

TECHNICAL BRIEF

TOWARDS EQUITY IN ASSESSMENT:

Making Standardized Learning
Assessments More Accessible for
Learners with Disabilities

Girls'
Education
Challenge



Table of Contents

1 ABOUT THIS BRIEF

- 03 Acknowledgements
- 05 Abbreviations
- 06 Introduction
- 10 Background
- 14 Methodology

2 LEARNINGS

- 18 Key Learnings
 - 18 Pre-design
 - 18 *Disability screening and identification*
 - 23 *Determine Appropriate Timeline*
 - 23 *Literature Review and Situational Analyses*
 - 25 Stakeholder engagement
 - 30 Accommodations and modifications
 - 31 Accommodations
 - 35 *Accommodations for learners who are blind or have low vision*
 - 36 *Accommodations for learners who are deaf or hard of hearing*
 - 39 Modifications
 - 40 *Modifications for learners who are deaf or hard of hearing*
 - 42 *Modifications for learners who are blind or have low vision*
 - 45 *Determining whether to use accommodations or modifications*
 - 46 Additional considerations when adapting reading assessments for learners who are deaf or hard of hearing
 - 46 *Sign languages and variations*
 - 47 *Scoring accuracy*
 - 48 Piloting of assessments
 - 51 Assessor selection

3 RECOMMENDATIONS

- 53 Key Recommendations
 - 53 Actions to promote more accessible, valid, and reliable learning assessments for learners with disabilities
 - 54 *Prioritize engaging the most appropriate experts, with a wide range of expertise*
 - 54 *Understand the context*
 - 55 *Consider all critical technical steps*
 - 56 *Recognize the importance of making progress*
 - 57 Additional considerations

4 APPENDICES

- 59 Appendix 1: Research questions
- 61 Appendix 2: KII Guide
- 65 Appendix 3: KII Participants
- 66 Appendix 4: KII Resources
- 67 Appendix 5: Works Cited

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About the Authors

Recognizing their unique experience in mandating and advising on the inclusion of learners with disabilities in learning assessments, the Girls' Education Challenge (GEC) Fund Manager (FM), funded by the UK Foreign, Commonwealth and Development Office (FCDO), and All Children Reading: A Grand Challenge for Development (ACR GCD), a partnership of the United States Agency for International Development (USAID), World Vision and the Australian Government, partnered to spearhead the development of this technical brief.



The Girls' Education Challenge (GEC), launched by the UK's Foreign, Commonwealth and Development Office (FCDO) in 2012, has worked to transform the lives of the world's most marginalized girls through quality education and learning. GEC projects have reached 151,855 girls with disabilities through interventions to improve their access and quality of education. GEC projects are also conducting formative and summative evaluations, including measuring of literacy and numeracy outcomes through commonly applied tools such as the Early Grade Reading Assessment (EGRA) and Annual Status of Education Report (ASER). Because these tools have not traditionally included accommodations or adaptations for learners with disabilities, GEC projects and their external evaluators (EE) have had to make decisions on how to include these learners in their evaluations—and more specifically, how to design learning assessments that can be administered with girls with disabilities.



All Children Reading: A Grand Challenge for Development (ACR GCD) a partnership of the United States Agency for International Development, World Vision and the Australian Government, has spurred the development of some of the first adapted assessments in braille and sign language in several underserved languages, has promoted the use of adapted assessments, and funded adapted assessments. Additionally, ACR GCD brings expertise in convening education technology (EdTech) and child literacy technical expertise to collaboratively develop and disseminate innovative literacy approaches and tools, including for learners with disabilities.

ACR GCD's commitment to inclusive assessments includes funding adaptations in Filipino Sign Language, Moroccan Sign

Language, Papua New Guinea (PNG) Sign Language and Rwandan Sign Language for learners who are deaf and hard of hearing. Additionally, it has funded adaptations in Bharati braille, Kinyarwanda braille, Filipino braille, English braille and large print for learners who are blind or have low vision and for learners with learning disabilities. Beyond this, ACR GCD prioritizes funding to the most marginalized children in the world, particularly learners with disabilities. ACR GCD-funded solutions require the engagement of Organizations of Persons with Disabilities (OPD) in project design and as budgeted project subs. ACR GCD also requires that reading materials are created as "born accessible" to meet the learning needs of all learners, including those with disabilities. ACR GCD is leading the development of Standards for Sign Language Storybook production in low-resource contexts. It has funded and scaled the production of thousands of accessible books, including sign language storybooks, in the most underserved languages in the world.

Abbreviations

ACR GCD All Children Reading: A Grand Challenge for Development	ASER Annual Status of Education Report	CRPD Convention on the Rights of Persons with Disabilities	DFAT Australian Department of Foreign Affairs and Trade	DFID Department for International Development	DPO Disabled persons organization
EGMA Early Grade Mathematics Assessment	EGRA Early Grade Reading Assessment	EdTech Education technology	EE External evaluator	FCDO Foreign, Commonwealth and Development Office	FM Fund Manager
GEC Girls' Education Challenge	ICF International Classification of Functioning, Disability and Health	IDELA International Development Early Learning Assessment	IDRT Institute for Disabilities Research and Training, Inc	KII Key informant interview	MDRT Mico Diagnostic Reading Test
OPD Organization of persons with disabilities	PASEC Programme for the Analysis of Education Systems	PILNA Pacific Islands Literacy and Numeracy Assessment	PIRLS Progress in International Reading Literacy Study	PISA Program for International Student Assessment	PNG Papua New Guinea
SACMEQ Southern and Eastern Africa Consortium for Monitoring Educational Quality	SDG Sustainable Development Goal	SEA-PLM Southeast Asia Primary Learning Metrics	SeGMA Secondary Grade Mathematics Assessment	SeGRA Secondary Grade Reading Assessment	TIMSS Trends in International Mathematics and Science Study
UDA Universal Design for Assessment	UIS UNESCO Institute for Statistics	UDL Universal Design for Learning	UK United Kingdom	UN United Nations	UNESCO United Nations Educational, Scientific and Cultural Organization
UNICEF United Nations Children's Fund	USAID United States Agency for International Development	WG Washington Group on Disability Statistics			

Introduction

Policymakers, implementers, assessment designers and researchers working in international education have increasingly utilized standardized summative learning assessments—such as early grade reading assessments (EGRA), early grade mathematics assessments (EGMA) and Annual Status of Education Reports (ASER)—to measure literacy and numeracy progress of learners in primary and secondary school. The results of these learning assessments provide critical information to stakeholders, including learners’ progress towards benchmarks, the value for money of education projects, and improvements needed to advance the learning skills of learners. Great investments have been made to develop guidance on how to design these assessments to be valid and reliable in different contexts, resulting in their widespread use across national education

programs and bilaterally and multilaterally funded projects to improve learning. Despite the substantial benefits resulting from the use of these learning assessments, the assessments are not, in their standardized format, designed in a way that allows all learners with disabilities to fully demonstrate what they know. Specifically, the way the assessment information is presented, and requirements for how responses are provided, may disadvantage or exclude learners with disabilities.

When assessments are not designed to be accessible to learners with disabilities, it is not possible to reliably measure their learning outcomes. Learners are not able to effectively demonstrate what they know. As a result, policymakers, implementers, educators and researchers are left with a poor understanding of

ABOUT THIS BRIEF

the learning outcomes of these learners and are unable to adequately meet their learning needs.

The purpose of this brief is to share lessons that implementers, assessment designers and researchers have learned by including learners with disabilities in standardized summative learning assessments. This technical brief also aims to encourage others to commit to including learners with disabilities in learning assessments and to provide recommendations on how to measure these learners' learning outcomes more validly and reliably.

The way the assessment information is presented, and requirements for how responses are provided, may disadvantage or exclude learners with disabilities.

This brief is intended to serve as a key resource for policymakers, implementers, assessment designers and researchers in low- and middle-income contexts who seek to make low- and medium-stakes standardized summative learning assessments more inclusive and want to learn from the experience of others.¹ Although not an explicit focus of this brief, many of the examples provided can benefit teachers responsible for administering highly localized formative assessments, which are critical to fully



understanding whether individual learner's goals are achieved.

This brief does not address all the enabling environmental or cost implications of adapting assessments. Additional resources from projects have been provided to better understand the former, and highlighted projects may be able to provide more details on the latter.

Finally, this brief will not solve all the research gaps that exist; it is not meant to provide prescriptive guidelines or serve as a toolkit. Rather, it serves to facilitate knowledge sharing and access to resources, recognizing all the work that has been done and all the future knowledge that will come as we continue including learners with disabilities in learning assessments.

¹ Low- and medium-stakes formative and summative learning assessments differ from high-stakes international assessments, such as the Program for International Student Assessment (PISA) and the Program for the Analysis of Education Systems (PASEC). Additional work is needed to ensure equitable access to high-stakes national and international assessments for learners with disabilities. Significant progress is being made towards this, including by contributors to this brief.

Reflecting on short- and long-term goals

Learners with disabilities are often left out of assessment systems because curriculum and assessment are not universally designed and are therefore inaccessible. There is limited evidence on how they are accessing curriculum, what types of skills they have, what gaps exist in their knowledge and how systems can better address their needs. This brief presents lessons learned from projects that adapted learning assessments, designed for the purpose of project summative evaluations, to provide better data on what learners with disabilities know. These actions are steps on the pathway towards a more inclusive education system and are not the ultimate end goal. The authors recognize that there is still a significant amount of research to be done to understand the validity and reliability of these assessments for learners with disabilities – both in the low- and middle-income contexts, as well as in higher-income country contexts.



Our short-term goal is to give learners with disabilities better access to learning assessments, so they have a more equitable educational experience. In some cases, this brief presents actions that make an assessment different from the assessment delivered to learners without disabilities, meaning that it is not possible to compare outcomes across learner groups. The authors do not intend to promote creating separate assessment systems for learners with disabilities. Rather, the intention of this brief is to highlight steps that policymakers, implementers, assessment designers and researchers can take to make existing standardized assessments more appropriate for learners with disabilities.



Our long-term goal is inclusive education systems that provide universally designed curriculum and assessments, equitable access and equitable opportunities. The authors believe that the learnings featured in this paper, and the future actions of other organizations who build on the lessons and progress outlined in this brief, can move the entire education ecosystem along the pathway to achieving this important goal.

FIGURE 1

Educational settings terminology^{2,3}



SEGREGATED EDUCATION

Segregated education, commonly referred to as special schools, are learning environments in which learners with disabilities—often those perceived as having more severe disabilities—are provided disability-specific instruction. Segregated schools sometimes, but do not always, follow the national curriculum. They are often located within urban areas and may offer boarding facilities for learners who do not live close enough to be transported to the school daily (Hayes & Bulat, 2017).



INTEGRATED EDUCATION

Integrated education is a general education setting in which learners with disabilities are not provided with individualized accommodations or supports that they require to learn and participate effectively. Integrated education can also describe a setting in which learners with disabilities are segregated in specialized or special education classrooms, with limited interaction with other learners and often without access to the national curriculum (Hayes & Bulat, 2017).



INCLUSIVE EDUCATION

Inclusive education is an educational setting in which learners with and without disabilities learn within the same general education classroom, with the required individualized supports, and without exclusion (Hayes & Bulat, 2017).

Adherence to the national curriculum in special schools varies by country and may depend on whether the special school is privately or publicly operated.

² For learners who are deaf, an inclusive education experience is one that provides a right to language and right to education concurrently through quality bilingual schools that instruct in the national sign language(s) and national written language(s). Schools for learners who are deaf should not be phased out but should be supported to be transformed into inclusive bilingual schools (International Disability Alliance, 2020).

³ Specialized schools for learners who are blind or have low vision should not be phased out but supported to become inclusive through community engagement and interaction (International Disability Alliance, 2020).

Key terminology

ADAPTATION

This paper uses the term adaptation to describe the process of reviewing an existing learning assessment and making it appropriate and accessible for learners with disabilities. Adaptation can entail changing protocols, providing accommodations or modifications, and localizing the assessment to make it context appropriate for learners with disabilities.

CONSTRUCT

A construct refers to an attribute, proficiency, ability or skill being measured. An example of a construct is reading comprehension or early numeracy.

ACCOMMODATION

An accommodation refers to a change in testing materials or procedures that increases access for learners with disabilities but likely does not change the construct being measured. An example of an accommodation is extended time for an assessment subtask.

MODIFICATION

A modification refers to a change that alters, in whole or in part, what is being measured on an assessment. Modifications are changes to the test content. Because changes to the test content may change the constructs measured, modifications to assessments may make the results incomparable to the original assessment results. An example of a modification may be changing items within a subtask to match an alternative curriculum.

It is critical for those undertaking this work to understand if the accommodations and modifications introduced during an adaptation change the construct being measured in the original assessment. This has a significant impact on how the data from an assessment should be used and understood and if results are comparable across learners.



Background

People with disabilities have historically been excluded from formal and informal education systems. In the classroom, they frequently receive a different educational experience than their peers without disabilities and are excluded from educational activities, including learning assessments. These exclusionary practices have substantially impacted the education system’s ability to accurately assess the learning of people with disabilities, and the ability and opportunity of learners with disabilities to achieve their learning potential.

Article 24 of the United Nations (UN) Convention on the Rights of Persons with Disabilities (CRPD) states that countries must ensure that “persons with disabilities are not excluded from the general education system on the basis of disability,” that “persons 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.” Further, it states that “persons with disabilities receive the support required, within the general education system, to facilitate their effective education,” and that “effective individualized support measure are provided with the goal of full inclusion (UN General Assembly, 2006). Further, Sustainable Development Goal (SDG) 4 aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations, 2015).

Many countries have invested considerable efforts to increase the access and quality of education for learners with disabilities. Nevertheless, challenges remain to reach these goals. Research has shown that people with disabilities are less likely to have attended school and have lower attendance rates than their peers without disabilities (Chakraborty, A., Kaushik, A., & UNESCO Office Bangkok and

Regional Bureau for Education in Asia and the Pacific, 2019; UNESCO Institute for Statistics, 2017). One estimate states that close to one quarter to one half of children with disabilities are not in school, which represents up to one third of the overall out-of-school children (World Bank, 2019). These disparities are exacerbated in low and low-middle income countries, in which approximately 40 percent of children with disabilities are out of school at the primary level

and 55 percent in the lower secondary level (World Bank, 2019). Further, learners with disabilities are less likely to complete primary education than children without disabilities, which leads to fewer people with disabilities in secondary and higher education (UNESCO Institute for Statistics, 2017). Barriers to education access for learners with disabilities are the result of cultural, economic and social factors (Figure 2).

FIGURE 2

Barriers to education for learners with disabilities



There is a fundamental need for countries seeking successfully recruit and retain learners with disabilities in the classroom to ensure that assessments at the classroom, school, national, and international level are inclusive and accessible. Learners with disabilities should be able to equitably access the assessments administered to their peers, both to provide evidence around what they know and to ensure that the education system can effectively address their learning needs (Chakraborty, A., Kaushik, A., & UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2019). Indeed, an inclusive assessment framework predicates that assessments should (1) include all learners; (2) be accessible and appropriate for all learners; and (3) assess and report areas of relevance (Douglas, McLinden, Robertson, Travers, & Smith, 2016).

Article 24 of the CRPD requires that member states provide learners with reasonable accommodations, which ensure that students with disabilities have access to education on an equal basis with others (International Disability Alliance, 2020).⁴ In many high-income country contexts, learners with disabilities are allowed reasonable accommodations—

and sometimes modifications—during assessments that enable them to access the content and show their true aptitude or achievement level. However, a recent review of international, national and large-scale household learning assessments showed that, as of 2019, learners with disabilities in low-income contexts were largely excluded from assessments (World Bank, 2019).⁵ Excluding learners with disabilities from learning assessments is discriminatory and likely further institutionalizes their marginalization within the educational system. It is also non-compliant with the CRPD and does not allow for measurement towards achievement of SDG 4.6., that by 2030, all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

In cases when learners with disabilities are included in assessments, the assessment is often designed in a way that is inaccessible to them; it does not provide adequate accommodations or modifications that would give learners the ability to demonstrate what they know (Chakraborty, A., Kaushik, A., & UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2019; Cumming & Dickson, 2013). As a result, measurements of learning outcomes for

⁴ Reasonable accommodations are specific to a person. Each learner should have their specific needs and strengths considered, and the learner themselves should be involved in determining what reasonable accommodations are best for them.

⁵ These assessments include the Program for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS), Progress in International Reading Literacy Study (PIRLS), the Programme for the Analysis of Education Systems (PASEC), Southeast Asia Primary Learning Metrics (SEA-PLM), the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ), and Pacific Islands Literacy and Numeracy Assessment (PILNA). In some cases, accommodations were described for learners, but it is unclear how frequently they were utilized. Some exclusion criteria identified by the assessments include: learners in special (segregated) schools, learners with functional or intellectual disabilities, and non-native language speakers (likely including learners who are deaf).

ABOUT THIS BRIEF

learners with disabilities may not be available at all, and if they are, the measurements may not be valid or reliable, leading to false understandings or interpretations of their abilities.

Further, there are concerns about the appropriateness of assessment content for learners with disabilities. Learners with disabilities may be taught from a different curriculum than learners in general education schools or may not have access to certain subjects, which means that the content on an existing assessment may not match the curriculum that learners with disabilities are taught (Hayes & Bulat, 2017; Le Fanu, Schmidt, & Virendrakumar, 2022; Kiru & Cooc, 2018). National and international-level assessments often focus on literacy and numeracy and may leave out critical constructs that have value for all learners. In particular, these assessments may obscure improvements in functional life skills that are critical for all learners, including those

with disabilities (Douglas, McLinden, Robertson, Travers, & Smith, 2016).

With global priorities (e.g., SDG and CRPD) and funders driving organizations to engage all learners in education programming, appropriate assessment tools are critical to ensure the full participation and success of learners with disabilities. Data from these assessments are important to ensure that learners with disabilities are being equitably supported, are benefitting in terms of learning outcomes, and are included in program monitoring and evaluation. Additionally, more policymakers, funders and implementers are driven by value for money and effectiveness in terms of learning outcomes of programming for learners with disabilities. To measure value for money and effectiveness and donor accountability, it is necessary to have valid and reliable learning outcome data for all learners.



Photo courtesy of ACR GCD awardee Resources for the Blind, Inc.

Methodology

To develop this technical brief, the GEC FM and ACR GCD established a broad set of research questions (Appendix 1: Research Questions) and conducted a review of the literature on education and assessment of learners with disabilities as well as documentation from 20 projects that conducted learning assessments for learners with disabilities. The authors also conducted key informant interviews (KII) with 18 individuals from 14 organizations, each of which have direct experience and expertise in adapting literacy and numeracy assessments for learners with disabilities (Appendix 2: KII Guide; Appendix 3: KII Participants; Appendix 4: KII Resources).^{6,7} The GEC FM and ACR GCD authors also leveraged lessons learned from their

experience designing and implementing learning assessments for learners with disabilities across multiple countries and contexts.

Following the compilation of literature and analysis of data in this technical brief, key informant respondents provided review and feedback. The GEC FM and ACR GCD also convened a review panel comprised of funder representatives and technical experts to review the report and provide written feedback. The inputs of these individuals served to strengthen this brief and its usefulness and ensure that myriad perspectives, learnings, and recommendations were included.

⁶ One organization submitted responses in writing.

⁷ Projects represented through key informant respondents are included in Appendix 1.

Recently, more policymakers, implementers, assessment designers and researchers have considered how to ensure that programming and learning assessments are designed to meet the needs of learners with disabilities. However, project staff and evaluators have then confronted the question of how to create learning assessments that can validly and reliably measure the skills of learners with disabilities.

This brief reviewed 20 projects that developed, adapted or administered learning assessments for learners with disabilities (Figure 3). Though this review does not include all projects that have included learners with disabilities in assessments, it does provide broad representation across location, funder, type of learning assessment and type of learners included.

Making the decision to adapt learning assessments for learners with disabilities

Projects reviewed underscored the importance of investing in the process of adapting learning assessments for learners with disabilities, emphasizing that the choice to opt out of this work is a choice to continue to exclude learners with disabilities.

“

“[Adapting assessments is] do-able ... we shouldn't write it off as being too difficult. It is a critical component of ensuring that all learners are addressed and included and served through our projects and activities. Don't just say it's too hard. Yes, it's nuanced and specialized and technical; but you can find the right people to do the work. It means engaging with people with disabilities. It doesn't mean it's so expensive or so hard that you shouldn't do it.”

- KII respondent, Juarez & Associates

“I think we've got to make these kids show up [in education data] somehow. That's how I would approach it. And recognize that [this assessment] is the best we have at the moment. If we don't collect this information, we can't understand what these learners know. The more we can show about what they know, the more we can recognize what's actually needed. It's a sort of moral responsibility.”

- KII respondent, ACER

ABOUT THIS BRIEF

Specifically, the projects reviewed represent experiences in 14 countries across the Pacific, Latin America, the Caribbean, Middle East, North Africa, South Asia and Sub-Saharan Africa. Funders include the Australian Government, ACR GCD, FCDO,⁸ USAID and the World Bank. Projects adapted seven assessments, namely:

- Annual Status of Education Report (ASER)
- Early Grade Reading Assessment (EGRA)
- Early Grade Mathematics Assessment (EGMA)
- Secondary Grade Reading Assessment (SeGRA)

- Secondary Grade Mathematics Assessment (SeGMA)
- International Development Early Learning Assessment (IDELA)
- Mico Diagnostic Reading Test (MDRT)⁹

These assessments are adapted for learners who¹⁰

- Are blind or have low vision
- Are deaf or hard of hearing
- Have learning disabilities
- Have an intellectual disability
- Have physical disabilities



Photo courtesy of Leonard Cheshire

⁸ FCDO, formerly known as Department for International Development (DFID)

⁹ MDRT is a locally-developed standardized assessment for the Caribbean, from the Mico University College Child Assessment & Research in Education Centre (Mico CARE).

¹⁰ Some of the adaptations for learners with disabilities may solely include the provision of accommodations such as assistive devices.

FIGURE 3

Illustrative projects adapting and/or administering learning assessments for learners with disabilities¹¹

KEY FOR TARGET LEARNERS WHO...

- are deaf or hard of hearing
- are blind or have low vision
- have learning difficulties or disabilities
- have physical disabilities
- have intellectual disabilities
- have disabilities
- are deaf blind

1 Partnership for Literacy Enhancement for the Deaf

Jamaica
Funder: USAID
Used: MDRT*
Target group: ■

2 Inclusive Education for Visually Impaired Primary School Children in Mali

Mali
Funder: USAID
Used: EGRA
Target group: ■

3 Moroccan Sign Language Assisted Technology for Reading Improvement of Children who are Deaf or Hard of Hearing

Morocco
Funder: USAID/
Morocco
Used: EGRA
Target group: ■

4 Lecture Pour Tous

Senegal
Funder: USAID
Used: EGRA
Target group: ■

5 Empowering Girls with Disabilities in Uganda through Education

Uganda
Funder: FCDO
Used: EGRA, EGMA, SeGRA, SeGMA
Target groups: ■ ■ ■

6 Reading for All Malawi

Malawi
Funder: USAID
Used: EGRA
Target groups: ■ ■

7 Lesotho Literacy for Young Visually Impaired Persons

Lesotho
Funder: ACR GCD
Used: EGRA
Target group: ■

8 Wasichana Wetu Wafaulu

Kenya
Funder: FCDO
Used: EGRA, EGMA, SeGRA, SeGMA
Target groups: ■ ■ ■

9 Inclusive Assessments through Partnerships

Pakistan
Funder: DFID/
FCDO
Used: ASER
Target groups: ■ ■

10 Expanding Inclusive Education Strategies for Girls with Disabilities

Kenya
Funder: FCDO
Used: EGRA, EGMA, SeGRA, SeGMA
Target groups: ■ ■ ■ ■

11 Tusome

Kenya
Funder: USAID
Used: EGRA
Target groups: ■ ■

12 Learn Together Activity**

Tajikistan
Funder: USAID/
World Bank
Used: EGMA
Target group: ■

13 Bookshare India

India
Funder: ACR GCD
Used: EGRA
Target group: ■

14 Leveraging Existing Accessibility Resources in Nepal

Nepal
Funder: ACR GCD
Used: EGRA
Target groups: ■ ■ ■ ■

15 Reading For All

Nepal
Funder: USAID
Used: EGRA
Target groups: ■ ■ ■ ■

16 Empowering a New Generation of Adolescent Girls with Education

Nepal
Funder: FCDO GEC
Used: EGRA, EGMA
Target groups: ■ ■ ■ ■

17 Gabay

Philippines
Funder: USAID
Used: EGRA
Target groups: ■ ■

18 Reading Beyond Sight

Philippines
Funder: ACR GCD
Used: EGRA
Target group: ■

19 Rapidly Improving Standards in Elementary

Papua New Guinea
Funder: Australian Government
Used: IDELA
Target groups: ■ ■ ■

20 Rapidly Improving Standards in Elementary

Papua New Guinea
Funder: Australian Government
Used: IDELA
Target groups: ■ ■ ■

21 Yumi Read Together

Papua New Guinea
Funder: ACR GCD
Used: EGRA
Target groups: ■ ■ ■

* Mico Diagnostic Reading Test (MDRT)

** The USAID Learn Together Activity implemented a pilot of a universal design for assessment approach to the EGMA that targeted learners with and without disabilities with different learning styles. More details can be found in Accommodations and modifications.

¹¹ The projects listed have adapted and/or administered already-adapted assessments.



Key learnings

Projects reviewed undertook a series of steps to design and adapt learning assessments to make them accessible to learners with disabilities. This section summarizes key learnings, grouped under six themes, that arose from the literature review and key informant interview interviews.

Pre-design

Disability screening and identification

One of the challenges in collecting learning assessment data from learners with disabilities is that there is no uniform international definition of what constitutes a person with ‘disability’ (UIS-UNESCO Institute of Statistics, 2017). Additionally, the tools

available in countries to screen and identify learners with disabilities—and consequently match them with appropriate instruction and assessment—are often not universally validated, available or applied in classroom settings.

The Washington Group on Disability Statistics (WG), in collaboration with the United Nations Children’s Fund (UNICEF), has developed a set of tools, including the Short Set and Child Functioning Module, that are increasingly included in censuses and surveys to report on disability prevalence at an aggregate level (Washington Group on Disability Statistics, 2021). These tools use the World Health Organization’s International Classification of Functioning, Disability and Health (ICF) as a conceptual model, focusing on functioning in basic, universal activities.¹² Sometimes

¹² These include learning and applying knowledge; general tasks and demands; communication; mobility; self care; domestic life; interpersonal interactions and relationships; major life areas; and community, social, and civic life. (World Health Organization, 2002)

KEY LEARNINGS



Photo courtesy of ACR GCD awardee Resources for the Blind, Inc.

referred to as functional questionnaires, they serve a different purpose than screening and identification tools that use a medical model conceptualization of disability (Washington Group on Disability Statistics, 2022; Pagel & Maxson, 2020). Medical screening and identification tools can include those applied at the classroom or school level by non-technical administrators or those administered in a medical context by experts, such as ophthalmologists or audiologists. These tools have often been used to identify those learners who may need individualized supports in the classroom (Hatch, Luke, & Omoeva, 2018). Several countries have adopted the ICF framework as the basis for guiding assessment and planning, and researchers are working to determine the extent to which the ICF framework and functional questionnaires and screeners can be used for a similar purpose in other contexts (Thomas, Cross, & Campbell, 2018; Hollenweger, 2011; Silveira-Maia, et al., 2012). WG and UNICEF tools have not been

validated to identify individuals' disability status and needs, however, and should not be used to identify health conditions or diagnoses.

Respondents cited the importance of screening and identification within education systems, so that learners in different education settings can receive the accommodations they need to facilitate their learning in the classroom. Screening and identification should be a process that is integrated into the education system, and it can also help ensure learners receive the accommodations and modifications they need to demonstrate what they know during assessments. This might be less evident in the context of special schools or special education classrooms, in which learners with identified disabilities are taught together. It is important to underscore, however, that there are learners in general education classroom contexts that may—and likely do—have a need for accommodations or modifications. In the absence of robust screening and identification systems,

KEY LEARNINGS

some respondents utilized functional screening tools or other types of pre-assessment tools to help identify the accommodations that would serve learners' needs. *USAID/Malawi Reading for All Malawi* integrated a pre-assessment intake form to help identify accommodations that would be appropriate for individual learners, and to understand if the assessment would fit their learning needs. *Expanding Inclusive Education Strategies for Girls with Disabilities and Empowering Girls with Disabilities in Uganda through Education* also conducted pre-assessment screenings based on Washington Group functional screening

questions to determine the accommodations that would benefit learners.

Respondents mentioned that the need for pre-assessment screening and identification could be greatly mitigated by designing assessments that use universal design for assessment (UDA) principles. If an assessment format is accommodating to a wide range of learners' learning styles in its design, it will more accurately measure learning outcomes even in the absence of robust advanced screening and identification (Thompson, Johnstone, & Thurlow, 2002).

Moving towards a universal design for assessment (UDA) approach

Nearly all the examples of adapted assessments presented in this review build off standardized assessments that do not consider accessibility of diverse types of learners in their administration. It is, however, important to think about how standardized assessments can be redesigned in ways that make them more inclusive from the start. Some are suggesting a paradigm shift in standardized learning assessments that builds on principles of Universal Design for Learning (UDL), an evidence-based framework for educational instruction that focuses on achieving equitable education outcomes for all learners—including learners with disabilities. UDL recognizes the importance of developing learning environments, curricula, methods and materials that address the learning variability of learners (Hayes, Turnbull, & Moran, 2018). UDL guidelines suggest providing learners with multiple means of engagement, representation and action and expression (CAST, 2018). These same principles are beginning to be incorporated into learning assessments using a Universal Design for Assessment (UDA) framework. Universally designed assessments are developed to consider learners' different learning needs and allow the equitable participation of the widest possible range of learners (Inclusive Development Partners, forthcoming).

The Seven UDA Elements

The seven elements of UDA are (Thompson, Johnstone, & Thurlow, 2002; Frey & Allen, 2010; Inclusive Development Partners, forthcoming):

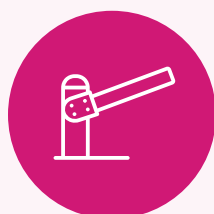
1. INCLUSIVE ASSESSMENT POPULATION

Assessment is designed in a way that allows for equal opportunity for participation for all learners in the target population.



2. PRECISELY DEFINED CONSTRUCTS

Assessment constructs are clearly defined to remove irrelevant cognitive, sensory, emotional and physical barriers.



3. ACCESSIBLE, NON-BIASED ITEMS

Assessment items are free of content that may be biased against certain groups (e.g., learners with disabilities or other marginalized groups), and all learners in the target population should have equal probability of answering correctly.



4. AMENABLE TO ACCOMMODATIONS

Assessment should allow accommodations (e.g., braille and sign language) to remove unintended disadvantages for learners with disabilities without changing constructs.



5. SIMPLE, CLEAR, AND INTUITIVE INSTRUCTIONS AND PROCEDURES

Assessment instructions and protocols should be simple, clear and easy to understand, regardless of a learner's experience, knowledge or language skills.



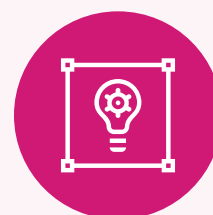
6. MAXIMUM READABILITY AND COMPREHENSIBILITY

Assessment should use plain language, well-constructed sentences and minimize organizational complexity (e.g., limited sentence length and avoiding unnecessary or difficult words).



7. MAXIMUM LEGIBILITY

Assessment items, instructions, tables, figures and illustrations should be easily deciphered. Large font and 50% blank space should be used.



KEY LEARNINGS

In Tajikistan, Inclusive Development Partners, in coordination with *USAID/Tajikistan Learn Together Activity* and under an inclusive education initiative funded by the World Bank, piloted subtasks for an EGMA that allowed for use of manipulatives to show learners what to do instead of telling them. The initiative also provided learners with choices in word problems and other UDA adaptations.

Several respondents mentioned reviewing all assessment language for bias—specifically on reading tests—to ensure that there were no references or framing that would be inappropriate for learners with disabilities. For example, for instructions or stories that referenced ‘seeing’ or ‘hearing’, small modifications were made to the text so the language was more appropriate for learners with disabilities.

Projects might also consider using pictures or drawings to accompany listening or sign language comprehension subtasks to give learners multiple ways of accessing information through which to demonstrate their comprehension.

By integrating UDA principles into assessment design from the start, all learners will better be able to demonstrate their knowledge:

“These [UDA accommodations] are actually good strategies not for just one type of learner; they’re actually good for other types of learners.”

- KII respondent, ACER

“Can you have a test that is designed along UDL principles? If you don’t do this, it’ll be hard to make progress, no matter how hard you work.”

- KII respondent, Sightsavers

KEY LEARNINGS

Determine appropriate timeline

Projects representatives were asked how much time they recommend dedicating to adapting summative learning assessments for learners with disabilities. *USAID/Malawi Reading for All Malawi* adapted an EGRA for learners who are blind or have low vision in about three months and for learners who are deaf or hard of hearing in about five months. However, they noted that their timeline was too short and recommended no less than six months for the adaptation process. Other respondents agreed that it should take at least six months, while one recommended dedicating two years for the adaptation process, including discussions with teachers, government officials and other partners. They also recommended multiple rounds of field testing and validation exercises.



“You don’t want to show up at an adaptation workshop and start from scratch. You need word lists, stories from textbooks, etc. That information isn’t always easy to find.”

- KII respondent, STS

“Don’t underestimate the technical rigor required. There needs to be sufficient time and resourcing available.”

- KII respondent, Ichuli Consulting

Literature review and situational analyses

Projects reviewed generally began the adaptation process by conducting a literature review and situational analysis, with a focus on assessments being used in-country and for the targeted populations and curricula and language policy for the targeted populations. The *USAID/Mali Inclusive Education for Visually Impaired Primary School Children in Mali* project analyzed teaching, learning and assessment practices for learners who are blind or have low vision. They found that braille literacy is taught in French and not Bamanankan, that there was little availability of large print in classrooms and assistive devices

for learners with low vision were not common. During a literature review conducted by the project, the *USAID/Philippines Gabay* project identified that learners who are deaf or hard of hearing do not learn to read local languages in early grades, as is the practice for learners in general education classes. Instead, they are taught to read in English, and their language of instruction is Filipino Sign Language. These details were key to informing the adaptation of the EGRA to the Malian and Filipino context and to help ensure the meaningful localization of the assessment tools.

KEY LEARNINGS

During the literature review, it is also critical to understand the curriculum delivered to learners with disabilities in different educational settings. In some countries, such as Mali and Pakistan, respondents noted that the curriculum for learners with disabilities is mostly the same in general education classes and, in some cases, in segregated or integrated settings. However, in other contexts—for example, Kenya, the Philippines and Morocco—some learners with disabilities, including those in segregated or integrated settings, did not receive the same curriculum as learners in the general education setting.¹³ In Malawi, segregated schools for deaf learners provide four years of instruction, including non-standardized instruction in Malawian Sign Language, prior to beginning the curriculum for standard 1. In Kenya, learners with intellectual disabilities, who have an established level of functional skills, use the same curriculum as their peers. This curriculum is adapted to their needs. These contextual details should be determined during the literature review to ensure that the assessment content is most appropriate for the learners to whom it will be administered.

The literature review may also entail primary data collection. For example, some projects mentioned holding interviews with teachers to learn about their teaching methodologies and practices in the classroom. The *USAID/Philippines*

Gabay project conducted a needs assessment with teachers of learners who are deaf prior to adapting their assessment; *USAID/Mali Inclusive Education for Visually Impaired Primary School Children in Mali* interviewed teachers to determine their teaching methodologies and any tools they are using or not using.

Overall, the literature review provided the information necessary to design an assessment aligned with the skills that learners should have developed, based on the local curriculum and classroom realities.



Photo courtesy of Link Education International

¹³ In Kenya and the Philippines, children who are deaf or hard of hearing learn to read in English, while their peers who are hearing learn local languages and English. In Morocco, children who are deaf or hard of hearing are primarily educated in privately run schools that each deliver a unique curriculum by center.

Determine the purpose of the assessment

Before beginning the assessment design or adaptation process, it is critical to work collaboratively with stakeholders, especially those from the local government, to determine what the end goal of the assessment is. For example, is the learning assessment being designed to measure the outcomes of a specific project's content or is it measuring achievement against a national curriculum? Is the goal of a formative assessment to understand the extent to which a learner has acquired a skill, or is it to benchmark against standards set for the general population?

Questions like these should be asked early in the process. They will guide the design and adaptation of the assessment; in particular what types of modifications might be appropriate given the assessments' purpose.

Stakeholder engagement

Organizations generally hold workshops, also called adaptation workshops, that engage local subject-matter experts and government officials to develop and adapt learning assessments for a specific project and participant group. These events ensure that assessments are appropriate to the specific context, measure what is being taught through the curriculum and are well-received by local governments and stakeholders and help secure their support and engagement. These workshops also focus heavily on determining what accommodations and modifications to provide for projects adapting learning assessments for learners with disabilities.

Adapting a learning assessment does not necessarily require an adaptation workshop. However, many projects held local workshops

to incorporate perspectives and opinions from different experts and to ensure engagement from relevant stakeholders. The projects reviewed engaged a range of stakeholders in the process of adapting assessments for learners with disabilities; the most frequently mentioned include:

- People with disabilities
- Organizations of Persons with Disabilities (OPDs)
- Government officials (local and national)
- National assessment and standards-setting bodies
- Teachers of learners with disabilities
- Academics and researchers
- Subject-matter experts (including in assessment design, curriculum, and inclusive education)
- Learners
- Funders

KEY LEARNINGS

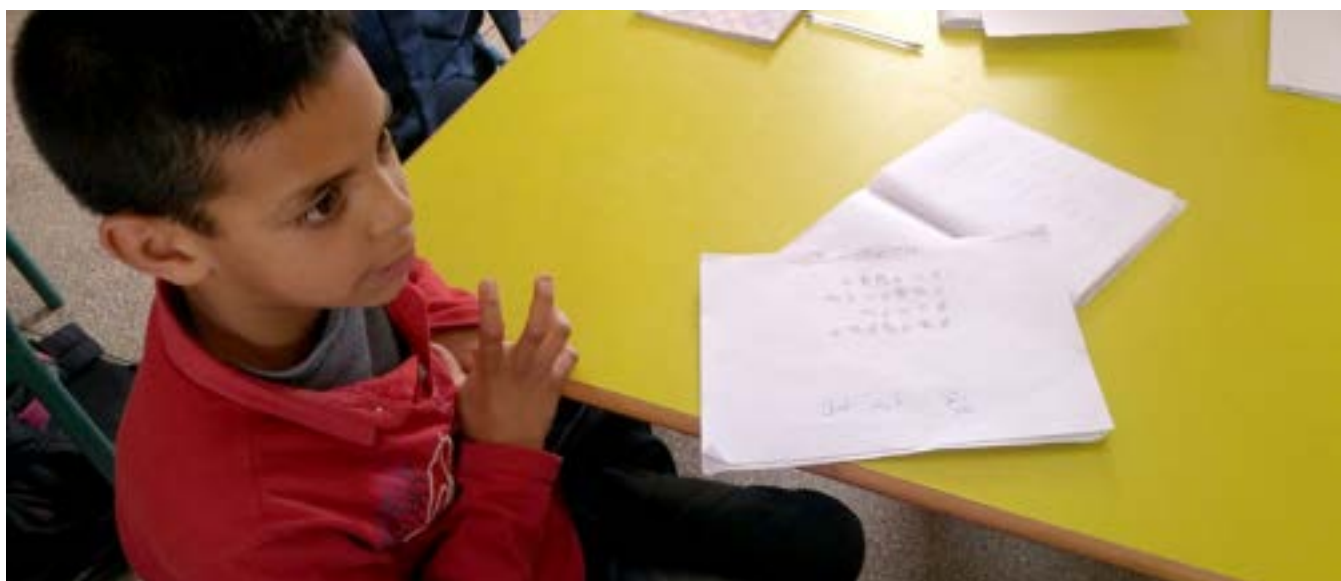


Photo courtesy of School-to-School International

Importantly, most projects involved members of disability communities. The *USAID/Malawi Reading for All Malawi* project directly consulted and involved people with disabilities and national association bodies that align with the needs of the assessment’s target group. The *USAID/Philippines Gabay* project ensured that people who are deaf—specifically, teachers’ aides from primary schools—took part in the adaptation workshop to develop an assessment for learners who are deaf or hard of hearing. This was both critical to ensure representation and to have native sign language users engaged in the development process. Many of the respondents interviewed mentioned that they specifically engaged with local OPDs,¹⁴ also referred to as Disabled Persons Organizations (DPOs), in the adaptation process.

Understanding the local context of disability

“There is often a ‘language’ within the community that we don’t understand when talking about disability. The concept of disability may vary a lot across different contexts, so it is highly critical to understand the educational environment for children with disabilities.”

- KII respondent, ACER

¹⁴ OPDs are civil society organizations managed by and for persons with disabilities.

KEY LEARNINGS

Projects reviewed consistently engaged government officials and departments in the assessment development and adaptation process. In Kenya, the *USAID/Kenya Tusome and Wasichana Wetu Wafaulu* projects worked with experts from the Kenyan Ministry of Education,¹⁵ the Kenya Institute of Special Education¹⁶ and the Kenya Institute of Curriculum. *USAID/Malawi's Reading for All in Malawi* project engaged the Ministry of Gender, Children, Disability and Social Welfare. The *Empowering a New Generation of Adolescent Girls with Education* project in Nepal developed tools in coordination with the Education Review Office. Some projects engaged the local government instead of the national government. This was the case for the *Rapidly Improving Standards in Elementary* project in PNG. Respondents highlighted that engagement by government representatives, either local or national, was important to ensure their vision for the assessment and its future use was considered when making choices about how to adapt the tool. In the case of *USAID/Mali Inclusive Education for Visually Impaired Primary School Children in Mali*, the Ministry of Education wanted to ensure comparability of results on the adapted EGRA for learners who are blind or have low vision with results from the standard EGRAs. As a result, they advised the implementer to not change the standard assessment to the extent that data from the adapted assessment would not be comparable.

Although projects agreed that government representation is critical in the adaptation process, some did mention that it is important to not rely solely on governments to make decisions about how to adapt the assessments for learners with disabilities. One project team mentioned that they did not find technical expertise at the local government level to adapt the assessment. Another respondent mentioned that, across different projects, they found that Ministry of Education officials, even those with a background in education for learners with disabilities, did not necessarily have the technical skillset to advise on assessment design for these learners.

Engaging learners in the adaptation process

Sightsavers actively engaged learners with disabilities in the adaptation process and when piloting the assessment—not just as research subjects but as advisors on how to make the assessment best fit their needs.

The *USAID/Mali Inclusive Education for Visually Impaired Primary School Children in Mali* project had substantial interaction with learners to attain their feedback on the assessment. They asked learners questions about the assessment to determine if they were comfortable with the setting or furniture, could accurately show their skills and had the type of technology or assistive devices needed, among others.

¹⁵ Including the Directorate of Special Needs

¹⁶ Including the Teacher Service Commission, Special Needs Education Curriculum Support Officers

KEY LEARNINGS

Other stakeholder groups that were engaged in the adaptation and localization process included teachers, academics, and subject-matter experts. To develop an EGRA for learners who are blind or have low vision, the *USAID/Senegal Lecture Pour Tous* project engaged a braille specialist from the National Institute of Education and Training for Youth with Visual Impairment. The *Inclusive Assessments Through Partnerships* project in Pakistan engaged Faculty of Education at the University of Cambridge and the Family Educational Services Foundation. School-to-School International and the *USAID/*

Philippines Gabay project worked with experts from De La Salle-College of Saint Benilde. One respondent cautioned, however, that it is most important to have specialists who understand assessment design, and that even those with the highest graduate degrees are not always the best suited to advise on this.

Other stakeholders engaged by the projects reviewed include national assessment and standards-setting bodies, stakeholders from special needs education teacher training institutions and civil society representatives.

Engaging teachers in the adaptation process

Projects that have adapted learning assessments for learners with disabilities highlight the importance of engaging teachers in the process. Teachers are most familiar with what is being taught in classrooms and the extent to which curriculum and accommodations are being employed. Because of this, they may also have a better understanding of the learning levels in their classrooms. It is important to balance the practical expertise of teachers with the technical expertise of assessment experts. It is also crucial to recognize that some teachers may still espouse the medical model of disability as their guiding framework. It remains critically important to engage a wide variety of stakeholders in the adaptation process to leverage expertise of different groups and simultaneously ensure that status quo and potentially counterproductive beliefs on learners with disabilities are challenged.

“

“The best resources are the teachers. They are the ones with the most knowledge of the students, what the students know and what the students are learning.”

– KII respondent, STS

“Teachers should provide recommendations on the types of accommodations ... Teachers can describe what learning should look like ... they concurrently confirm the scale and the content.”

– KII respondent, ACER

KEY LEARNINGS

Interestingly, not many respondents mentioned funder engagement in the adaptation process, likely because funder personnel might not have the required skillset to contribute to the adaptation process. One example in which funders were highly engaged was in Morocco: the *ACR GCD Moroccan Sign Language Assistive Technology for Reading Improvement of Children who are Deaf or Hard of Hearing* project and School-to-School International worked closely with USAID/Morocco and USAID/Washington to adapt an EGRA for learners who are deaf or hard of hearing. This collaboration was beneficial for several reasons. First, USAID/Washington's Inclusive Education Specialist had specific subject-matter expertise that benefited the adaptation process. Second, the engagement of USAID officials created capacity and advocates for this type of work and champions for adapting assessments for learners with disabilities in other countries, namely Nepal, Papua New Guinea, the Philippines and Rwanda. USAID/Morocco officials also increased investment and programming for learners with disabilities and their teachers in collaboration with the Ministry of National Education and Vocational Training in Morocco. Additionally, ACR GCD's involvement in the adaptation process informed requirements that all future procurements requiring assessments include funding for including learners with disabilities.

How to increase government uptake of inclusive assessments

Key informants were asked if they knew of any other institutions or organizations that have used their adapted assessments. Although some shared anecdotes of other projects or organizations using the assessment, almost none shared definitive examples of government uptake of the accessible assessment. The reasons provided for this lack of uptake included the high cost of administering the assessment, incompatible capacity to administer the assessment using government experts or teachers and slow policy changes that would enable an adapted assessment to be adopted into government assessment systems.

This finding underscores the work that must be done to ensure that learning assessments accessible to learners with disabilities are not designed and administered as one-offs. Government stakeholders should be engaged early in the adaptation process. It is also critical to build capacity of a range of technical experts in-country to design and administer these assessments and disseminate learnings—both of literacy and numeracy skills but also on process—to relevant government stakeholders. Additionally, it is critical to create advocates within government institutions for this work, which is often time intensive and costly to implement.

Accommodations and modifications

To ensure that assessments are inclusive of learners with disabilities and produce accurate measurement of learners' knowledge and skills, some projects have made accommodations, others have made modifications and some have done both.¹⁷ Both accommodations and modifications are adaptations designed to reduce

assessment barriers for learners with disabilities. They differ, however, in how they change—or do not change—the assessment content and underlying construct (Inclusive Development Partners, forthcoming).

The accommodations and modifications used by the projects reviewed, based on local context, needs of the assessed learners and type of assessment, are summarized in Figure 4.¹⁸

FIGURE 4

Illustrative adaptations, by disability type, employed by highlighted projects

DISABILITY	TOOLS	ACCOMMODATION AND MODIFICATIONS*		LOCATION
DEAF OR HARD OF HEARING	EGRA, EGMA, SEGRA, SEGMA, ASER, IDELA, MDRT	ACCOMMODATIONS - Extended time - Sign language enumeration - Setting accommodations - Untimed subtasks	MODIFICATIONS - Sign language subtasks - Alternative or modified subtasks	Kenya, Jamaica, Malawi, Morocco, Nepal, Pakistan, Papua New Guinea, Philippines, Uganda
BLIND OR LOW VISION	EGRA, EGMA, SEGRA, SEGMA, ASER, IDELA	ACCOMMODATIONS - Extended time - Large print font - Braille print stimuli - Setting accommodations - Assistive devices (magnifiers, bookstands, eyeglasses, braille mats)		Mali, Malawi, Pakistan, Papua New Guinea, Philippines, Nepal, India, Senegal, Uganda
LEARNING OR INTELLECTUAL DISABILITIES	EGRA, EGMA, SEGRA, SEGMA, ASER, IDELA	ACCOMMODATIONS - Extended time - Large print font - Assistive devices (typoscopes) - Setting accommodations		Malawi, Nepal, Papua New Guinea, Uganda

* Some of the adaptations made by projects can be considered accommodations in certain assessment administrations but modifications in others.

¹⁷ Additional information on the specific accommodations and modifications employed can be found in Appendix 4: KII Resources.

¹⁸ It is important to note that the examples provided here serve as an illustrative starting point and are not all encompassing or prescriptive. Not all learners with the same disability require the same accommodations or modifications. Learning assessment needs may vary by the individual, and even those learners who are perceived as not having a disability may need accommodations or modifications.



Photo courtesy of Cheshire Services Uganda

Accommodations

Accommodations are changes to the regular assessment environment and auxiliary aids and services that allow learners with disabilities to demonstrate their true aptitude or achievement levels on exams or assessments (U.S. Department of Justice, 2014). Accommodations result in a change in testing materials or procedures that increases access for learners with disabilities but do not change the construct being measured (Inclusive Development Partners, forthcoming). Teachers provide accommodations both during learning and for assessment purposes. Ideally, accommodations provided for learning assessments should not change the construct being measured—in other words, even with the introduction of reasonable accommodations for some learners, each learner is demonstrating their knowledge of the same content.

Assessment accommodations are often grouped into four categories: presentation, response, setting and time (Landau, Vohs, & Romano, 1998). Presentation accommodations address barriers related to the way assessments are presented such as large print or magnification devices. Response accommodations are concerned with the way the learner is required to respond. For example, barriers such as impaired motor skills can be addressed through the provision of scribes or speech-to-text software. Setting accommodations relate to the physical environment, which can be adapted by special lighting or acoustics or the use of adaptive furniture. Finally, time accommodations address barriers related to timing and scheduling and can include extended time for tasks or frequent breaks. Assistive devices, such as hearing aids, book holders and magnifiers are also considered accommodations (Table 1).

TABLE 1

Assessment accommodations by category

ACCOMMODATION CATEGORY	DESCRIPTION	ACCOMMODATION EXAMPLES
 PRESENTATION	Addresses barriers related to the way information is presented (e.g., an EGRA stimuli); allows a learner to access information in ways other than standard visual or auditory means; changes the way that instruction, directions and information are presented.	• Large print • Braille print • Sign language content interpretation • Magnification devices • Amplification devices • Allowing directions to be repeated or simplified • Fewer items placed on each page • Markers to maintain place, or cues (such as arrows or stop signs, on stimuli or learner booklets) • Typoscope¹⁹
 RESPONSE	Addresses barriers related to the way the learner is required to respond; allows learners to provide responses in different ways, such as in writing, using a sign language device or using assistive devices.	• Scribes • Digital recorders • Calculators or abacuses • Text-to-speech software • Communication device (language board, speech synthesizer) • Allowing written responses
 SETTING	Addresses barriers related to the characteristics of the setting; allows for a change in the environment or in how the environment is structured.	• Reduce distractions to student • Change setting to permit physical access or use of assistive devices • Use of adaptive furniture • Adaptive lighting or acoustics
 TIMING	Addresses barriers related to the timing and scheduling of the instruction; allows for changes to when and how long learners must do an assessment, and allows an assessment to be broken into smaller sections.	• Extended time for tasks • Frequent breaks • Shorter testing sessions • Change order of tasks

Table 1: Source: (Landau, Vohs, & Romano, 1998; Inclusive Development Partners, forthcoming)

¹⁹ A typoscope is a piece of black plastic or heavy paper with a cutout opening, that allows a reader to focus on a segment of text that they are reading. A typoscope helps track along the reading line, keep place on a line, and track to the beginning of the next line.

KEY LEARNINGS

Photo courtesy of ACR GCD awardee, Benetech



It is important that any selected accommodation is contextually appropriate. It is not effective to introduce, for example, a typoscope to learners for a reading assessment if they have not or will not use a typoscope in their classroom. Projects and researchers should determine what types of accommodations and assistive devices are appropriate for the learner population they will be supporting; ensure adequate training on, orientation to, and provision of the accommodations are provided before conducting learning assessments; and make certain learners continue to have access to those accommodations during implementation.

If learners are receiving differentiated—or individualized—accommodations, such as access to specific assistive devices, it is critical that the use is encoded and captured in the data. This may be helpful when analyzing data and if learners are reassessed in the future.

Several project representatives employed extended time as an assessment accommodation for learners with different disabilities. Timing on EGRAs and EGMAs has been extended from the standard one minute to up to five minutes. For the *USAID/Nepal Reading for All and the ACR GCD Leveraging Existing Accessibility Resources in Nepal* projects, learners with disabilities²⁰ who were assessed received three minutes to complete timed subtasks. For ACR GCD projects for learners who are blind or have low vision in India, Lesotho and the Philippines, learners received three minutes to complete timed subtasks. For the *ACR GCD Moroccan Sign Language Assistive Technology for Reading*



Photo courtesy of ACR GCD awardee Resources for the Blind, Inc.

²⁰ This includes learners who are blind or have low vision, who are deaf or hard of hearing, and who have intellectual disabilities.

KEY LEARNINGS



Improvement of Children who are Deaf or Hard of Hearing project, learners who are deaf or hard of hearing received two minutes to complete timed subtasks. *USAID/Malawi Reading for All Malawi* allowed five minutes for timed subtasks for learners with learning disabilities.

Some projects—such as *USAID/Philippines Gabay and Empowering a New Generation of Adolescent Girls with Education*—have chosen to make subtasks untimed and instead focus on measuring accuracy instead of fluency. This accommodation has utility when assessing learners who are deaf, as respondents described the difficulty in accurately scoring learners’ responses in sign language on timed subtasks.²¹

Extended time

“More time in assessments is something that is underrated... Give the students time to show us what they can do and make the assessment less about where they time out and what they can’t do.”

—KII respondent, ACER

²¹ This introduced a limitation in that learners were only able to demonstrate their accuracy, and not also their fluency.

KEY LEARNINGS

Other accommodations utilized by the projects reviewed included adding additional practice items, allowing for questions to be repeated and ensuring appropriate levels of lighting and sound proofing for learners and enumerators during administration.

Specific accommodations for learners who are blind or have low vision

Projects that assessed learners who are blind or have low vision provided braille and large print font stimuli as accommodations. *The USAID/Kenya Tusome* project identified that learners who are blind are receiving learning instruction in uncontracted braille in grades one and two and contracted braille in grade three.²² Accordingly, they provided EGRA stimuli that corresponded to the type of braille each learner was using in the classroom.²³ The *Rapidly Improving Standards in Elementary* project printed braille cue cards for the IDELA administered for pre-primary learners in Papua New Guinea. In Nepal, the *Empowering a New Generation of Adolescent Girls with Education* project used braille and large print stimuli for learners who are blind or have low vision. The project recommended that the braille stimuli are verified twice to ensure that the Nepali and braille stimuli align. In Pakistan, the *Inclusive Assessments through Partnerships* project provided



Photo courtesy of ACR GCD awardee Resources for the Blind, Inc.

braille stimuli as well as large print fonts. This was both to allow for learners with low vision to use Urdu script and braille to demonstrate their reading knowledge, and to allow for assessors who did not read braille to administer and score the EGRA. Similarly, stimuli for the *USAID/Nepal Reading for All* and the *ACR GCD Leveraging*

²² Uncontracted braille translates each individual print letter, number or punctuation mark into a braille sign. Contracted braille uses the same letters, punctuation and numbers as uncontracted braille but adds special signs to represent common words or groups of letters.

²³ USAID/Kenya Tusome also ensured that braille stimuli did not introduce special characters, punctuation or capitalization for grade 1 and 2 learners since this had not yet been taught in the classroom.

KEY LEARNINGS

Existing Accessibility Resources in Nepal projects used braille with Nepali script stickers (non-large font) placed above to facilitate assessors who did not read braille. Projects that provided large print font stimuli—such as the *ACR GCD Reading Beyond Sight* and the *ACR GCD Yumi Read Together* projects—used 16-, 24- or 32-point font.²⁴ In some cases, braille and large print font stimuli were coupled with assistive devices like eyeglasses, bookstands and magnifiers for learners who are blind or have low vision.

Specific accommodations for learners who are deaf or hard of hearing

Projects reviewed used sign language administration as an accommodation for learners who are deaf or hard of hearing. Some projects hired enumerators who know sign languages. Others employed sign language interpreters to enable communication between enumerators who did not know sign languages and learners who used sign language. It is important to recognize and give proper attention to enumerator selection for assessments for learners who are deaf, as their ability to effectively communicate with the learners and standardize their administration of the assessment greatly impacts the reliability and validity of the assessment results.



Photos courtesy of ACR GCD awardee Catholica Relief Services



Photo courtesy of School-to-School International

²⁴ Choices on font size were made based on the type of accommodations provided to learners in the classroom.

CASE STUDY

Adding accommodations to literacy and numeracy assessments in Kenya



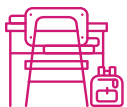
Photo courtesy of Education Development Trust

Wasichana Wetu Wafaulu is a girls' education project funded by FCDO through GEC in Kenya. The project administered EGRA/EGMA and SEGRA/SEGMA tests during their baseline and midline without providing any adaptations to learners with disabilities. Realizing that they were excluding these learners, and thus lacking an understanding of their learning competencies, the project worked with the Kenya Institute of Special Education to adapt the assessment

tools. They then used the adapted tools to assess the literacy and numeracy levels of learners with physical disabilities, those who are deaf or hard of hearing, and those who are blind or have low vision. The project assessed learners in grades six, seven and eight and forms one, two and three in five project schools in Kilifi and Mombasa counties. Some of the accommodations provided by the project for these assessments are detailed below.

KEY LEARNINGS

CASE STUDY

CATEGORY	ACCOMMODATION
 SETTING	• An accessible room (ramps, proper spacing) • A room free of distractions • A well-lit room • Use of assistive furniture (e.g., wheelchair tray, adaptive seats and adaptive desks) allowed
 PRESENTATION	• Individualized testing with test administrator present, as needed • Large print and braille materials (uncontracted or contracted) • For learners who are blind or low vision: test administrator guided the student's finger to the reading material and demonstrated the reading process, as needed • For learners who are blind or low vision: diagrams were presented in a narrative; the angles in a triangle were explained in a narrative rather than being presented as a drawing; and, instead of being required to draw a graph, the student was asked to describe the graph • For learners who are deaf or hard of hearing: the assessment was adapted from oral/aural (spoken, speaking, and listening) to fingerspelling, signing, pointing and total communication²⁵ • Limited items on each page • Repeating of instruction allowed
 RESPONSE	• No penalty for articulation errors arising from speech difficulties, allowed learner to complete sentences without interruption, no penalty for writing errors due to poor grip or lack of writing strength • Provision of adaptable writing tools (e.g., pens or pencil with adapted grip)
 TIME	• All tests administered in the morning • Extra time given to complete tasks (e.g., provide short breaks between tasks, if needed.)

²⁵ Total communication describes a holistic view of communication such as use of gestures, sign language, fingerspelling, lipreading, and speaking. It is considered ineffective by many deaf education experts and the World Federation of the Deaf, who favor a bilingual approach.

Modifications

A modification refers to a change that alters, in whole or in part, what is being measured on an assessment. In other words, modifications are changes to the test content and the underlying construct. Modifications should be used only when necessary, as they make results for the learners receiving the modifications incomparable with other learners' results. Modifications are most often provided to

learners with developmental disabilities, complex support needs or intellectual disability (Inclusive Development Partners, forthcoming).

Projects reviewed did not use modifications for learners who are blind or have low vision or for learners with learning or intellectual disabilities. The *USAID/Malawi Reading for All Malawi* project added an orientation to braille print subtask for learners who are blind or have low vision. These learners then took all other standard subtasks.

I A note on modifications and comparability

The decision of whether modifications are used should not be made based on the assumption that learners with disabilities need an easier or different assessment because of their disabilities. In the projects reviewed, modifications were introduced because the standardized source assessment was not universally designed. Ultimately, the choice of whether to make modifications that alter comparability of learning assessments is dependent on the purpose of the assessment, the curriculum delivered to learners with disabilities, and the guidance of local and regional experts and stakeholders.

When modifications are used, it is critical to understand the extent to which modifications change the construct being measured, and what the impact of those changes are on the comparability scores across learner groups. The goal should be to create an assessment that is accessible and appropriate for all learners. By modifying an assessment to make it incomparable to other learners' assessments, implementers, assessment designers, and researchers risk creating a separate system for learners with disabilities. However, if done under the guidance of experts, and with sufficient understanding of the constructs being measured, assessment modifications can help us better understand the learning outcomes of learners with disabilities.

KEY LEARNINGS

Specific modifications for learners who are deaf or hard of hearing

Many of the projects have modified existing reading learning assessments for learners who are deaf or hard of hearing and sign language users, in collaboration with local, regional and international experts and stakeholders. These projects employed different approaches and proffered several lessons learned. Though these

projects have begun to confront the challenges of modifying EGRAs for learners who are deaf, more research should be done to ensure that these learning assessments are providing the most accurate picture of what learners know, in terms of sign language knowledge and reading.

When using EGRA or ASER-type assessments that are administered orally to assess the reading skills of learners who are sign language users, instructions or questions must be provided using sign languages. The resulting assessment becomes



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KEY LEARNINGS

bilingual, requiring the learner to have sufficient comprehension to understand the instructions and questions in sign languages in addition to assessing their reading skills in the written language. As a result, the measurement of their reading knowledge is conflated with their understanding of sign languages and may not measure the same constructs as the traditional EGRA subtasks. Learners who are hearing may have limitations in spoken language comprehension when undergoing an orally administered assessment, which may limit their ability to fully demonstrate their reading knowledge. However, this challenge has proven to be more acute in learners who are deaf or hard of hearing, to whom the assessment is administered in sign language, due to infrequent use of sign language at home (in comparison with spoken language) and teachers' limited sign language fluency (also in comparison with spoken language).

Several projects introduced new subtasks to test the sign languages of learners using receptive vocabulary, expressive vocabulary and sign language story comprehension tasks. Introducing sign language subtasks is particularly beneficial because it may help assessors better understand to what extent learners can comprehend what they are being asked to do in the assessment, in addition to furthering the research on the relationship between first and second language acquisition for learners who are deaf or hard of hearing. The ACR GCD

Moroccan Sign Language Assistive Technology for Reading Improvement of Children who are Deaf or Hard of Hearing project created and administered a Moroccan Sign Language receptive vocabulary subtask. The *USAID/Philippines Gabay* project created and administered a receptive vocabulary subtask, an expressive vocabulary subtask, a fingerspelling subtask, and a sentence sign language comprehension subtask in Filipino Sign Language.²⁶ The *USAID/Kenya Tusome* project assessed learners' receptive and expressive language skills in Kenyan Sign Language. *USAID/Malawi Reading for All Malawi* administered receptive and expressive Malawian Sign Language subtasks, as well as fingerspelling, productive language and narrative expressive Malawian Sign Language comprehension subtasks.



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²⁶ For most EGRAs administered to learners who are deaf or hard of hearing, the standard listening comprehension subtask is administered as a sign language story comprehension subtask. The learner watches an assessor sign a story and is asked comprehension questions at the end of the story. The sentence sign language comprehension subtask was administered as one sentence, followed by a comprehension question, repeated for a total of five sentences.

Modifying listening comprehension subtasks for learners who are deaf or hard of hearing

EGRAs often include an orally-delivered story and corresponding comprehension questions to measure learners' overall spoken language comprehension—known as listening comprehension. The purpose of this subtask is to understand if comprehension difficulties that learners have stem from low reading skills or from low overall language comprehension skills. Because this subtask is a measure of spoken language, it is not appropriate for learners who are deaf.

Instead of fully eliminating the listening comprehension subtask for learners who are deaf or hard of hearing and use sign languages, projects have instead modified it into a sign language story comprehension subtask by translating the story into the local sign language and modifying the content, recognizing that it is not measuring the same construct. Although it is not a comparable subtask to the listening comprehension subtask, the sign language story comprehension subtask provides valuable information on the level of learners' language skills, which can enhance understanding of their performance on reading subtasks.

Projects have taken different approaches to the administration of this sign language comprehension subtask, based on the level of administration standardization desired. Specifically, some projects—namely, the *USAID/Philippines Gabay* project—have had enumerators sign the comprehension story live to the learners. Others have video-recorded the comprehension story and had enumerators show the video to learners during the assessment. The *Inclusive Assessments through Partnerships* project in Pakistan allowed both live administration and video recorded administration of the story. Projects' determination of which option to employ depended on the local

context and the purpose of the assessment, among other factors. Specifically, projects had to determine how many versions of a video would be needed given regional variations in sign language. The *ACR GCD Moroccan Sign Language Assistive Technology for Reading Improvement of Children who are Deaf or Hard of Hearing* project created two videos, one standard and one for Marrakech, which had a substantial number of regional variations. Projects also needed to determine to what extent it would be possible for enumerators to standardize live administration of the story across enumerators and across assessments and what level of variation in live administration was acceptable based on the stakes of the assessment.

It is critical that projects consult with local and regional experts and stakeholders, including OPDs and teachers, who are fluent in the local sign language to make evidence-based, context-appropriate decisions in modifying listening comprehension subtasks to sign language comprehension subtasks and to determine the most appropriate administration protocols to use.



CASE STUDY

Case study: Adapting an EGRA for learners who are deaf or hard of hearing

The Institute for Disabilities Research and Training, Inc. (IDRT) and the Center for Languages and Communication at the École Nationale Supérieure des Mines de Rabat implemented the *Moroccan Sign Language Assistive Technology for Reading Improvement of Children who are Deaf or Hard of Hearing* project under ACR GCD and co-funded by USAID/Morocco. The project aimed to enhance the literacy of learners who are deaf in Morocco by creating assistive software that incorporates Moroccan Sign Language. The project team worked alongside international experts in Deaf education and assessment, including School-to-School International, USAID/Washington and USAID/Morocco, to adapt the Modern Standard Arabic EGRA for learners who are deaf or hard of hearing. This adaptation was the first known instance in which an EGRA had been adapted for learners who are deaf or hard of hearing. As a result, there were several lessons learned through the process.

The process began in 2016 with an adaptation workshop facilitated by School-to-School International that was attended by members of the Deaf Community, representatives from the Ministry of National Education and Vocational Training (division head, reading experts and curriculum and assessment experts), teachers of learners who are deaf, a researcher from the Center for Languages and Communication at the École Nationale Supérieure des Mines de Rabat, a Deaf education expert from IDRT and a researcher in special education and assessment from Georgia State University. This process resulted in a pilot form of the assessment that was tested with 155 learners in grades one and two across eight schools, which examined test item function and whether assumptions of what subtasks could measure and the correlations between different subtasks could be validated. Following the pilot, it was determined that additional updates to the assessment were needed to improve the quality of items within each subtask and strengthen the relationship across subtasks. As a result, the project held a validation workshop in 2017 to strengthen the quality of the assessment. Some of the participants of the original adaptation workshop attended along with more teachers from across the project's implementation areas, a Deaf education expert from the United States and additional members of the Moroccan Deaf Community.

Following this validation workshop, the project finalized a version of the assessment, referred to as the Early Grade Reading and Sign Language Assessment (EGRSLA). It included the following subtasks: letter name identification (two minutes timed), syllable identification (untimed), familiar word reading (two minutes timed), reading passage (two minutes timed), reading passage comprehension (untimed), Moroccan Sign Language story comprehension (untimed) and receptive Moroccan Sign Language vocabulary (untimed). It is important to note that this assessment measured Moroccan Sign Language and Modern Standard Arabic Reading, as well as the knowledge of the correspondence between the two languages.



Photo courtesy of ACR GCD awardee Institute for Disabilities Research and Training, Inc.

KEY LEARNINGS

Although much of the content was similar, because of the bilingual nature of the assessment for learners who are deaf, it was not comparable with the EGRA developed for learners who are hearing.

Some of the important findings from the process of developing the EGRSLA are:

- Scoring assessments accurately for learners who are deaf or hard of hearing and use sign languages to communicate is difficult because it requires enumerators to toggle between looking at the learner and marking on a tablet screen or paper. The enumerator team video recorded all assessments and scored them afterwards to ensure accuracy. This is a labor and time intensive exercise, and projects may want to consider using untimed subtasks to eliminate the need for asynchronous scoring.
- Regional variations of national sign languages are prevalent and should be accounted for in the development and scoring of assessments. It is likely that different areas of a country—as was the case with Morocco—use different signs for the same concept. Enumerators accounted for this in their scoring and allowed for regional variations to be marked as correct.
- Ample training of enumerators is critical to ensure standardization of administration. School-to-School International provided nine days of training for EGRSLA enumerators, including a five-day training immediately prior to the baseline.
- High interrater reliability may be challenging to achieve on assessments for learners who are deaf or hard of hearing. This was the case in Morocco, and as a mitigation technique, the two enumerators—one who was deaf and one who was hard of hearing—were assigned specific subtasks in the assessment. This ensured internal reliability on those subtasks and likely improved standardization of assessment administration due to the ability to focus on a smaller set of subtasks.
- Delivering subtasks using pre-recorded videos of subtask, such as a comprehension story, may facilitate standardization of assessment administration, but it may also be a less familiar medium for learners and necessitate multiple versions to account for regional variations. In Morocco, pre-recorded videos were used for the Moroccan Sign Language story and receptive vocabulary



subtasks. Two versions of the story were necessitated due to regional variations. Local experts and stakeholders highlighted that learners did not often use videos or tablets to view sign languages and may have been uncomfortable with the medium.

- Learners who are deaf or hard of hearing likely have not taken a standardized learning assessment in the past and may be unfamiliar or uncomfortable with the process. This was the case in Morocco and is likely the case in many other low- and medium-income contexts. It is critical to take this into account when designing the assessment to ensure that learners are introduced to having their skills assessed in a way that feels as easeful as possible.
- The EGRSLA was not comparable with the source EGRA, but it still provided an important proof-of-concept to how it might be possible to measure the language and reading skills of learners in these types of contexts. In Morocco, neither teachers nor the ministry had systematically assessed these skills for learners who are deaf or hard of hearing prior to this assessment. Showing that it was possible to measure their abilities spurred interest in using the data to better inform instruction in the classroom and to improve pre-service teacher training to serve the needs of these learners. Though the EGRSLA did not solve all assessment design and administration challenges, it did serve as an important catalyst to focus more on the learning and assessment needs of learners who are deaf or hard of hearing in Morocco.

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I Determining whether to use accommodations or modifications

When thinking about introducing accommodations or modifications to a learning assessment to make it appropriate for learners with disabilities, it is critical to identify the purpose of the assessment and what you hope to measure. Some things to consider:

Is the purpose to compare results across different types of learners?	If so, modifications that change the constructs being measured are not appropriate as they do not allow for comparability.
Do learners with disabilities receive the same curriculum as learners without disabilities or general education learners?	It is strongly discouraged for learners with disabilities to receive a different curriculum than their peers without disabilities, as this creates a separate system and reinforces inequities. However, this is the reality for some learners in both segregated and integrated educational environments. If learners with disabilities access a different curriculum, modifications should be considered to ensure that the content in the assessment aligns with the curriculum being delivered to the learners, with recognition of the limitations (e.g. non comparability) and risks (e.g. reinforcing inequities) that this introduces. ²⁷ Because learning assessments tend to be designed based on the curriculum for general education learners, using existing learning assessments without modifying the content to align to the curriculum for learners with disabilities, may provide a deficit-based lens on what the learners with disabilities know. If learners with disabilities access the same curriculum as their peers without disabilities, it may be appropriate to use existing learning assessments with accommodations—similar to those used in the classroom context—that do not alter the constructs being measured. This approach will allow for comparability across learner cohorts and provide valuable information to governments about the extent to which learners with disabilities are receiving and internalizing general education curriculum. The choice around whether to modify content to align with what is being taught in the classroom is dependent on the purpose of the assessment.
Is the language within an original source assessment appropriate and sensitive to learners with disabilities?	For example, are there references to seeing, hearing or physical movement that might be inappropriate for learners who are blind, deaf or have physical disabilities that restrict their movement? If yes, changes to the assessment content should be considered. These may be minor and may not necessarily change the construct being measured in the original assessment. Ideally, the language in the source assessment should also be adapted so that all learners are accessing the same, non-biased assessment content.
Does any part of the assessment require the learner to see or hear content to be able to respond?	If yes, accommodations should be provided that allow for learners to access assessment instructions and content and provide their responses in other ways. For example, if an assessment is generally administered orally, an appropriate accommodation for a learner who uses sign language would be to provide all instructions in sign language and allow the learner to respond using sign language. For an assessment that requires a learner who is blind to read printed questions, they should be printed in braille.

²⁷ Modifications that alter the construct being measured make an assessment incomparable with other learners that receive an unmodified assessment. Additionally, by modifying an assessment, there is the risk of creating and promoting a separate assessment system for learners with disabilities.

Additional considerations when adapting reading assessments for learners who are deaf or hard of hearing

In addition to the accommodations and modifications that projects utilized for learners who are deaf or hard of hearing, respondents highlighted several additional key considerations for the administration of reading assessments for learners who are deaf or hard of hearing.

Sign languages and variations

When adapting reading and language assessments for learners who are deaf or hard of hearing, it is critical to determine which sign languages should be considered correct. In many contexts, different sign languages are used within and outside of classrooms. For example, many teachers in the Philippines received their initial training in American Sign Language, while the local Deaf Community communicates in Filipino Sign Language. As a result, classroom instruction contains a mix of these languages. It is critical to understand regional variations of a country's sign language that may complicate conducting a standard assessment. Regional variations of a national sign

language often emerge as a result of the natural evolution of languages, when a critical mass of signers come together to invent new words to represent concepts that previously might not have had a sign or when a sign emerges from the influence of other countries' sign languages. In Morocco, there is great variation in Moroccan Sign Language between regions of the country, in which schools for the Deaf have been geographically isolated from each other, thereby creating regional variations of Moroccan Sign Language. Additionally, the impact of missionary workers that established schools for the Deaf in Morocco, and the country's proximity to Spain, has resulted in the importing of Belgian, French, and Spanish Sign Languages in some Moroccan schools.

It is also important to consider the presence and potential use of communication systems invented to improve literacy acquisition and learning, such as Signed Exact English.²⁸ These signed systems are not languages and have some utility in teaching English grammar and syntax but become problematic when used as a general Language of Instruction in pedagogical approaches. In Kenya, the Deaf Community uses Kenyan Sign Language, while teachers are trained to use Signed Exact English as the language of instruction. These cultural and contextual factors are not simple, and decisions around which language to assess and what to score as correct should not be made without understanding the larger language, culture

²⁸ Signed Exact English is a system of manual communication that is an exact representation of English vocabulary and grammar. This is different from ASL, which has its own grammar rules.

KEY LEARNINGS

and identity politics. Deaf individuals with the most knowledge of these considerations should be engaged to guide this decision-making process.

The projects reviewed have taken different approaches to this challenge. In Morocco, the *ACR GCD Moroccan Sign Language Assistive Technology for Reading Improvement of Children who are Deaf or Hard of Hearing* project conducted a language mapping exercise going to each school involved in the project to catalog the signs used. This catalog of signs was used as a guidebook for enumerators to score regional variations correct during the assessment. In the *USAID/Philippines Gabay* project, enumerators from different parts of the country trained each other on variations of Filipino Sign Language used for words in the assessment to enable more inclusive scoring of regional variations. Additionally, the project deployed enumerators specifically to assess learners that used the same regional variations as the enumerator. Finally, the project allowed enumerators multiple response options—correct in Filipino Sign Language, correct in American Sign Language, correct in Signed Exact English or incorrect. This enabled a less dichotomous and richer understanding of learners’ language knowledge. *USAID/Malawi Reading for All Malawi* project also incorporated regional variations of Malawian Sign Language into their scoring protocols.

Scoring accuracy

An additional consideration relates to the scoring accuracy of assessments for learners

who are deaf or hard of hearing. For many of the assessments used by the projects reviewed, standard administration protocols require that an enumerator listen to a learner’s response while looking at a tablet or paper to score the assessment. Learners who are deaf or hard of hearing and use sign languages produce their responses on these assessments in sign language. This necessitates that an enumerator looks at the learner, comprehend the sign the learner has produced, then look to the tablet to score. For fluency measures in which learners are instructed to read as many items as they can within a specified time limit, an enumerator’s ability to accurately score responses in sign languages is complicated by this process. On some of the projects reviewed, enumerators expressed that they weren’t confident in their ability to accurately score these assessments. During the time that they looked down to mark an item correct or incorrect, they may have missed more responses produced by the child.

Projects have taken different approaches to mitigating the challenges in accurately scoring assessments for learners who are deaf or hard of hearing and use sign languages. The *USAID/Philippines Gabay* project chose to make all EGRA subtasks untimed, prioritizing accuracy measures and accuracy of scoring over measuring fluency. The project also utilized two enumerators per assessment. One was responsible for enumerating the assessment to the learner and the other was responsible for scoring the learner’s responses. The *ACR GCD*

KEY LEARNINGS

Moroccan Sign Language Assistive Technology for Reading Improvement of Children who are Deaf or Hard of Hearing and the ACR GCD Leveraging Existing Accessibility Resources in Nepal projects video recorded learners during the assessment. After the assessment, a team of scorers re-marked learners' responses to ensure accuracy of scoring, enabled by the ability to watch and rewatch responses.

Piloting of assessments

Projects identified pilot testing as a key step in the adaptation of learning assessments for learners with disabilities. Although piloting is always recommended when testing a new tool, it is especially critical when the assessment is targeted for a population that has traditionally not been well-defined and assessed. Hence little is known about their reading and mathematics levels—and for whom accommodations and modifications are being introduced that may not have been previously utilized in the context. Piloting is also important to enable an analysis of content validity, or how well the assessment measures the intended constructs, especially if modifications have been introduced during the adaptation process.

An assessment pilot is necessary...

“...to test not only the basic content of the learning assessments and questionnaires, but the appropriateness of adaptations for learners with different types of disabilities. This may yield important further revisions to the instruments, which is necessary before a national rollout of the tools in a full evaluation.”

– KII respondent, Juarez & Associates

A respondent noted that multi-country assessments, such as the Program for International Student Assessment (PISA) and the Programme for the Analysis of Education Systems (PASEC), may be uniquely positioned to pilot assessments adapted for learners with disabilities. They may provide opportunities to better identify, define and understand the population of learners with disabilities due to the large sample size. Because there are often a limited number of learners with disabilities in which to pilot national-level assessments, piloting adaptations in regional or international assessments may allow for more robust validation.

KEY LEARNINGS

Examples of piloting approaches are described below.

The **USAID/Kenya Tusome** project piloted adapted assessments in five special schools for learners who are blind or have low vision in Nairobi. After the pilot, the project analyzed data, made adjustments and implemented the assessment country wide.

The **USAID/Mali Inclusive Education for Visually Impaired Primary School Children in Mali** project piloted in six schools in Bamako with the purpose of demonstrating the applicability of the adapted assessment and to produce practical recommendations prior to a wider administration of the assessment.

The **Empowering a New Generation of Adolescent Girls with Education** project in Nepal piloted in an adjoining community with a very small sample. Following the pilot, the project determined to extend the timing of subtasks to five minutes and to increase the font size on stimuli.

The **ACR GCD Moroccan Sign Language Assistive Technology for Reading Improvement of Children Who are Deaf or Hard of Hearing** conducted a two-phased pilot. First, the project piloted a test in non-intervention schools. After the tool was updated, researchers conducted a second data collection in intervention schools. However, due to several challenges—including inadequate cataloging of Moroccan Sign Language regional variations prior to the data collection, insufficient representation from

the Moroccan Deaf Community in developing the assessment and a desire to include Deaf assessors in the data collection—the project decided that the second data collection, originally intended to be a baseline, should instead serve as a second pilot. The project reflected on lessons learned from the second pilot and engaged a wider group of stakeholders to make updates before conducting a baseline one year later.

The **USAID/Philippines Gabay** project conducted a pilot test of its reading and sign language assessment for learners who are deaf or hard of hearing in six non-intervention schools. The study was conducted two weeks prior to the baseline data collection and included a sample of 92 learners. Following the pilot test, the project updated subtasks and administration protocols, and then validated the final tool with the Department of Education and USAID staff prior to the baseline.

At least two respondents mentioned that one of the major challenges in piloting adapted learning assessments is finding comparable populations to include in the pilot. The numbers of learners with disabilities in similar school settings, in similar geographic contexts and of similar grades and ages are often low, meaning that finding ideal piloting conditions is notably difficult. This should be taken into consideration when planning for the design, piloting, and implementation of an assessment.

CASE STUDY

Piloting an adapted assessment in Uganda

Cheshire Services Uganda's *Empowering Girls with Disabilities in Uganda through Education* project, funded by FCDO under GEC, conducted a pilot study over two days in March 2018 to test early grade and secondary grade assessments. Additionally, supporting tools to collect information at the school level from headteachers, teachers and learners, and at the household level from caregivers were also reviewed. Before the pilot, the tools and protocols were developed and adapted for learners with different disabilities (visual, hearing, and intellectual) during an adaptation workshop. The pilot study had three aims:

1. To evaluate whether the learning assessment instruments (EGRA, EGMA, SeGRA, SeGMA) functioned as intended. This included not just the content and basic administration but also whether the disability adaptations were fit for purpose.
2. To allow enumerators and disability experts to review the supporting tools (household/caregiver interview, headteacher interview, student interview, lesson observation and school observation) and to verify whether the length and content were appropriate.
3. To allow enumerators to gain additional field experience and report back on the appropriateness of protocols, sampling and guidance.

During the pilot, key stakeholders assumed various roles. Enumerators collected data from respondents. Project team leaders were responsible for introducing the enumerators at the schools, sampling the learners, coordinating the arrangement of assessment locations and populating a timetable to ensure all lesson observations and teacher interviews could be carried out. Disability experts were responsible for ensuring the disability criteria checklists were administered prior to assessments and that enumerators were adhering to the project's disability protocols. A quality assurance team was deployed to ensure overall compliance with protocols and child protection policies.

The project piloted the assessments in Kampala with learners across six primary and secondary schools. Once the data was cleaned and analyzed, recommendations were made for amendments to tools based on the findings. The project also outlined post-pilot recommendations to finalize assessments. Examples of post pilot amendments to the EGMA and EGRA centered on: some tasks taking too long, ceiling effects, the addition of more complex word problems and some tasks being inappropriate for learners with intellectual disabilities.

Assessor selection

As with any data collection, selection and training of assessors is critical in the administration of learning assessments for learners with disabilities. Projects and respondents interviewed described different approaches for selecting assessors based on the context, project, administration protocols and local capacity. They also highlighted that serving as an assessor is a highly skilled role and one that significantly builds capacity, as the assessor receives intensive training on the theory and practice of learning assessments, how data can be used, and how to effectively administer assessments to learners with disabilities.

Many projects contracted people with disabilities to serve as assessors. This is particularly important when administering assessments to learners who are deaf or hard of hearing, as fluency in the local sign language is a key skill required for effective administration and scoring of the assessment. Having people with disabilities serve as assessors is also beneficial for learners who do not have the opportunity to frequently interact with adults with disabilities in their school or community. This creates strong rapport between the assessors and the learners, and it shows the learners examples of adults with disabilities in professional roles. Specifically, *USAID/Senegal Lecture Pour Tous*, *USAID/Malawi Reading for All*, *USAID/Philippines Gabay*, the *ACR GCD Moroccan Sign Language*



Photo courtesy of ACR GCD awardee Resources for the Blind, Inc.

KEY LEARNINGS

Assistive Technology for Reading Improvement of Children who are Deaf or Hard of Hearing, USAID/Jamaica Partnership for Literacy Enhancement for the Deaf and USAID/Kenya Tusome projects employed assessors who were blind or deaf to administer assessments to learners.

Other projects employed Ministry of Education officials, teachers or teachers' aides to administer the assessments to learners. The *USAID/Kenya Tusome* and *USAID/Malawi Reading for All Malawi* projects both employed current or former special education teachers to serve as assessors. The *USAID/Jamaica Partnership for Literacy Enhancement for the Deaf* and *USAID/Philippines Gabay* projects partnered special education teachers with deaf teachers' aides or mentors to administer assessments to learners who are deaf or hard of hearing. The *Wasichana Wetu Wafaulu* project trained general education teachers to administer the assessment. Additionally, the Australian Government-funded *Rapidly Improving Standards in Elementary* project partnered trained assessors with local teacher aides to conduct the IDELA with pre-primary learners with disabilities in Papua New Guinea.

Projects expressed several challenges and limitations in the selection of assessors. For example, the *Inclusive Assessments through Partnerships* project in Pakistan highlighted the challenges of finding assessors with local sign language skills. Although the curriculum dictated that teachers use Pakistani Sign Language in the classroom, teachers had limited proficiency in Pakistani Sign Language and relied

on lip reading or invented signs. As a result, these teachers did not have the capacity to administer and accurately score the assessments for learners who are deaf. The *Empowering a New Generation of Adolescent Girls with Education* project in Nepal also expressed the challenge of finding community-level individuals with capacity in reading braille or knowing local sign language. Other projects recognized the tension between using assessors who are familiar to the learners, such as the learners' own teacher, who may want their learners to succeed and not stick as closely to protocols or using an assessor who is unfamiliar to a learner and may be uncomfortable in an assessment environment with a stranger. One respondent expressed a recommendation to use an assessor that had a close relationship with the learner to ensure the learner could understand the questions being asked and felt comfortable. They felt that having an assessor that the learner did not know was a greater risk to the assessment than the potential bias of using a learner's teacher.



Photo courtesy of ACR GCD awardee Resources for the Blind, Inc.



Key recommendations

Several projects have undertaken the task of adapting learning assessments to make them more inclusive, accessible and appropriate for learners with disabilities with the overall goal of more validly and reliably measuring their skills. Although no project reviewed or individual interviewed claimed to have the perfect assessment, they did highlight important considerations that can strengthen the ability of governments, donors, NGOs and education practitioners to assess the reading and mathematics skills of learners with disabilities. Their efforts have led to more valid and reliable assessment results, a more accurate understanding of what these learners know and higher quality educational instruction.

Actions to promote more accessible, valid and reliable learning assessments for learners with disabilities

While the collective community of funders, governments, projects and researchers continue to work towards a long-term goal of inclusive education systems that provide universally designed curriculum and assessments, equitable access and equitable opportunities for all learners, there are some key actions that these stakeholders can take to make learning assessments more accessible for learners with disabilities. Many of these actions are not prohibitively technical and instead address who

KEY RECOMMENDATIONS

to involve, how to involve them and what types of high-level steps to take to adapt learning assessments. These actions will not make our assessment systems fully inclusive or equitable. However, they can move us along the pathway to our long-term goal.

Prioritize engaging the most appropriate experts, with a wide range of expertise

- **Engage people with disabilities and organizations for persons with disabilities throughout the adaptation process.** People with disabilities are the most critical stakeholders in the adaptation process, and they should be consulted from design through piloting and data collection. It is particularly important to engage people with disabilities during the assessment administration, including as enumerators.
- **Engage local experts, stakeholders and teachers to strengthen an understanding of local curriculum and the language context.** Doing this early in the adaptation process can ensure a more appropriate assessment for learners with disabilities. Engagement may also include primary data collection, such as conducting individual interviews with teachers and conducting classroom observations.
- **Engage regional or international experts in the adaptation process.** This may strengthen the adaptation process in many ways. These experts can bring lessons learned from

other adaptations to ensure that previous experiences are built upon and leveraged in the adaptation process. Additionally, technical experts like psychometricians can help advise on specific item adaptation, piloting and analyses so that the validity and reliability of the adapted assessment is fully understood.

Understand the context

- **Identify the purpose of the assessment to determine whether modifications to an existing learning assessment are appropriate.** Sometimes, projects and stakeholders want to measure learning outcomes across diverse types of learners, necessitating a comparable assessment. In this case, modifications may not be appropriate. In contrast, if the purpose of the assessment is to get a better sense of what learners know in general, rather than what they know based on curriculum-based benchmarks, there may be more freedom to modify subtasks and assessment content to be more targeted to these learners. However, this must be done with the recognition that modifications may change the constructs being measured and make assessments incomparable across learner groups.
- **Conduct extensive and localized literature reviews prior to adapting a learning assessment for learners with disabilities.** A comprehensive understanding of the types of things learners with disabilities should be learning, according to their curriculum,

is critical prior to adapting assessments for them. This information leads to an assessment that measures the constructs and content most appropriate for these learners.

- **Ground the selection of specific accommodations in what is used regularly in the classroom and/or appropriate to the context.** This is linked closely to an understanding of the local context. Projects should learn what types of assistive technologies or accommodations teachers provide to their learners and what local stakeholders, especially people with disabilities, recommend as the most appropriate accommodations in the context.

Consider all critical technical steps

- **Dedicate sufficient time and resources** to carefully adapt, pilot and validate assessments and accommodations prior to conducting operational data collections. One respondent stated, “Don’t underestimate the technical rigor; there must be sufficient resourcing available.” Two respondents recommended a minimum of six months to adapt an assessment prior to an operational data collection. One organization suggested up to two years to fully adapt, pilot, validate and roll out an adapted assessment. Although this is a recommendation for funders, governments, projects and researchers, it is particularly critical for funders and governments to

understand the level of effort required to include learners with disabilities in learning assessments in a way that allows for valid and reliable measures of their reading and mathematics knowledge.

- **Ensure prioritization of screening and identification processes that are needed for service provision, classroom instruction and learning assessment design.** Without knowing what types of functional difficulties or disabilities learners in a project population have, it is challenging to ensure appropriate programming, services provision and assessment design. It is critical to understand the learner population and their needs to appropriately adapt an assessment, match learners with accommodations and measure their learning skills. This is a critical process that is often not included in the budget and time considerations for adapting an assessment. It should be recognized as a process that is as important for ensuring that learners’ needs are appropriately met in the classroom and for ensuring an appropriate assessment. Doing this will enable more valid and reliable results on assessments and may also lead to an overall better educational experience for learners.
- **Ensure that the assessment is piloted with comparable populations and in a variety of educational contexts.** Because the learning levels of learners with disabilities are often not as well understood as students in general education classrooms, it is important to pilot sufficiently—with as many comparable

KEY RECOMMENDATIONS

learners as possible, in special schools, special education classes, and inclusive classrooms—to determine if the assessment is appropriately leveled and that the accommodations are best suiting the learners’ needs. Piloting should include analysis of content validity to understand whether the adapted assessment is measuring the intended constructs.

Recognize the importance of making progress

- **Utilize the process of adapting learning assessments and measuring learning outcomes to expand the research and evidence base.** Much of the work being done by projects and researchers is still in proof-of-concept phase, and there is significant work to be done to measure learning outcomes of learners with disabilities validly and reliably. The research and implementation community should prioritize sharing research best practices in adapting learning assessments so there is greater opportunity to understand the learning needs and outcomes of learners with disabilities. This prioritization should also include more robust analysis on the validity and reliability of adapted learning assessments and considering how assessments can be more universally designed to make them more inclusive of all learners’ needs.
- **Invest more in researching how accommodations and modifications impact the**

constructs being measured, as this impacts how we understand learners with disabilities’ performance in comparison with learners without disabilities. It is critical for researchers undertaking this work to understand if the accommodations and modifications introduced during an adaptation change the construct being measured in the original assessment. This has a significant impact on how the data from an assessment should be used and understood. Further research should be done to better understand the impacts of accommodations and modifications on assessment validity and reliability, including understanding how different accommodations or modifications do or do not change the intended constructs and how accommodations and modifications impact performance.



Photo courtesy of School-to-School International

Additional considerations

In addition to the specific actions recommended, there are additional considerations for funders, governments, project staff and researchers as they reflect on the importance of making learning assessments more inclusive of learners with disabilities.

- Assessments should better reflect UDA principles.** Nearly all the examples presented in this brief represent adaptations to standardized assessments to include learners with disabilities. Many of the challenges faced during the adaptation of these assessments, including insufficient screening and identification and the use of modifications, can be mitigated by creating assessments that are universally designed. Considering UDA principles—such as precisely defined constructs, accessible, non-biased items, and simple, clear, and intuitive instructions and procedures—during assessment development may reduce the need for lengthy and costly adaptation processes and potentially reduce the need for accommodations and modifications. Ultimately, assessments designed with UDA principles will allow more learners the ability to demonstrate what they know.
- The process of adapting a standardized assessment can serve as an important capacity-building and advocacy activity for education sector stakeholders, government officials and funders.** Even those who work on behalf of learners with disabilities may hold complicated or incorrect beliefs about what people with disabilities can learn. Showing these stakeholders that people with disabilities can serve as experts in developing and administering learning assessments, and seeing learners interact and partake in learning assessments, is a powerful and formative experience. Further, if engagement is broad-based and inclusive of individuals with decision-making power within funders and government institutions, being part of the adaptation process can build awareness and urgency to continue working to equitably include learners with disabilities in the education and systems. In other words, the process of adapting an assessment can turn observers into advocates.
- What we learn by and through including learners with disabilities in learning assessments must be linked to actions.** Designing and administering adapted assessments for learners with disabilities is a first step towards a more accurate understanding of what these learners have learned through the education system. It is imperative that stakeholders use the data collected to improve access to and the quality of education for learners with disabilities.
- Projects must do more to integrate adapted assessments and learnings into**

government systems. When asked if their adapted assessments or learnings from the results were being used presently, most of the projects said that they were not aware of them being integrated into government assessment mechanisms. To an extent, the knowledge about the process is maintained by local stakeholders, as it does not appear that governments have taken up the adapted assessments or the learnings from the process. It is important that more emphasis is placed on institutionalizing the process and learnings on adapting and administering learning assessments to learners with disabilities into government systems to foster sustainability and a meaningful paradigm shift.

- **More work is needed to determine the types of adaptations that may be appropriate for learners with intellectual disabilities.**

Most projects reviewed focused on adapting assessments for learners with sensory disabilities; fewer projects adapted assessments for learners with intellectual disabilities. As we continue to refine our approach to better assess learners who are blind or have low vision and learners who are deaf or hard of hearing, more resources should be dedicated to improving understanding of the learning environment and assessment needs of learners with intellectual disabilities.

- **More work is needed to build the capacity of teachers to adapt and provide reasonable accommodation on formative assessments.**

This brief does not explicitly provide guidance on adapting formative assessments, as the focus was on the adaptation of standardized summative assessments. However, it is critical that teachers improve their ability to deliver appropriate assessments in their classrooms that include accommodations to enable learners with disabilities fully demonstrate their knowledge. Some of the experiences shared in this brief, specifically around the selection of accommodations and modifications, provide useful guidance to teachers. More explicit guidance and training for teachers is needed.

Increased awareness, investment, and advocacy are needed to ensure that learners with disabilities are included in learning assessment systems globally. Only through these efforts, will policymakers, implementers, assessment designers and researchers gain an understanding of what is needed to help these learners strengthen their foundational literacy and numeracy and enable their inclusion and integration in education systems. These stakeholders must prioritize ensuring that learners with disabilities are more centered in education programming and learning outcomes research to achieve a more fully inclusive and equitable education system for all learners.

1 | Research Questions

1. What are the current gaps or limitations in designing and administering learning assessments that include learners with disabilities?

- a. What are the risks and limitations of not providing learning assessment accommodations or adaptations for learners with disabilities?
- b. What are the barriers to providing learning assessment accommodations or adaptations for learners with disabilities?

2. What types of accommodations and adaptations have been used to assess reading skills of learners with disabilities?

- a. What learning assessments have been used with learners with disabilities?
- b. Who was engaged to design/select the accommodations and adaptations? Who else should have been engaged? Why?

- c. How were accommodations and adaptations targeted to the right learners? What data on learners' disabilities were used? (i.e., functional questionnaire data, medical screening data, school data, etc.)
- d. What were the conditions that made it possible to use accommodations and adaptations for the learning assessments (i.e., funder or government requirement, project interest, etc.)
- e. What information on interventions was needed from projects, such as provision of assistive technologies or inclusive education activities?
- f. What piloting was undertaken on accommodations and adaptations?
- g. What were the limitations of the learning assessment accommodations or adaptations?

3. How can we make learning assessments inclusive?

- a. What tools, accommodations and adaptations are recommended? For whom?

- b. What are common challenges or pitfalls in the development and administration of learning assessments for learners with disabilities?
- c. What data at the individual and school/ community level are needed?
- d. What data on project interventions are needed? (i.e., inclusive education programming, types of interventions and accommodations provided, etc.)

4. What are specific actions that organizations/ researchers can take to ensure that their learning assessments

are more accessible to learners with disabilities in their population?

- a. What are the minimum actions that all organizations can immediately adopt to make learning assessments more inclusive?
- b. What are the ‘next level’ actions that are more targeted to students by type and severity of disability?
- c. What package of actions yield valid and reliable learning assessment data for children with disabilities? How does this package of actions maximize the individualization of assessment conditions and minimize the risks to validity and reliability?



2 | KII Guide



Inclusive Learning Assessments

Key Informant Interview Guide

INTERVIEW INFORMATION

Facilitator name

Notetaker name

Date

Name of participant(s)

The Girls' Education Challenge (GEC) Fund Manager (FM) and All Children Reading: A Grand Challenge for Development (ACR GCD), a partnership of the United States Agency for International Development (USAID), World Vision and the Australian Government, are collaboratively developing a technical brief that captures the importance of, progress towards and lessons learned from the development of inclusive learning assessments for children. The technical brief will provide a framework and

guidance to help make learning assessments more inclusive of children with disabilities and to measure their learning outcomes more validly and reliably. Once complete, this document, and other promotional materials will be made public.

During the interview, I'll ask you questions about your experience designing learning assessments for children with disabilities, limitations and challenges you experienced and your lessons learned. What you share will be used to inform the development of the framework and guidance in our technical brief. We will cite your organization or project as a data source for the brief and/or as a case study or example.

If we use your organization or project name as a case study, you will have the opportunity to review the brief before it is published.

May we record this conversation? **Y / N**

[MAKE INTRODUCTIONS]

Background

I'll start by asking some background questions about the project or projects for which you designed assessments.

1. What was the project or projects for which you developed learning assessments for children with disabilities?

- Who was the funder?
- What were the project's main interventions/activities and goals?

2. (For each project) Was the project an inclusive education project or a special education project? By that, I mean was the project targeting learners with and without disabilities, or was it focused on solely learners with disabilities?

- What type of learners did the project reach through its interventions?

3. (For each project) What were the target populations of children for the learning assessment? What types of disabilities did children have?

4. (For each project) What type of learning assessment did you use?

- What types of skills were tested?
- What grades or levels did your learning assessment target?
- What existing learning assessments did you use as your starting point?

5. (For each project) Had assessments for learners with disabilities been used in the context/country before?

6. (For each project) Why did you decide to develop and/or adapt assessments for learners with disabilities? For example, was it a funder or government requirement?

Assessment Development

The next questions will be about the development of the assessments. *(Facilitator note—You may ask about all projects or for just one, depending on relevance)*

7. Who did you engage when developing or adapting the assessment? What people, organizations or types of experts did you speak with? What did each contribute to the process? *(Facilitator note—For example, government officials, NGOs, civil society organizations, advocacy groups, DPOs, educators, etc.)*

- In what way did you engage people with disabilities in the process?
- Were there any people, organizations or types of experts that you should have engaged but didn't? Please explain.

8. What type of information did you have on the learner population when you began to develop the assessment? *(Facilitator note—For example, grade level, disability type, school information, teacher background, etc.)*

- a. How were learners with disabilities identified? What type of screening data did you have?

9. What accommodations or modifications did you use for the assessment? By accommodations, I mean changes to the testing environment and aids and services—such as assistive technologies, extended time or different stimuli—to allow the learners to demonstrate their true achievement. By modifications, I mean changes to the assessment content.

- a. How did you decide to use those accommodations or adaptations? Who was involved in the decision?
- b. If adaptations were used, how did you determine the appropriateness of the content?
- c. If adaptations were used, how did you select which types of skills to test?
- d. If accommodations were used, were any of these also utilized by the project? Did learners have previous exposure to the accommodations or assistive technologies?

10. How did you pilot the accommodations or adaptations?

11. Who served as enumerators for the assessment?

- a. What type of training did they receive? How much training?

- b. What challenges did you face in recruiting appropriate enumerators?

12. What were your lessons learned—positive and negative—about the development of these assessments?

- a. What challenges did you face? How did you resolve these?
- b. What limitations do you see to the assessment content or administration?

13. Approximately how long did it take you to develop the assessment, starting from the design through to having a final tool?

- a. What level of investment was required?

14. Did you learn anything about the intersection of disability and gender, such as disparities in:

- a. Enrollment?
- b. Learning outcome?
- c. Access to accommodations?
- d. Appropriate enumerators?
- e. Those engaged in the assessment development process?

Context and Enabling Environment

Now I have a few broader questions about the context in which you were working.

15. Thinking about the data you collected through the assessment, what did you learn?

- a. What gaps were there in the data?
- b. What gaps were there in the process or design of the assessment?
- c. How were the data used, for purposes of the project and for others such as the government?
- d. What did you learn about assessing children with disabilities that you may not have been aware of at the start?

16. Overall, how much input did you receive from government when developing the assessment?

- a. How helpful was the government input?
- b. What was the policy environment? How much work was being done more broadly to support or engage children with disabilities through the government or donor-funded projects?

17. What was the local capacity to support development and administration of the assessments?

- a. What was the local capacity for enumerators?

18. Do you know of any other institutions or organizations that have used your assessment? If yes, which ones?

Recommendations and conclusions

19. What would be your major recommendations for others who are embarking on the process to assess the learning outcomes of children with disabilities?

- a. Do you have any significant “pitfalls” or things to avoid doing?

20. In your opinion, are there minimum actions that can be immediately adopted to make learning assessments more inclusive?

- a. Are there ways to make learning assessments more inclusive regardless of whether we know specific disability prevalence in a population? If yes, what?
- b. Are there “next level” or more complex actions to make learning assessments more inclusive? If yes, what?

21. Do you have any resources or reports that you could share with us on your process or results?

22. Is there anyone else you’d recommend we talk to about developing learning assessments for children with disabilities?

3 | KII Participants



Organization and country experience represented

Australian Council for Educational Research

1 Australia

EdIntersect

2 Tajikistan
3 Senegal

Education Development Trust

4 Kenya

Ichuli Consulting

5 Uganda

Idara-e-Taleem-o-Aagahi

6 Pakistan

Inclusive Development Partners

2 Tajikistan

Jamaica Association for the Deaf

7 Jamaica

Juarez & Associates

8 Malawi

Montrose International

5 Uganda

PNG Partnership Fund

9 Papua New Guinea

RTI

4 Kenya

School-to-School International

10 India
11 Lesotho
12 Morocco
13 Nepal
9 Papua New Guinea
14 Philippines

Sightsavers

15 Mali
6 Pakistan

Voluntary Service Overseas*

13 Nepal

* Responses submitted in writing

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