in Malawi implemented by Research Triangle Institute (RTI) International reached out to teachers at schools for students who are blind and deaf to include them in their literacy training for teachers. One teacher reported that she was able to adapt and apply the literacy teaching techniques from the training in her classroom for students who are deaf, and as a result her students are reading after three months of instruction—a task that in the past has taken more than a year (USAID, 2017).

Reflect on Your Context

How are teachers trained in the country?

Is inclusive education and promoting literacy skills for students with and without disabilities part of this training? If not, how could this be included?

What additional training would benefit principals or administrators?

2.3 Instructional Approaches and Teaching Supports

Key Highlights

- It is imperative that students with disabilities have individualized education plans that include literacy goals, document the student's learning strengths and challenges, and detail what accommodations might be effective in promoting learning.
- For students with disabilities to have equitable access to education, it is essential to provide equitable access to the content addressed in the national curriculum.
- Teaching and learning materials need to be inclusive of persons with disabilities and incorporate the principles of UDL.
- Assistive Technologies can be an effective tool to motivate students to learn, provide learning content and allow students to express literacy skills.

2.3.1 Individualized Education Plans

An IEP is a written plan that sets learning goals for students with disabilities, and addresses the services or accommodations that will be provided by the school. One effective approach to developing an IEP is using the McGill Action Planning System (MAPS), which includes six central tenets. They are: 1) all students belong to and learn together in a general education classroom; 2) general educators can and do teach all students; 3) necessary supports will be provided inclusively; 4) inclusive education is a right, not a privilege to be earned; 5) all students can succeed and graduate; and 6) creative alternatives for learning will be provided for students who learn in non-traditional ways (Forest, Pearpoint, & O'Brien, 1996). It is important that IEPs are developed using a multidisciplinary process that involves parents, teachers, administrators other educational support staff and the student with disability (Hayes & Bulat, 2017). Engaging the student with disability to lead or participate in the IEP process, as soon as it is appropriate, is important as it helps build self-determination and enables students to make decisions about their own learning goals and academic process. IEPs are an important fundamental tool that can help teachers support students with disabilities in the classroom. How these documents are developed, and the extensiveness of the information provided within the IEP will vary significantly by country. For schools that are only beginning to introduce IEPs as a classroom tool, the IEP may only be a few pages long compared to the more extensive IEPs often developed in higher income countries. However, the length of the IEP is less important than the content within. It is recommended that IEPS cover the following core components:

1. **Be based on information obtained through an evaluation.** Ideally, an evaluation would take place prior to an IEP to determine baseline levels of performance and assess how students best receive information, express information and what motivates them to learn.
2. **Establish measurable, academic goals.** Use IEP goals that incorporate baseline data and provide measurable or SMART (Specific, Measurable, use Action words, Realistic and Time-limited) goals. It is recommended that these goals are monitored on a regular basis with routine reports provided to parents that highlight the progress towards the goals (Wright, Wright, and Webb O'Connor, 2017). For example, a goal could include increasing sight word recognition by a certain amount within the academic year.
3. **Address strengths and challenges.** Incorporate a student's strengths and challenges related to learning using the UDL framework within an IEP. Therefore, IEPs identify how students best receive information, express information and what motivates them to learn. Challenges to learning can also be linked with possible accommodations to support learning in relation to those challenges.

Educational Transitions

For many students with disabilities, transitions (such as from primary to secondary school) can be challenging. Prior to transitions, it is recommended that IEPs address how those transitions can take place as smoothly as possible.

4. **Ensure access to the curriculum.** Promote access to the national curriculum (either a modified or adapted curriculum as needed (see section 2.3.2)) as a core component of an IEP. IEPs need to clearly state if a student may benefit from this accommodation and how it will be provided in the classroom.
5. **Clarify additional services.** If additional services are available, such as speech, occupational therapy, etc. (see section 2.4.2), clarify how these services might improve learning and how students will have access to the services in the school setting.
6. **Articulate accommodations.** Many students require accommodations (see section 2.3.3) to effectively receive and express information related to literacy skills and other academics. It is important that IEPs specify what accommodations need to be provided to the student to enhance learning.
7. **Social and behavioral considerations.** If students have behaviors that may impede their learning, an IEP can provide suggestions on how to best mitigate those behaviors in a positive way. Also, IEPs can describe how students with disabilities will have the maximum involvement and social interaction with their peers and how that could be potentially supported.

IEPs should also address present levels of literacy skills and set goals to build on those skills (Downing, 2005). These goals grow over time as students with disabilities continue making gains in reading in secondary school, emphasizing the need for ongoing literacy instruction (Lemons et al., 2016). Developing pre-determined goals for literacy, also known as "goal banks," is not considered good practice as it is more beneficial for the student to have an individualized IEP. A goal that is appropriate for one student with a disability will most likely not be appropriate for another (Wright, Wright, & O'Conner, 2017). Many LMICs, such as Jordan, Malawi, South Africa and Uganda, are beginning to encourage teachers to use IEPs in the classroom. However, IEPs are not universally used, and they often can be deficit-based versus building upon academic strengths. Often, IEPs are not regularly monitored by teachers or used as an instructional tool (Hayes & Bulat, 2017). Developing strength-based IEPs allows educators to see past limitations and highlight and expand students' individual strengths (Elder, Rood, & Damiani, 2018). As the language used to describe students often influences how educational professionals view them, this shift from a deficit focus towards a strength-based IEP approach helps education professional think of students with disabilities as contributors and assets to the classroom (Linton, 1998).

Reflect on Your Context

Are IEPs used throughout the country for all students with disabilities? If so, are they used as tools to help promote and monitor learning?

Do they identify a student's strengths and challenges? If not universally used, what steps could be taken to strengthen the use of IEPs?

2.3.2 Access to the Curriculum

In most countries, the national curriculum sets standards related to teaching and learning of literacy skills. For students with disabilities, it is important that they have access to what is being taught in the national curriculum, so they can also benefit from literacy instruction. For many students to have access to learning content incorporating the UDL Principle of Representation is beneficial, providing multiple ways to present the curriculum in a way that enables students to learn. One effective way to promote curriculum access is to design (or re-design) the national curriculum consistent with the three UDL principles. This approach is inclusive from the outset and minimizes the extent to which teachers need to infuse UDL principles on their own.

Students with disabilities are more likely to have access to the national curriculum if they are taught in inclusive classrooms (Jackson, Ryndak, & Wehmeyer, 2008-2009). Unfortunately, many students with disabilities in LMICs, especially those educated in segregated or integrated/self-contained classrooms, either have minimal or no access to the national curriculum. This is particularly true for students with intellectual disability, complex support needs or multiple disabilities. In these cases, students often focus the majority of their time on non-academic instruction. Non-academic instruction can consist of focusing on life skills (e.g., brushing teeth, cleaning, dressing), doing crafts or having free time. This is different than functional academic skills (balancing a checkbook, reading bus schedules) and social competence skills (how to receive feedback in a non-defensive manner, how to express frustration), which are skills that all children need and are becoming more common within curricula around the world.

Some academics argue that teaching a certain level of life skills and functional skills is needed to promote independence for children with disabilities (Detrich & Higbee, 2010). However, these skills do not replace opportunities to learn literacy and math, which happens too often in LMICs. Likewise, students who are deaf in LMICs also typically do not have access to the national curriculum due to misperceptions on their ability to obtain literacy skills and learn new content (see section 3.4.3). A situation in which students are taught an entirely different curriculum than their peers without disabilities is usually referred to as an "alternative curriculum." Many countries, such as Kenya and Rwanda, have developed alternative curricula for students with intellectual disabilities who are educated in segregated or integrated settings. This practice sets arbitrary learning objectives based on a disability diagnosis instead of allowing students with disabilities to access academics. The use of alternative curriculum is not encouraged nor is it supported by USAID. Also, many students with disabilities may benefit from also having access to an individualized augmented curriculum. The difference between adapted, augmented and modified curriculum is described in Figure 8.

Figure 8. Definitions and Examples of Different Types of Recommended Curricula[10]

Type of Curriculum	Definition	Example
Adapted Curriculum	Provides the same learning outcomes as in the national curriculum but provides accommodations so that a student with disabilities can participate equitably.	Students who are blind receive the same content in the national curriculum, including science and math, but are allowed to access information and content using braille.
Augmented Curriculum	Provides the same content but also provides additional information or course work that helps support a student's ability to function independently.	Students who are deaf receive sign language instruction as well as instruction on deaf culture. Students who are blind receive mobility and orientation skills.
Modified Curriculum	Follows the standards set forth in the national curriculum but modifies curriculum as needed. In this scenario, the student may have learning outcomes that are very different than the students without disabilities but still has access to the same basic content. This process is individualized and is not a standardized modification applied to all students within a particular diagnosis or label.	Students with intellectual disability receive literacy skill instruction but may focus on fewer new vocabulary words. New words will gradually become more complex as literacy skills grow. For example, if students are learning new vocabulary related to agriculture, students without disabilities may learn 20 words while a student with a disability may learn 4-5 words on the same topic.

Reflect on Your Context

Do all children in your country have access to the national curriculum that is individually modified if needed?

Is there a practice of providing alternative curriculum based on disability label?

What are the benefits of having access to the national curriculum?

10 Different countries may use different names for these concepts. To help clarify how they are used in the toolkit, names were provided, definitions and examples were provided.

2.3.3 Reasonable Accommodations

Accommodations are intended for students to overcome obstacles or challenges related to their disability in order to demonstrate what they have learned (Wright, Wright and Webb O'Connor, 2017). The type of accommodations that a student may need is determined by an assessment/evaluation of their educational strengths and weaknesses and documented in the student's IEP (see section 3.2). Accommodations can take place to modify the environment (e.g., having students in the front of the class or near a location where they can take breaks), in classroom instruction (e.g., allowing students to receive notes from peers if they have challenges with writing) or in testing (e.g., allowing students to provide oral answers instead of written answers if they have challenges seeing or writing). These accommodations are often needed for students to equitably receive and express information related to literacy skills and other academics. Having access to reasonable accommodations is key for many students to acquire and demonstrate literacy skills. Figure 9 provides information on simple dos and don'ts when considering how to provide reasonable accommodations for students with disabilities.

Figure 9. Do's and Don'ts When Selecting/Providing Reasonable Accommodations

✓ Do	✕ Do not
Make accommodation decisions based on individualized needs.	Make accommodation decisions based on what is the easiest; assume that one size fits all.
Select accommodations that reduce the effect of the disability as much as possible to facilitate learning and demonstration of learning.	Select accommodations unrelated to documented student learning needs or intended to give students an unfair advantage.
Document instructional and testing accommodations in an IEP.	Use instructional and testing accommodations that are not based upon and documented in an IEP.
Provide specifics about the "Where, When, Who, and How" of providing accommodations.	Simply indicate accommodations will be provided "as appropriate" or "as necessary".
Reevaluate accommodations and student response to accommodations on an annual basis.	Assume the same accommodations remain appropriate year after year.

Source: Adapted from Thompson, S. J., Morse, A. B., Sharpe, M., & Hall, S. (2005). Accommodations Manual: How to select, administer, and evaluate use of accommodations for instruction and assessment of students with disabilities. Washington, DC: Council of Chief State School Officers. p. 43.

Photo of students who are blind who are educated in inclusive setting.
Photo Credit: Leonard Cheshire Disability (LCD) Kenya

Article 2 of the CRPD states that governments should provide reasonable accommodations as needed. The CRPD defines reasonable accommodation as:

"The necessary and appropriate modification and adjustments, not imposing a disproportionate or undue burden where needed in a particular case to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms."

(United Nations, 2006)

Sign Language: Research Tells Us...

Access to learning in sign language:

- Improves spelling and expands vocabulary (Daniels, 2009).
- "Initiates the language acquisition process required for literacy development and bilingual competence" (Gárate, 2012, p. 1).
- Fingerspelling can lead to mastering reading (Stone et al., 2015).

Closer Look at Inclusion: Beyond Sign Language

Access to sign language is often seen as an accommodation but rather it is important that sign language be viewed as much more, as it is a fundamental component of how students learn and express information. Access to sign language supports the learning of students who have an intellectual disability and students with complex support needs and for all toddlers regardless of a presence of disability as they learn new language skills (Thompson et al., 2007). Sign language acquisition for students who are deaf is of paramount importance. There is often the misperception that students who are deaf can learn by lip reading or speech reading. Lip reading is not an effective source to receive information for students who are deaf/hard of hearing and is especially challenging for students who are deaf and have never heard spoken language. One study found that for individuals who have no access to sound, only 30 percent of language can be obtained and comprehended through lip-reading (Barnett, 2002).

It is critical that sign language be provided to students who are deaf/hard of hearing as young as possible. Sign language does not hinder the development of spoken language. In fact, signs can support both speech and literacy development (Leigh & Andrews, 2017; Leigh, Andrews, & Harris, 2018). Access to sign language at an early age also reduces the risk of linguistic deprivation, which makes individuals more vulnerable to abuse (Humphries et al., 2016). Language deprivation occurs when deaf children are deprived of visual access to language process, which occurs during the critical time of language acquisition between birth and age two (Humphries et al., 2012). Humphries et al. caution on the consequences of this, "...their subsequent development of the cognitive activities that rely on a solid first language might be underdeveloped, such as literacy, memory organization, and number manipulation" (Humphries et al., 2012, p. 1). This deprivation also has the potential to produce cognitive delays, mental health difficulties, child maltreatment, lifetime trauma and post-traumatic stress symptoms (Humphries et al., 2012). Additional outcomes of being linguistically deprived are 1) difficulties with math and organization of memory, 2) illiteracy, 3) severely limited educational and career possibilities, 4) poor psychosocial and communication skills and 5) a higher rate of imprisonment, unemployment, poverty and poor health (Humphries et al., 2012). To reduce language deprivation, Hall recommends, "Rather than focusing on auditory deprivation and speech skills, developmental approaches for deaf children should prioritize healthy, expected development of all developmental domains (e.g., cognitive, academic, socioemotional) that comes with the guaranteed full acquisition of a fully accessible first-language language foundation such as sign language." (Hall, 2017, p. 3). In many places around the world, sign language interpretation is provided to students who are deaf in inclusive classes. However, the WFD states that students who are deaf/hard of hearing require the opportunity be able to "communicate freely with teachers, school staff and other students in sign language without using a sign language interpreter." (WFD, 2014)

2.3.4 Accessible Learning Materials

For students with disabilities to acquire literacy skills, it is important to have equitable access to learning materials. For many students, this means having information in alternative formats such as braille, large print or audiobooks. For learning materials to be fully accessible, it is important that they be designed in an accessible manner and take into account the learning styles of persons with disabilities. For example, images can be used to reinforce learning but not used to show new concepts, as these images may not be accessible by braille or audiobooks. Learning materials can also utilize the principles of UDL by providing information using different formats (means of representation) by using a mix of text, flowcharts/graphs and pictures, and including diverse classroom exercises that allow students to show their knowledge in different ways (means of expression), and motivate different students to learn and be engaged (means of engagement). Having diversity of learning materials can better help reach different learners to promote literacy. It is vital that all materials provided to students with disabilities to promote literacy follow recommended characteristics—age appropriate, interesting and of high quality, and meet a student's individual needs (Allington & Baker, 1999). Some students with physical disabilities or mobility challenges may require additional supports to manipulate materials. This can be done by low-cost solutions of providing mounts for books or slant boards that elevate material in a way that make books more visually or physically accessible (Downing, 2005).

In addition to providing accessible content and ensuring accessibility, it is also important to include persons with disabilities as positive characters and in illustrations. The USAID Guide to Promote Gender Equality and Inclusiveness in Teaching and Learning Materials (2015) states that since 15 percent of the population has a disability, persons with disabilities should represent at least 15 percent of images and stories within all teaching and learning materials. It is also important that these images portray persons with disabilities in an empowering manner and highlight how they can be active learners and valuable members of society.

Digital Accessible Textbooks: UNICEF Global Case Study

UNICEF is driving an initiative to increase accessibility of textbooks and other learning materials for children with disabilities as a concrete measure for improving learning and providing quality education for all. The aim of the initiative is to shape the textbooks and learning materials market towards digital formats that are accessible, by encouraging governments, particularly MOEs, to require that all reading materials are published in both hard copy and accessible digital formats, and at the same time providing commercial publishers with the tools needed to meet this demand.

Bringing together writers, publishers, teachers, DPOs, technology experts, MOE officials and other stakeholders, the initiative is developing standards needed to produce reading materials in digital formats that combine digital versions of reading materials with narration, sign language, interactivity and audio-description of images, making the materials accessible to a wide range of students, including those with disabilities. While the early stages of the initiative focus on the foundational years of education, including pre-school and the early grades, the goal is for all learning materials at all levels to be available in digital formats. Prototypes are being produced, tested and validated in Argentina, Paraguay, Brazil, El Salvador, Bolivia, India, Uganda and Kenya. Four new countries in Latin America are producing a series of story books in accessible textbooks: El Salvador, Bolivia, Dominican Republic and Nicaragua.

2.3.5 Assistive Technology

Assistive technologies support access and demonstration of learning for students with disabilities (Edyburn, 2003; Hasselbring & Glaser, 2000). Assistive technologies can vary from low cost assistive devices (mobility canes, magnifying glasses and adapted writing tools) to higher cost technologies (refreshable brailler displays, FM radio systems, and tablet-based AAC devices). Assistive technologies are especially useful, and sometimes a requisite, to promote literacy skills for students with disabilities. Examples of how assistive technologies promote literacy skills include:

- Students who are blind use a variety of assistive technologies to read and write braille.
- Students who have intellectual disability or complex support needs and are non-verbal rely on AAC devices (simple picture boards or higher tech tablet devices) to communicate their ability to comprehend text.
- Students with learning disabilities and students who are blind/low vision benefit from hearing audio versions of books to reinforce literacy skills.
- Students who are hard of hearing or deaf-blind benefit from FM systems that transmit a teacher's voice through headphones, so they can hear with limited background noise.
- Electronic local sign language dictionaries are a good way for students who are deaf/hard of hearing to expand their vocabulary.

Assistive technologies can be an effective way to help promote UDL practices in the classroom. Together these two approaches can allow for students to use accessible formats and provide interactive learning that serves as motivation to learn. For example, most textbook information is presented only in traditional print, which can be challenging for students who are blind/low vision, have a learning disability or have an intellectual disability. Using technology that provides information using other modalities (audio, video, symbols, etc.) greatly improves learning opportunities for many students. Computer technology in particular has greatly advanced literacy acquisition for students with and without disabilities. The use of these computer-based technologies is increasing in LMICs. For example, research conducted by Fisher, Bushko and White (2017) found that Brazil, Malaysia and South Africa are using online teaching modules to compliment traditional lessons with teachers stating that they feel technology has had a positive impact on student learning outcomes.

For assistive technology to support the learning of students with disabilities, it is recommended that students have routine and consistent access to those assistive devices. This means providing devices not only to use at school but also to use at home to reinforce learning and complete homework. Unfortunately, even though there is a clear need for access to assistive technologies, they are often limited for students with significant disabilities (Harding, 2003; Koppenhaver, Erickson & Skotko, 2001). This comes from the misperception that students who have significant disabilities are not capable of using different types of assistive devices. Too often students with disabilities are denied assistive

WHO Priority Assistive Products List

As a step to promote access to assistive products and assistive technologies, the WHO provides guidance a list of the top 50 priorities assistive products that are needed by different individuals with disabilities. For more information, please visit http://www.who.int/phi/implementation/assistive_technology/EMP_PHI_2016.01/en/.

technologies until they can show they can use them but unfortunately cannot show they can use the technology until they have access. To break this dangerous cycle, it is important to presume competence and give students with disabilities multiple technologies to help build and demonstrate their literacy skills. Similarly, for students to take full advantage of assistive technology to promote literacy skills, it is important that both the teacher and the student be trained on how to use the technology and where and when its use is appropriate (Kennedy & Boyle 2017). It is also important to recognize that demonstrations of literacy skills from students who use assistive devices to express their knowledge and understanding are just as valid as responding orally or by writing.

Although it is important to promote the use of assistive technologies it is also important to recognize the limitations of assistive technologies. Assistive technologies should be seen as an additional classroom tool but should not replace direct instruction from teachers. Likewise, having access to assistive technologies should not replace students learning foundational skills such as having audiobooks or computers replace the need to learn braille or having sign language avatars replace the need to have teachers who are fluent in local sign language. For assistive technologies to be effective they must be coupled with appropriately trained teachers.

Assistive Technologies: Research Tells Us...

- A comprehensive review of the use of assistive technologies with students with learning disabilities reported that the most effective applications included word processing, multi-media and hyper-text with smaller positive effects for speech-to-text systems (Perelmutter, McGregor, & Gordon, 2017).
- Use of technology significantly improves reading achievement of students with intellectual disabilities (Coyne et al., 2012).
- Using a mix of UDL and assistive technologies can enhance the learning of students with and without disabilities (Rose et al., 2005).
- Students who are deaf/hard of hearing show consistent academic gains when provided with sequential text highlighting and supportive captions in digital instructional materials (Rose et al., 2005).

Reflect on Your Context

How does access to technology improve learning and literacy?

What type of assistive technologies exist within the country?

Do these technologies support the learning needs of a diverse group of learners?

How could access to assistive technologies be improved?

Closer Look at Inclusion: Assistive Technology to Promote Braille Literacy

Braille is a system of six raised dots that allows for persons who are blind to read print text tactilely. Each country has its own braille code that defines the meaning of the various dot compositions. Assistive technology is needed to promote literacy skills for students who are blind/low vision. While an array of assistive technologies for students who are blind exist, only a few are readily available in LMICs. Often schools in LMICs relay on the slate and stylus, which costs approximately $5 dollars but has considerable disadvantages for learning literacy skills (see section 2.3.5). In many cases, assistive technologies available in high-income schools are either not available in LMICs or are prohibitively expensive. Examples of technology to promote reading in braille and estimated costs include:

- Brailler ($800 USD)
- Refreshable braille displays ($3,500-$15,000 USD)
- Computer text-to-voice software ($50-$500 USD)

Increasing availability of audio books and computer software readers offers new opportunities for students who are blind/low vision. Some individuals even question the future or utility of braille when audio books and digital recordings are available. However, reading braille and writing braille is needed for literacy. Research shows that braille provides a critical advantage for students to learn grammar, language, math and science (National Braille Press, 2018). In fact, braille is essential to learn spelling and grammar, as this cannot be achieved through merely listening to books. Though computer literacy is important, research has shown that braille literacy is more important to support independent literacy skills for students who are blind (Bano et al., 2011). Audiobooks and computer skills can be used to reinforce learning skills and access to learning content, but do not replace the need to learn and use braille.

2.4 School Supports/Other Related Services

Key Highlights

- Additional services or other related supports such as access to different technical experts can help augment literacy skills for students with disabilities.
- Accessible transportation is needed for many children in LMICs to attend school and is an important component of inclusive education programming.
- Girls and boys with disabilities are at an increased risk to experience school-related gender-based violence or sexual assault while traveling to and from school; it is important to address safety issues of students with disabilities in all related programming.

2.4.1 Other Related Services

In many high-income countries, technical experts provide different therapies or services within the school setting without any additional cost to the family. These supports and their role in supporting education are as follows:

Audiologists: Specialists who determine the range, nature and degree of hearing loss; and fit and monitor amplification devices. Though these experts were not traditionally involved on a student's literacy team, there is a new push for them to be more exposed to their role in the literacy process and help support literacy acquisition. One study showed that simple exposure to the importance of pre-literacy skills as part of pre-service training increased audiology students' ability and interest to promote and advocate pre-literacy skills for families (English et al., 2012). Some audiologists may also know sign language, thereby providing literacy support for students who are deaf, and those who are hard of hearing (Andrews & Dionne, 2011).

Braille Literacy Experts: Specialists fluent in braille and trained on how to teach young students to acquire literacy through reading braille code. One study found that 1-2 hours of daily braille literacy programming is needed in early grades (Kindergarten to Grade 3) to effectively learn the skill (Koenig and Holbrook, 2000). Literacy skills reinforcement continues in higher grades but less frequently. Students with low vision may also require additional time to learn other literacy-related skills such as writing and using a keyboard. Braille literacy experts need to be trained in braille instruction and be literate in reading and writing braille.

Deaf Education Specialists: Deaf education specialists can work in different educational settings including co-enrollment schools, schools for students who are deaf, within the general education setting, and as itinerant specialists. The role of these teachers varies depending on student needs, including direct instruction to support literacy, sign language acquisition skills and support of general education to adapt the curriculum. These individuals can also help teach deaf culture to students who are deaf/hard of hearing and to students without disabilities. Hiring teachers who are deaf/hard of hearing is a recommended practice, as this increases the likelihood of having a teacher fluent in sign language (Shantie & Hoffmeister, 2000). Teachers who are deaf/hard of hearing also serve as advocates for students and understand societal/social issues affecting students who are deaf/hard of hearing. These teachers have the lived experience and can share their own successful strategies with their students.

Mobility and Orientation (M&O) Specialist: Specialists that support students who are blind/low vision/deafblind to move and travel safely and independently. This support also helps students understand directional and spatial orientation (up/down, back/front, right/left), skills that help strengthen literacy. For example, knowing to start reading on the top of the page from left to right (or right to left for Arabic and other languages) is an important skill for reading braille. M&O services can be provided to any student who would benefit from support, including those with low vision.

Occupational Therapist (OT): Specialists who help persons participate in things they want or need to do in everyday life. This includes helping people regain skills after injuries, providing interventions to better engage in school or the community, or providing adapted supports. (The American Association of Occupational Therapy, 2018). OTs can support literacy by improving a student's ability to write and express knowledge as well as by providing adapted writing tools.

Physical Therapist (PT): Specialists who promote the ability to move and/or restore physical mobility functions. Often PTs focus on using new mobility devices to support independent movement in the school and the community (American Physical Therapy Association, 2018). PTs work directly with students on safety and motor skills to support students with physical disabilities to move independently in the school environment. PTs can also help strengthen gross and fine motor skills that can help to improve handwriting.

Speech and Language Pathologist/Therapist (SLP): Specialists who assess and work to improve speech, language, social communication and swallowing disorders in children and adults (American Speech-Language-Hearing Association, 2018). There is a link between language and literacy. Students who have challenges with receptive and expressive language can have difficulties with phonetic awareness and experience increased challenges with learning literacy skills. In addition to providing language and articulation skills, SLPs help identify students at risk for reading and writing difficulties. Ideally, SLPs also know sign language and can also provide support for students who are deaf/hard of hearing.

In many LMICs these specialists are not readily available, or if they are available they are provided outside of the classroom and paid for by families. For example, Jordan has speech, occupational and physical therapists within the country, however, they are provided in private clinics or private schools, with parents paying the associated costs (RTI, 2017). Likewise, in Cambodia, there are several physical therapists in the country, but they are only working in hospitals or private clinics, and the profession of speech therapy is only now emerging within the country (Bryce et al., 2017). As many of these professions fall under the responsibility of the Ministry of Health in many countries, it is important to have a strong collaborative relationship with the Ministry of Health and MOE. It is important to explore how these services can be expanded and how local training courses and certification can be promoted.

2.4.2 Additional Supports and Teachers' Assistants

For inclusive education to be effective, teachers need access to different forms of support. For some students, especially those with high support needs, having access to a teacher assistant or paraprofessional is beneficial to help them on an individual basis in the classroom. These individuals usually have less educational expertise compared to teachers and are placed in the classroom to provide support to specific students with disabilities. Paraprofessionals can also be effectively used to help improve literacy skills for students with disabilities (Vadasy, Sanders, & Peyton, 2006). It is important to note that paraprofessionals do not replace general education or special education teachers in the classroom, but instead serve as an additional support for students. Paraprofessionals

Using Telecommunications to Provide Therapies to Remote Areas: A United States Case Study

In many rural areas within the United States, it is often not feasible for a school to have its own speech or occupational therapist given the small number of students with needs. Large distances between schools makes the itinerant model for expert support less feasible. In these instances, school districts are providing therapeutic services via distance using technology such as Skype or other video communications. This remote service model is referred to as tele-rehabilitation. Research conducted by Cason (2009) showed that this model of service support can be just as effective as in-person support. Though it is unclear if this type of support has been attempted in LMICs, it might be an option to consider in places that have access to internet and technology.

need to also receive in-service training on inclusive education, literacy instruction and how to best support students with disabilities in the classroom. Ideally, paraprofessionals help support the classroom in general versus only spending time with a specific student. This can help reduce stigma associated with a disability and ensure that the presence of a paraprofessional does not reduce interaction with peers or the general education teacher (Giangreco & Doyle, 2007). It is important that these individuals promote independence as much as possible and resist doing things directly for the student they are trying to support. Typically, the role of the paraprofessional includes (Causton-Theoharis et al., 2007):

- Provide instructional support in small groups.
- Gather materials.
- Provide assistance for personal care or other physical needs.
- Assist students to complete directions as given by the teacher.
- Facilitate interactions between students.
- Re-read stories for students.
- Listen to students read.
- Lead sound-categorization activities.
- Perform alphabetizing and rhyming activities.

The top five ways that paraprofessionals can help support literacy acquisition skills in the classroom include (Causton-Theoharis et al., 2007):

1. Use paraprofessionals in supplementary or supportive roles to reinforce learning, not provide direct instruction.
2. Use research-based reading approaches (see chapter 3).
3. Train paraprofessionals in the research-based reading approaches.
4. Train paraprofessionals to manage behaviors.
5. Provide paraprofessionals with ongoing monitoring and feedback.

Reflect on Your Context

Does your country use paraprofessionals to support students with disabilities in the classroom?

How is this need for support determined?

How are paraprofessionals trained?

How could the use of paraprofessionals be improved to support literacy?

2.4.3 Accessible Transportation

Many LMICs do not provide transportation for students. Instead, students often travel long distances to get to the closest school, or informal transportation is provided by the parents. For students with physical disabilities, getting to school can be particularly difficult if there are roads and bridges that are inaccessible for wheelchairs or if the distance is too great (World Health Organization, 2011). The lack of reliable transportation is often cited as one of the main reasons students with disabilities are not enrolled in school. There is a link between physical inaccessibility and transport-related social exclusion, though most of the research on this issue has been conducted in high-income countries (Kett and Deluca, 2016).

For many parents, particularly of students with sensory or intellectual disability, challenges with transportation are not only related to accessibility but also to safety. Girls and boys with communication or sensory disabilities are at risk for sexual violence as they may have challenges identifying their attacker. For these reasons, parents of children with disabilities are often concerned about their child traveling even short distances alone. In a survey conducted by RTI International in Cambodia, parents cited concerns for their child's safety as the main reason for removing their child from school. Many members of the parent association reported that their child was sexually abused while walking to and from school (RTI, 2018).

Providing Accessible Transportation: Zimbabwe Case Study

In general, children in LMICs face difficulty in getting to school, and the challenge is compounded for children with disabilities, who face an increased risk of missing school. Some inclusive education programs such as the Leonard Cheshire Disability (LCD) and Inclusive Development Center (IDC) focused on identifying and developing innovative community-based solutions for school transport for children with disabilities. This focus became a pilot project with LCD and IDC providing inclusion schools with three-wheel motorbikes in rural Zimbabwe. Use of these "tricycles" increased access to education for many children with disabilities, as they presented an affordable and safe alternative to go to school. Some project highlights:

- Due to local production's low cost, communities chose to purchase trailers pulled by tricycles and to a lesser extent, scotch carts pulled by donkeys. A trailer can transport eight children at a time.
- Over three years, 20 eligible schools in four districts received 20 tricycles with trailers.
- Transporting children with disabilities created new employment opportunities for parents, school personnel and community members.
- Transportation solutions made a significant difference in the parents' daily lives and presented them with the opportunity to focus on additional income-generating activities.

Issues such as weather conditions, road conditions and safety, maintenance costs and driver training still need to be examined. However, an exploration of transport and inclusion in Zimbabwe reveals a crucial need for community-owned solutions. As stated by Kett and Deluca (2016) "Obviously transport—in this case tricycles—are not the only factor necessary for an inclusive education system, but they have highlighted some crucial gaps in the current approaches, as well as some crucial gaps in the literature around inclusive education" (p. 69).

2.5 Family, DPO and Community Engagement

Key Highlights

- Students with disabilities need to be active participants in their education process including being able to choose preference and establish learning goals.
- It is crucial to engage families of students with disabilities as partners throughout all phases of education.
- DPO engagement is an essential component of inclusive education, which is also mandated by the CRPD.
- Engaging communities leads to more effective and sustained inclusive programs.

2.5.1 Self-Determination

Self-determination is the process of:

- Setting goals based on one's own preferences and choices.
- Developing and implementing plans to meet one's goals.
- Recognizing the link between one's actions and outcomes (shogren et al., 2015).

Self-determination encompasses a broad range of specific skills, beliefs and attitudes, including knowing oneself, identifying preferences, making choices, setting goals, making and implementing action plans to achieve goals, solving problems, advocating for oneself and learning from successes and setbacks.

Self-Determination: Research Tells Us...

- Students with disabilities typically are less determined than same-age peers (Shogren et al., 2007).
- Students who are self-determined are more likely to be successful in employment and independent living (shogren et al., 2015) and have a more positive quality of life (Shogren et al., 2006).
- School-based interventions are successful in preparing students to be self-determined (Wehmeyer & Little, 2014).
- Families and teachers have a key role in promoting self-determination from the earliest years (Morningstar & Wehmeyer, 2008; Wehmeyer et al., 2013).

The instructional approach with the strongest research base is the Self-Determined Learning Model of Instruction (SDLMI) (shogren, Wehmeyer, Burke, & Palmer, 2017). The SDLMI has three instructional phases focusing on a problem to be solved:

- **Phase 1: What is my goal?** Students set an instructional goal based on preferences, strengths and needs
- **Phase 2: What is my plan?** Students design a progress monitoring plan and achieve their goal
- **Phase 3: What have I learned?** Students review data based on self-monitoring and alter their goal or plan if appropriate.

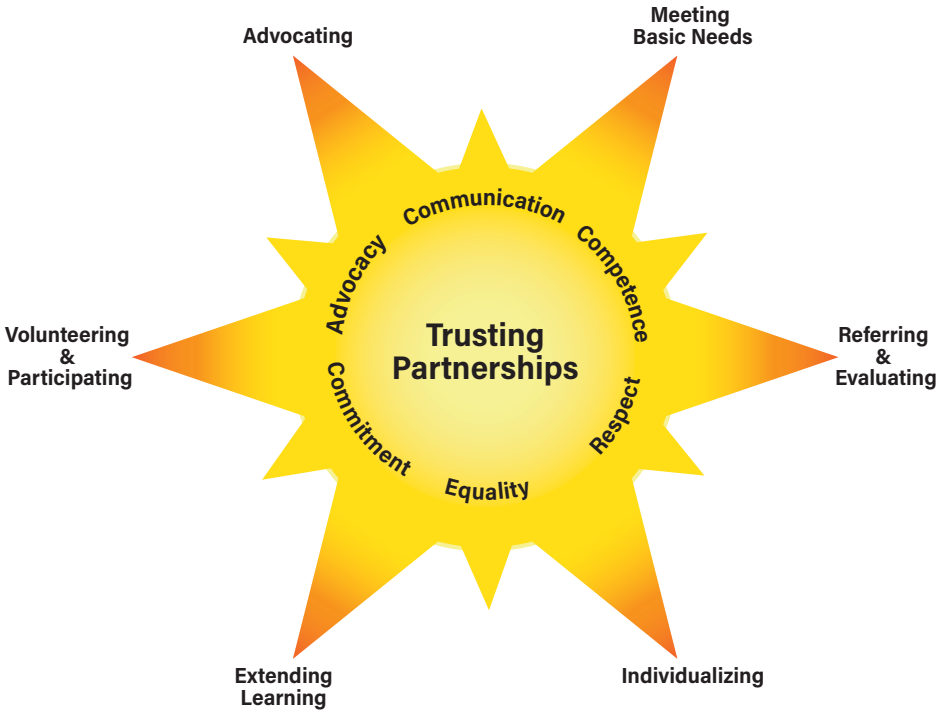
It is important to integrate the need for self-determination within teacher training as well as outreach efforts for families. Both families and schools need to encourage self-determination for students as early as possible and recognize that they can potentially serve as barriers for self-determination if they do not respect and provide opportunities for students with disabilities to provide input preferences and contribution to decisions about their own education.

2.5.2 Family Engagement

It is important to include families in developing literacy goals for students with disabilities. This includes learning what literacy means to them and their hopes and expectations (Downing, 2005). Figure 10 provides an illustration of trusting partnerships depicted as the sun. You will see around the sun's circumference six research-based partnership principles—communication, competence, commitment, advocacy, respect and equality (Blue-Banning et al., 2004; Summers et al., 2005). In the sun depiction, the principles of partnership are "infused" within each of the types of partnership. Annex D provides more information the different types of family professional partnerships.

Given their need for specially-designed instruction, partnerships are especially important for students with disabilities (Turnbull et al., 2015).

Figure 10. Sunshine Framework for Trusting Family-Professional Partnerships



> ***"It is widely recognized that community and parental engagement in education is a vital force in the effort to remove barriers to quality education, mobilize scarce education resources, and increase accountability for results in learning."***
>
> (USAID, 2011, p. 11)

Family Partnership: Research Tells Us...

- Students with disabilities whose families are highly engaged in their education are less behind grade level in reading and tended to receive better grades (Newman, 2005).
- Parents who have positive partnerships with educators report higher levels of family quality of life and lower levels of stress (Burke & Hodapp, 2014; Kyzar et al., 2015).
- Schools that have higher trust levels have been found to be three times more likely to have reading and math improvement (Bryk & Schneider, 2002).
- In South Africa, the absence of family partnerships can negatively influence teachers' implementation of inclusive education (Engelbrecht, Swart, & Eloff, 2001).
- An inclusion education project in India focused on preparing parents to be equal partners with teachers in educating children in general education classes (Alur, 2010).

In USAID's 2011 Education Strategy, they underscore the importance of parent and community engagement. To improve reading skills, it is critical to have "greater engagement, accountability, and transparency by communities and the public" (p. 11). For example, in Pakistan and India, students have increased learning achievement when their parents receive their report cards. One of the best ways for parents to encourage children's literacy development is to engage in dialogic reading, an interactive approach where parents ask children questions about picture books and children act as the storyteller. Research on young children with and without disabilities documents that dialogic reading is successful in strengthening oral language but has not had an effect on phonological processing (Institute for Educational Services). It is important to educate families on the laws within the country related to education of children with disabilities so they can better advocate for their child's right. It is also extremely important to educate parents on their child's disabilities in a way that follows a human rights model and provides insight on their child's needs as well as their potential strengths. In some cases, this outreach may include strategies to reinforce learning at home or teaching parents skills on how to communicate with their child (such as learning sign language, braille or how to model AAC devices).

In LMICs, families face challenges with their own education and access to literacy resources. In India, up to 38 percent of mothers have not completed primary school (Vagh, Nag, & Banerji, 2017). In approximately one-half of children's homes there is support for learning, but only about one-third of the homes have print materials. It is important that all children, regardless of disability, have access to books at an early age with parents who provide a home learning environment.

2.5.3 DPO Engagement

Engaging DPOs in any inclusive education program is crucial. The CRPD Article 4 on General Principles requires that all policies or decision-making processes concerning persons with disabilities and inclusive education, should include a consultation mechanism and "actively involve persons with disabilities, including children with disabilities through their representative organizations (United Nations, 2006, Art. 4)." Involvement of DPOs and other disability leaders results in stronger programs. DPOs' have a strong and unique role to play in advocating for improved inclusive education policies and programs (UNESCO, 2017-2018). A study conducted by Eleweke (2011) in both high-, middle- and low-income countries found that DPOs' participation in and advocacy for improved educational services produces improved special education services. DPO engagement in literacy programs not only supports program alignment with the unique insights and priorities of the DPO community, but involving DPO leaders in literacy training can also provide adult role models for students, families and teachers.

International DPOs often produce policy statements and other valuable information related to best practices in education and literacy acquisition for persons with the specific type of disability they represent. Therefore, it is important to not just consult with local DPOs but also to follow guidance provided by different representative groups. For example, Inclusion International, an IDA member, has worked extensively over the years to promote inclusive education and has inclusive education as one of their priorities. As part of their programs, they produce policy papers and studies, and advocate to ensure that students with intellectual disability are fully considered within the inclusive education movement.

Community Engagement: Fiji Case Study

In Fiji, an important collaboration between a local DPO, the Fiji National Council for Disabled People (FNCDP) and Save the Children is underway. FNCDP and Save the Children work together to maintain child education in a safe environment and provide psychosocial support to children, parents and communities in time of natural disaster. Millions of children, especially those with disabilities, are disadvantageously affected by man-made or natural disaster emergencies. Education suffers from school closings, destruction of property and educational materials, and teacher absence. If education is included in humanitarian relief efforts, it can be lifesaving for children from dangers and exploitation that unfold during and after emergencies. Save the Children and FNCDP ensure the Education in Emergency (EiE) policy and plan is disability inclusive. Some of their EiE activities carried out include:

- Conduct drills in inclusion schools that have children with disabilities.
- Emergency training for students and staff at local schools for children with disabilities.
- Provide educational supplies for children with disabilities after an emergency.
- Inform inclusion schools on their right to access to EiE.
- Provide information on sanitation and hygiene, healthcare access and food distribution, landmine safety, sexual abuse awareness, peace building and conflict resolution.
- Encourage and enrich children's learning through the teaching of literacy, numeracy and study skills (Christian Blind Mission, 2012).

The International Disability Alliance (IDA)

IDA is an alliance of eight global and six regional organizations of persons with disabilities. IDA works at the international level to advocate for the rights of persons with disabilities (including all disability categories) using the CRPD as its standard. For more information on IDA please visit: www.internationaldisabilityalliance.org.

2.5.4 Community Engagement

Community engagement involves trusting partnerships among educators, other professionals, organizations and businesses (Gross et al., 2015). Similar to family engagement, community engagement has a strong research base. Community engagement not only signifies outreach from the school to the community but also represents educating the community on the importance of providing literacy skills to students with and without disabilities. It involves community members and engaging in proactive and meaningful activities to support local schools and students.

Researchers have drawn five recommended practices from schools that excel in community partnerships and link to literacy (Gross et al., 2015; Elder & Kuja, 2018). These practices are:

1. Engage with the community to identify businesses who could provide materials, books and other resources related to literacy instruction.
2. Identify mutual interest and goals of community leaders around their ideas of how to mobilize the community to achieve literacy goals.
3. Ensure reciprocity in partnerships, identifying ways that staff, students and families can give back to the community in literacy-related activities.
4. Maintain an "open door policy" by welcoming community members to be school volunteers.
5. Invite community members to be active participants in designing school literacy projects and providing celebrations for students' literacy progress.

Researchers in Kenya provide a strong example of a partnership involving educators, families, community members and students in advocating for inclusive education (Elder & Kuja, 2018). This project involved constituting inclusion committees at two schools, focused on addressing a range of

Community Engagement: Research Tells Us...

- Schools that have strong community partnerships have a higher percentage of students achieving on grade level and increased test scores (Sheldon, 2003, 2007).
- Community engagement leads to increased parent volunteerism (Anderson et al., 2010).
- Community engagement opens doors for students to have learning opportunities outside of school (Blank et al., 2003).
- Community members with and without disabilities joined other stakeholders in an inclusion committee that improved the quality of inclusion pedagogy and dissolved some of the boundaries between inclusive and segregated schools (Elder & Kuja, 2018).

Girls learning to read through the USAID Prioritas project that used Response to Intervention to improve reading. Photo Credit: Education Development Center

topics including national and international legal mandates for inclusive education, access to funding, identification of strengths and needs related to inclusive education, action planning in establishing and addressing goals, and planning for project sustainability. One result was the partial disbanding of boundaries between a school for children without disabilities and a segregated school located nearby for students with physical disabilities. Discussions also led to an increase in the number of students enrolled in each of the schools and to governmental review of special education policy. The authors identified the participation of multiple partners, including families and community members, as a key aspect of the project's success.

In addition to engaging the community, it is important to educate families of children without disabilities on the benefits of inclusive education for students with and without disabilities. Engaging and educating parents early can help reduce spreading false information or fears related to inclusion and can help ensure that families are supportive and do not serve as an additional barrier.

Reflect on Your Context

Are there commonly held beliefs or perceptions within the community that may serve as a barrier to education for children with disabilities?

What type of partnerships with the community might be helpful to address and change those beliefs?

Chapter 2: Additional Online Resources and Information

Policy and Support Systems

Hayes, A.M. & Bulat, J. (2017). Disabilities Inclusive Education Systems and Policy in Resource-Constrained Environments: A Practitioner's Guide. Research Triangle Park, NC: RTI Press. Retrieved from https://www.rti.org/rti-press-publication/disabilities-inclusive-education-systems-and-policies-guide-low-and-middle-income

International Disability Alliance. (2015). The right to education of persons with disabilities: The position of the International Disability Alliance. Retrieved from http://www.internationaldisabilityalliance.org/resources/right-education-persons-disabilities

Schulze, M. (2007). Understanding the UN Convention on the Rights of Persons with Disabilities. Handicap International. Retrieved from https://iddcconsortium.net/sites/default/files/resources-tools/files/hi_crpd_manual_sept2009_final.pdf

United Nations. (2016). General comment No. 4 on the right to inclusive education. Convention on the Rights of Persons with Disabilities. Retrieved from http://www.ohchr.org/EN/HRBodies/CRPD/Pages/GC.aspx

UNESCO. (2009). Policy guidelines on inclusion in education. Paris: UNESCO. Retrieved from http://unesdoc.unesco.org/images/0017/001778/177849e.pdf

Teacher Training and Teacher Roles

Catholic Relief Service. (2010). How-to Guide Series: Preparing teachers for inclusive education. Retrieved from https://books.google.com/books?hl=en&lr=&id=IweAdJBIFAoC&oi=fnd&pg=PA4&dq=Special+Education+Kosovo&ots=2Hd4_Fs7Dm&sig=8KnRXNx1rXB0arJg1YTrfIRiXdg#v=onepage&q&f=false

International Disability and Development Consortium. (2013). Teachers for all: Inclusive education for children with disabilities. Retrieved from http://www.unicef.org/disabilities/files/IDDC_Paper-Teachers_for_all.pdf

United Nations Educational, Scientific and Cultural Organization. (2003). Open file on inclusive education: Support materials for managers and administrators. Retrieved from http://unesdoc.unesco.org/images/0013/001321/132164e.pdf

National Center for Education Evaluation and Regional Assistance. Website. Retrieved from https://ies.ed.gov/ncee/

Instructional Approaches and Teacher Supports

Universal Design for Learning

CAST. Universal Design for Learning. Retrieved from http://www.cast.org/

CAST Professional Learning Resources. Retrieved from http://castprofessionallearning.org/free-udl-resources-and-tips/

Individual Education Plans (IEPs)

Center for Parent Information and Resources. (2017). The Short-and-Sweet IEP Overview. Retrieved from http://www.parentcenterhub.org/iep-relatedservices/

Reasonable Accommodations

Maryland State Department of Education. (2012). Maryland Accommodations Manual: Selecting, Administering and Evaluating the Use of Accommodations for Instruction and Assessment. Retrieved from http://archives.marylandpublicschools.org/MSDE/testing/docs/2012_MD_Accommodations_Manual_.pdf

Assistive Technology

World Health Organization. (2016). Priority Assistive Products List. Retrieved from www.who.int/phi/implementation/assistive_technology/EMP_PHI_2016.01/en/

Accessible Teaching and Learning Materials

National Center on Accessing the General Curriculum (NCAC). (2004). National Instructional Materials Accessibility Standard Report. Retrieved from http://aem.cast.org/about/publications/2004/ncac-nimas-report-national-file-format.html#.Wt9f6Zch02w

USAID. (2015). A guide for promoting gender equality and inclusiveness in teaching and learning materials. Retrieved from https://globalreadingnetwork.net/eddata/guide-promoting-gender-equality-and-inclusiveness-teaching-and-learning-materials-0

School Supports and Other Related Services

Other Related Services

The IRIS Center. (undated). What Are Related Services for Students with Disabilities and How Are They Provided? Nashville, TN: Peabody College, Vanderbilt University. Retrieved from https://iris.peabody.vanderbilt.edu/module/rs/cresource/q1/p01/#content/

Center for Parent Information and Resources. (2017). Related Services. Retrieved from http://www.parentcenterhub.org/iep-relatedservices/

Paraprofessionals/Teacher Assistants

Causton-Theoharis, J.N., Giangreco, M.F., Doyle, M.B., & Vadasy, P. F. (2007). Paraprofessionals: The "Sous-Chefs" of literacy instruction. Council for Exceptional Children, 40 (1) 56-62. Retrieved from https://www.researchgate.net/profile/Julie_Causton-Theoharis/publication/28799732_Paraprofessionals_The_Sous-chefs_of_Literacy_Instruction/links/53ff0d360cf283c3583c5580/Paraprofessionals-The-Sous-chefs-of-Literacy-Instruction.pdf

Accessible Transportation

Kett, M. and Deluca, M. (2016). Transportation and access to inclusive education in Mashonaland West Province, Zimbabwe. Social Inclusion, 4 (3) 61-71. Retrieved from https://www.cogitatiopress.com/socialinclusion/article/viewFile/502/502

Self-Determination, Families, DPO and Community Engagement

Self Determination

National Gateway to Self-Determination. (undated). Website. Retrieved from http://ngsd.org/

Family Engagement

Beach Center on Families and Disability. Website. Retrieved from https://beach.ku.edu/sites/default/files/inline-files/Beach/parents-guide-to-sd.pdf

National Center for Families Learning. Website. Retrieved from http://face.familieslearning.org/index/

DPO Engagement

International Disability Alliance (IDA). Website. Retrieved from http://www.internationaldisabilityalliance.org/

Community Engagement

Strategies for Community Engagement in School Turn-Around. (2014). Retrieved from https://www2.ed.gov/about/inits/ed/implementation-support-unit/tech-assist/strategies-for-community-engagement-in-school-turnaround.pdf/

Chapter 3: Promoting Literacy Skills for Students with Disabilities

Every student benefits from literacy instruction. All children have the right to obtain this valuable skill set. Having high exposure to literacy instruction is important, but for many students, that may not be sufficient. For students with disabilities to more effectively acquire literacy skills, different instructional techniques may need to be used. Sometimes these adaptions may be minimal. But some students may need a more specially designed and individualized approach. Many of the evidence-based techniques and approaches highlighted in this section improve literacy acquisition not only for students with disabilities but also can be helpful in improving and strengthening literacy acquisition for students without disabilities. This chapter of the toolkit:

- Provides general principles for literacy acquisition.
- Dispels myths related to literacy acquisition and students with disabilities.
- Introduces purposes and methods to identify students who may need additional supports.
- Explains different stages of literacy acquisition for students with disabilities and the importance of early intervention.
- Provides examples of instructional techniques that support literacy skills for students in different disability categories using the UDL framework, and the intersectionality of these practices.
- Explains how to monitor learning and literacy progress for students with disabilities.

3.1 Understanding Literacy and Disability

Key Highlights

- All students, including those with disabilities, can obtain literacy skills and should receive literacy instruction.
- The principles of literacy acquisition can be applied to students with and without disabilities.
- Harmful myths about literacy acquisition exist concerning students with disabilities that serve as barriers to learning and reaching their full academic potential.

3.1.1 Core Principles for Literacy Acquisition for All Students

For students with and without disabilities, it is recommended to apply a core set of principles when providing literacy instruction. These core principles include:

Presume competence. All students can learn and should be exposed to literacy. It is essential that all strategies build upon this premise and enable students to reach their full academic potential. The assumption that all students can learn is often referred to as the "least dangerous assumption" principle. The least dangerous assumption is to presume a student is competent to learn general education curriculum, including literacy skills, and to design educational programs and supports

based on that assumption (Jorgensen, 2006). When teachers presume student competence, students are far more likely to have improved outcomes (Jorgenson, McSheehan, & Sonnenmeier, 2007).

Build on student strengths. A strength-based approach shifts the focus from a student's deficits and challenges and focuses instead on what a student can do with appropriate supports in place (Thompson, Shogren, & Wehmeyer, 2017). Focusing on a strength-based approach has resulted in higher learning outcomes, reduced absenteeism and increased student confidence (Clifton & Harter, 2003). Similarly, a strength-based approach in special education services is especially important for inclusive education (Turnbull et al., 2013). This includes developing strength-based IEPs that build on a student's academic and social strength instead of solely addressing a student's deficits and limitations (Elder, Rood, & Damiani, 2018).

Use evidence-based instructional techniques. Recommended practice is that literacy instruction for children with disabilities incorporate evidence-based strategies proven effective for all children. For example, explicit instruction with positive reinforcement can benefit all children (Archer & Hughes, 2011). Other evidence-based techniques include modeling, discrete trial, prompting and fading, and generalization training (Wehmeyer, Shogren, & Brown, 2017).

Provide positive behavioral supports. Unfortunately, too often when there is challenging behavior due to the presence of a disability, typically the response is to punish rather than to teach students appropriate behavior. An alternative is to use positive behavior support, which is a problem-solving, data-based, proactive approach to teaching students how to behave consistent with school expectations. It uses systematic procedures to first identify the function that the challenging behavior is serving for the student, so that teachers and other schools staff can address the behavior in a positive manner and prevent the challenging behavior from reoccurring. Changing the environment, redirecting students, adapting teaching strategies and reinforcing positive behavior all are used to achieve positive behavioral outcomes (Carr et al., 1999). In order to accomplish literacy goals, many students with disabilities will benefit from positive behavior support.

Promote culturally relevant learning. Culturally relevant teaching uses strengths, everyday experiences, networks and values of students and their families as a resource to ensure learning and positive outcomes (Gay, 2013). Children should be exposed to instruction and materials that reflect their culture. Including words, concepts, stories and books that are culturally relevant is highly motivating in the acquisition of literacy skills.

Ensure gender equity. It is crucial that both girls and boys with disabilities receive equitable literacy instruction. Education plays a vital role in combating harmful gender stereotypes. However, traditionally, gender programs and interventions too often have been designed without taking into consideration the needs of students with disabilities. It is critical that both girls and boys with disabilities be an integral component of all gender and equity programming.

Ensure dignity. All children, including students with disabilities, should be treated with dignity in the classroom. This includes ensuring that corporal punishment is not used, students are not exposed to school-related gender-based violence (SRGBV), and they are respected as individuals. This also means using respectful terminology when referring to disability and not talking down to students with disabilities (for example, do not speak to a student who is 12 as if they are three years old). As stated within General Comment 4, "education must be directed at the full development of the human potential and sense of dignity and self-worth, and the strengthening of respect for human rights and human diversity" (United Nations, 2016, p. 6).

3.1.2 Dispelling Myths on Literacy Acquisition and Students with Disabilities[11]

There are several harmful myths related to literacy and students with disabilities. Dispelling these myths is vital, as teaching based on false and negative perceptions can influence what a teacher instructs and a student's access to learning. Six of the more common misperceptions related to literacy acquisition for students with disabilities are listed as follows.

Myth #1: Learning to read is a natural process. Immersion in a literacy-rich environment does not by itself support learning to read. Learning to read requires explicit instruction that often needs to be varied to support the unique needs of different types of learners. For many, such as children with learning or behavior and attention disabilities, explicit, systematic phonemic awareness is more effective than unsystematic instruction (Ehri et al., 2001). For others, such as children who are blind, this requires learning to read through braille. Auditory-based language acquisition, as well as reading, is not a natural process for many students including students who are deaf/hard of hearing/deafblind and for many students with communication disorders. These students best acquire language through visually-based language acquisition. Humphries et al. wrote that "Children naturally come to be fluent in whatever accessible language(s) they are surrounded by and exposed to on a regular and frequent basis" (Humphries, 2012, pg. 2). Recognizing that many students receive and communicate reading differently is a core element of using UDL practices.

Myth #2: All students with the same disability label will learn literacy skills the same way. All children are unique and thus learn differently. There is no "one size fits all approach" that works for every child with a disability or without. Although there are approaches that often work for children with the same disability, there are always exceptions to the rule. Likewise, children are individuals and will be motivated to learn and engage for different reasons. Some children may be motivated by music, others by physical activities or technology. Because all children are different, it is important to promote literacy approaches that build upon a student's unique learning preferences.

Myth #3: If students with disabilities do not achieve literacy skills by a certain age, they will not be able to obtain literacy skills. If a child has not learned to read and write by a certain age, it does not mean they will be unable to learn later in life. Research documents that many older children or adults with disabilities can acquire literacy skills later in life (Downing, 2005). However, early language and literacy skills are important as they often provide critical foundational skills to support future learning, including numeracy and other subjects. It is critical that students of all ages receive literacy instruction. For example, a child with a disability who is 10 or 15 who has never been to school but is now enrolled can still receive literacy instruction.

11 Thank you to Dr. Jean Andrews, Dr. Susan Copeland, Dr. Julie Durando, Dr. Linda Mason and Dr. David McNaughton for their contributions to the various myths on disabilities and literacy.

Myth #4: Students with complex support needs, such as those with intellectual disability, multiple disabilities or who are severely affected by autism spectrum disorder, cannot acquire literacy skills. Research documents that students with intellectual disability and other complex support needs can acquire literacy skills if given sustained, intensive, comprehensive literacy instruction (Copeland & Keefe, 2017; Channell et al., 2013). This means: (1) developing lessons that concurrently (within the same lesson) teach language/communication skills, word recognition (that includes both sight words and phonics), vocabulary, fluency, reading and listening comprehension, and (2) writing using multiple modalities and active learning (Allor et al., 2014). Incorporating engaging topics and text helps students with intellectual disability make better connections and meaning, supporting the acquisition and generalization of skills.

Myth #5: Students who are deaf/hard of hearing, including those with additional disabilities, cannot learn to read and write. Young children who are deaf/hard of hearing can be taught how to read and write the language of their country. Young students who are deaf can learn both alphabetic and non-alphabet scripts (i.e., Chinese, Arabic, Korean, etc.) (Wang & Andrews, in progress). A lack of literacy skills does not mean that students who are deaf/hard of hearing do not have the mental capabilities. Studies have consistently shown that intelligence is normally distributed in the deaf population (Leigh & Andrew, 2017). Even young students who are deaf/hard of hearing with additional disabilities (i.e., learning, emotional) and with other sensory disabilities (i.e., deaf, blindness) can acquire literacy (Leigh & Andrew, 2017). To help support literacy skills, children must acquire language as early as possible. With local sign language along with the aid of technology (cochlear implants and hearing aids) and visual (ebooks, internet, captioned TV, YouTube, cell phone apps, etc.) can be used to teach literacy to young students who are deaf/hard of hearing (Leigh, Andrews, & Harris, 2018).

Myth #6: Students who are non-verbal or have communication disorders are unable to obtain and demonstrate literacy skills. Most literacy curricula used in schools require oral or written responses from students to demonstrate learning. However, many students have difficulty writing due to their disability. Just because students have challenges communicating what they have learned, does not mean they are not learning. Through the use of AAC, many students with complex communication needs can learn decoding and sight words to begin to read. Likewise, using AAC, students can express what they have learned and demonstrate reading comprehension (Light et al., 2008). Students with complex learning supports, including those with complex communication needs, benefit from a balanced approach to literacy that incorporates daily reading, writing and word study (Carnahan & Williamson, 2010; Erickson & Koppenhaver, 2007) that enables them to express what they have learned in flexible ways.

Reflect on Your Context

Are some or all of these myths relevant in the context in which you work?

Are there other myths on literacy acquisition that also might apply?

How can these myths be addressed in future trainings?

3.2 Identification and Qualification for Services

Key Highlights

- Identification is not intended to attach a label of disability to a student but instead to assess student strengths and challenges related to how they can most effectively receive and express information and be motivated to learn with age-appropriate peers without disabilities.
- Identification is achieved through an on-going thoughtful and phased classroom-based approach; gradually building a country's systems, tools and expertise; and avoiding misdiagnosis. Do not relegate identification to a series of simple questions or a singular checklist.
- Identification processes focus on strengths and challenges, use culturally adapted tools, engage families as partners and take place in the classroom over an extended period.

3.2.1 The Purpose of Identification

Identifying students with disabilities or knowing the additional learning supports that can benefit them can be challenging, especially in LMICs. Most LMICs lack culturally-adapted procedural protocols and tools for screening and evaluation, and may have limited access to experts needed to identify children with certain disabilities. Even with these challenges, there is still a push by both governments and donors to have accurate estimates of children with disabilities to help support policy, planning and program decisions. To obtain data, many decision-makers and international practitioners in LMICs often request simple solutions for what is actually a very complex task, requiring a multipronged approach over an extended period. Identifying students with additional learning needs associated with disabilities is very different from collecting census data. Census data are used to collect rough estimates of anonymous prevalence rates with the understanding that there may be some natural levels of error. Conversely, the purpose of classroom identification is to assess if specific students have a disability or other barriers to learning, with the goal to provide them with appropriate services and supports. The knowledge and insight obtained can inform the inclusive instructional techniques used to promote literacy. Then this information can be reported through Educational Management Information Systems (EMIS) or other data services to obtain estimated numbers and determine budget needs.

It is important that classroom identification is conducted with the objective of providing services and supports, instead of potentially providing harmful labels without accompanying support. As stated by WHO and UNICEF (2012), "there are dangers in 'labeling' children according to their diagnosis as it can lead to lower expectations and denial of needed services and overshadow the child's individuality and evolving capacities." (p. 23). Additionally, in many emerging inclusive education systems, inclusion for all children has yet to be guaranteed. Unfortunately, many countries use identification practices and resulting disability labels as justification to either segregate students with disabilities or deny access altogether. For example, in Gabon, Macedonia and Morocco, children suspected of having a disability must be diagnosed with a specific disability before being allowed to access a segregated school; and yet with that diagnosis, they are often denied entry into local schools within the general education system (Hayes et al., 2018). Identification should be a tool that provides an appropriate inclusive education for students with disabilities and promote academics skills such as literacy, not justification for segregation.

It is recommended to use the identification practice to assess additional learning supports needed to effectively include students in the classroom. Identification should not be used as justification for exclusion or segregation.

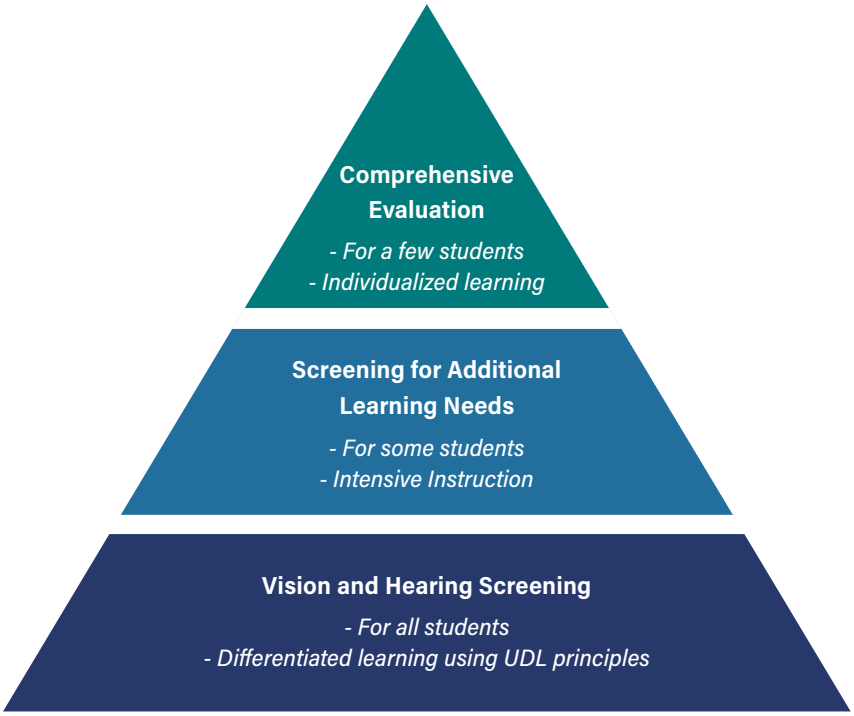
3.2.2 Applying a Phased Approach to Identification

To accurately identify students who have additional learning needs or disabilities, a phased approach is recommended. This phased approach:

1. Starts with vision and hearing screening for all children,
2. Involves screening for children who demonstrate challenges learning to read and learn, and
3. Finally entails comprehensive evaluation for students with suspected disabilities.

Figure 11 shows the recommended phases to identify a student who may benefit from receiving additional learning or special education services.

Figure 11. Phases of Identification and Educational Supports



Source: Adapted from Hayes et al., 2018

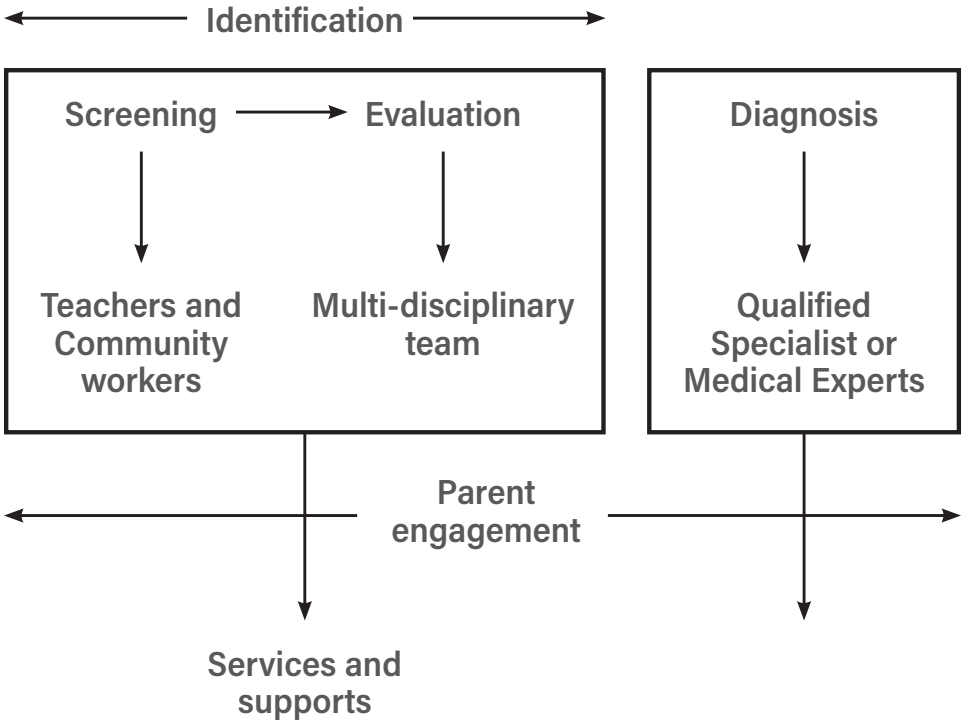
Additional information on the three phases suggested by Hayes et al. (2018) are listed as follows.

Conduct hearing and vision screenings. All children, starting as young as possible, should receive routine vision and hearing screenings. Too often, teachers mistake challenges associated with vision and hearing challenges with other types of disabilities. Ruling out vision and hearing challenges is an important first step for all students. Screenings can be done by teachers or health care providers with minimal training within the school setting, using a few simple tools. It is recommended practice to refer students with suspected vision or hearing challenges to a medical clinic or similar service to receive additional evaluation and be referred to services such as eyeglasses. Teachers can also be trained on classroom and environmental accommodations that can be provided to students with low vision or who are hard of hearing. Once vision and hearing screenings are conducted, families need be informed about results, especially if there is a need for referral for additional evaluation. It is recommended that teachers continue to monitor students' outcomes even after referral and conduct routine follow-up to assess if there has been a change in vision or hearing.

Screen for additional learning needs. After ruling out challenges being associated with vision or hearing challenges, it is important to monitor if students continue to have challenges learning. These challenges may be related to the different means of UDL such as how a student receives or expresses information and what motivates a student to learn.

Conduct a comprehensive evaluation. Students who need more intensive individualized instruction may benefit from having an IEP and a more comprehensive evaluation to assess their learning needs and types of academic supports. No singular tool should be used to assess what type of a disability a student may have or their specific learning and literacy interventions. It is important that an evaluation be conducted by a multidisciplinary team of experts including general education teacher, special education teachers, psychologist and technical experts. Results of evaluations inform IEPs and specific IEP literacy goals. It is also imperative to share results with families in a written report (in their native

Figure 12. Distinguishing between identification, screening, and diagnosis



language) and discuss outcomes in person (Farral, Wright, & Wright, 2015).[12] If a country has yet to establish a system for effectively evaluating students in the classroom, they can still be supported in the general education classrooms by offering instructional approaches that reinforce the principles of UDL. Ideally, all students, including those with confirmed disabilities, are evaluated once the appropriate procedures and tools are in place to learn more about their individual strengths, challenges and preferences related to how to receive and express information, and are motivated to learn.

A Closer Look at Inclusion: Characteristics of Students Who May Have Challenges Learning

There are several reasons why a student may struggle academically. They include external factors such as health issues, lack of sleep, exposure to abuse, past trauma and disability. The important thing in screening is to assess if a child may benefit from additional learning support regardless of the reason for their challenges academically. Possible characteristics of students who may have challenges learning to read include (HelpGuide.org, 2017):

- Problems pronouncing words
- Trouble finding the right word
- Difficulty rhyming
- Trouble learning the alphabet, numbers, colors, shapes and days of the week
- Difficulty following directions or learning routines
- Difficulty controlling crayons, pencils, scissors, or coloring within the lines
- Trouble learning the connection between letters and sounds
- Unable to blend sounds to make words
- Confuses basic words when reading
- Slow to learn new skills
- Consistently misspells words and makes frequent errors
- Trouble learning basic math concepts
- Difficulty telling time and remembering sequences
- Difficulty with reading comprehension or math skills
- Trouble with open-ended questions and word problems
- Dislikes reading and writing; avoids reading aloud
- Poor handwriting
- Poor organizational skills (homework and desk are messy and disorganized)
- Trouble following classroom discussions and expressing thoughts aloud
- Spells the same word differently in a single document

12 In many countries, the term "assessment" is used to determine the process in which students are eligible for special education services. The toolkit uses the term "evaluation" to eliminate confusion with the term "assessment," which indicates testing and monitoring a student's progress.

A Closer Look at Inclusion: Using Ecological Evaluations/Assessments

One screening tool that can be used in LMICs is an Ecological Assessment. This tool can help determine if a student may benefit from additional learning supports and what type of intervention(s) they may require by using observational techniques to analyze how students perform in their natural environment compared to same-aged peers without disabilities. By using observational techniques in different school-related settings over a period of time, a more accurate picture of the student's strengths and support needs is captured (Downing, Hanreddy, & Peckham-Hardin, 2015). The benefit of an Ecological Assessment is that it is more likely to provide an appropriate intervention plan to serve as a tool for teachers in any environment that students with disabilities frequent (Beukelman & Mirenda, 2013). Another benefit of an Ecological Assessment is that it does not need to be culturally normed or adapted, as the tool is inherently culturally appropriate in comparing students to their natural environment and other students in that environment. When using Ecological Assessments, it is important to use a team approach, including teachers or school officials who regularly interact with the student over time, and actively engage the student's parents in the process.

Ecological Assessments have been used successfully in rural Kenya to identify the strengths and needs of students with disabilities and determine discrepancies in abilities between students with disabilities and their non-disabled peers. This discrepancy is where targeted instructional goals were developed to support students with disabilities in primary school classrooms rather than justifying their placement in segregated special schools. This application in Kenya was an alternative to building a costly assessment center that would place students with disabilities in special schools away from their families and local community supports (Elder, 2015). See Annex E for a draft template of an Ecological Assessment that can be translated and used in various contexts and countries.

In countries where there are not adapted tools or technical experts, accurately identifying a child with a specific disability is challenging. Ascertaining if a child is blind/low vision, deaf/hard of hearing or deafblind is a first step. Individuals with these categories of disability require unique instructional approaches to obtain literacy skills and often require assistive devices, access to sign language or tactile sign. For example, it is important to know if a student is blind or if their low vision is significant enough to support braille literacy. Other disabilities, such as intellectual disability, learning disabilities and communication disorders, can be more challenging to differentiate and evaluate.

3.2.3 Additional Effective Practices in Identification

In addition to a phased identification approach, the following are also evidence-based effective practices that are applicable when conducting evaluations, regardless of suspected disability:

Assess students' strengths and challenges. Another important element of identification in the classroom is that the evaluation process highlight student strengths, and build on them to encourage learning, instead of focusing only on challenges or deficits related to their disability. Too often identification processes only highlight academic deficits, and miss the opportunity to explore how students can best receive and express information, and be motivated to learn.

Cultural Adaptations in Development Screening: Cambodia Case Study

Screening tools for childhood development such as the Denver Development Screening Test (DDST) are based on standard milestones of early childhood in western countries. However, these milestones do not match the reality in Cambodia. A study conducted by Ngoun et al. (2012) found that it is unusual for Cambodian children to play with their food, unlike in the West where children are actively encouraged to explore food as part of their eating habits. While children in western countries are expected to draw, Cambodian children usually do not draw before starting school at age 5. Another marked cultural difference is that younger Cambodian children are expected to perform household tasks such as chopping onions.

A partnership consisting of Cambodian and international medical personnel adapted the DDST into a culturally relevant screening tool, "Angkor Hospital for Children Development Milestone Assessment Tool" (AHC DMAT). This makes it possible for professionals in Cambodia to carry out early identification and treatment of children, especially those with disabilities, in a culturally appropriate context. Examples of cultural adaptions:

- Using "play chab chab," a traditional infant gesture in Cambodia instead of "wave bye-bye"
- Playing with lotus seed
- Listing common food like rice and porridge
- Using English and/or Khmer

Adapt tools to reflect the culture and context of a country. When using tools, it is important not to simply import and translate tools. The preferred practice is to adapt tools as needed to the culture and context of a country. The use of tools from high-income countries that are not adapted raises ethical questions, as the validity and reliability of the tool becomes questionable. This can lead to misidentification of a student by either overestimating or underestimating the extent of services and supports that would align with the student's disability (Oakland, 2009).

Engage families throughout the process. It is crucial to involve families throughout all stages of identification. Families have unique insights about their children and provide valuable information on how students receive and express information, and their personal interests that serve as educational motivators. In many countries, signed parental consent is mandated by law throughout the various stages of identification. Thus, it is important to follow existing country law related to parental consent. It is also recommended to educate families on their rights in the process. Additional evidence-based benefits of including families in the evaluation process are:

- Family participation contributes to aligning instructional and school supports and student needs (Chen & Gregory, 2011).
- Family involvement can enhance future family-professional partnership with the school (McClain, Schmertzin, & Schmertzin, 2012).

Conduct classroom-based evaluations over a period of time. To provide the best instructional roadmap for teachers, students need to be screened and evaluated in a classroom setting. Evaluation

should also take place over a period of time to rule out bad days caused by external factors (illness, lack of sleep, etc.), with samples taken across different academic settings (instruction for literacy, numeracy and other subjects). In many LMICs, educational leaders are establishing separate assessment/identification centers to identify students who experience disabilities due primarily to a lack of experts in schools. However, in these situations, students with disabilities are often under-identified because screening and evaluations only take place at assessment centers, and travel to assessment centers is cost prohibitive (Mukria & Korir, 2006). In addition, these centers do not allow for observation in the classroom setting and may not be in the position to provide advice on how a student may need to receive and express information, and be best motivated to learn. As a result, reports from centers are less applicable to the classroom, failing to provide guidance for instructional techniques that can be used by teachers. Figure 13 delineates what should and should not be part of an identification process.

Figure 13. What Should and Should Not Be a Part of the Identification Process

✓ *Identification practices SHOULD*	✕ *Identification practices should NOT*
Assess if a student may benefit from additional learning supports or special education services.	Place a potentially harmful label on a student without providing additional learning supports.
Identify student learning strengths and accommodation needs to support and literacy skills.	Only focus on a student's challenges, weaknesses and deficits.
Use a phased approach using multiple tools to determine what supports would be beneficial.	Determine special education service eligibility, using census questions or using one checklist.
Culturally adapt tools to ensure they reflect the context of the country.	Import translated tools without considering culture and context.
Engage parents and families throughout the identification process.	Bring parents in at the end of an assessment and inform them of results without obtaining their valuable insight.
Assess students in the classroom setting at different times of the day and over time.	Conduct assessments in off-site centers that lack the ability to assess children in a classroom setting; provide assessments based on a brief "snapshot."

When conducting the identification process related to disability, it is important that techniques used are adapted and normed within the country. The identification of a particular type of disability is not always needed to provide service and support. However, having a designation of a particular type of disability can be helpful for some families, teachers and specialists. Before identifying a student with a specific disability, it is important that the evaluation team has carefully conducted a phased process and made an informed decision—that the benefits of being identified with a particular disability clearly outweigh possible negative drawbacks (Brown & Percy, 2017).

Reflect on Your Context

How are children identified as having a disability within the country?

Are they following best practices and using identification to provide additional services?

At what stage is the country currently?

What steps can take place to build an effective classroom-based identification system?

3.3 Stages of Literacy Acquisition

Key Highlights

- Due to existing attitudinal barriers many students with disabilities do not have the same early childhood exposure and access to pre-literacy skills and thus may need additional foundational support.
- Many children do not take a linear approach to literacy acquisition and benefit from balanced and flexible instruction.
- Early intervention and participation in early childhood development programs are particularly beneficial for children with disabilities. It is recommended that early intervention be explored, developed and encouraged as much as possible in LMICs.

Fluency in reading and writing with comprehension requires sustained instruction. It is a staged process where students build on existing skills to move toward full literacy. Long before being able to read and write, students obtain early literacy skills that provide the foundation for learning. The developmental skills needed to learn literary skills start very early in life and often come from being exposed to an environment rich in print, interacting with texts and books and basic phonological awareness (identifying and manipulating auditory/spatial phonemes of signed/spoken words). This step of developing pre-literacy skills is often referred to as emergent literacy. While children in LMICs may have reduced opportunities to access books and engage with print before going to school, prior access to books and print for students with disabilities can be even more limited or non-existent. Studies show that the amount of time families spend reading to a child with disabilities,

especially those with severe disabilities, is considerably less compared to the time reading to children without disabilities (Marvin, 1994). Due to misperceptions related to the ability to learn literacy skills, coupled with the lack of early intervention or accessible early childhood programs, many students with disabilities enroll in school lacking the emergent literacy skills that many of their peers without disabilities have obtained. Other students with disabilities may have challenging behaviors or other related challenges that can interfere with learning. Because of these reasons, the traditional steps toward literacy may not strictly apply to students with disabilities, and a more flexible approach to literacy may be needed.

Many students with disabilities benefit from conceptualization of additional, or precursor, steps to literacy before emergent literacy and literacy skills can take place. This redesigned approach to literacy is based upon the National Center on Deaf-Blindness (NCDB) Steps to Literacy. Although it was designed initially for students who are deafblind, the techniques apply to students with and without disabilities. This approach was augmented to incorporate the Perkins School for the Blind recommended pre-braille literacy requirements as well as Language Development Milestones in sign language. See Figure 14 for the different skills represented in each stage for children with and without disabilities as well as specific designation for skills for students with sensory disabilities.

The National Center on Deaf-Blindness has also developed checklists in both English and Spanish that can be adapted to different contexts to help teachers assess a student's initial literacy skills.[13]

13 For more information, please visit http://literacy.nationaldb.org/files/7914/7672/3022/Literacy_Skills_Checklist_English.pdf.

Figure 14. Steps to Literacy for Children with and without Disabilities

Building a Foundation

Initial foundation/starting points:

- Demonstrates little or no interest in the people around him/her
- Uses behavior as communication
- Seems reluctant to engage in the environment
- Engages in self-stimulating behavior for a significant part of the day
- Demonstrates behaviors that are difficult to interpret
- Has some experience with books or stories

Additional skills for children who use sign language:

- Looks in the direction in which the signer is pointing
- Copies physical movements involving the arm, hands, head and face
- Turns head in response to attention getting behaviors (e.g., hand waving, lights on and off)
- Tracks and follows movement with alertness

Early Emergent Literacy

Important skills for all children:

- Attends to a communication partner
- Participates in turn-taking activities
- Attends to objects and/or pictures in a familiar routine or activity
- Is beginning to use consistent objects/symbols/signs for communications
- Is beginning to understand that people and objects have names/labels/signs
- Shows interest in books, stories and/or others engaged in literacy activities
- Handles, mouths or explores books (even in non-traditional ways)
- Tolerates being touched

Additional skills for children who use sign language:

- Recognizes own name sign
- Recognizes name signs of family members
- Responds to simple sign commands (e.g., come here, eat dinner)
- Uses over 50 signs

Emergent Literacy

Important skills for all children:

- Holds, carries and/or turns pages of a book
- "Reads" to self or pretends to read
- Participates in story reading using the child's preferred communication method
- Show interest in print, braille or tactile representation
- Points to and/or names (or signs) objects
- Understands that text/pictures (or braille) convey meanings

Additional skills for children who use braille:

- Uses two hands cooperatively
- Understands and can count to six (to understand the six, braille dotted system)
- Places individual finger on braille keys
- Understands positional concepts of above/below, left/right, back/front, up/down, top bottom

Additional skills for children who use sign language:

- Begins to use fingerspelling
- Uses negation (e.g., no, none, etc.)
- Maintains visual attention for conversations in sign language
- Asks and understands questions including "where", "how" and "why

Source: Adapted from the National Center on Deaf-blindness Steps to Literacy.

3.3.1 Techniques for Learning by Stage

For each of these stages, teachers can use instructional techniques regardless of the nature of a student's disability. These skills, while designed for students with disabilities, apply to students with or without disabilities. For example, students who lived through or are continuing to experience conflict may also have limited exposure to pre-literacy skills and would benefit from these different techniques. For many countries, previous work in the area of literacy for any students—with or without disabilities—has been fairly limited and is only recently emerging. This represents an opportunity to design new literacy interventions that are inherently inclusive and to incorporate the principles of UDL from the beginning. These recommended techniques are displayed in Figure 14.

For more information on how to provide these specific strategies, please visit the NCDB website at http://literacy.nationaldb.org/

Reflect on Your Context

Do children with disabilities have the same access to pre-literacy skills as students without disabilities in the country? If not, how is this gap being addressed?

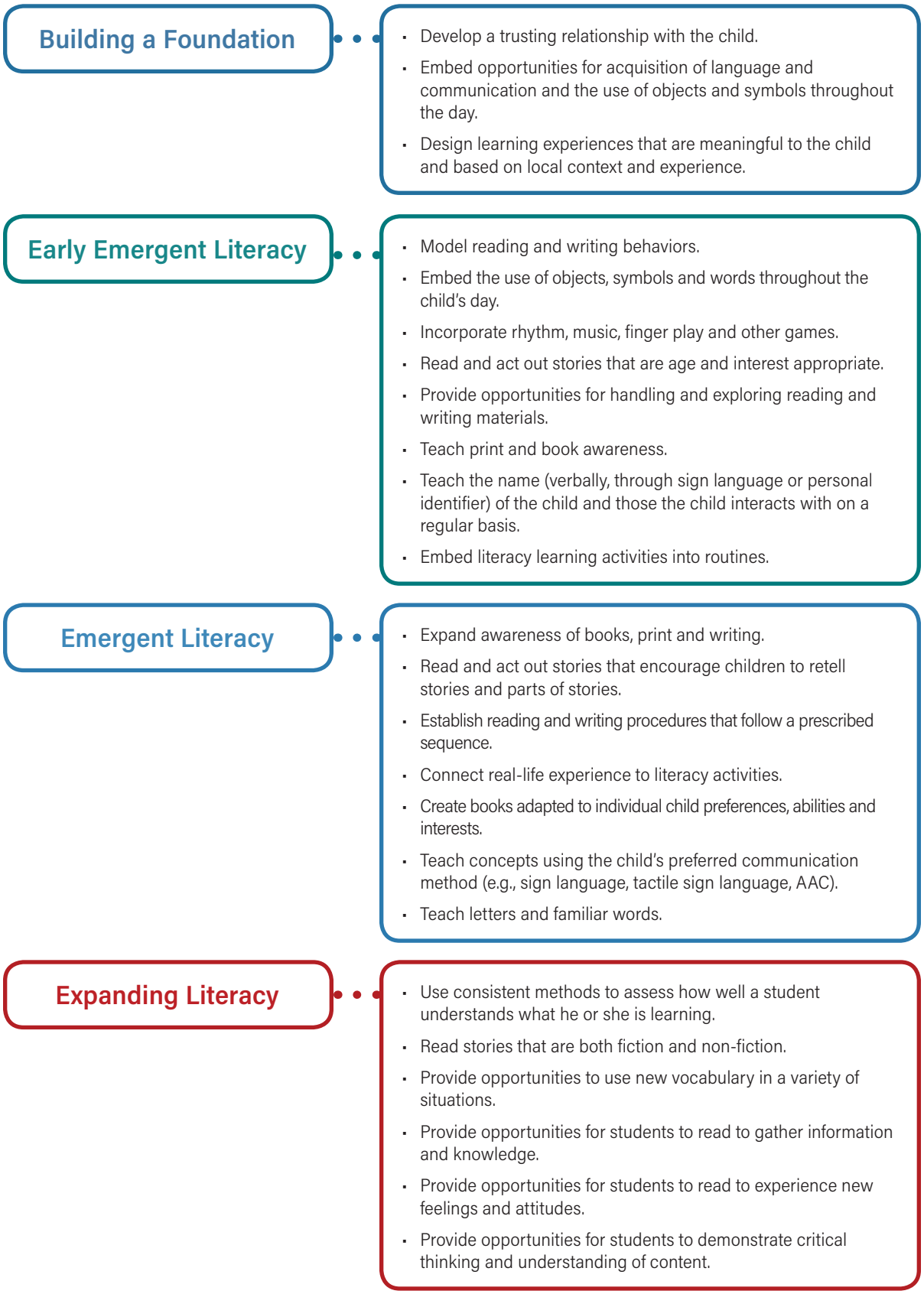
How could the stages of literacy be better understood and used in the classroom?

3.3.2 Recognizing and Accepting Non-linear Literacy Skill Development

The instructional techniques for developing literacy skills highlighted above are meant to be illustrative to guide teachers on how to build strengths and ensure literacy skills development. The steps to literacy are not meant to be prescriptive—where a child is required to obtain all skills before moving to the next stage. Some children may struggle with certain stages and speed through others, while other children may move back and forth between stages based on another issue they are learning or other things going on in their lives.

Many students with disabilities do not take a traditional linear approach to literacy. For example, many students who are deaf may exhibit challenges associating phonetic sounds to letters but become adept readers by learning and memorizing sight words, matching picture-to-pictures, words-to-pictures. Enforcing and isolating skills in a strictly hierarchical approach is not effective; students instead require a more balanced approach to literacy that introduces them to basic skills while also moving toward more advanced skills (Downing, 2005). For example, often students with intellectual disability or complex support needs are not provided with whole stories they can enjoy reading. Instead, teachers focus on drilling letter and word identification and students are rarely allowed to advance to more meaningful instruction that involves reading text. This type of practice has been proven not to be successful and thus is not recommended (Erickson & Koppenhaver, 1995; Katims, 2000). It is important to use the steps to literacy as a guide for developing literacy skills while also ensuring a balanced, ecological approach that assumes competence in reading whole texts as well as isolated skills such as decoding. This does not signify that structured instruction for children with disabilities is not needed but rather that structure instruction should be flexible and respond to the academic needs and strengths of students.

Figure 15. Techniques and strategies for students with disabilities for the different literacy stages



Source: Adapted from the NCDB Literacy for Children with Combined Vision and Hearing Loss.

3.3.3 The Importance of Early Intervention and Inclusive Early Childhood Education

Offering support for early literacy and pre-literacy skills for children ages 3-5 provides a foundation for learning and is associated with later school success (Juel, 2006). For children with disabilities, early childhood intervention (ECI) and access to inclusive early childhood education are important to help students with disabilities enter primary school with the strongest possible foundation for literacy and learning. Early intervention is the provision of a range of services, interventions or therapies that help support babies or toddlers with disabilities or developmental delays. It can expose young children with disabilities to valuable skills, help promote literacy development and reduce barriers or challenges related to specific disabilities or developmental delays. Support at an early age is important as this is the time period where the developing brain is most capable of change (Center on the Developing Child at Harvard University, 2014). As stated by the WHO and UNICEF (2012), "if children with developmental delays or disabilities and their families are not provided with timely and appropriate early intervention, support, and protection, their difficulties can become more severe—often leading to lifetime consequences, increased poverty, and profound exclusion. (p. 5)

Importance of Early Intervention: Research Tells Us...

- A study in the United States determined that children who receive early intervention are more likely to graduate from high school, hold jobs, live independently and avoid teen pregnancy, delinquency and violent crime (Glascoe & Shapiro, 2004).
- The same study showed that investing in a child with a disability during early childhood resulted in savings to society of approximately $30,000 to $100,000 per child over time (Glascoe & Shapiro, 2004).
- One in three children who receive early intervention services in the United States do not require special education services when they start elementary school, due to gains made while in early intervention (Hebbeler et al., 2009).
- Children who are hard of hearing and receive early intervention are less likely to have challenges with listening and speaking proficiently (Anderson, 2011).
- Children without disabilities in high-quality inclusive early childhood settings also benefit from developmental specialists who can identify and address delays in development that might otherwise not be identified (United States Department of Education, 2015).

ECI takes place in many settings including at home through the support of community health workers, at medical clinics and within early childhood development (ECD) programs. However, interventions that have engaged families to learn techniques for incorporating learning into everyday routines have resulted in the best learning outcomes for the child (Dunst, 2011; Mahoney & MacDonald, 2007). ECI programs that engage families also provide an opportunity to educate families on their child's rights to receive an education, and help build disability awareness so that parents can make informed decisions about issues that might impact their child's educational future. For example, ECI can be an excellent opportunity to inform parents of children who are deaf about the need to provide local sign language and other visual communication techniques to improve interaction with their child and support future learning (Trussel & Easterbrooks, 2014).

Recognizing the impact of early childhood development on later learning, many countries are increasingly supporting ECD programs. Countries such as Lesotho and Vietnam include access to early childhood development as part of their education laws (Le, 2013; World Vision UK, 2007). Children with disabilities are frequently in the most need of receiving and participating in early childhood services and yet continue to be excluded from enrolling and participating based on disability (WHO & UNICEF, 2012). All children, regardless of the nature or extent of their disability, benefit from access to ECD programming. For ECD programs to be inclusive, it is vital that they are physically accessible, have qualified teachers, provide flexible instruction, support ECI to the largest extent possible and provide additional support or accommodation as needed.

Early Childhood Education and Engagement: Malawi Case Study

Participatory research allows Sightsavers in Malawi to support early childhood development and education for children who are blind/low vision. To encourage "buy-in" from families and community, the Visual Impairment Centre for Teaching and Research (VICTAR) researchers involve them in developing toys made of available local resources and provide initial skills training for community workers. (Lynch, 2015). The toys made from local resources are:

- A plastic bottle filled with seeds which became a rattler
- A ball made of plastic bags and string which became a football
- Pieces of clothes sewn together which became a doll

As a result of family and community engagement, Lynch (2015) explains, "We found that combining the tool with visits enabled more positive attitudes to their children with disabilities, improved relationships between carers and children and improved the responsiveness of the child" (pg. 1). Providing children who are blind/low vision with greater access to play caused an increase in family engagement and communication.

In Malawi, early childhood development programs can be inadequately staffed and under-resourced. Trained specialists have full caseloads and are unable to dedicate attention to pre-school children at home. Community workers often do not have the same training and experience, yet they have the potential to make a significant contribution. This project helps fill the gap by promoting multi-sectoral collaboration to ensure that early childhood programs are accessible to children with disabilities. The outcomes of this project are:

- Development of a complete set of culturally appropriate training materials in the national language of Chichewa,
- Production of a variety of low-cost toys to encourage and engage children who are blind/low vision in communication and play and
- Motivation for greater social attentiveness on the part of children who are blind/low vision.

Reflect on Your Context

Do children with disabilities have access to ECD?

Are there services available to provide ECI?

What steps can be done to make preschools more inclusive of children with disabilities?

3.4 Additional Interventions and Disability Specific Supports

Key Highlights

- Some students with disabilities acquire literacy skills in the same ways as their peers without disabilities but require accommodations to best receive and express knowledge.
- Other students with disabilities may acquire literacy skills differently based upon their disability and need specially designed instruction.

In addition to understanding that many students with disabilities need additional support before acquiring emergent or literacy skills, it is also important to recognize that students with disabilities may acquire literacy skills differently than other students. The principles of UDL highlight that all children have differences and preferences regarding receiving and expressing information and being motivated. These principles also apply to students with disabilities, with the learning preferences, strengths and supports often aligned with a student's disability. Using the UDL framework, this section provides practical techniques that apply to learning for students regardless of nationality, gender, socio-economic status or mother tongue language. The categories of disabilities (listed alphabetically) that are highlighted in this section include:

- Students who are blind/low vision
- Students with communication challenges
- Students who are deaf/hard of hearing
- Students with intellectual disability and students with complex support needs
- Students with learning, emotional and attention disabilities
- Students with multiple disabilities/deafblind

Although there are additional categories of disabilities that are not included above, this section addresses the majority of disabilities that may require specific instructional techniques or supports to acquire literacy skills.

A Closer Look at Inclusion: Supporting Children with Physical and Mobility-Related Disabilities

Many students have physical or mobility related disabilities. It is estimated that 20 million people worldwide use wheelchairs for mobility with higher incidences in countries that experience conflict or natural disasters (WHO, 2011). However, only a small percentage of children and adults have access to wheelchairs and other mobility- related devices (USAID, n.d.). Inaccessible school infrastructure, inaccessible water and sanitation for health (WASH) systems and lack of accessible transportation are barriers to their ability to receive an education. Students who have physical disabilities acquire literacy skills in the same way as their peers without disabilities. However, many students may require adapted writing and learning materials to learn and demonstrate learning. Ensuring an accessible environment is one of the most important elements to promote literacy skills for students with physical disabilities.

3.4.1 Supports for Students Who Are Blind/Low Vision

The World Blind Union estimates that there are 253 million people who are blind/low vision worldwide, including 36 million people who are blind and 217 million people considered to have low vision. Of these individuals, 89 percent live in LMICs (World Blind Union, 2017). Knowing the exact numbers of individuals who are blind/low vision can be difficult as there is not an agreed-upon definition of blindness or low vision. However, individuals who are blind are often referred to as someone who has visual acuity of not greater than 20/200 even with glasses or correctional support. For low vision, this is usually referred to as someone with functional vision but challenges viewing objects either nearby or far away even with glasses or correctional support (Jernigan, 2005). These definitions vary significantly by country. Although blindness is usually identified in children at very young ages in all countries, in many LMICs recognizing low vision is challenging due to the lack of comprehensive vision screenings.

Literacy Instructional Techniques

Using the principles of UDL, this section includes research-based instructional techniques that promote literacy for students who are blind/low vision. This list is not comprehensive but rather highlights some of the key components needed to support and promote literacy skills.

Multiple means of representation (how students best learn)

- **Learning Media Assessments (LMA).** A learning media assessment captures a holistic picture of student learning needs for those who are blind/low vision, and to identify accommodations in the home, school and community (Zebehazy & Lawson, 2017). This helps assess if a student will benefit from learning literacy through braille, print or both. It also helps identify other types of supports they may need to be included successfully in school environments (for example, what types of adaptations or assistive technologies they may need to reach their full academic potential). Ideally, teachers conduct an LMA for students who are blind by the age of three to help inform future learning strategies.
- **Learning phonetics through braille.** Students who are blind learn literacy through decoding braille that symbolizes different letters. Each country has its own braille code to correspond with their country alphabets. Students use fingers to recognize the braille letter and then apply a phonetic sound similar to how sighted readers decode. A phonetic approach is used versus recognizing sight words, given that braille letters are deciphered individually instead of by full

Contracted and Uncontracted Braille

Many countries use both an uncontracted braille system, where each braille code represents a single letter, as well as a contracted version, where braille code represents sounds such as "sh" or "ow". Most literacy experts recommend learning the uncontracted version of braille first before moving towards the contracted version to ensure a better understanding of spelling.

words. Braille is needed to understand spelling and grammar and how text is formatted (headings, titles and subtitles). These skills cannot be obtained by only receiving aural information (American Foundation for the Blind, 2018). Some students with low vision benefit from learning braille while others benefit from learning traditional print in larger font sizes. The need for braille versus large print is based upon the individual students, their range of vision and their preferences for learning. For example, some students with low vision, in particular, those who may have degenerative vision conditions, may benefit from learning dual media literacy, which is the learning of both braille and reading print text.

Multiple means of action and expression (how students communicate what they learn)

- **Writing in braille.** In addition to learning to read in braille, students who are blind/low vision also need to learn to write in braille. Although there are several assistive device options (see section 2.3.5), in most LMICs, students who are blind learn to read and write braille using a slate and stylus as an inexpensive solution (approximately $5 to $10 USD per device). The challenge with a slate and stylus is that it requires students to write from right to left (or the opposite direction in which the language is typically read), requires the writing of mirrored images of letters and is significantly more challenging to obtain literacy skills (Kalra, Lauwers, & Dias, 2007). Learning literacy while spelling backward is very challenging. A study conducted by D'Andrea (2012) in the United States found that students who learned to write using the slate and stylus quickly abandoned the device once other devices became available. Most students stated that the slate and stylus was too difficult to use for functional literacy tasks and did not foresee using it in the future. The study showed students preferred the Perkins Brailler or other models that serve more like a typewriter for braille. Best practice is that each student who is blind has access to his or her own brailler or other comparable assistive technologies to be able to write braille while in school, and ideally, an additional assistive device that could be used at home to reinforce learning obtained at school.
- **Classroom accommodations.** Students who are blind can effectively learn and demonstrate literacy skills. However, to demonstrate their knowledge, classroom accommodations are needed. In addition to learning braille and using assistive devices, students who are blind/low vision often require additional time to complete tasks. They are slower readers compared to students with sight. One study found that traditional early-grade print readers are 1.5 to 2 times faster readers, with differences increasing as the grades advance (Wall Emerson, Holbrook, and D'Andrea, 2009). Thus, students who are blind will need additional time in completing literacy-related tasks. Also, if the general education teacher is unable to read or write braille, then one option might be to give some tests orally for students to show they understand new learning content.

Multiple means of engagement (what motivates students to learn)

- **Tactile reinforcements and manipulatives.** Students who are blind tend to be tactile and auditory learners. Using manipulatives and hearing content read (by a teacher, student or audiobooks) can help reinforce literacy skills. Research has identified using tactile pictures or manipulatives as an

A girl student who is blind learning to ready by using braille. Photo credit USAID DRC

effective way to teach numeracy and more abstract scientific concepts (Zebehazy & Lawson, 2017). However, not all objects or concepts can be taught by touch. For example, some objects are too large (such as mountains) or small (such as insects or molecules) or dangerous (such as fire and boiling water) (Lowenfeld, 1973). Therefore, it is important to bring in other senses as much as possible, such as sound, taste and smell. Furthermore, like all students, students who are blind/low vision benefit from having the text read to them to reinforce literacy skills. Interactive activities in the classroom that build upon the reality of local contexts (for example, allowing the students to pretend to go to the local market to learn the names of local foods) is also an effective way to reinforce literacy skills.

- **Auditory reinforcement.** Strong listening skills can be a very valuable tool for learners who are blind/low vision. Many students who are blind/low vision are auditory learners and need new learning content to be reinforced through aural means as well as in written form. Listening skills include listening comprehension (understanding what is being heard), auditory discrimination (knowing what a sound is) and sound localization (being able to tell where a sound comes from). Listening comprehension can reinforce literacy skills. However, repeating back what a student has heard is not the same as listening comprehension. It is important to ask probing questions to make sure students understand what is being said in the classroom (Paths to Literacy, 2018).

Reflect on Your Context

Do all children who are blind/low vision have access to learn literacy through braille?

Are LMAs used to determine the best way to teach the student?

Are the methods mentioned above used to promote literacy?

Learning Media Assessment Training: Malawi Case Study

As part of the USAID Early Grade Reading Activity (EGRA) in Malawi, implemented by RTI International, Perkins International provided technical support to Malawi's Ministry of Education to build the capacity of teachers on how to conduct Functional Vision Evaluations and Learning Media Assessments. This was done through training of a cadre of teachers for students who are blind/low vision who were involved in resource centers for persons who are blind. The goal was to ensure that teachers have the competency to assess and evaluate students with vision strengths and challenges to determine the appropriate learning and literacy media (e.g. braille, large print, etc.). As a result, teachers are now able to use a systematic way of collecting information about a student's learning preferences and accommodations needed within the environment and materials.

3.4.2 Supports for Students with Communication Disorders

Instructional Techniques Provided by Dr. David McNaughton of Penn State

Communication includes understanding and expressing information, knowledge, ideas and feelings. However, many students have challenges receiving or understanding language and information (even with no challenges related to hearing). This is known as a receptive language disorder. Other students with expressive language disorders have difficulties expressing language and ideas. Still other students with speech disorders may have little to no challenges understanding language or expressing thoughts; but when they speak, they may have difficulty with producing or articulating sounds. Combined, these challenges represent communication disorders which exist in all languages and every culture. Due to a lack of speech therapists and accurate identification practices in most LMICs, it is difficult to ascertain the global estimates of individuals with communication disorders. In the United States, however, approximately 20 percent of children ages 3-21 have a communication disorder (U.S. Department of Education, 2016). In addition, approximately 1.3 percent of the population has speech disabilities that require some method of AAC to communicate (Beukelman & Mirenda, 2013).

Communication for many children can improve over time significantly while others may have persistent life-long challenges that require AAC devices or sign language to communicate. Children with long-term persistent communication challenges are referred to as having complex communication needs. There are 99 million persons worldwide with complex communication needs. Many do not receive appropriate communication or education services and do not have the opportunity to learn to read and write. Research demonstrates strong evidence that literacy instruction can be adapted to support successful outcomes for children and adults with complex communication needs (Benedek-Wood, Light, & McNaughton, 2016; Caron et al., 2018).

Literacy Instructional Techniques

Using the principles of UDL, research-based instructional techniques that promote literacy for students with communication disorders are highlighted below. This list is not comprehensive but rather highlights some of the key components needed to support and promote literacy skills.

Multiple means of representation (how students best learn)

- **Sight word recognition, decoding and reading comprehension.** Students with complex communication needs benefit from receiving balanced literacy instruction that combines sight word recognition, decoding and reading comprehension strategies. Information should first be modeled, then supported through guided practice and followed by independent practice. Teachers then monitor student processes and provide appropriate feedback. It is also important to provide students with multiple ways (depending on the student's preference for communication) to express what they have learned, including saying the word, using sign language or selecting a picture or symbol using AAC.

Multiple means of action and expression (how students communicate what they learn)

- **Augmentative and Alternative Communication.** It is essential that students be allowed to use different forms of expressions depending on their capacities and preferences. For many with complex communication needs, AAC enables students to symbolically express learning if they are unable to orally respond or do not have the motor planning skills needed for sign language. AAC is available in both high-tech forms (tablet-based apps that allow for larger, more extensive availability of symbols for communication) as well as in low-tech forms such as a printout of pictures referred to as Picture Exchange Communication (PECs). For example, a student can demonstrate learning through low-tech AAC support by participating in a discussion of *Goldilocks and the Three Bears* and pointing to the pictures and symbols on a communication board. Figure 16 shows an example of a picture board for *Goldilocks and the Three Bears*. As the child learns to read, the pictures and symbols can be replaced by text (i.e., printed words). This helps demonstrate the ability to recognize written words as well as demonstrate reading comprehension.

Multiple means of engagement (what motivates students to learn)

- **Shared Reading.** Shared reading provides students with the opportunity to apply decoding and sight word skills while reading through actual books. When reading a book, the teacher pauses at a simple word and enables students to say it, sign it or select the picture or symbol from a communication board or AAC device. In the beginning, it is recommended to target only one word per sentence, moving toward targeting 2-3 words per sentence and more complex words. Different reading materials can be used, including magazines and different genre books. Whenever feasible, select books based on the student's interests (Light & McNaughton, 2012).

Reflect on Your Context

Do children with complex communication needs receive opportunities to learn literacy?

Do they have access to AAC (high or low tech) to express their knowledge?

Are the methods mentioned above used to promote literacy?

Figure 16. Example of a Picture Board for *Goldilocks and the Three Bears*

3.4.3 Support for Students Who Are Deaf/Hard of Hearing

Instructional Techniques Provided by Dr. Jean Andrews of Lamar University

Approximately 70 million people worldwide are deaf (World Federation of the Deaf, 2018). An additional 466 million people, or 5 percent of the world's population, have significant hearing loss, 34 million of whom are children (World Health Organization, 2018). Similar to blindness, there is no universal definition of deafness or hard of hearing. However, a person who is deaf typically has a hearing loss of 70 to 90 decibels or greater, and someone with hearing loss has a hearing range between 20 to 70 decibels (Turnbull et al., 2016). Persons who are deaf/hard of hearing benefit from learning local sign language at the earliest age possible. Children who are deaf and do not have access to sign language at an early age may be at risk for linguistic deprivation which impacts their ability to learn language in the future and which may cause deficits in cognitive activities such as visual perception and use of facial expressions (Emmorey, 2002; Humphries et al., 2016). Although several studies have proven intelligence is normally distributed through the deaf population as it is with the hearing population, obtaining literacy skills can be very difficult for many students who are deaf (Vernon & Andrews, 1990; Lomas, Andrews, & Shaw, 2017).

It is essential that students who are deaf/hard of hearing learn local sign language as well as how to read and write written language text. Learning both languages is referred to as bilingualism. Many people may incorrectly assume that sign language is simply a visual representation of the written language. However, the linguistic structures of sign language and written language tend to be fundamentally different, which is why they are considered as two distinct languages. Transferring meaning from one language to the other without explicit instruction can be very difficult for learners (Lomas, Andrews, & Shaw, 2017). However, sign language can be used to support students' early reading development in the locally written text as well as reading higher levels of reading development (Andrew et al., 2016).

Literacy Instructional Techniques

Using the principles of UDL, research-based instructional techniques that promote literacy for students who are deaf/hard of hearing are highlighted below. This list is not comprehensive but rather highlights some of the key components needed to support and promote literacy skills.

Multiple means of representation (how students best learn)

- **Teaching decoding skills using signs, fingerspelling and writing.** Traditional decoding, where sounds are associated with letters, can be extremely challenging for many students who are deaf (Lomas, Andrews, & Shaw, 2017). Instead, many students bypass the phonological system and learn to read visually (Andrews et al., 2016). Improved literacy can be achieved through a combination of sign language, writing and fingerspelling. Fingerspelling is considered to be a part of sign language and it can be used as spelling is used for written language; each letter of the written language is represented by a different handshape in sign language. Research has shown that readers who are deaf and are skilled in fingerspelling demonstrate greater fluency in reading due to shared underlying cognitive capacities involving word decoding accuracy and word recognition (Padden & Hanson, 2000; Stone et al., 2015).
- **Shared Book Reading (comprehension).** Some students who are deaf/hard of hearing learn to read and write based on their sensory strength—vision. Students who are deaf/hard of hearing benefit from learning literacy through a six-step strategy piloted with young students who are deaf/

hard of hearing (Andrews et al., 2017; Wosley et al., in press). This six-step process includes:

1. Teacher reads storybook in sign to children.
2. Students individually read/sign storybook with picture, peer and teacher support.
3. Teacher closes storybook and models story retelling, followed by each student individually retelling the story with teacher and peer support.
4. Students choose print words from storybook and practice signing, fingerspelling and writing words with peers.
5. Students choose a favorite picture from storybook to draw, then label it in print.
6. Students bring drawings and "writing" to the teacher, explaining in sign the meaning of their drawing and "writing." The teacher glosses the children's signs for later analyses. Teachers and students repeat this procedure several times a week.

Multiple means of action and expression (how students communicate what they learn)

- **Think-aloud and retell.** Children hold an object (such as a candy wrapper, food label, object, toy or favorite storybook) and think aloud by relating to the teacher what the print means to them (using spoken or signed words, or drawings). The teacher transcribes the think-aloud into simple language and gives it to the child to read to peers and parents. After reading a book or participating in an experience (going on a field trip, visiting a park, cooking in class) children retell the experience to the teacher using their own spoken words, signs, gestures or drawings. The teacher transcribes the retelling into simple language for the child to read to peers and parents. Children practice decoding vocabulary words by fingerspelling and writing.

Multiple means of engagement (what motivates students to learn)

- S**hared storysigning, story reading and story retelling.** Teachers can contact and engage members of the adult deaf community in helping them educate young deaf children. Invite a deaf adult to come to your classroom and tell the children in sign language stories about their culture. Deaf adults can translate the underdeveloped language of signs, gestures and vocalizations of young deaf children into a higher level. Teachers can write a translation of the story in the written language of the community for the children to read after the viewing of the story in sign language.

Reflect on Your Context

Are children who are deaf/hard of hearing instructed by someone fluent in sign language?

Are students instructed in sign language along with the written text of the local language?

Are the methods mentioned above used to promote literacy?

Students who are deaf/hard of hearing learning local sign language in Kenya through the USAID Tusome project. Photo credit: Research Triangle Institute.

3.4.4 Supports for Students with Intellectual Disability and Complex Support Needs

Instructional Techniques Provided by Dr. Susan Copeland of New Mexico University

There is often little understanding of the capacities of and challenges faced by children with disabilities. This is especially true in many LMICs where children with intellectual disability and students with complex support needs are denied access to education; and if educated, education takes place in segregated settings that resemble childcare or institutions where academics are rarely taught. Intellectual disability can be defined as having "significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social and practical adaptive skills. This disability originates before age 18" (Schalock et al., 2010, pg. 1). Accumulating research shows that children with intellectual disability learn to read in a similar way as their peers without disabilities (Wise et al., 2010). In other words, though they benefit from UDL approaches they do not need a specific approach like braille for students who are blind or sign language for students who are deaf/hard of hearing. Because of this and many more reasons, it is critical that students with intellectual disability and students with complex support needs be taught in an inclusive environment to take advantage of the literacy approaches being used in the general education classroom. While many of the techniques to promote literacy are the same, intensity and types of supports and accommodations will vary significantly based on the individual learning needs and strength of a student. Annex F, developed by Dr. Susan Copeland, provides more information on the types of challenges that students with intellectual disability and complex support needs often face in the classroom as well as ideas for possible interventions.

Literacy Instructional Techniques

Using the principles of UDL, research-based instructional techniques that promote literacy for students with intellectual disability and complex support needs are included below. This list is not comprehensive but rather highlights some of the key components needed to support and promote literacy skills.

Multiple means of representation (how students best learn)

- **Simplifying text and/or using digital texts.** Students with intellectual disability benefit from simplifying the reading level of text (e.g., reducing the number of words, using familiar vocabulary, simplifying the grammar, using repetitive phrases), communicating the main idea of a topic in an accessible manner. This allows students with intellectual disability to use an adapted version of the same materials as their peers without disabilities. There are many online resources to help teachers with this (e.g., rewordify.com), or teachers can alter text themselves. Digital texts often allow many text features to be altered very quickly (e.g., enlarging text, adding spaces between lines of text, reading text aloud) that increase accessibility of text content.
- **Using pictures/graphics, objects, or video to enhance comprehension.** Pictures[14] of objects, people, places or actions can be used in many ways to provide access to word meaning (e.g., pairing a picture with a word in a piece of text), build understanding of a concept, enhance comprehension of connected text (sentences) or teach a process (e.g., a visual task analysis of solving an addition problem with regrouping). Some students may need to see and interact with actual objects or materials to access vocabulary or content knowledge. For example, when teaching the concept of measuring temperature with a thermometer in science, have students physically manipulate materials that are cold, room-temperature or warm to build their understanding of vocabulary and the concept of temperature. Using short video clips available on the internet to illustrate key ideas is another way to provide access to vocabulary and content knowledge and process knowledge.

Multiple means of action and expression (how students communicate what they learn)

- **Cooperative Learning.** Students work with peers in pairs or in small groups composed of students with and without disabilities. For example, in a Think-Pair-Share activity, a student with an intellectual disability is paired with a classmate without a disability; the teacher poses a question about the lesson and each individual student thinks for a moment of what the student thinks is a good answer (Think); each pair of students next talks over with each other what they think is a correct answer (Pair); the partner student either helps the student with the disability to write down the answer or the partner does the writing based on what they both thought was the correct answer (Share). Alternatively, the teacher has a variety of pictures available from which students can select to represent what they think is a correct answer to the question posed.
- **Using alternative, non-text forms of expression or alternative means of composing written responses.** Students demonstrate learning using pictures or symbols, or use alternative means of writing. For example, a student is asked what is the beginning, middle and end of a story; the teacher provides three pictures of events from the story that take place at the beginning, middle or end of the story and the student arranges the pictures in the correct order. The teacher provides pre-printed responses on index cards when asking students comprehension questions; students

14 Whenever possible the same image or picture should be used to convey a meaning, as using different pictures to represent the same meaning or concept can be confusing to students.

Access to Simplified Text

For some students who struggle to read, having language available that is easy to read and understand can help facilitate learning. For more information on simple language, please visit the European standards for making information easy to read and understand, which are available in 15 languages: http://easy-to-read.eu/european-standards/

can select their answers from the pre-printed responses rather than having to write their answers, thus bypassing fine motor difficulties while demonstrating what they understood. Students dictate responses to a peer or adult, use dictation software, use augmentative or alternative communication systems to communicate their responses, or use computers or tablets to create assignments that incorporate both print, graphics, video or pictures. For example, students learning about character development use environmental print to create a poster for each of a short story's main characters. After hearing/reading the story, the class discusses important aspects of each character. Students work individually or in pairs to select pictures and graphics from environmental print that represent key characteristics of their assigned character. They share posters in class, explaining how the pictures/graphics represent the character's appearance, motives, and actions.

Multiple means of engagement (what motivates students to learn)

- **Choice.** Students are offered choices in how to engage with and demonstrate literacy. For example, students can choose to work with partners or independently to complete an assignment; they can select from a menu of assignment options to demonstrate learning (e.g., typing or handwriting their own story, working with a peer to co-create a short video of their story rather than writing a story; using reader's theater to act out a short story or illustrate point of view of a character); choosing from among a list of topics. (e.g., selecting a topic from a menu of weather-related topics that they want to research and read about to create a report in science class).
- **Classroom and materials are accessible.** Classrooms are physically accessible, organized into clear areas, and tools and materials allow students with cognitive, sensory or physical challenges to fully participate in learning activities. For example, writing tools are available that include pencils, markers, pens, computers or tablets, or dictation software; adapted books on topics the whole class is studying are available for use; seating areas are flexible to enable students to work independently or in small groups; students can choose to wear noise-cancelling headphones while they work; spaces are physically accessible for students with mobility challenges.

Reflect on Your Context

Are children with intellectual disability provided with literacy instruction?

Do students with intellectual disabilities have access to age-appropriate materials in simplified text?

Closer Look at Inclusion: Autism and Literacy

Autism is a developmental disability that impacts a person's ability to interact socially and communicate, often accompanied by repetitive and restrictive behaviors. This occurs in early childhood (usually before age three) and presents barriers to everyday functioning. Representing approximately 2-3 percent of the population, individuals with autism can exhibit a range of intelligence from those with intellectual disability to individuals who fall into the category of genius. In the past, it was assumed that most individuals with autism also had an intellectual disability. Recent research has disproved this perception, showing that only 38 percent of children with autism were identified as having an intellectual disability (Center for Disease Control and Prevention, 2016). Determining this estimate is challenging, as it is extremely difficult to conduct intelligence tests on individuals who are non-verbal. Thus, many of the non-verbal tests for students with autism, especially those who have yet to master using AAC to communicate, may have questionable accuracy (Bishop, Farmer, & Thurm, 2015).

Students with autism have the capacity to learn and should be engaged in literacy instruction. Often students with autism are not given that opportunity to learn from research based and balanced literacy instruction. For example, students who are non-verbal are often assumed not to be able to gain literacy skills due to a false presumption that reading is impossible in the absence of being able to spell out words phonetically (Miranda, 2003). As there is not a typical student with autism, there is no singular approach to literacy that is effective for all students with autism. However, overall suggested techniques include (Kluth, n.d):

- Using visual aids
- Using written words as additional visual supports
- Integrating instruction across the day
- Reading aloud
- Offering multiple text to motivate learning

For students with autism and complex communication needs, the instructional techniques described in Section 3.4.2 can also be applied.

3.4.5 Supports for Students with Learning, Emotional and Attention Disabilities

Instructional Techniques Provided by Dr. Linda Mason of George Mason University

Because of high prevalence estimates, students with learning disabilities, ADHD and EBD are usually referred to as having high incidence disabilities (occurring more frequently than low incidence disabilities such as intellectual disability, autism, deaf/hard of hearing and blind/low vision). Most LMICs lack experts and systems needed to appropriately identify high incidence disabilities, but it can be assumed that they still represent a significant portion of the student population, remaining unidentified and unsupported. Within the United States, approximately 4-8 percent of children have some form of learning disability, 12 percent of school-aged children have some form of an EBD, and approximately 7 percent have been identified as having ADHD (Swanson, 2011; Forness et al., 2012). These children are at increased risk of dropping out of school, substance abuse and juvenile delinquency, especially when not provided with academic supports (Morrison & Cosden, 1997). Additional information on the different types of high incidence disabilities include:

Learning disabilities: Although learning disabilities are not always formally recognized by LMIC governments and school systems, learning disabilities, such as dyslexia, exist within all language systems. The US IDEA law defines learning disability as a "disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations" (US IDEA, 2004). Learning disabilities include dyslexia, dysgraphia, dyscalculia and language processing disorders, among others.[15] Students with learning disabilities typically have average or above average intelligence but may struggle in one or more subjects, such as reading or math (Turnbull et al., 2016).

Emotional and behavioral disorders (EBD): Recognizing and understanding disabilities associated with emotions and behavior is a new concept for most LMICs. Students with EBD are not identified in most data collection nor included in special education systems. There is a dearth of international research related to EBD in LMICs. However, it is well documented that adults and children with psychosocial disabilities face huge issues with discrimination and stigma, and experience widespread human rights abuses including forced institutionalization (Disability Rights International, 2018). It is not unrealistic to assume that children with EBD in LMICs are misunderstood and poorly supported, and are at increased risk to drop out of school, their educational needs are not met. IDEA defines EBD as a condition accompanied by one or more of the following characteristics over a long period of time and to a marked degree, that adversely affect a child's performance:

- An inability to learn that cannot be explained by intellectual, sensory or health factors
- An inability to build or maintain satisfactory interpersonal relationships with peers/teachers
- Inappropriate types of behavior or feelings under normal circumstances
- A general, pervasive mood of unhappiness or depression
- A tendency to develop physical symptoms or fears associated with personal or school problems. (Turnbull et al. 2016)

15 While there are many disabilities, this toolkit focuses primarily on learning disabilities that impact achievement.

The five most common types of EBD include (1) anxiety disorder, (2) mood disorder (depression, bipolar disorder), (3) oppositional defiant disorder, (4) conduct disorder (antisocial or aggressive behaviors) and (5) schizophrenia.

Attention-Deficient Hyperactivity Disorder (ADHD): Most professionals adhere to the American Psychiatric Association (APA) definition of ADHD, focusing on two domains: inattention and hyperactivity/impulsivity that interfere with a student's development and functioning in multiple settings, including school. Typically, characteristics of ADHD must occur before age twelve and must persist for at least six months (APA, 2013). Often students with ADHD are mislabeled as troublemakers, as their behaviors can be disruptive to classroom instruction. Without appropriate supports students may have "challenges working in distracting environments, absorbing large amounts of information, shifting flexibility from task to task, and/or linearly linking a series of cognitive operations" (Turnbull et al., 2016, pg. 169).

Though learning disabilities, EBD and ADHD represent distinct disability categories. However, there is often an overlap between the different types of disabilities. For example, two-thirds of students identified as having ADHD also have behavioral disorders (Glanzman & Sell, 2013). Many students with learning disabilities also have ADHD and exhibit challenging behaviors. In addition to the incidence overlap, these disabilities are grouped here since the instructional techniques to support literacy acquisition are similar, with different levels of intensity and individualization.

Literacy Instructional Techniques

Using principles of UDL, the following research-based strategies promote literacy for students with high incidence disabilities. It is not comprehensive but highlights key literacy strategies.

Multiple means of representation (how students best learn)

- **Explicit instruction.** Explicit instruction focuses on critical skills that are sequenced logically and taught systematically. For example, easier, high-frequency skills (e.g., consonant/vowel/consonant words) are taught prior to teaching low-frequency, harder skills (e.g., multi-syllabic irregular words). Lessons are paced and scaffolded to meet individual needs. In this approach, the teacher models new content, followed by student response. Students are prompted and provided multiple opportunities to engage with instruction. For example, responding together as a group orally for sound blending words gives all students an opportunity to demonstrate new skills.
- **Cognitive strategy instruction (CSI).** CSI focuses on areas of reading remediation: (1) vocabulary, (2) awareness of understanding and (3) connecting ideas. In CSI, teachers foster student learning by providing explicit instruction for (a) learning strategy steps (i.e., a series of steps needed to complete a task); (b) modeling application of the steps to a task; (c) setting goals and self-monitoring progress with the strategy; (d) using positive self-statements; and (e) self-reflective thinking and reinforcement. It is recommended that teachers provide students with guided collaborative whole-class, small-group, paired and individual practice until a strategy is learned and can be applied.

Multiple means of action and expression (how students communicate what they learn)

- **Manipulatives.** Manipulatives can be used by students to communicate learning. For example, letter blocks or cards can be used to demonstrate sound blending and spelling. Interactive games—such as picture match bingo—promote learning and provide insight into what students learned. Story sentence strips can be used to sequence a story.

- **Demonstration.** Students can demonstrate learning by pointing to letter, word, sentence or story parts in response to a question. For example, a teacher asks the class to point to each word on the page that contains the /t/ sound. For students who struggle with reading aloud, teachers can use choral, partner, tape-assisted and/or dramatic readings to provide students with reading practice. To demonstrate comprehension, students can use words or pictures to complete story maps or graphic organizers.

Multiple means of engagement (what motivates students to learn)

- **Kinesthetic, visual and oral engagement.** To reinforce phonemic and phonetic awareness, students can trace letters or use manipulatives as they say sounds (kinesthetic), or can use color-coding as visual reinforcement. Linguistic and multi-sensory structured language approaches for phonics instruction and reading of text are recommended for students with learning, attention and behavioral difficulties. Providing students with opportunities to discuss what has been read as a whole class or small-group discussion supports learning and motivation.
- **Text availability and student choice.** It is imperative to expose students to a wide range of narrative and informational text. This includes books, magazines, newsletters, newspapers, and web-based resources. Along with teacher-selected readings, it is important to provide students with opportunities to explore and choose their own reading materials.

Reflect on Your Context

Are students with learning, emotional or attention disabilities recognized by the school system?

How are their learning needs supported by teachers?

Are the methods mentioned above used?

Closer Look at Inclusion: Trauma and Emotional Disorders and the Impact on Learning

Exposure to trauma can lead to emotional disorders and manifest behaviors that can impact a student's ability to learn literacy skills. It is crucial to understand that trauma affects children in multiple ways, including their brain, that can trigger learning problems. Being aware of this is necessary to be responsive to children's potential life-changing learning challenges in LMICs.

Approximately 25 percent of victims and witnesses of violence develop post-traumatic stress disorder (PTSD), depression or anxiety disorders. In an interview, Dr. Unnikrishnan, who developed guidelines to support aid agencies to reduce mental health problems among survivors of disaster and conflict, remarks, "Whilst the psychosocial impacts of emergencies may be acute in the short term, they can also undermine the long-term mental health and psychosocial well-being of those affected" (Thomas Reuters Foundation, 2007, p. 1). Another article notes that "Epidemiological studies in war-affected populations have found a linear relationship between the number of war events types and PTSD symptoms in both children and adults" (Cantani et al., 2008, p. 2). The United Nations acknowledges this by including a section on "psychological recovery" in the UN Convention on the Rights of Persons with Disabilities (United Nations, 2006, Art. 16), yet psychosocial trauma is not often recognized after a disaster or emergency.

Trauma is particularly hard on children. A study on the mental health of 296 Sri Lankan children, ages 9 to 15, notes that natural disaster, civil war and family violence had an especially devastating effect on them. The result of the study shows explicit devastation: "Nearly all of these children (96 percent) reported experiencing or witnessing some type of domestic violence event. The psychiatric status of the children was evaluated by a diagnostic interview, and 30 percent met the criteria for PTSD. There was a relationship between cumulative stress (war, tsunami and family violence) and the severity of PTSD. Twenty percent of the children met the criteria for major depressive disorder, and 17 percent had current suicidal ideation" (Wagner, 2009, p. 1).

Another acknowledgment of emotional trauma and mental health impact on children comes from research carried out by American Academy of Pediatrics (AAP). This study found that the emotional cost of experiencing disasters, emergencies, family violence and a high incidence of an "expecting the worse" mentality has the potential to lead to emotional and behavioral disabilities in children (Stafford et al., 2010). According to the Trauma and Learning Policy Initiative (n.d.), a collaboration of Massachusetts Advocates for Children and Harvard Law School, studies revealed that "traumatic experiences in childhood can diminish concentration, memory, and the organizational and language abilities children need to succeed in school. For some children, this can lead to problems with academic performance, inappropriate behavior in the classroom, and difficulty forming relationships" (p. 1).

Children living in refugee camps experienced more psychological problems than non-refugee children. Children living in war zones can demonstrate distress from various traumatic events with emotional problems manifesting as PTSD, dissociative disorders, anxiety and substance abuse (Pynoos & Nader, 2000). The stress of being a refugee also has a marked impact on children's education. The process of entering a new educational environment and coping with complex factors in transitions, schooling, community, language, culture, identity and family present challenges. This added stress can lead to significant learning challenges, especially for children with disabilities (Graham et al., 2016).

3.4.6 Supports for Students with Multiple Disabilities or Who are Deafblind

Instructional Techniques Provided by Dr. Julie Durando of the National Center on Deaf-Blindness and Kristen Layton of Perkins International

Children who have more than one co-occurring disability are considered to have multiple disabilities. These children often require higher levels of services and supports to function within school and the community. Children with multiple disabilities are an extremely heterogeneous group as the combination of disabilities can vary significantly. For example, many individuals who are blind have additional disabilities (such as hearing challenges, learning disabilities or intellectual disability) that are often not recognized or identified. In the United States, it is estimated that two-thirds of the blind/low vision population have additional disabilities (Zebehazy & Lawson, 2017). Likewise, 30-40 percent of children who are deaf/hard of hearing in the United States have at least one additional disability (Wiley & Meinzen-Derr, 2012). Persons who experience both deafness and blindness are usually categorized as being deafblind, but even this group is very heterogeneous as there can be significant differences in each person's ability to see or hear with a few individuals being both completely deaf and blind. Unfortunately, in many LMICs, few children with multiple disabilities receive any education. As many systems are segregated and siloed by disability category, segregated schools are often only able to support children with one type of disability. For example, if a child is blind with an intellectual disability, schools for the blind are either ill-prepared or refuse to support children with intellectual disabilities, while schools for students with intellectual disabilities are not prepared to teach braille. As a result, students with multiple disabilities fall through the cracks of the system with no schools open to enrolling them.

For children with multiple disabilities and deafblindness, it is important to remember that literacy develops along a continuum from emergent literacy to independent literacy (see section 4.3 and Figure 13, Steps to Literacy). Many students with multiple disabilities can achieve braille and/or print literacy but need to be taught the building blocks in a meaningful way. For students with sensory loss and multiple disabilities this means providing sufficient time and multiple opportunities to access, process, and respond to information. It is important to include "wait time" during activities and teach critical skills several times each day in different environments, so that children have many opportunities to engage with, learn and express understanding. For example, instructors may provide information to a student without waiting for the student to respond or expecting them to initiate communication. For a student who is deaf-blind or has multiple disabilities, it is important to teach and encourage expressive communication skills. It is important to consider a student's ability to communicate on a continuum from pre-symbolic communication (facial expressions, behavior, pointing, etc.) to the use of more symbolic communication (objects, pictures, sign language, braille, etc.). Receptive and expressive communication and language development should be a part of every learning activity.

A broad definition of literacy is needed for some students with multiple disabilities or students who are deafblind. Not all students will achieve formal literacy, but it is important to value the early literacy skills that can support a child who is learning to communicate and develop language, and build social relationships and greater independence. For example, if a student is able to follow an object schedule to know what event is going to happen next, the student has more control over his/her environment and can use this knowledge to communicate and connect with the others. This requires strategies that encourage students who are deafblind to use touch for exploration and learning, such as joint exploration of an object or keeping a variety of interesting objects within reach of the child.

Literacy Instructional Techniques

Students with multiple disabilities benefit from research-based instructional techniques for literacy that incorporate UDL principles. The techniques below focus on students who are deafblind, but many of the techniques are also beneficial for students with multiple complex support needs. This list is not comprehensive but rather highlights key literacy techniques.

Multiple means of representation (how students best learn)

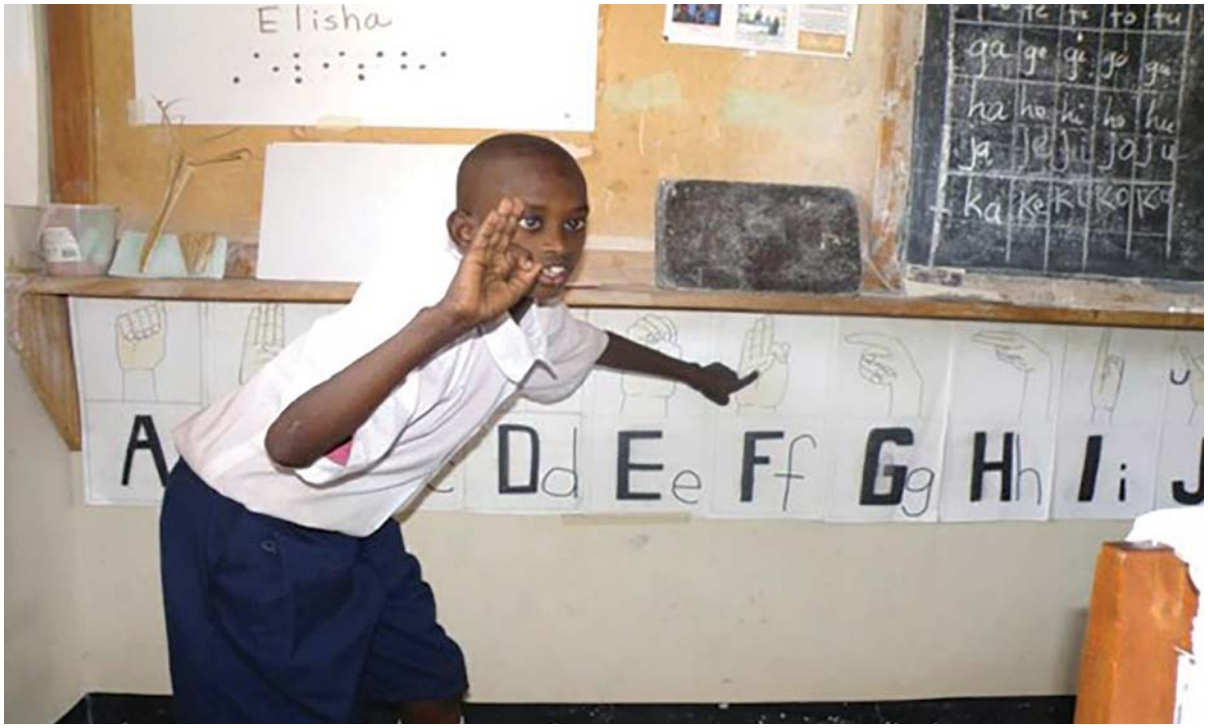
- **Active participation in meaningful activities and real experiences.** Children with sensory loss and multiple disabilities have limited access to incidental learning experiences. They are not able to see a parent cook, siblings put on clothes, or hear how someone is greeted when entering a home. These things need to be explicitly taught. Engaging children in everyday experiences that shape their world helps develop concepts they need to learn. For example, a child who is deafblind may only experience a snack magically appearing on their tray without ever understanding where the food comes from. Engaging the child in the task of preparing the snack provides an opportunity to learn concepts, vocabulary and skills that contribute to acquisition of literacy.
- **Routines.** Daily routine activities help a child develop memory and anticipation. By defining the beginning, middle and end of interactions, activities and routines, children gain understanding of and control over their environment. Routine activities that are well understood by the child are good opportunities to introduce and teach new skills. Routines around reading tactile, braille or print books directly promote literacy each day. It is also important to encourage children to make quality choices within all of their daily routines. Providing them with choices encourages expressive communication and gives them a level of control over their environment. A child can make a choice between two or more things by using objects, pictures, gestures, signs or verbally, depending on their communicative ability. Choosing a favorite book is an easy way to directly relate choice-making to literacy.

Multiple means of action and expression (how students communicate what they learn)

- **Imitation and turn-taking of child's body movements.** For this technique, a teacher moves in close proximity to a student in a position to enable the student to know someone is there. The teacher then greets the student and makes an introduction. Upon getting a response and after giving the student time to notice and process the teacher's presence and make a response, the teacher enters into the student's space. Following the student's lead, the teacher imitates the student's actions (vocal, visual, movement) and begins to add words or music to the student's actions. Responses from the student may be subtle (e.g., change in breathing rate, skin color, pace). After getting a response, the teacher and student then begin a turn-taking exchange (action – cue to respond – wait – repeat). Whenever, possible, it is best to find ways to turn-take within familiar interactions, routines and activities (e.g., lunchtime).
- **Requesting more or a continuation of something.** A concrete and basic function of expressive communication is for a child to be able to ask for "more" of something. This can be expressed in a variety of ways depending on the child's communication level. For a child with limited motor movement, even a slight movement of the finger can be used as an expression of "more". The traditional sign for "more" can be used with children who are able to understand more abstract concepts.

Multiple means of engagement (what motivates students to learn)

- **Hand-Under-Hand exploration.** In this strategy, the adult's hands are placed underneath the child's wrist to enable the child to focus his or her attention on the object explored. This strategy provides a safe environment for exploration and does not place any control over the child's hands but instead allows the child to lead the exploration.



A student who is deafblind in Uganda learning literacy skills through a USAID supported project. Photo Credit: Perkins International

- **Object/Picture Calendars and Schedules.** Object/picture calendars and schedules help build vocabulary and communication skills. Objects or pictures, oftentimes paired with braille or text to encourage literacy development, are sequenced to represent events that happen during the child's day. An example of this is using an anticipation object to represent the next activity. Using this technique, the teacher presents the child with an object directly related to an activity that is about to take place. For example, if the child is about to eat breakfast using a spoon, a spoon would be presented to the child using his or her best possible mode to explore (e.g., visual or tactile).
- **Tactile books, Experience Books and Story Boxes.** These strategies incorporate a variety of concepts and skills to encourage the child at the emerging literacy stage. These shared experiences with a communication partner foster joint attention and build relationships, encourage communication and language development while fostering a variety of skills to build literacy.

Reflect on Your Context

Are students with multiple disabilities allowed to enroll in school? If so, are there trained teachers who can support their education in an inclusive setting?

Are the methods mentioned above being used?

3.4.7 The Intersectionality of Literacy Instructional Approaches

An important thing to note about different instructional techniques aligned with each disability category is that the majority of these techniques are beneficial for all students. This alignment is depicted in Figure 17, which shows how each technique can apply to different categories of disability. Recognizing that every student learns differently, including students without disabilities, introducing this differentiated learning within the classroom can help improve learning for students with and without disabilities. For example, using explicit instruction and book sharing benefits both students with and without disabilities. Whenever possible, these instructional approaches can be incorporated into overall teacher training as they simply reflect improved teaching strategies.

Figure 17. The Intersectionality of Instruction Techniques for Literacy

Instructional Approach	Students who are blind	Students with communication disorders	Students who are deaf	Students with intellectual disability	Students with learning, emotional or attention disabilities	Students with multiple disabilities
Learning Media Assessments	✓	✓	✓			✓
Classroom Accommodation	✓	✓	✓	✓	✓	✓
Tactile Reinforcement and Manipulatives	✓	✓	✓	✓	✓	✓
Shared Book Reading	✓	✓	✓	✓	✓	✓
Explicit Instruction	✓	✓	✓	✓	✓	✓
Cognitive Strategy Instruction	✓	✓	✓	✓	✓	✓
Demonstration		✓	✓	✓	✓	
Kinesthetic, Visual or Oral Engagement	Oral	Kinesthetic and visual	Kinesthetic and visual	✓	✓	✓
Student Choice	✓	✓	✓	✓	✓	✓
Simplifying Text		✓		✓	✓	
Accessible Classroom Materials	✓	✓	✓	✓	✓	✓
Hand-Under-Hand	✓	✓		✓		✓

3.5 Assessment

Key Highlights

- There are several ways to assess knowledge; students with disabilities benefit from access to multiple approaches to testing, to show personal progress and progress compared to their peers without disabilities.
- Tests should incorporate principles of UDL allowing a variety of ways to present the assessment, enable the student to respond, and motivate students to show a best effort.
- Accommodations are needed for many students with disabilities to best demonstrate knowledge and progress.

As with all children, it is important to measure the progress of students with disabilities related to learning and literacy acquisition. The purpose of assessment is not to highlight students' failure but rather to assess the extent to which instructional techniques have been effective in promoting positive outcomes, and to determine skills that still need to be reinforced (Downing, 2005). There are two primary types of assessment:

1. Formative assessments that gauge a students' progress, often informally through class exercises, answering or asking questions or worksheets, and
2. Summative assessments that evaluate a student's cumulative performance.

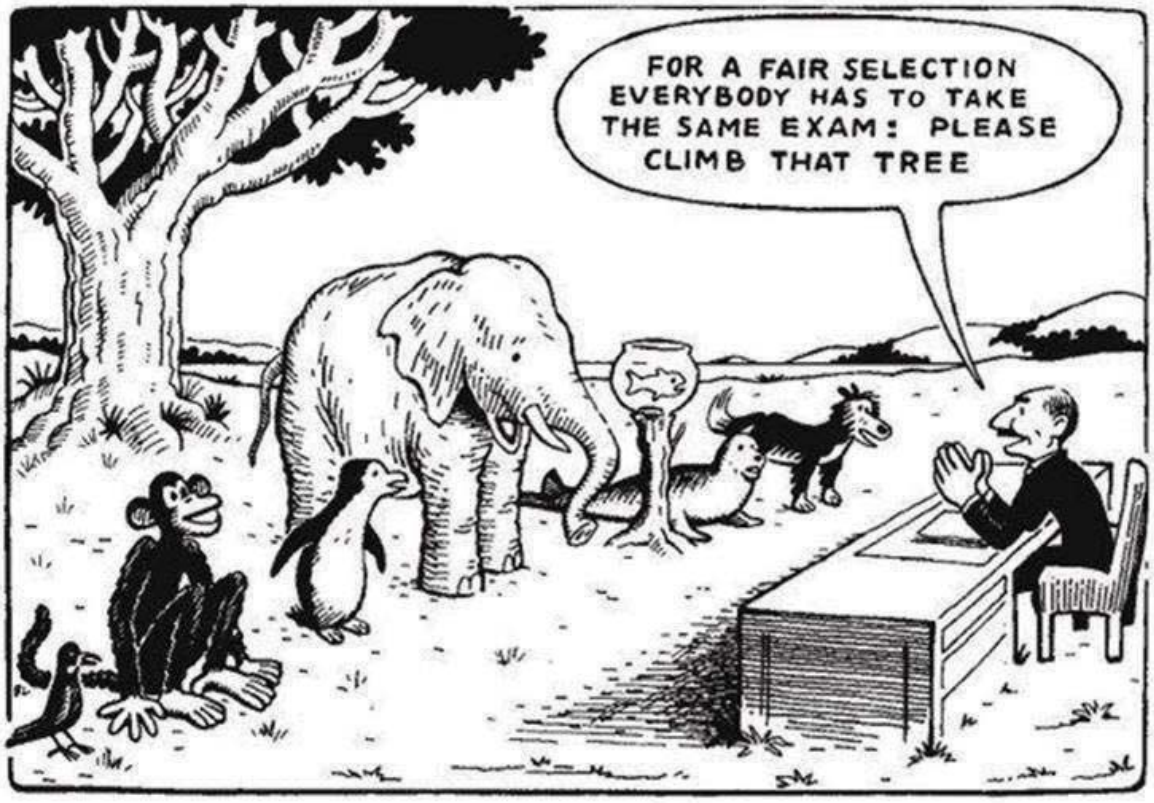
With formative and summative assessments, it is important to incorporate concepts of UDL to enable students to express what they have learned in different ways. When teachers engage students to demonstrate their knowledge in ways that build upon their strengths, students have more opportunity to show what they know (Meyer, Rose, & Gordan, 2014).

Typically, there are two ways to use summative assessment: norm-referenced and criterion-referenced. Figure 17 shows the difference between the two approaches. Ideally, schools use a combination of different assessment tools and tests to provide a comprehensive picture of a student's strengths and challenges (Hussain, Tedasse, & Sajid, 2015). For students with disabilities, it is especially important to provide access to both forms of testing. Access to standardized, norm-referenced tests is important to assess if students are accessing the same content in the curriculum as other students without disabilities.[16] However, for many students with intellectual disability or severe learning disabilities who struggle academically, providing criterion-referenced tests can indicate individual progress and growth.

16 For many students with intellectual disability, complex support needs or multiple disabilities, taking standardized tests without modified materials to reflect individualized learning can be challenging. This is especially true in secondary school, as the content of the tests becomes more advanced. It is a challenge to allow for students to have the opportunity but also to not require a skill that may be too advanced. Different high-income countries handle this challenge in different ways. For example, the United States allows for 1 percent of the population to be exempt from standardized testing. This may be hard to implement in LMICs where there are limited identification procedures. Whenever possible, students need to be given the opportunity to participate in standardized tests, as many children may be able to participate, but make exceptions based on the individual.

Figure 17. Difference Between Norm-Referenced and Criterion-Referenced Assessments

Norm-Referenced	Criterion-Referenced
Compares a student's test score and growth with the scores of other students in the same grade (e.g., class, national assessment)	Compares an individual's student performance against a pre-determined set of criteria to assess growth
To highlight high and low achievers	To find out what a student knows before instruction and then after instruction has finished
Are almost always standardized tests to allow for a consistent comparison	Although it can be standardized, allows for more flexibility in administration and materials



"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid."

– Albert Einstein

Original source of image unknown

Similar to the principles of UDL that focus on instruction, tests can be designed in a way that meets the needs of students with and without disabilities, which is often referred to as Universal Design for Assessments (UDA). UDA does not change the standard of the test, but instead ensures that the test can be easily used by all students. According to Thompson and Thurlow (2001), when designing UDA it is recommended that tests use the following criteria:

- Define test content clearly, removing irrelevant cognitive, sensory, emotional or physical barriers.
- Build accessibility items from the beginning, be sure that items are not biased (such as referencing colors, which is not accessible to students who are blind, or music that is not accessible to students who are deaf/hard of hearing).
- Design the test so that all needed accommodations can be easily used.
- Develop simple, clear and intuitive instructions and procedures so that students with and without disabilities can follow the test-taking directions.
- Use clear, plain language that reduces ambiguity and increases understanding.

Standardized, norm-referenced tests typically do not allow for questions or materials to be individualized to a student's specific strengths and needs. However, accommodations should be provided if required by the student for both norm-referenced and criterion-referenced tests.

UDA Accommodations Related to *Receiving Information*

- Allow audio recordings of text or having someone read the text out loud.
- Display fewer items or questions on each page or information in large print or braille.
- Mark tests with a highlighter to clarify instructions or other key elements.
- Be given a written list of instructions.

UDA Accommodations Related to *Expressing Information*

- Provide responses orally, using an AAC device or in sign language.
- Allow for typed responses on a computer.
- Use of a calculator or math table.
- Provide written responses in braille.

UDA Accommodations Related to *Motivation*

- Provide additional time to complete the test.
- Take a test in several sessions over a period of time to allow for breaks.
- Take tests at another time of day when the student is most focused and motivated to learn.
- Take tests in an alternate setting with fewer children or distractions.

Closer Look at Inclusion: Accessible Early Grade Reading Assessments

Widely used within USAID education programs, Early Grade Reading Assessment (EGRA) measures foundational literacy skills. Information obtained through EGRA can help inform educational systems and programs (Dubeck & Gove, 2015). EGRA has been used in dozens of languages. The instrument contains six subtasks, of which four are considered to be "core" subtasks. These include (RTI, 2015):

1. Listening comprehension
2. Letter identification
3. Non-word reading
4. Oral reading fluency with comprehension

It is recommended that EGRA be adapted to the language and context of the intended population. EGRA can also be adapted to be accessible for students with different disabilities. Adapting EGRA to be accessible for students with disabilities has taken place in several countries. For example, partnering with local DPOs and engaging experts in literacy and disability, School-to-School International adapted EGRA for students who are blind/low vision in the Philippines, Lesotho and India, and for students who are deaf/hard of hearing in Morocco. Based on their experience, School-to-School International followed a five-step process to adapt EGRA. The five-step process includes (K. Solum, personal communication, April 26, 2018):

1. Adapted content. This includes adapting stories and words to make sure there are no references to words that would be challenging to understand based on a specific disability. For example, it would be necessary to omit references to color for an EGRA adapted for students who are blind.
2. Appropriate stimuli. This includes conducting the EGRA using braille or large print as well as allowing for certain parts of EGRA to be expressed by the student through sign language or fingerspelling.
3. Accommodations. Reading braille and translating knowledge through fingerspelling takes additional time. It is recommended that EGRA tests accommodate students with disabilities by providing the student additional time. In addition, it is important to determine what type of magnifiers may need to be used as well as what type of reading displays.
4. Assessors. Finding local assessors who can either read braille or are fluent in the local sign language (including regional dialects if needed) as well as basic literacy concepts is important to ensure accurate results.
5. Data. It is important to analyze the EGRA data comparing results to not only other schools or regions for students with the same type of disabilities but also to students without disabilities. This comparison will help determine if there are discrepancies in literacy outcomes between the two groups of students.

This process was also used by RTI in Kenya, where they developed EGRAs in braille and sign language as part of a nation-wide baseline assessment of braille and sign language literacy skills.

Chapter 3: Additional Online Resources and Information

Identification

Hayes, A.M., Dombrowski, E., Shefcyk, A. & Bulat, J. (2018). Learning disabilities systems guide for low-and-middle-income countries. Research Triangle Park, NC: RTI Press. Retrieved from https://www.rti.org/rti-press-publication/learning-disabilities-screening-and-evaluation-guide-low-and-middle-income

Stages of Literacy

National Center on DeafBlindness (n.d). Literacy Development Continuum. Retrieved from http://literacy.nationaldb.org/index.php/literacy-development-continuum/

World Health Organization and United Nations Children's Fund (2012). Early Childhood Development and Disability: A discussion paper. Retrieved from http://www.ecdgroup. com/pdfs/ECD-Disability-UNICEF-WHO-2012.pdf

Specific Instructional Techniques

Literacy for Students Who Are Blind/Low Vision

Paths to Literacy. Website. Retrieved from http://www.pathstoliteracy.org

Perkins School for the Blind. Braille & Literacy website. Retrieved from http://www.perkins.org/stories/category/braille-and-literacy

Literacy for Students with Communication Challenges

International Society of Augmentative and Alternative Communication. Website. Retrieved from https://www.isaac-online.org/english/home/

Penn State. Literacy Instruction for Individuals with Autism, Cerebral Palsy, Down Syndrome and Other Disabilities & AAC-Learning-Center. Websites. Retrieved from http://aacliteracy.psu.edu/

Literacy for Students Who Are Deaf/Hard of Learning

Visual Language and Visual Learning Lab (VL2 Lab) at Gallaudet University, Research Briefs. Retrieved from http://vl2.gallaudet.edu/research/research-briefs/ (published in English, Spanish, Chinese)

American Sign Language and English bilingual stories for deaf children with literacy lessons (VLOG #4). Retrieved from https://www.redeafiningacademiccollaboration.com/vlogblog

Literacy for Students with Intellectual/Development Disabilities

Center for Literacy and Disability Studies. Website. Retrieved from http://www.med.unc.edu/ahs/clds

Tar Heel Reader. Website. Retrieved from https://tarheelreader.org

Literacy for Students with Learning, Emotional and Attention Disabilities

Get Ready to Read (National Center for Learning Disabilities). Website. Retrieved from http://www.getreadytoread.org/

Learning Disabilities Association of America. Website. Retrieved from https://ldaamerica.org/

Reading Rockets. Website. Retrieved from http://www.readingrockets.org

Literacy for Students with Multiple Disabilities

Literacy for Children with Combined Vision and Hearing Loss. Website. Retrieved from http://literacy.nationaldb.org/

Assessments

National Center on Educational Outcomes. Universal Design for Assessment. Website. Retrieved from https://nceo.info/Resources/faq/universal-design/universal-design-for-assessments

Chapter 4: Theory into Practice: Implementers' Guide on How to Support Literacy for Students with Disabilities in LMICs

While the preceding chapters of the toolkit focus on evidence-based intervention and instructional approaches that support literacy acquisition for students with disabilities, this chapter explores how these interventions and approaches can be implemented in LMIC context. Moving from theory into practice can be a challenge in many environments, especially in the classroom realities in many LMIC countries. This chapter of the toolkit provides:

- Background on the donor landscape related to inclusive education;
- Recommended do's and don'ts for funding and implementing inclusive education programming; and
- Suggestions for supporting a phased approach when moving from segregated educational systems towards inclusive education systems.

4.1 Background on Donor Support and Funding Landscape

Key Highlights

- A twin-track approach to disability-inclusive development includes supporting disability-specific initiatives and programs, and including persons with disabilities as beneficiaries in all other development and humanitarian aid programs.
- USAID's Education Office is increasingly asking all education programs to include students with disabilities as well as supporting a disability targeted approach.
- Other major bilateral donors and multilateral agencies are also becoming more engaged and supporting inclusive education programming.

Donors are increasingly engaged in funding inclusive education programming. They are not only funding disability-specific initiatives, but also beginning to require that all projects integrate the needs of students with disabilities. This approach is referred to as a twin-track approach. Many donors-such as the European Commission and World Bank-are supporting this approach in practice and with policy. For example, DFID has established and regularly updates a Disability Framework that highlights the need to promote inclusive education, requiring that all school construction use the principles of Universal Design. See Figure 18 for a donor map with information on bilateral donor commitment on disability-inclusive development and education. Historically, donors have focused primarily on supporting children with physical disabilities with an emphasis on the provision of wheelchairs and the construction of ramps. This narrow focus has since been expanded to support all children with disabilities which includes supporting inclusive education. However, only recently have programs on inclusive education moved beyond just promoting the need to include students in

Figure 18. Donor Mapping on Disability Inclusion and Inclusive Education

Donor	Formal Commitment to Disability-Inclusion	Formal Commitment to Inclusive Education
Australian Department of Foreign Affairs and Trade (DFAT)	DFAT's Development for All 2015-2020: Strategy for Strengthening Disability-Inclusive Development[17]	Inclusive education is a core element of programming focus
The British Department for International Development (DFID)	DFID's Disability Framework[18]	Inclusive education is a core policy area defined in the framework
German Federal Ministry of Economic Cooperation and Development (GIZ)	Action Plan for the Inclusion of Persons with Disabilities; Disability and Development in German Development Cooperation Policy Paper[19]	Mentions the importance and commitment to commission applied research on inclusive education
Japan International Cooperation Agency (JICA)	JICA Thematic Guidelines on Disability[20]	Mentions education as a condition and environment for empowerment
Korean International Cooperation Agency	The Framework Act on International Development Cooperation, including people with disabilities as beneficiaries[21]	Not specified
Norwegian Agency for Development Cooperation (NORAD)	Opportunities for All-Human Rights in Norway's Foreign Policy and Development Cooperation[22]	The right to education for children with disabilities specified under the priority of education; mentioned under persons with disabilities
Swedish International Development Cooperation Agency (SIDA)	Human Rights for Persons with Disabilities Work Plan 2009-2012[23]	The right to education of students with disabilities mentioned throughout the document
USAID	1997 Disability Policy[24]	Inclusive Education mentioned as a crosscutting theme in the Education Strategy 2011-2015

Source: USICD International Development Agency Policy Website

17 For more information, http://dfat.gov.au/aid/topics/development-issues/disability-inclusive-development/Pages/disability-inclusive-development.aspx

18 For more information, https://www.gov.uk/government/publications/dfid-disability-framework-2015

19 For more information, http://www.usicd.org/doc/Strategiepapier330_01_2013.pdf

20 For more information, http://usicd.org/doc/JICA%20Thematic%20Guidelines%20on%20Disability.pdf

21 For more information, http://www.law.go.kr/lsInfoP.do?lsiSeq=160744&chrClsCd=010203&urlMode=engLsInfoR&viewCls=engLsInfoR#0000

22 For more information, http://usicd.org/doc/Opportunities%20for%20All-%20Human%20Rights%20in%20Norway%E2%80%99s%20Foreign%20Policy%20and%20Development%20Cooperation%20%E2%80%94%20Report%2010.pdf

23 For more information, http://usicd.org/doc/Human%20Rights%20for%20Persons%20with%20Disabilities%20Work%20Plan%202009-2012.pdf

24 For more information, http://www.usicd.org/doc/USAID%20Disability%20Policy%20Paper%201997.pdf

education toward the focus on how to improve the education system including increasing literacy and learning outcomes. This signals an important shift that needs to be sustained and integrated into all education programs.

USAID requires that all education programs include the needs of students with disabilities as a crosscutting theme and find ways to engage this population meaningfully. For example:

- USAID/Ethiopia's Reading for Ethiopia's Achievement (READ) Technical Assistance (TA) used technology for classroom vision and hearing screenings,
- USAID/Rwanda's Literacy, Language and Learning (L3) developed inclusive learning materials, and
- USAID/ Rwanda's Mureke Tusome conducted community awareness campaigns on disability.

USAID has also supported several targeted inclusive education programs both through country mission initiatives and other funding opportunities supported by the USAID Education Office in Washington, D.C. For example, USAID missions in Morocco, Mali and Haiti have all funded specific programming focused on improving the education of students with disabilities. Likewise, the All Children Reading Grand Challenge for Development (ACR GCD) devoted a round of funding to conducting innovative pilot projects that could be potentially replicated in other countries. Through this initiative, inclusive education projects were supported in Ghana, India, Lesotho, Morocco and the Philippines. USAID is also implementing Sign On For Literacy, which supports innovative solutions to provide greater access to local sign language for students who are deaf. These initiatives highlight the growing commitment towards providing inclusive education and supporting a twin-track approach to disability-inclusive development.

4.2 Do's and Don'ts of Funding for Inclusive Education

Key Highlights

- It is important that inclusive education programming supports the social model approach to development and does not reinforce negative and harmful stereotypes associated with the medical and charity approaches.
- LMICs have the opportunity to leap over challenges, mistakes or less effective practices related to the education of children with disabilities; LMICs can learn from the mistakes of other countries working in this area and build upon best practices early on.
- When conducting inclusive education programs, it is important to implement technical approaches that are evidence-based, avoiding programming that may reinforce stigma, discrimination and segregation.

When implementing inclusive education programs, it is important to implement programs that: (1) are aligned with the CRPD, (2) engage DPOs as planners and active participants, not just beneficiaries, and (3) ensure that programs are inclusive and empower persons with disabilities. It is important that education programs apply a social approach to disability-inclusive development instead of a medical or charity model. Figure 19 provides a summary of different models of disabilities with examples of how they can manifest in an educational setting.

Figure 19. Models of Disability and Education

Charity

Depicts persons with disability as unfortunate or deserving pity or charity. This model reinforces negative stereotypes as it does not address the strengths of individuals or their ability to be active and participating members of society.

Education Example: Provides education or assistive devices as an act of charity rather than recognizing education is a human right and assistive technologies are vital learning tools. The education of children with disabilities is often outside of the general education system and provided by religious groups or NGOs.

Medical

Focuses on a person's limitations and the need to "fix" the person rather than looking at possible societal barriers. This model reinforces stereotypes as it emphasizes deficiencies and not strengths of an individual.

Education Example: Requires a medical diagnosis to enroll in school. Assumes all individuals with the same diagnosis learn the same and thus teaches to the disability label instead of the child. Provides limits on child's potential based on disability label.

Social

Focuses on the barriers that exist in society and how to reduce those barriers to ensure full and equitable participation in society. This, along with the rights-based approach, are the preferred models for disability.

Education Example: Recognizes that all children have unique learning strengths and learning challenges. Provides individualized supports to build upon strengths while addressing challenges to promote learning.

Figure 20 provides some illustrative examples of what donors and implementing partners may want to consider when implementing inclusive education practices. This list of examples is not exhaustive or comprehensive but rather highlights successful and challenging practices that are currently being implemented in LMICs, as well as lessons learned from high-income countries that can serve as examples. It is most useful as a supporting tool during program planning discussions.

Figure 20. Do's and Don'ts for Funding

✓ *Do*	✕ *Do not*	*Explanation*
General Inclusive Education		
Do support programs that provide inclusive educational settings.	Don't support initiatives that reinforce segregating students with disabilities in separate settings away from their same-age peers.	According to the CRPD, funding and future programming must focus on an inclusive education model.[25] Unfortunately, segregated schools continue to be often supported with the rationale that "segregated schools are the only current model and it is better to support them versus abandoning those children in the schools without a better alternative in place." Given the scarcity of funds, unless inclusive education is prioritized and supported by donors and governments, the goal of inclusion will never be realized. The CRPD General Comments also support that all donor and government-funded programs immediately shift to supporting inclusion with clear plans on how to transition from the outdated segregated system.
Do establish model or pilot programs that include children with the full range of disability categories and level of support needs.	Don't create model or pilot programs that exclude children based on category of disability or severity.	A program cannot be called "model" if it is inherently discriminatory. Model programs instead need to be inclusive of all students regardless of type of disability or those with higher support needs. Furthermore, to implement programs that exclude certain children can inadvertently reinforce stereotypes and stigmas and further isolate and potentially harm children. It is recommended to avoid this practice, as model programs for inclusive education signify providing education for all.
Do recognize the unique communication needs of students who are deaf who benefit from a multilingual environment which may not be their local general education school.	Don't place students who are deaf in inclusive education settings without providing support and an inclusive communication environment.	As discussed throughout the toolkit, students who are deaf benefit from an environment that respects their linguistic and cultural identity. Placing students who are deaf in local inclusive schools without the appropriate supports while not addressing ability to interact directly with their peers and teachers can result in students becoming more isolated and segregated. It is crucial that the educational setting for students who are deaf be based on a student's individual needs, reflect the educated choice of the family and child and promote full communication.

25 Please keep in mind how inclusive education is defined by the deaf community (see section 3.4.3) and the different implications associated with educational settings for students who are deaf/hard of hearing that allow for full linguistic immersion and social interaction.

✓ Do	✕ Do not	Explanation
Do engage students with disabilities, DPOs, families of children with disabilities, government representatives, key school officials and teachers, and community leaders in inclusive education programming.	Don't support programs that only address few or none of these essential stakeholders. All programs and activities benefit from actively engaging these important actors.	To develop a participatory approach, it is important to include input from a diverse set of stakeholders. Do not assume that persons without disabilities or families of children without disabilities represent the disability community. Aligned with the CRPD, the principles of "nothing about us without us" should be adhered to in all programming and thus should engage DPO and families accordingly. This signifies designing inclusive education programs with services and supports that engage students with disabilities, DPOs, families of children with disabilities, government representatives, key school officials and teachers and community leaders. DPO may also require additional training to help ensure that inclusive education policies and other programs are being implemented appropriately.
Do support access to the national curriculum that is adapted or modified as needed.	Don't support alternative curricula that are not individualized to the needs of the student or are pre-determined based on disability type	All children can learn; however, some students need adapted or modified curriculum to reach their full academic potential. An alternative curriculum sets arbitrary barriers on students based upon their disability diagnosis or label. It is important to presume competence and give students the opportunity to succeed while meeting their individualized educational goals.
Do pilot programs and use evidence-based practices and evidence to test new programming before going to scale.	Don't implement programs at the national level without first piloting to assess how proposed instructional approaches can be applied within the specific context.	Inclusive education is new programming for many countries and implementing partners. There is limited available information on what works as far as effective instructional approaches in LMICs. Because of this, it is important to first pilot programming and incorporate lessons learned before implementing programming at a national level or implementing large-scale projects.
Do create education programs that are inclusive of the needs of students with disabilities from the beginning.	Don't rely on retrofitting programs to include the needs of students with disabilities.	Not unlike the challenges of retrofitting a building versus building an accessible building, retrofitting programs to be inclusive can be challenging. When inclusion is not required from the beginning, there is often not funding available for later adding inclusive education programming; thus, inclusive programming is either minimal or non-existent. When inclusion is an afterthought, it tends to be swept aside during implementation to address other priorities. It is important to make inclusive education programming a core part of all programming and require newly funded programs to be designed inclusively from the start.

✓ Do	✗ Do not	Explanation
Do document indicators of impact, such as the number of materials incorporating UDL principles, number of teachers trained and number of assistive technology devices used	Don't merely report number of students with disabilities served, since techniques to reliably identify students with disabilities is still at such an early stage of development.	It is essential to have indicators of "doing the right thing" with students with disabilities, which means insuring their educational progress, regardless of their label or even the accuracy of their identification. Thus, it is recommended that the emphasis of project implementation be on benefits and outcomes for students whose educational progress deviates significantly from the class mean rather than merely documenting the number of students with disabilities served by a project. The absence of comprehensive identification does not preclude a focus on benefits and outcomes for students who face barriers to learning.
Do address community and society attitudes as part of inclusive education programs together with DPOs.	Don't assume social, societal and other attitudinal barriers can be addressed at a later date.	Addressing community attitudes, including engaging and educating parents of children with and without disabilities on the benefits of inclusive education, is a key component to sustainable inclusive education programs. It is beneficial for programs addressing the education of children with disabilities to include social behavior change elements in all programs. School management committees and parent teacher associates may also require training on how to help support inclusive education within the school and community.

Identification of Students with Disabilities

Do focus on funding educational supports and services for students and teachers.	Don't focus solely on identification without also providing supports and services for students and teachers.	The purpose of early identification of students who would benefit from special education services in the classroom is to ensure they receive appropriate supports and services to reach their full academic potential. To identify students as needing special education services, but then not offer services, defeats the purpose of identification. It is important for governments and educational systems to put a plan in place to provide and expand services and supports as needed. The worst-case scenario is that identification is used to justify removing students from classrooms, resulting in reducing student access to education. It is recommended to prioritize identification once there are appropriate services and supports in place to ensure that identification does not inadvertently lead to exclusion or segregation.

✓ Do	✗ Do not	Explanation
Do support classroom-based screenings and evaluations/assessments that are strengths-based to determine eligibility for special education services and supports.	Don't use tools not designed for educational use (such as census questions or medical assessments) to make educational decisions.	Having reliable census data is important but requires different processes, tools and protocols than what is needed to identify a student who qualifies for special education services and supports. Instead, census tools, such as the Washington Group Questions* and International Classification of Functioning (ICF), are recommended for census use, while culturally appropriate identification tools are developed and used for educational purposes.
Do support vision and hearing screening in schools.	Don't support assessment centers or rely solely on community clinics to determine if students have vision or hearing challenges.	It is important that vision and hearing screenings be conducted in schools to ensure that all students are screened. Ideally, screening results in students being referred to additional services in the community (e.g. eyeglasses and additional hearing exams). In many cases, students may have simple eye or ear infections that can be treated. If glasses and hearing aids are not available, teachers can make adaptations and accommodations in the classroom. Assessment centers are not considered best practice as they are not assessing students in the classroom setting and often require families to cover travel costs. Instead, mobile clinics are a less costly alternative, increasing engagement of teachers and schools. Organizations may benefit from working directly with schools to address inclusive practices in School Improvement Plans for students with disabilities after identifying additional needs.
Do focus on identifying children excluded from school and providing an impetus for their school achievement.	Don't ignore the fact that many students with disabilities (formally identified or not) are excluded from attending school with their peers and do not receive benefits from education projects.	Millions of children with actual or suspected disabilities are excluded from both inclusive and segregated schools. Within the Annual Student Experience Report (ASER) process when community members survey every household related to the educational needs of children, they may want to ask questions about reasons children are not attending school. These questions may serve as an initial screening for the presence of disabilities. The community surveyors can then provide information to parents about educational opportunities for their children. Additionally, they provide information to project implementers and school officials about the educational barriers that are preventing all children from attending school. ASER reports ideally include the percentage of out-of-school children identified and the number of parents who received information on educational options for their children.

* For more information about the Washington Group Questions please visit their website at http://www.washingtongroup-disability.com/washington-group-question-sets/short-set-of-disability-questions/

✓ Do	✕ Do not	Explanation
Teacher Training		
Do strengthen and support special education systems.	Don't assume that inclusion equates not providing specialized services and supports as needed.	Special education is a service delivering specially designed instruction; it is not a place (special school, special class). When supporting inclusive education systems, it is important to provide the students with disabilities and the general education teachers with appropriate services and supports to promote learning. Placing children with disabilities in an inclusive setting without support can result in teachers and students feeling overwhelmed.
Do support multi-tiered support and expertise that prepares general and special education teachers to provide the appropriate level of academic and behavioral support to students with and without disabilities.	Don't support systems that only prepare general education teachers OR special education teachers to support the needs of students with disabilities.	For inclusive education to be effective, different levels, or tiers, of support are needed. When supporting or implementing inclusive education programs, it is important to address these various types of supports to help support both teachers and students in the classroom.
Do support deaf education using well-prepared teachers fluent in sign language and who have knowledge of deaf culture in their particular country.	Don't support programs that only provide introductory sign language training and assume it meets the needs of students who are deaf.	Fluency in any language cannot be achieved through minimal exposure. Though providing introductory sign language training to teachers is encouraged as a way to promote an understanding of the deaf culture and promoting diversity, someone who has received minimal language training should not be expected to provide instruction in that language. It is preferred practice that students who are deaf/hard of hearing receive an education from someone who is fluent in sign language.
Do promote the recruitment and hiring of persons with disabilities to be credentialed as teachers.	Don't assume that if someone is deaf and knows sign language or is blind and knows braille they are prepared to teach deaf education or braille literacy.	It is important that persons with disabilities are hired as teachers. They can serve as vital role models for students with disabilities. Likewise, persons who are blind or deaf tend to be more fluent in either braille or sign language as compared to teachers without the lived experience of disability. However, knowledge of braille and/or sign language alone does not qualify someone to teach. Instead, these individuals may benefit from receiving teacher training at the same level as other teachers in the school. To ensure that this happens, it is imperative that teacher pre-service training at colleges and universities do not discriminate against students who have disabilities.

✓ Do	✕ Do not	Explanation
Do use trainers that have practical experience educating students with disabilities if implementing a training using a cascade model (training a teacher to then train other teachers).	Don't assume a teacher can learn new information about inclusive education and teach it to others without having real-life experience educating students with disabilities.	In many large-scale or national education programs, cascade training is used to reach a large population of teachers. However, training teachers to become trainers in inclusive education who have no practical experience in educating students with disabilities is not an effective practice. All trainers in inclusive education benefit from having real, hands-on experience educating students with disabilities before transferring those skills to others.
Do adapt training to the local context receiving input from teachers, families of children with disabilities, and DPOs.	Don't export trainings from other countries without making them relevant to the local context and culture.	For teacher training to be effective and meaningful, it is important that the trainings are culturally relevant and build upon previous training and knowledge. Importing inclusive education trainings from one country to the next without receiving participatory input from the different stakeholders engaged in supporting the education of students with disabilities is not seen as good practice as the trainings often become less relevant to the participants.
Do promote mentoring programs and ongoing support or coaching as part of teacher training programs.	Don't assume information provided in training is sufficient and that ongoing and classroom support is not needed.	Teachers benefit from receiving on-going support when implementing new instructional techniques and strategies. Implementing programs with a mentorship or ongoing access to support is an effective way for teachers to receive additional feedback and suggestions on inclusive education, as well as providing resources in case they have additional questions once implementing the information obtained from trainings.
Do incorporate UDL practices and other techniques to promote child-centered learning into teacher training and scripted lesson plans, if using them.	Don't use scripted lesson plans that only address the "average child;" instead incorporate techniques that address variability in learning styles and preferences of students with and without disabilities.	UDL is an effective way to improve the education of all children, including those with disabilities. It is recommended that trainings be child centered and allow for teachers to adapt content and techniques to meet the specific needs, strengths and preferences of students with and without disabilities in their classroom. However, in many LMICs, scripted lesson plans have been useful to support teachers who may be new to teaching or are less familiar with the instructional approach being taught. When scripted lesson plans are deemed necessary, it is important to integrate UDL practices into the proposed scripts to effectively teach students with and without disabilities.

✓ Do	✕ Do not	Explanation
Educational Supports		
Do support use of IEPs that address a student's current performance, annual goals and benchmarks, and needed services and supports.	Don't support IEPs that are overly simplistic or are deficit-based, focusing solely on academic challenges.	An IEP is a helpful tool to help identify students' learning strengths, needs and preferences, as well as the nature of specially designed instruction (including UDL accommodations) that will enable students to make appropriate progress. However, when overly simplified, an IEP becomes less effective. Likewise, if an IEP is deficit-based, focusing on what students cannot do without recognizing what they can do or what interests or motivates them, an IEP can potentially reinforce stigma.
Do support IEPs that have SMART individualized goals that provide a useful a tool for teachers and families.	Don't support IEPs that have generic goals or are not measurable.	For IEPs to be a tool that can be used by teachers and families, it is beneficial to provide individual goals that meet the SMART criteria. Using "goal banks" that provide goals that could be used for multiple students with disabilities is also not encouraged as these goals would not allow for individualization.
Do incorporate assistive devices that support the needs of various types of students (e.g., brailler, FM systems, AAC devices) into instruction.	Don't assume that only children with physical disabilities need assistive devices (e.g., wheelchairs, crutches)	Assistive devices include a wide variety of low-, medium- and high-tech tools that can help support learning. When providing assistive devices, it is important to not only look at mobility or sensory challenges (e.g., wheelchairs, eyeglasses and hearing aids) but also look at other devices that can promote the achievement of goals in a broad array of domains including communication, academics, engagement and appropriate behavior.
Promoting Literacy Skills		
Do allow for a flexible definition of literacy that is inclusive of students with disabilities.	Don't adhere to definitions of literacy that view traditional writing or oral fluency as the only ways to demonstrate skills.	Students with disabilities may express their literacy competency differently than students without disabilities. For example, students who are blind will not read print words but utilize braille. Other students may demonstrate their literacy knowledge with pointing to pictures or using AAC devices to show comprehension of a story. Students with disabilities need a flexible definition of literacy that enables them to address their learning goals.

✓ Do	✕ Do not	Explanation
Do recognize that students with different types of disabilities may acquire literacy skills in different ways.	Don't assume that all children learn through phonetics and may not need an adapted or modified approach to literacy acquisition.	Students with disabilities may require different approaches to literacy skills development based on their strengths and needs. For example, students who are deaf may not benefit from a phonetic approach but learn better with a combination of materials and strategies, such as inclusion of signed stories, finger spelling, sight words, writing and bilingual strategies such as codeswitching. Support an evidence-based approach to literacy that is aligned with different disabilities while allowing flexibility to support individual preferences.
Do use the principles of UDL to help support learning for all students including those with disabilities.	Don't take a "one size fits all" approach to literacy without recognizing that students may learn and express information, and be motivated to learn in alternative ways.	UDL recognizes that students receive information, express information and are motivated to learn in different ways. Supporting educational programs and preparing teachers to provide differentiated instruction that addresses the variability of student learning will increase educational progress for students, with and without disabilities, alike.
Do build foundational skills and early emergent literacy skills for students with disabilities if needed.	Don't assume that students with disabilities enter school with the same access to pre-literacy or emergent literacy skills as peers without disabilities.	Many young children with disabilities have reduced exposure to books and print due to not just their disability but to inaccurate beliefs about their capacities to read. Additional pre-literacy supports may be needed for students with disabilities to obtain literacy skills.

Reflect on Your Context

Do the inclusive education programs being implemented in the country follow the recommended, or "do's", practices?

Are there inclusive education programs that follow the "don't" practices?

How can current programs be transitioned to align better with recommended practices?

How to best ensure that future programs follow recommended practices?

✓ Do	✗ Do not	Explanation
Do support early identification, early childhood intervention and inclusive early childhood education, understanding that the purpose of early identification is to provide early services.	Don't assume young children with disabilities will not benefit from early childhood programs nor promote early identification that is not coupled with early intervention.	The purpose of early identification is to provide early intervention services. Identification without services can risk placing a label on children without providing them with the early supports needed to achieve developmental and learning goals. Children with disabilities, as with all children, benefit from early childhood education and thus it is important that these programs are also fully inclusive of young children with disabilities.

4.3 Supporting Inclusive Education Programming

Key Highlights

- A twin-track approach to disability-inclusive development includes supporting disability-specific initiatives and programs, and including persons with disabilities as beneficiaries in all other development and humanitarian aid programs.
- USAID's Education Office is increasingly asking all education programs to include students with disabilities as well as supporting a disability targeted approach.
- Other major bilateral donors and multilateral agencies are also becoming more engaged and supporting inclusive education programming.

Donor-supported education programs cannot be effective if they exclude or ignore 20 percent or more of school-aged children. Likewise, creating education systems that focus primarily on the needs of those who are "easy" to educate will ultimately be rendered ineffective, as it fails to recognize diverse learning needs of all students. Recognizing that all children learn differently and may need additional educational supports at some point is simply good practice. For education programs to be fully inclusive of students with disabilities, it is critical to address the unique needs of students with disabilities throughout all stages of the project. Too often the needs of students with disabilities are taken into consideration as an afterthought in program design and implementation. To avoid this, it is critical that inclusive education be clearly stated as part of key program goals. However, even with donor, government and implementer commitment, many implementers are often unaware where to start or how to best support literacy approaches for students with disabilities.

Each inclusive education program will be different depending on the country and context. Similar to all education programs, there is no strict recipe for inclusive education programs that can be transferred from one country to another without modifications or adaptations. However, there are some suggested phases that donors and implementers can consider when designing, implementing and evaluating projects. These suggested phases are as follows:

Phase 1: Engage with key stakeholders

Phase 2: Understand current practices, paradigms and needs

Phase 3: Plan for inclusion

Phase 4: Move from segregation towards inclusion

Phase 5: Take programming that has been proven effective to scale

Phase 6: Address gaps in research and increase general knowledge basis

Phase 7: Share best practices and lessons learned

Less able does not mean less worthy. All children have the right to an education and all individuals can make that a reality.

4.3.1 Phase 1: Engage with Key Stakeholders

As part of the design process, it is important to meet with relevant stakeholders to receive their inputs on programmatic priorities in their country. Their valuable inputs can help design programs that build upon the strengths of current practices while addressing continuing challenges and needs. These stakeholders are key to implementation and thus it is highly beneficial to engage them throughout the project. Some of the key stakeholders follow:

- Ministries of Education
- DPOs and the disability community
- Families of children with disabilities
- Teachers and administrators
- NGOs and civil society
- Other donors

Annex G provides more information on how to engage each of these key stakeholders in project design and implementation.

Reflect on Your Context

Are the above-mentioned stakeholders regularly engaged and consulted?

How can stakeholder engagement be strengthened and improved?

4.3.2 Phase 2: Understand Current Practices, Paradigms and Needs

Knowing the complexities—including goals, challenges and existing resources—is needed to design programs that build upon existing services and address contextual needs. Even countries with emerging inclusive education systems have different strengths and weaknesses. For example, one country may have a system in place to educate general education teachers on inclusive education with no supports for special education services for students and teachers in place. Other countries may have strong specialized services with general education teachers having never received any form of training on inclusion. Understanding the point from which a country is starting and their goals is vital to develop programs that support inclusive education goals. This information can help determine appropriate activities and intervention that best respond to a country's priorities, needs and strengths. A situational analysis can be conducted for both programs focusing on disability-specific issues as well as other education programs that work to address the needs of children with disabilities as part of their beneficiaries. It is recommended that a situational analysis utilize a multi-modal approach to research using both qualitative and quantitative data. This includes using a variety of learning techniques such as:

- Conducting a desk review including government policies and strategies, NGO and DPO reports, and academic articles.
- Interviewing key stakeholders including many of the diverse groups mentioned above
- Conducting classroom observations including inclusive and segregated classrooms and schools as well as private and public schools if applicable.
- Conducting surveys of DPO members, families of children with disabilities, and teachers.

It is important to engage various stakeholders, including the MOE, the DPO community and families of children with disabilities in the development of any research questions or tools to ensure that the situational analysis also captures information that is important to the different groups. It is also a beneficial practice to engage DPOs representatives as interviewers, observers or enumerators to help facilitate their engagement in the process.

It is recommended that situational reports examine policies, systems, trainings and holistic supports that promote the education and literacy skills of students with disabilities. It is also important that the analysis address the needs of all types of disabilities rather than only addressing the needs of a few select categories of disabilities. This means assessing the needs of all children with disabilities including those who may be considered to have severe disabilities and those with multiple disabilities. It is also recommended to include gender issues throughout the document to ensure programs and services are available to both boys and girls with disabilities. Annex H provides information that would be helpful to cover in a situational analysis.

Reflect on Your Context

Has an inclusive education assessment been conducted within the country? If so, how can it be used as a tool? If not, how can the current situation be best assessed?

Teachers who have received inclusive education training through the USAID SHRP program provide literacy skills to students in Uganda. Photo credit Research Triangle Institute

Closer Look at Inclusion: Including Disability into Gender Assessments, Analysis and Inclusion Plans

In addition to conducting a disability situational analysis to help guide disability-targeted programming, it is also important to include disability as a key element of all Gender Assessments, Analysis, and Inclusion Plans. Conducting Gender Assessments and Analysis is a required policy at USAID (see ADS 201.3.9.3 and ADS 201.3.11.6) (USAID, 2010). These documents assess how gender differences potentially impact the participation of individuals, and thus inform and guide programming accordingly. These documents also assess other vulnerabilities that may impact equitable participation, which in most countries include disability status. Therefore, it is recommended that the issues of gender and inclusive education be a core component of all education and gender assessments. For more information on how to include disability as part of these core documents, please refer to USAID's Guide on How to Integrate Disability into Gender Assessments and Analysis (2010): https://www.usaid.gov/sites/default/files/Guide_How_Integrate_Disability_Gender_Assessments_2010.pdf

4.3.3 Phase 3: Implement Disability-Inclusive Programming

The project implementation phase is where design and planning become a reality, and where theories of literacy instruction are implemented. Too often, general education and literacy programs consider the needs of students with disabilities as an afterthought and during implementation struggle to make programs inclusive as inclusion was not initially woven into the project design. It is possible to conduct inclusive education specific programming that takes into account the accessibility needs of persons with disabilities and enables them to be active participants instead of just beneficiaries. A few suggestions to help ensure that education programs are inclusive follow:

- **Work plans:** Work plans should reflect information from assessments, indicate how programs will integrate inclusive programming and describe programs that will be implemented.
- **Budget:** Budget should reflect disability-specific programs as well as any accommodations that would be needed (such as sign language interpretation, materials in alternative formats, providing assistive devices to support learning) to promote disability-inclusive programs.
- **Staffing Plans:** Staffing plans should specify outreach to recruit and retain qualified staff with disabilities, including accommodations they may need related to employment, and even family members of people with disabilities. Staff plans should also indicate hiring technical experts or consultants to support inclusive education activities as well as possible sub-grants to DPOs and family organizations.
- **Staff and partner trainings:** Since local staff may be new to inclusive education and disability awareness, it is important to train them. Local partners may also benefit from training so they can begin to consider inclusion in their own programs.
- **Accessibility:** All activities and public events should be held in accessible venues with accommodations that enable persons with different types of disabilities to participate equitably. When securing new programmatic office space, it is important to consider accessibility features so that partners and DPOs can meet with program staff if needed.
- **Community Awareness:** When conducting any community awareness activities, it is important to address the importance of educating students with disabilities and dispelling harmful myths about their capacity to learn and become literate. Addressing attitudinal barriers is important to ensure that community and parents accept the concepts of inclusive education and do not become barriers to students with disabilities receiving an education.

Reflect on Your Context

Are all education programs inclusive of students with disabilities?

How can this be strengthened or improved to ensure that all programs are inclusive?

4.3.4 Phase 4: Move from Segregation Towards Inclusion

To be aligned with the CRPD and other international and often national policies, it is important to develop programming that supports inclusive education. However, moving from a system that is highly segregated towards one where both students with and without disabilities are welcomed and supported in the general education setting can be challenging. Many stakeholders are overwhelmed by this challenge and are unsure of where to start. Often people look for a roadmap they can apply. As all countries are different, unfortunately, there is no single roadmap that can be followed. Instead, each country will take their own path building on existing strengths and resources. However, there are some general approaches that can be applied in most settings. Below are frequently asked questions and answers related to supporting an inclusive education system in LMICs.

Question: *As the number of students with disabilities within the country remains largely unknown, should identification be the priority before providing services? Without accurate data on the number of students with disabilities, how can countries appropriately budget and plan?*

Answer: The purpose of identifying students who may have a disability or additional learning needs is to provide students with the additional supports and services that they may need to reach their full academic potential. Therefore, many argue that it is ineffective to prioritize identification before developing services as this may result in potentially stigmatizing labels without the accompanying support. One of the worst-case scenarios is to use identification as justification to segregate students and deny students access to the same learning opportunities as their peers without disabilities. Keep in mind that including students who are deaf/hard of hearing within hearing schools may deny them opportunities to learn language from adults and peers who are deaf/hard of hearing, and accommodations need to be made to ensure language access by providing students with a deaf community of sign language users. Access to reliable data is a valuable tool to help governments with budgeting and planning. Ideally, education systems move forward by providing both identification and services, as well as developing effective data collection methods. If this is not feasible, then it is recommended that the emphasis be placed on development of services using an estimated 10-15 percent of the student population as having a disability.[26] Methods for reliable identification can then be thought through and planned so that this estimate is not used over a prolonged period.

26 These estimates are based upon high-income figures. It is feasible that rates of students needing special education services may increase in countries that have experienced conflict, disaster or have high rates of poverty.

Question: *Who needs to be trained within the education system to support inclusion?*

Answer: Children with disabilities are represented in all geographic regions, ethnicities and socio-economic classes. Thus all public schools will have children with some form of disability already enrolled. Since all schools will have students with disabilities represented at all grade levels, all teachers, administrators and support staff require some basic knowledge of inclusion and how to diversify instructional approaches (see section 2.3). Since it is recommended that special education services be integrated into government budgets, data collection, and curriculum, all decision-makers within the MOE will benefit from understanding the concepts and benefits of inclusive education. Also, engagement and partnership with families of children with disabilities are key factors in students' academic success. Thus, families may require training on their rights, how to advocate for their child and how to support and reinforce learning at home. It is also important to educate parents of students without disabilities so that they can provide support for successful inclusion.

Question: *How can the concept of differentiating learning and the application of UDL principles be applied if there is a determined need to provide teachers with a scripted lesson plan?*

Answer: Many USAID and other donor-supported programs recommend using scripted lesson plans as a way to help teachers become comfortable and confident in teaching. As seen in Malawi, teachers often use scripted plans as a guide for teaching but then modify instruction to allow for additional explanations or extra practice exercises (Mattos & Sitabkhan, 2016). If scripted lessons plans are being used, then there is no reason why these lesson plans cannot be designed in a way that incorporates the three principles of UDL. For example, scripted lesson plans can help teachers become more comfortable in presenting information orally as well as writing information on the chalkboard. Likewise, scripted lessons plans can provide students with the option of how they want to respond to questions or exercises by providing multiple options throughout the teachers' guide.

Question: *Many children with disabilities are older but have previously not received a formal education. Should students with disabilities who are older start their education at grade one or be integrated within the grade level as their peers of the same age?*

Answer: Overaged student enrollment is a challenge in many LMICs where students' early education may have been disrupted by conflict, long distances to school or socio-economic considerations. For example, in Liberia, 82 percent of students in primary school are too old for their grade (Darvas & Namit, 2016). Children who are overage are more likely to drop out of school, and girls who are overage are at a greater risk for teenage pregnancy. These risks also apply to students with disabilities who enter school at an advanced age. Whenever possible, it is recommended that students with disabilities be placed in the same-aged classroom as their peers without disabilities. Once placed in a higher grade level and recognizing they may have missed foundational learning provided in earlier grades, additional supports and services from special and general education teachers will be needed to help with remedial learning and building basic literacy skills. This specialized support may need to take place in other settings within the school, while still ensuring inclusion with their peers as much as possible.

Question: *Are model schools needed to demonstrate that inclusion is a viable option?*

Answer: Many practitioners use model schools, or schools which are inclusive, to demonstrate that inclusion is feasible and to carry out pilot programs. While there are certainly advantages to this approach, there are also associated challenges. For example, too often schools used as model schools are not actually models of good practice as they exclude students with certain types of disabilities and with complex support needs. Similarly, implementing model programs in systems where this is the only education option for children with disabilities can result in over-representation of children with disabilities, not reflecting a school with natural proportions of children with and without disabilities. Families of children with disabilities may also choose to move closer to the model school if it is the only option for their child, resulting in families being uprooted and losing important community connections. Another challenge is that if only one or two model schools exist, they may not reflect the reality of all regions within the country. While model schools may show that inclusion is feasible in one region, these models are typically not replicated across the country. Model schools are often stand alone and fully supported by NGO support without full government ownership or buy-in.

That said, piloting professional training and instructional approaches can be very useful to adapt and apply lessons learned before going to scale. One alternative to developing model schools, if funding allows, is to designate multiple schools

Students who are deaf/hard of hearing learning local sign language in Kenya through the USAID Tusome project. Photo credit: Research Triangle Institute

that are inclusive as "lab schools" to pilot professional training and instructional approaches before taking these techniques to scale. This will help capture lessons learned from various settings and support comprehensive application.

Question: *What happens to the segregated or specialized schools during the transition towards inclusion?*

Answer: The technical knowledge and expertise usually available in segregated settings are still needed as countries transition towards inclusive environments. However, the location of where these supports are provided will change. Many countries have transformed specialized schools to centers of excellence or resource centers. In these cases, specialists become itinerant specialists and provide support to students and teachers in inclusive settings. As their roles shift towards supporting inclusion, it is important that in-service and pre-service trainings also reflect this change. The infrastructure for these centers also can be transformed to continue to support persons with disabilities in the community. For example, instead of using the building to provide direct instruction to students, it can be used as a community resource center, community braille library or inclusive early childhood education center, while also serving as a hub for specialists as they provide support to inclusive schools.

Transition to Inclusion: Armenia Case Study

In Armenia, Open Society Foundations collaborated with segregated schools and general education systems to help support inclusive education. This model consists of "a resource center model providing specialist support for children with SEN [Special Needs Education] in mainstream schools [that] would gradually depopulate the special schools while simultaneously building a place for their professional expertise in a new, inclusive education system (Lapham & Papikyan, 2012)." This demonstrates the feasibility of evolving the special schools as inclusion-centric resource centers.

Lapham & Papikyan (2012) examined three special schools' transition to inclusion resource centers and four inclusive mainstream schools. The inclusive schools received professional and technical support from the three resource centers. Activities that transpired in the 2009-10 and 2011-12 academic years included:

- Training of inclusive school teachers
- Training parents and providing consultation
- Training for the children with disabilities at home
- Supporting the creation and development of teaching materials and syllabi
- Training for regional teachers and parents
- Hosting round-table discussions involving representatives from all stakeholder groups
- Offering interactive seminars with the parents and the students at inclusive schools (Lapham & Papikyan, 2012).

Lapham and Papikyan (2012) note that in order for transition from segregation to inclusion to be a steady and stable process, all stakeholders need to be involved in providing feedback, observing and supporting. The initiative found that what is required is a focused inquiry of four factors: (1) special schools as resource centers; (2) teachers and the school environment; (3) family and the community; and (4) the policy environment of the country. The four factors play a role in ensuring Armenia's greater inclusion efforts in the education system.

Reflect on Your Context

Do the above questions apply to the country?

What other questions are most commonly asked about inclusive education?

What resources exist to help answer these additional questions?

4.3.5 Phase 5: Take Programming That Has Been Proven Effective to Scale

Funding for inclusive education has traditionally been limited, with insufficient funding available to take programs to scale at a national level. Too often, inclusive education programs that were developed have been innovative but lacked scalability and sustainability. Piloting programs can be a useful practice to trial techniques and approaches in a new context, but it is important to develop pilot programs in a way that is scalable to ensure real impact. It is also important to consider scalability within the program design phase as well as to ensure host government buy-in at the early stages to promote government transfer and ownership. Donors may also want to consider moving beyond funding inclusive education in small increments and begin to look at the type of support needed to financially support inclusive education at a larger level.

One cost-effective option for taking inclusive education measures to scale is incorporating the education of students with disabilities into larger education or health programs. For example, in Cambodia, Sightsavers partnered with the World Bank to integrate vision screenings together with the national health deworming program. This practice not only leveraged additional health funds but was also less disruptive (as there was only one classroom intervention and not separate interventions for both deworming and vision screening) and was able to reach more children as children no longer had to travel to a clinic to be screened (Sightsavers, 2017).

Reflect on Your Context

Are inclusive education programs currently at scale at a national level? If not, how can programs be scaled in the future?

How can programs be designed taking into consideration scalability?

4.3.6 Phase 6: Address Gaps in Research and Increase General Knowledge Base

There is a dearth of research conducted in LMICs regarding effective pedagogical practices related to education of children with disabilities. Few research studies have been completed on issues related to the impact of the different supports described in Chapter 2: Holistic Supports, and there is even less information on effective literacy techniques with a focus on LMICs. As part of the literature conducted for this project, more than 300 regional or LMIC country-specific documents were reviewed. Research studies from Africa and Asia were then further reviewed and analyzed to ascertain possible trends in research as well as research gaps.

Analysis showed that in both Africa and Asia most research provides either a summary of the situation of inclusive/special education in the respective country or a summary of research conducted on teachers' attitudes toward inclusive education and students with disabilities. For example, 33 percent of research conducted in African countries provided a general overview of inclusive education in the country compared to 47 percent of research in Asia. Twenty five percent of studies in Africa focused on teacher attitudes or perceptions of inclusive education and children with disabilities compared to 29 percent of studies found in Asia. The next most common areas of research were related to the general situation of children with different categories of disabilities, with 18 percent of research in Africa addressing these issues compared to 9 percent in Asia. Only 2 percent of African studies and 3 percent of Asian studies focused on instructional approaches and techniques to promote learning. As a result, many evidence-based research studies cited in this toolkit came from research conducted in high-income countries. Figures 21 and 22 provide a breakdown of the percentages of research by topic area in the regions of Africa and Asia.

Based on initial research analysis and research conducted for this toolkit, gaps in research remain in LMICs on the following topics:

- Impact of inclusive education instructional approaches (such as adapted curriculum, IEPs, reasonable accommodations, access to teacher assistants, etc.) on learning outcomes of students with and without disabilities.
- Incorporation and outcomes of UDL in low-resourced environments with large class sizes.
- Effective literacy techniques for students with different types of disabilities and levels of support needs in low-resource settings.
- Approaches to modify curriculum and provide alternative supports to teach literacy skills to students with different categories of disabilities.
- Effectiveness of existing screening and assessment practices to identify students with disabilities in the classroom and the need to strengthen identification systems.
- Training standards for special and general education teachers related to inclusive education and provision of additional teacher training supports.
- Effective approaches related to community and family engagement and partnership to improve educational opportunities for students with disabilities.
- Behavioral communication change (BCC) approaches to improve attitudes and perceptions of students, teachers, families and community members regarding inclusive education.

Figure 21. Analysis of Special/Inclusive Education Research in Africa

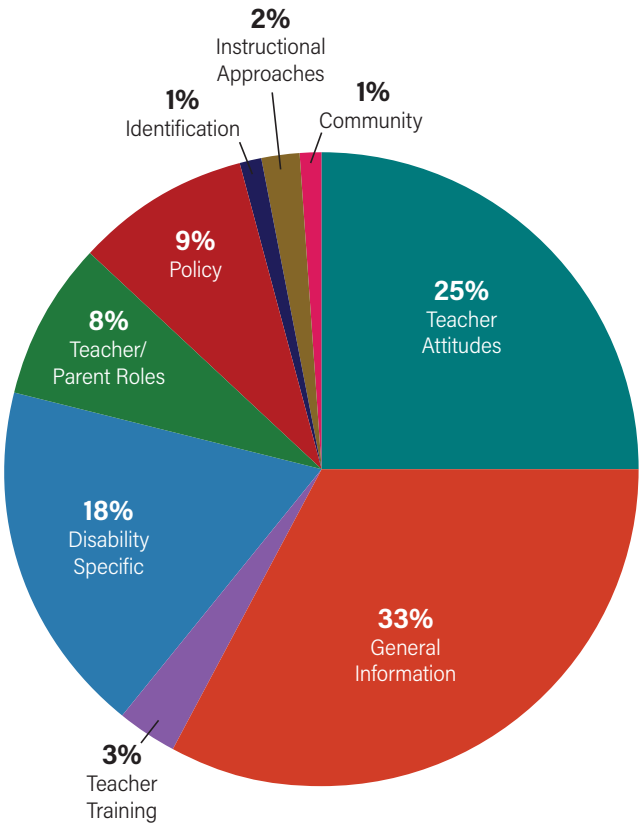
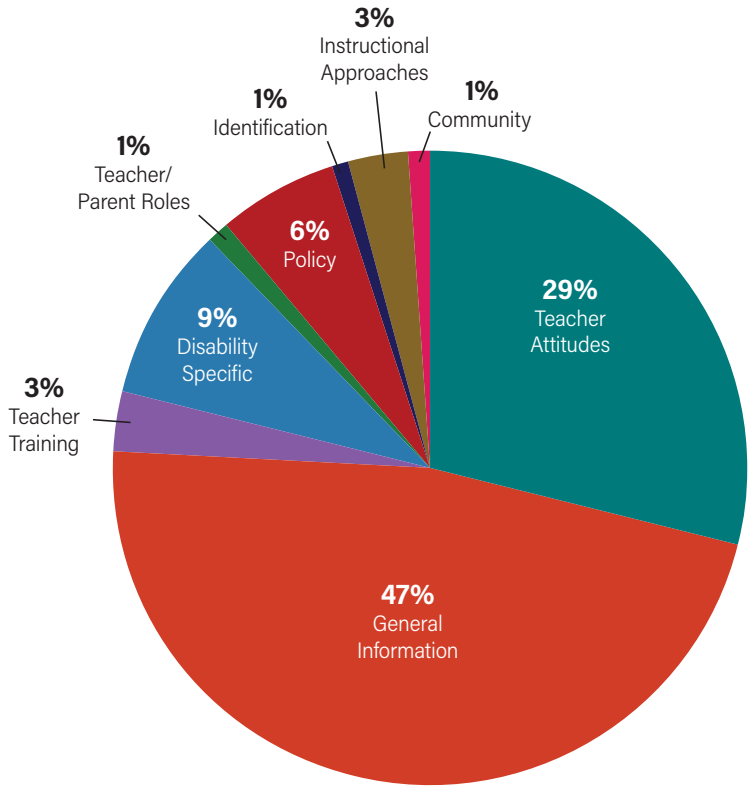


Figure 22. Analysis of Special/Inclusive Education Research in Asia



Whenever feasible, incorporate research studies into literacy programs that focus on the needs of students with disabilities in LMICs to continue to capture lessons learned and to improve techniques and supports to improve literacy skills for students with and without disabilities.

Reflect on Your Context

What research has been conducted within the country to help strengthen education for children with disabilities?

Are there additional areas that need to be researched?

What are options to help ensure that these research questions are being addressed?

4.4.7 Phase 7: Share Best Practices and Lessons Learned

Although there is growing literature and interest in inclusive education, information available on instructional approaches to support literacy acquisition remains sparse. There is also a need to document how the recommended supports (Chapter 2) can be implemented. Much of the available information takes the form of anecdotal evidence or is easily lost within larger program reports. This includes information on both what worked within a LMIC and what did not work. Gathering and sharing information on lessons learned can help other groups avoid similar mistakes. Since inclusive education programs largely remain under-resourced, it is important to use the little money that is available to build on the knowledge and experience of others in this area. Information can be shared more publicly amongst the various stakeholders by:

- Creating documents and other guides based on both research and practical experience.
- Encouraging communities of practice that bring together diverse stakeholders to share experiences.
- Presenting results on inclusive education and literacy in larger literacy workshops, symposia and conferences.
- Publishing program results and lessons learned in peer-reviewed journals.

It is also important to implement programs that apply international standards and best practices related to inclusive education. Though inclusive education programming may be just emerging in many LMICs, high-income countries have experience and research-based practices that can be modified and applied in different settings. Knowing what practices to embrace and those to avoid is particularly important in settings with limited funding.

Reflect on Your Context

How are best practices currently shared among stakeholders?

How can this be improved and strengthen?

Chapter 4: Additional Online Resources and Information

Donor Support and Funding Landscape

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Chapter 5: Conclusion

Literacy is for everyone. Most students with disabilities who are illiterate are so not due to their capacity to learn, but rather due to misperceptions that they cannot learn literacy skills. This toolkit helps discredit these harmful misperceptions by providing evidence-based techniques that support learning and literacy acquisition for students with disabilities. Students with disabilities often need additional supports and services to reach their full academic potential. Though many of the recommendations laid out within this toolkit may be aspirational for many LMICs, it is important to be aware of the full range of services and supports available to serve as a guide for future inclusive education interventions. Many of these techniques will need to be adapted to reflect the local context and culture. This entails building upon existing country strengths and allowing for flexibility while maintaining standards to promote learning for all. As donors, governments and NGOs implement national literacy programs, it is important that they recognize they cannot achieve learning for all if they discount the needs of approximately 15-20 percent of the student population that require additional learning supports. Moving forward, the needs of students with disabilities need to be a core component of all education programming. The evidence-based techniques presented in this toolkit can serve as a useful guide to help students with disabilities learn literacy skills and improve overall instructional practices that benefit students with and without disabilities.

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Glossary of Terminology

Attention Deficit Hyperactivity Disorder (ADHD). A disorder marked by a chronic pattern of attention difficulty and/or hyperactivity-impulsivity that interferes with a child's functioning and development.

Annual Student Experience Review. An annual review of monitoring activities (data review, external reports, student surveys and other informational collections) of a student's experience at school.

Anxiety Disorder. An anxiety disorder is different from normal feelings of nervousness or anxiousness; anxiety disorders include excessive and pervasive fear or anxiety which can be sweating, heart palpitations and feelings of stress.

Augmentative and alternative communication (AAC). A method or a device that improves communication for individuals with complex communication needs through low-tech AAC (e.g., the use of picture displays and alphabet boards) and high-tech AAC (e.g., apps to support communication on iPads and tablet technologies).

Bilingualism for sign language. Also known as bimodal bilingualism, this exceptional linguistic process lies in acquiring fluency in a signed and a spoken language (two separate modes). Those two modalities cause simultaneous production of the two languages.

Braille. A system of six raised dots that allow for persons who are blind to read print text tactilely.

Brailler. A type of "braille typewriter," where corresponding keys represent the various six dots of the braille code, the most common of which is the Perkins Brailler.

Co-enrollment schools. A school model that incorporates bilingual and dual language education practices for teaching students who are deaf/hard of hearing and students who are hearing in the same classroom.

Communication disorders. A disability that impacts the ability to receive, send, process and comprehend concepts or verbal, nonverbal and graphic symbol systems. Individuals may demonstrate one or any combination of communication disorders.

Complex communication needs. Individuals who have speech, language and communication challenges that severely impact the ability to communication learning, interests or thoughts.

Complex support needs. Individuals who may or may not have an intellectual disability but often require multiple supports or accommodations to reach their academic potential.

Comprehension. The ability to process text, understand its meaning and integrate it with one's existing knowledge. It is an intentional active process occurring before, during and after reading. Vocabulary knowledge and text comprehension are the main elements of effective reading.

Computer text-to-voice software. Software that translates/adapts text into speech. This software assists people with vision needs, learning disabilities or language barriers.

Conduct Disorder (antisocial or aggressive behaviors). A disorder based on behavioral and emotional problems in young children and adolescents. They have great difficulty following rules and behaving appropriately in social settings. This disorder causes severe social issues and can lead to further social and emotional difficulties in adulthood.

CRPD Committee. The body of independent experts which monitors implementation of the Convention by the States Parties. They examine reports and make suggestions/recommendations based on the report then forward to the States Parties.

Dialogic Reading. An interactive technique that prompts adults to engage children with questions and discussions while reading.

Disabled Persons Organizations (DPOs). Organizations in which persons with disabilities constitute a majority (over 51%) of the staff, board and volunteers, and where persons with disabilities are well represented within the organization.

Decoding. The process of translating print into speech by rapidly matching a letter or combination of letters (graphemes) to their sounds (phonemes) and recognizing the patterns that make syllables and words. [27]

Developmental delays. When a child does not reach their development milestones at the same rate as the majority of their peers the same age. Delays include gross/fine motor, language, cognitive, behavioral, emotional and/or social development.

Dyscalculia. A type of specific learning disability that affects a person's ability to understand numbers and learn numeracy.

Dysgraphia. A type of specific learning disability that affects a person's handwriting ability and the capacity related to fine motor skills.

Dyslexia. A type of specific learning disability that affects reading and related language-based processing skills. Dyslexia can affect reading fluency, decoding, reading comprehension and other related elements of literacy and reading.

Early childhood development. The physical, cognitive, linguistic, social and emotional development of a child from infancy to age eight.

Early childhood intervention. A system of coordinated services that promote a child's growth and development during the critical years of life (usually before age 3). Usually provided to children with identified disabilities or developmental delays.

Educational Management Information Systems (EMIS). A system used within the education sphere to help organize information about students and services for national educational planning and management.

Emotional and behavioral disorder (EBD). A disability which consists of an inability to build/maintain social relationships, an inability to learn, chronic behavioral stress under normal conditions and physical symptoms/pains/fears related to personal or school issues.

Evaluation. Often referred to as "Assessment," an evaluation is a comprehensive process conducted by a multidisciplinary team using multiple tools that can provide information about a student's academic strengths, challenges and what accommodations might mitigate those challenges.

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27 Reading Horizons. (n.d.). What is Decoding? Retrieved from https://www.readinghorizons.com/reading-strategies/decoding/what-is-decoding.

Explicit instruction. A holistic system of instruction. Explicit instruction is skill-based, interactive, integrative, developmentally appropriate, student-tailored and cognitively engaging.

Expressive language disorders. A condition where an individual has challenges using oral language or talking.

Fingerspelling. The process of spelling out words by handshapes which signify letters of the manual alphabet. Sign languages around the world have their own manual alphabets.

Fluency. "Reading fluency is made up of at least three key elements: accurate reading of connected text at a conversational rate with appropriate prosody or expression."[28]

FM systems. A wireless system that makes it easier to identify and understand speech for students who are hard of hearing where an individual speaks directly into a wireless microphone that is then transmitted to a receiver or hearing aid.

General education. Formal school-based education system that is generally made available to students in a community, generally operated by the Ministry of Education.

Individualized Education Plan (IEP). A plan or program developed that determines an individual student's academic goals and monitors the progress of those goals to ensure that the student is progressing in school. An IEP also determines what type of supports or accommodations a student may need to reach their full academic potential.

Identification. The process of applying a phased process using both screening and evaluation techniques to determine if a student would benefit from additional learning supports or special education services. This process should be conducted by trained individuals within the classroom setting.

Itinerant teacher. A qualified teacher or specialist who travels from school to school to provide educational supports to multiple schools potentially across several communities.

Kinesthetic learning. A multi-sensory learning style that incorporates tactile techniques to support visual and/or auditory learning.

Language processing disorders. A disorder that focuses on the difficulties of processing of expressive and/or receptive languages.

Learning disabilities. A general term that refers to neurological disorders in learning. Learning processing can interfere with learning basic reading, writing or math skills.

Local sign language. The distinct sign language developed within a given community, region or country.

Low-and-middle-income countries (LMICs). Countries that are "divided into four income groupings: low, lower-middle, upper-middle, and high. Income is measured using gross national income (GNI) per capita, in U.S. dollars, converted from local currency using the World Bank Atlas method." [29]

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28 Read Naturally. (n.d.). Fluency. Retrieved from https://www.readnaturally.com/research/5-components-of-reading/fluency

29 The World Bank. (n.d.). How does the World Bank classify countries? Retrieved from https://datahelpdesk.worldbank.org/knowledgebase/articles/378834-how-does-the-world-bank-classify-countries

Manipulative. A physical object (e.g., blocks) that helps instruct abstract concepts to children by using both visual cues or prompts.

Mood disorder (depression, bipolar disorder). A condition that is also known as an affective disorder; it affects a person's persistent emotional state and its related functions.

Motor skills. The function/ability to perform complex muscle-and-nerve acts that produce specific/intentional movements.

Oppositional defiant disorder (ODD). A childhood disorder with a pattern of hostile, disobedient and defiant behaviors targeted at adults or other authority figures. With ODD, children also have angry/irritable moods and argumentative/vindictive behaviors.

Paraprofessional. Also referred to as a teacher assistant, a paraprofessional supports the general education teacher in instructional for student with disabilities.

Phonetic awareness. A general skill that entails identifying and manipulating units of oral language such as words, syllables, onsets and rhymes.

Picture exchange communication system (PECS). A nonverbal symbolic communication method used with children with little or no communication abilities to communicate via pictures.

Post-traumatic stress disorder (PTSD). A mental health disorder that some children develop after experiencing or witnessing a deeply shocking, terrifying or dangerous event.

Refreshable braille display. A device that displays braille code through round-tipped pins raised through holes on a flat surface. Refreshable braillers are usually linked to a computer or another technical device.

Resource rooms. A separate room where students with disabilities are given specialized instruction, other related services and additional assistance. Instruction within a resource room is usually provided by a trained professional either on an individual basis or within a small group setting.

Schizophrenia. A long-term and severely complex psychosocial disability that affects a person's ability to think clearly, manage emotions and behave rationally.

Self-determination. The belief that people have the right to direct their own lives. Along with skills, attitudes and opportunities, self-determination also leads to being able to transition effectively to adulthood and employment.

Sight words. A term referring to a specific reading skill in identifying common words that appear with frequency. "Who, the, he, were, does, their, me, be" are a few examples.

Sign language. A visual language that employs signs made with the hands, facial expressions and body movements; all play an important role in conveying information and communication. Like any language in the world, sign languages usually have their own grammar and syntax. Sign languages' primary users are people who are deaf/hard of hearing.

Slate and stylus. A low-cost writing tool for braille that allows for the braille to be pushed in using a specialized pin.

Special education. The specially designed instruction of educating students with disabilities, which accommodates their individual needs. This process entails individually planning, systematically monitoring, adapting equipment and materials, and developing accessible settings.

Special education teachers. Teachers who are specifically trained to teach and work with students with a range of learning, mental, emotional and physical disabilities. They teach basic skills such as literacy and communication and adapt general education lessons for other subjects like reading, writing and math.

Story sentence strips. An approach to building fluency in language by teaching grammar, mechanics, punctuation, organization, parallel structure, sentence combination and other language/literacy skills. This approach utilizes paper strips.

Symbolic materials. Types of symbols used in representing students with disabilities' thoughts or for communicating messages. Symbols can be visual or tactile.

Tactile. A means of learning non-textual information via pictures, maps, diagrams or other images.

Teacher assistant. See paraprofessional.

Twin-track approach. Developing programs that both address the specific needs of persons with disabilities in a targeted manner as well as developing an inclusive design that enables persons with disabilities to participate in programs in an equitable manner.

Vision and hearing screenings. A screening that assesses if a person has challenges with their vision or hearing. It is often used to identify students who would benefit from a more comprehension vision or hearing exam by a medical professional.

Water and sanitation for health (WASH). Programs that address safe water, sanitation and proper hygiene to improve health and reduce related illnesses.

Annex A: Experts Interviewed

Dr. Ola Abu al Ghaib, Deputy Director, Leonard Cheshire Disability (LCD).

Angela Affran, Africa Regional Coordinator based in Ghana, Perkins International.

Dr. Heather Aldersey, Assistant Professor, Queens College.

Dr. Jean Andrews, Retired Distinguished Professor.

Dr. Rima Azzam, Independent Consultant (technical expertise in learning disabilities and Arabic).

Sarah Brasiel, Education Research Scientist, National Center for Special Education Research, U.S. Department of Education.

Susan Bruckner, Senior International Technical Advisor, Education Development Center.

Dr. Jennae Bulat, Director of Teaching and Learning, Research Triangle Institute (RTI) International.

Dr. Brent Carson Elder, Assistant Professor, Rowan University.

Dr. Susan Copeland, Associate Professor, University of New Mexico.

Dr. Julie Durando, Project Director, National Center on Deaf-Blindness.

Ines, Escallon, Inclusive Education Expert, Inclusion International.

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Christiana Okyere, PhD candidate (thesis on itinerant special education model in Ghana), Queens College.

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Kristina Solum, Director of Programs, School-to-School International.

Corinne Vinopol, President, Institute for Disabilities Research and Training (IDRT).

Dr. Gabrielle Young, Assistant Professor, Memorial University of Newfoundland.

Annex B: Self-Reflection Checklist

QUESTIONS	YES	NO
1. Has your country signed and ratified the CRPD?		
2. Are there national and/or local laws that require the inclusion of all students with disabilities?		
3. Is there a national and/or local plan on how to promote the education of students with disabilities?		
4. Do schools educate students with disabilities in segregated schools or self-contained classrooms?		
5. Are all students able to receive a beneficial education in their local school regardless of type or severity of disability?		
6. Does the school system recognize the need for students who are deaf to be educated in a communication-rich environment where they communicate directly with peers and teachers using local sign language?		
7. Are teachers responsible for teaching students who are deaf qualified and fluent in local sign language?		
8. Is there a hierarchy of teacher training supports available within the country and schools where all general education teachers are trained in inclusive education, special education teachers are available to support teachers and students have access to technical experts in a variety of fields?		
9. Does teacher training include Universal Design for Learning (UDL) principles?		
10. Does teacher training include different instructional techniques to teach literacy skills to students with disabilities?		
11. Are administrators and principals also trained on inclusive education?		
12. Are Individual Education Plans (IEPS) used within the classroom?		
12.1 Do these IEPs provide specific academic goals?		
12.2 Are parents engaged in the development of IEPs?		
12.3 Do IEPs address both a students' academic strengths and needs as well as provide suggestions for accommodations?		
12.4 Are students regularly monitored and assessed on IEP implementation?		
13. Do all students with disabilities have access to the national curriculum?		
14. Do students with disabilities have access to assistive technologies as needed?		
15. Are teachers trained on how to use assistive technologies to promote literacy skills?		
16. Do students with disabilities have access to other related services (speech therapist, occupational therapist, braille literacy experts, audiologist, etc.) if needed?		

QUESTIONS	YES	NO
17. Are students with disabilities actively engaged in their own education process, including being able to set goals and to develop and implement plans?		
18. Are families engaged in their children's learning in a way that promotes partnership?		
19. Have there been disability awareness campaigns to educate the community on the importance of students with disabilities receiving literacy instruction in inclusive settings?		
20. Are Disabled Persons Organizations actively engaged in all education programs serving students with disabilities including the design, implementation, monitoring and evaluation?		
21. Do all students receive vision and hearing screenings in schools?		
22. Is a phased approach to identification for additional learning supports put into place with teachers trained on these methods?		
23. Are there local screening tools and assessment tools developed within the country?		
24. Does the identification process identify students' academic needs as well as their academic strengths and preferences?		
25. Do early childhood education programs include students with disabilities and offer services for infants and toddlers if needed?		
26. Is instruction differentiated to address the diverse ways students learn, express information and are motivated to learn?		
27. Are assessments adapted or modified as needed to assess the learning progress of students with disabilities?		

Annex C: International Frameworks and Policies

Listed below are summaries of a few of the international frameworks related to inclusive education:

- United Nations Educational, Scientific and Cultural Organization (UNESCO) Salamanca Statement (1994)
- The United Nations Convention on the Rights of Persons with Disabilities (2006)
- Marrakesh Treaty to Facilitate Access to Published Works for Persons Who are Blind, Visually Impaired or Otherwise Print Disabled (2013)
- Sustainable Development Goals (SDGs) (2015)

United Nations Convention on the Rights of the Child (UN CRC). Adopted in 1989, the CRC addresses the general rights of all children with its Article 23 specifically addressing the rights of children with disabilities. Though the article does not address inclusive education it does state that children should receive an education that allows social integration and individual development to the fullest extent possible. For more information on the CRC, please visit http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx

The United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities. Adopted in 1993, this non-binding framwork provides 22 rules concerning the rights of persons with disabilities. Rule number 6 is focused on education and supports students being educated in the general school system and the need to provide appropriate accommodations. For more information on the Standard Rules, please visit https://www.un.org/development/desa/disabilities/standard-rules-on-the-equalization-of-opportunities-for-persons-with-disabilities.html

United Nations Educational, Scientific and Cultural Organization (UNESCO) Salamanca Statement. Adopted in 1994, this document highlights the need to provide inclusive education for children with disabilities. Held in Salamanca, Spain, and attended by 92 governments and 25 international organizations, this document was adopted during the World Conference on Special Needs Education. For more information on the Salamanca Statement, please visit http://www.unesco.org/education/pdf/SALAMA_E.PDF

The United Nations Convention on the Rights of Persons with Disabilities (CRPD). The CRPD has been ratified by 177 countries[30] and addresses the full spectrum of rights of persons with disabilities, including access to health, education, political participation and employment (United Nations, 2018). The CRPD has 50 Articles, of which many are relevant to implementing and supporting literacy programming for students with disabilities. The three main articles related to the education of children with disabilities are as follows:

- Article 4: General Obligations. This article requires the active engagement of DPOs in development of policies or programs related to persons with disabilities. Specifically, the article states "In the development and implementation of legislation and policy to implement the present Convention, and in other decision-making processes concerning issues relating to persons with disabilities, State Parties shall closely consult with and actively involve persons with disabilities, including children with disabilities, through their representative organizations."

30 The number of ratifications as of April 2018.

- Article 24: Education. Governments should ensure inclusive education system at all levels and for all persons with disabilities (regardless of types of severity of disabilities). In additions, governments should provide:
  - Reasonable accommodations as needed
  - Support within the general education system to support their education
  - The facilitation of "learning in braille, alternative script, augmentative and alternative modes, means and formats of communication and orientation and mobility skills, and facilitating peer support and mentoring"
  - The facilitation of "learning sign language and the promotion of linguistic identity of the deaf community."

Governments should also employ teachers, including teachers with disabilities, who are qualified in sign language and/or braille and to train staff to work at all levels of education (United Nations, 2006).

- Article 32: International Cooperation. All international development and humanitarian aid programs should be inclusive of and accessible to persons with disabilities. International cooperation should also support capacity building and the sharing of best practices as well as research and access to technical knowledge. As a signatory of the CRPD, the US should follow the principles of the Convention and thus is encouraged to ensure that all US-funded development programming is fully inclusive of persons with disabilities. However, if the host government has ratified the CRPD, then all US-funded support must be inclusive to be aligned with local law.

For more information on the CRPD, please visit: https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html

Marrakesh Treaty to Facilitate Access to Published Works for Persons Who are Blind, Visually Impaired or Otherwise Print Disabled. Adopted in June 2013, the Marrakesh treaty introduces a "standard set of limitations and exceptions to copyright rules to permit reproduction, distribution and making available of published work" in accessible formats for persons who are blind/have low vision or are print disabled (World Intellectual Property Organization [WIPO], 2017). The purpose of this treaty is to increase the information that is accessible online or in an audio version for persons with disabilities. As of January 2018, 35 countries have ratified the treaty.[31]

For more information on the Marrakesh treaty, please visit: http://www.wipo.int/treaties/en/ip/marrakesh/

The United States and the CRPD

On July 30, 2009, President Obama signed the CRPD. On December 12, 2012, a vote to ratify the CRPD came before the US Senate but failed to pass the required 2/3 vote by 5 votes (USICD, 2018).

31 The United States signed the Marrakesh treaty on October 2, 2013 but as of January 2018 has not yet ratified the treaty.

Sustainable Development Goals (SDGs). In addition to the CRPD, Goal 4 of SDGs also addresses the need for countries to provide quality education to children with disabilities by ensuring "inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. The SDGs includes several indicators and targets that specifically address the need to provide education to children with disabilities. The targets related to inclusive education are as follows (UN Division for Social Policy and Development: Disability, 2016):

- Target 4.5: "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."
- Target 4.a: "build and upgrade education facilitates that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all."

For more information on the SDGs, please visit:
https://sustainabledevelopment.un.org/sdgs

Annex D: Six Partnership Types

1. Meeting families' basic needs

- Accessing emotional support.
- Accessing informational support.
- Having quality child care.
- Attending to health needs.
- Ensuring safety (including child abuse and neglect).
- Accessing financial resources.
- Forging community partnerships to address needs.

2. Referring and evaluating for formal services and informal supports

- Advocating for child, family, and teacher rights.
- Referring families to the state's Parent Training and Information Center.
- Coaching families in knowing and acting on child, family, and teacher rights.
- Implementing Child Find.
- Initiating and reviewing student referral.
- Collecting evaluation information on child.
- Documenting families' resources, concerns, and priorities.
- Discussing evaluation results.

3. Individualizing in developing and providing appropriately ambitious programs

- Advocating for child, family, and teacher rights.
- Referring families to the state's Parent Training and Information Center.
- Coaching families in knowing and acting on child, family, and teacher rights.
- Considering the effective incorporation of assistive technology.
- Preparing in advance of IFSP/IEP process.
- Conducting IFSP/IEP meeting.
- Finalizing IFSP/IEP document.
- Implementing IFSP/IEP.
- Planning for transitions.

4. Extending student learning in home and community

- Guiding families to teach children through everyday activities and routines.
- Making home visits.
- Advocating for preferred informational, emotional, and logistical support.
- Addressing behavioral challenges in home and community settings.
- Helping connect students and families to neighborhood and community peers.
- Supporting children and youth to be included in community recreational activities.
- Supporting students and families to attend community venues and events.
- Building community partnerships to address school, student, and family needs.

5. Participating and volunteering with program/classroom/school

- Creating family friendly environments within the program.
- Encouraging families to attend program/community events and meetings related to child development.
- Guiding families in how to assist with learning as a volunteer.
- Guiding families in how to contribute to other program tasks.
- Guiding families to volunteer in community events that have school, student and family benefits.

6. Advocating for systems improvement

- Taking advantage of resources from Parent Training and Information Centers.
- Participating in advocacy and leadership training.
- Mentoring families and being mentored by families in advocacy activities.
- Informing families about program and community advocacy events and encouraging them to consider participating.
- Ensuring that local and state special education advisory committees have family leadership.

Annex E: Template for Functional/ Ecological Assessment of Learning Environments

Student: _____

School: _____

Grade/Age: _____

Environment/Class: _____

Activity: _____

Student Characteristics: _____

Key: **+** = independent **P** = partial assistance **—** = refusal or full assistance

Peers Without Disabilities Inventory (steps for the activity)	Natural Cues	Target Student Performance (+, P, —)	Discrepancy Analysis	Intervention Strategies (e.g., adaptations, prompts)

Annex F: Challenges and Interventions for Students with Intellectual Disability and Complex Support Needs

By Dr. Susan Copeland

Learning Challenge	Some Ideas for Intervention
Need more time to learn new skills because of difficulties with memory.	Provide many opportunities to practice skills in as many different ways as possible. Come back to newly learned skills periodically to review them.
Often have difficulty transferring something learned in one setting to a different setting or different task.	Practice new skills with different types of activities, books, writing materials and tasks.
Often have low vocabulary levels (this affects every area of literacy so should be a foundation of every literacy program).	Build vocabulary and expressive language in every lesson.
Because of vocabulary issues may have difficulty following verbal directions.	Use simple, clear directions given one to two steps at a time.
May struggle to complete tasks with multiple steps.	Break multistep tasks down into steps (task analysis); model what you want students to do (for example, use visual supports such as a visual schedule, visual task analysis, graphic organizers).
May not use speech to communicate.	Provide other ways for students to respond or contribute using pictures, alternative communication systems, sign language, computers, tablets.
May have difficult with decoding due to problems with working memory.	Provide sustained, ongoing instruction using active learning.
May have trouble learning abstract concepts.	Use explicit, active instruction to help make connections between abstract concepts such as letter-sound associations.
Often have fine motor problems that make handwriting difficult.	Provide lots of practice but also provide opportunities to 'write' using dictation, keyboard or magnetic letters to bypass fine motor skills to develop written expression (i.e., don't wait until motor skills are solid before teaching students to express themselves using print).

Learning Challenge	Some Ideas for Intervention
May not be motivated to participate in lessons.	Create lessons that include a game or opportunity to work with others; develop lessons where the topic of instruction is familiar or of special interest to the student.
May have articulation problems that make fluency difficult.	Using techniques such as echo reading, reader's theater and repeated reading of a familiar text can help.
May become easily confused during a lesson.	Give clear feedback and use lots of positive reinforcement to keep motivation level high.
Reading comprehension may be lower than expected due to lower levels of vocabulary and complexity of text.	Use pictures, graphic organizers, read alouds to support comprehension.

Annex G: Recommendations for Stakeholder Engagement

It is important to design, implement, monitor and evaluation programs that take into consideration the unique viewpoints of a diverse group of stakeholders. Recommendations on how to engage these stakeholders are as follows:

- **Ministries of Education (MOE).** The MOE, or its equivalent in a country, is responsible for leading education planning and plays a pivotal role in educational reform, policy and curriculum development, and service delivery (Hayes and Bulat, 2017). It is important that the MOE be responsible for the education of children in the country, including children with disabilities. In many countries there is a continued practice of having ministries of Social Welfare oversee the education of children with severe disabilities (especially students with intellectual disability or developmental disabilities). The World Report of Disability states that this practice of having divided ministry oversight should be avoided and discontinued as it "further segregates children with disabilities and shifts the focus from education and achieving social and economic inclusion to treatment and social isolation" (WHO, 2011). While most countries do have a Department of Special or Inclusive Education, these departments can be underfunded and are often staffed by individuals who have limited knowledge in educating students with disabilities. Conversely, there are also many departments that are staffed by individuals with expertise in inclusive education who are also strong advocates but are limited by the lack of resources to make substantial change within the country. It is important to not only engage with the MOE but also specifically with representatives from the Department of Special/Inclusive Education. In many programs, there is a hierarchy within the MOE on who may engage with the donor and the implementing partners. These individuals may not always be aware of disability policies, strategies and priorities. It is important to engage those who are directly involved in supporting the education of students with disabilities to ensure that their views and input are substantially involved in the design and implementation of a project.
- **DPOs and the disability community.** DPO engagement is a key component to all disability programming and thus was placed as a requirement for developing disability programming and policy within the CRPD (see section 2.7). Additional suggestions for engaging DPOs as stakeholders include:
  - Engage umbrella DPOs or national representative organizations that bring together different national DPOs representing different types of disabilities.
  - Ensure that all different types of disabilities are represented as much as possible in meetings (for example, representation from persons with physical disabilities, sensory disabilities (deaf, blind and deaf-blind), intellectual disability, learning disabilities and psychosocial disabilities.
  - Ensure gender parity by promoting the inclusion of women, girls and youth with disabilities as well as ask for the participation of any DPOs that may represent women with disabilities in the country.
  - Promote geographic and ethnic diversity by asking DPOs to bring in members who represent rural and urban areas as well as members of relevant ethnic, racial or cultural minorities
  - Ensure that all DPO members can equitably participate by providing an accessible meeting space that is physically accessible and has accessible bathrooms, as well as provide accessible communication by providing local sign language interpreters and materials in alternative formats.

- **Families of children with disabilities.** Including the perspective of parents and families of children with disabilities is key (see section 2.5.2). Given their unique insights, these stakeholders also need to be a part of the design, implementation, monitoring and evaluation or programs. While some countries may have DPOs that represent families of children with disabilities, there are other countries where there are no formal parent support or advocacy structures. In some cases, DPOs in a country only represent parents of children with intellectual disability. However, it is important to include the perspectives of parents of children with other types of disabilities as well. As with the DPO community, it is important to bring in as many diverse perspectives as possible to represent parents (e.g. different types of disabilities, geographic setting, social economic status, etc.). It is also important to not only engage mothers of children with disabilities but also engage other relevant family members such as fathers and extended family caregivers where appropriate.
- **NGOs and civil society.** NGOs working in this sphere are important to include as part of the participatory process. NGOs can be international NGOs/contractors working in this area as well as local NGOs. In many cases, local NGOs may be providing direct educational services by supporting segregated schools. These individuals can help ensure that programs build upon past initiatives, understand the contextual challenges and avoid duplication of services. Donors, the MOE and DPOs can serve as valuable sources to understand which DPOs are working in the education of children with disabilities and can be effective contributors to the participatory process.
- **Other donors.** As discussed earlier in this section, many donors are becoming increasingly engaged in inclusive education. It is important to meet with them and include them as part of this participatory process to better understand their current programs and future plans in this area. Donors can include other bilateral organizations, UN agencies and multilateral organizations and private and corporate foundations.

Resources for finding local DPOs:

- Disabled Persons International (DPI) http://www.dpi.org/dpi-members.html
- International Disability Alliance (IDA) http://www.internationaldisabilityalliance.org/en/about-us/ida-members-organizations
- United States International Council on Disabilities http://www.usicd.org

Annex H: Information to Include in Situational Analysis

It is recommended that situational analysis capture the overall policies and programming related to inclusive education. It is also important to not just focus on one type of disability but provide a cross-cutting approach that addresses the needs of all children with disabilities. Information that can be included in a situational analysis is as follows:

- Policies and strategies (including those policies that may serve as a barrier for inclusion)
- Government official definition of disability
- Disability prevalence rates and other statistics disaggregated by sex, age, and other categories
- Enrollment, repetition and drop-out rates
- Literacy rates
- Estimates and causes for out-of-school children
- Existing educational settings (inclusive, integrated, segregated)
- Identification processes and protocols
- Teacher training for both general education teachers and special education teachers
- Access to and the inclusion of students with disabilities in teaching and learning materials
- Access to the curriculum, including instruction in early grade reading
- Access to accommodations, including classroom adaptions, braille or materials in alternative formats and instruction in local sign language
- Access to technology and assistive devices
- Provision and implementation of IEPs
- Available therapy services
- Available accessible transportation
- Community living versus living in institutions/social homes
- Family engagement and education (including families with and without children with disabilities)
- DPO engagement
- Community engagement

This list may be edited or expanded depending on the reality within the country. It may also be useful to compare existing practices to the standards or guidance set forth in the UN CRPD to highlight where countries may be aligned or yet to be aligned with the international treaty.

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