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Multi-Country Study on Inclusive Education (MCSIE) Malawi Endline Report

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About the Project

This report presents the results of an inclusive education endline survey completed in Malawi under the Multi-Country Study on Inclusive Education (MCSIE) for learners with disabilities in Cambodia, Malawi, and Nepal. The findings in this report will help United States Agency for International Development (USAID) and its partners to inform adaptations to its inclusive education activities in Malawi and to plan for new inclusive education programming globally. This project is supported through a buy-in from USAID's Center for Education (EDU) within the Bureau for Development, Democracy and Innovation (DDI) (USAID/DDI/EDU) through the Long-Term Assistance and SErvices for Research (LASER) mechanism. The LASER buy-in mechanism is currently in place between USAID's Research (R) Division in the Innovation, Technology, and Research (ITR) Hub within DDI (USAID/DDI/ITR/R) and LASER PULSE (Partners for University-Led Solutions Engine), a consortium led by Purdue University under cooperative agreement #7200AA18C00009. The MCSIE project has been executed by Inclusive Development Partners (IDP) under a sub-contract with Purdue University.

About LASER PULSE

LASER (Long-term Assistance and SErvices for Research) PULSE (Partners for University-Led Solutions Engine) is a $70 million program funded through the U.S. Agency for International Development's (USAID) Innovation, Technology, and Research Hub that delivers research-driven solutions to field-sourced development challenges in USAID partner countries.

A consortium led by Purdue University, with core partners Catholic Relief Services, Indiana University, Makerere University, and the University of Notre Dame, implements the LASER PULSE program through a growing network of 3,700+ researchers and development practitioners in 86 countries.

LASER PULSE collaborates with USAID missions, bureaus, and independent offices and other local stakeholders to identify research needs for critical development challenges and funds and strengthens the capacity of researcher-practitioner teams to co-design solutions that translate into policy and practice.

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IDP would like to honor the work of Rebecca Rhodes and all her contributions to the MCSIE project. She was a respected and valued member of the team and will be sincerely missed.

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Acronyms

AIM	Areas of Intervention Mapping
ASC	Annual School Census
BLV	Blind/Low Vision
CEED	Central East Education Division (Education)
CoP	Chief of Party
COVID-19	Coronavirus Disease of 2019
CRPD	Convention on the Rights of Persons with Disabilities
CSO	Civil Society Organization
CWED	Central West Division (Education)
DHH	Deaf/Hard of Hearing
DSNE	Department of Special Needs Education
DTED	Directorate of Teacher Education and Development
EGR	Early Grade Reading
EGRA	Early Grade Reading Assessment
EMIS	Education Management Information System
EQ	Evaluation Question
FGD	Focus Group Discussion
HOH	Hard of Hearing
IDP	Inclusive Development Partners
IEP	Individualized Education Plan
IKI	Invest in Knowledge Initiative
J&A	Juarez & Associates
KII	Key Informant Interview
LASER PULSE	Long-Term Assistance and SErvices for Research Partners for University-Led Solutions Engine
LD	Learning Difficulty
MANAD	Malawi National Association of the Deaf
MCSIE	Multi-Country Study on Inclusive Education
MERIT	Malawi Early Grade Reading Improvement Project
MoE	Ministry of Education
MSL	Malawi Sign Language
MUB	Malawi Union of the Blind
NED	North Education Division (Education)
NGO	Non-Governmental Organization
NRP	National Reading Program
NRPIE	National Reading Program Implementation and Expansion
OPD	Organizations of Persons with Disabilities
PODCAM	Parents of Disabled Children Association of Malawi
RC	Resource Centre
REFAM	Reading for All Malawi

RTI	Response to Intervention
SEED	South East Education Division
SHED	Shire Highlands Education Division
SWED	South West Education Division
ToT	Training of Trainer
TLM	Teaching and Learning Material
TTC	Teacher Training College
TWG	Technical Working Group
UDA	Universal Design for Assessment
UDL	Universal Design for Learning
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
UPRead	Upper Primary Reading Activity
USAID	U.S. Agency for International Development
VI	Visually Impaired
YESA	Yesani Ophunzira (Assess the Learners) Activity

1. Executive Summary

The U.S. Agency for International Development (USAID) has demonstrated a vested commitment to supporting education for all learners globally, including learners with disabilities. This commitment is reflected in the 2019–2023 U.S. Government Strategy on International Basic Education (USAID, 2018a) and the 2018 USAID Education Policy (USAID, 2018b). In line with this commitment, USAID has funded projects and programs that support early grade learning for students with and without disabilities, such as those in Cambodia, Malawi, and Nepal. Against this backdrop, the Multi-Country Study on Inclusive Education (MCSIE) aims to generate evidence and lessons learned around the implementation of inclusive early grade reading (EGR) programs. This report describes the endline findings in the evaluation of Reading for All Malawi (REFAM), an inclusive EGR activity that ran from February 2019 to August 2022.

1.1 Evaluation Background and Purpose

USAID is partnering with Inclusive Development Partners (IDP) through the Long-Term Assistance and SErvices for Research Partners for University-Led Solutions Engine (LASER PULSE) mechanism led by Purdue University to conduct a four-and-a-half-year evaluation of three USAID inclusive education activities in Cambodia, Malawi, and Nepal. This evaluation effort, referred to as MCSIE, seeks to derive lessons learned about what is working, for whom, and in what context to sustainably advance teaching and learning outcomes for children with disabilities in the target countries.

In the case of Malawi, IDP has collaborated with the research organization Invest in Knowledge Initiative (IKI) to evaluate inclusive education efforts within the REFAM project. REFAM supported Malawi's National Reading Program (NRP) initiatives and specifically focused on inclusive education and early literacy in Standards 1–4 to improve reading outcomes among children with disabilities. Malawi uses a twin-track[1] instructional approach for inclusive education, with general support provided to learners with disabilities in the general education system, as well as more

[1] A "twin-track" approach is a metaphor used in the United Nations Disability Inclusion Strategy (UNDIS) to describe two types of programming – "mainstream" and "targeted." Mainstream programs are those in which children with disabilities are brought into existing general programming to participate (i.e., general education classrooms). Targeted programs are programs that aim to support children with disabilities in specific ways (i.e., remedial reading support). The United Nations Disability Inclusion Strategy (UNDIS) makes no mention that that targeted programs must take place in segregated settings. Therefore, utilizing the language of "twin track" programming does not automatically imply that targeted programs must take place in segregated settings. Instead, a rights-based interpretation of "twin-track" programming (found in CRPD and UNDIS) suggests that both targeted and mainstreaming programming can be accomplished inclusively. In the case of education, children with disabilities can both be served through strategic pedagogies (Universal Design for Learning) and targeted supports in inclusive schools.

targeted support for learners with disabilities who need additional assistance. In Malawi, those targeted supports are currently provided in resource centers (RCs) and specialized schools (National Strategy on Inclusive Education 2017 – 2021). However, Malawi is working toward the progressive realization of full inclusion for learners with disabilities into the general education system. REFAM targeted government-funded primary school RCs throughout Malawi. At the time of project implementation, 146 RCs in primary schools were unevenly distributed throughout Malawi to serve all 34 educational districts. According to interviews with teachers conducted over the project's lifespan, Malawi has several different teacher classifications that may instruct learners with disabilities, including general education teachers, specialist teachers, itinerant teachers, inclusive education teachers, and assistant teachers. The full report gives a more detailed explanation of the differences between the types of teachers, but readers should note that in the Malawian context "inclusive education teachers" refers to teachers who have training in special needs education but perform most or all of their work in general education classrooms. Specific definitions for types of teachers are found in Section 2.2 of this report.

From REFAM's inception in 2019, activities have included participating in a national technical working group (TWG) on inclusive education; developing training on individualized education plans (IEPs); screening, coaching, and implementing Universal Design for Learning (UDL); focusing on deaf education; and developing and pretesting adapted versions of the Early Grade Reading Assessment (EGRA) for learners who are deaf or hard of hearing, are blind or have low vision, or have learning disabilities (difficulties).[2] The EGRA activity also included developing tools to assist with standardizing Malawi Sign Language (MSL) for the adapted EGRA and for future use in schools and RCs for learners who are deaf.

1.2 Methodology

This report is an endline evaluation of REFAM's activities related to inclusive education through the program's closure in 2022. IDP used a process evaluation[3] design to develop individual case studies of the inclusive education system in each of the three MCSIE countries (Malawi, Nepal, and Cambodia) to show how the USAID-funded interventions have affected the respective systems. Five key themes provided a framework for the study and have helped to structure this report: (1) the process of setting up and implementing the project, (2) the screening and identification of learners with disabilities, (3) the teacher training models supporting learners with

[2] The term "learning difficulties" is used by the Government of Malawi and broadly refers to any student who has difficulty achieving proficiency in the national curriculum and whose difficulty is not related to a sensory impairment. MCSIE uses the term in this document because it is relevant to the Malawi policy context.

[3] Process evaluation is a common approach to understanding development activities. Process evaluations seek to understand if programmes have been implemented as intended. See https://www.cdc.gov/std/program/pupestd/types%20of%20evaluation.pdf for an overview.

disabilities, (4) the inclusive instructional models to improve reading outcomes, and (5) the project's unintended consequences.

From 2019 to 2023, IDP collected primary and secondary data, including an extensive review of over 200 project documents and 40 additional supporting materials; key informant interviews (KIIs) with implementing partner staff (n=8), government stakeholders (n=22), school directors (n=56), classroom teachers (n=54), organizations of persons with disabilities (OPDs) (n=4), and training participants (KIIs and focus group discussions [FGDs]) (n=72); and 12 FGDs with families (n= 72). Additional data collected included classroom observations (n=59), training observations (n=7), teacher and head teacher interview telephone surveys of teachers who participated in REFAM trainings (n=55), and a pre-post training survey (n=318). IDP analyzed data through quantitative statistical analysis (i.e., descriptive, and inferential statistics) and qualitative analysis (i.e., deductive coding, rapid analysis, and descriptive analyses).

1.3 Answering the Evaluation Questions

For each of the study's five themes, USAID generated an evaluation question (EQ) to inform the evaluation of individual country programs as well as programming across the three countries. The following is a summary of these findings according to EQ. Readers should note that the EQs are meant to answer questions across countries. In cases of individual country analysis, evaluative data on what worked best may not be available. Instead, descriptive data about the strategies that were used and output/outcomes data (where available) are reported below. These descriptive answers to evaluation questions will provide the grounding for a three-country review of inclusive education (a final and cumulative activity for the MCSIE project).

1. **Process:** What worked well/poorly in the process of setting up an efficient, effective, and sustainable system to focus on improving the quality of education for learners with disabilities?

   Answer: The REFAM program effectively collaborated with Malawi's Ministry of Education (MoE) at all levels and with other literacy-related development programs and projects in the country. By doing so, REFAM focused on systems-level change in Malawi providing an opportunity for scalable and sustainable change. REFAM intentionally partnered with policymakers at the national level and inclusive education desk officers at the regional level to both influence policy change in relation to inclusive education and to engage stakeholders who could have a "ripple effect" in Malawi's schools (i.e., desk officers). To this end, REFAM was able to leverage existing infrastructure from the international community, Government of Malawi initiatives, and the private sector, thus avoiding a siloed approach to literacy and development. The project design was a limitation of this model as it focused only on specialist teachers. REFAM had limited direct engagement with and, therefore, limited impact on general education teachers in general education classrooms.

2. **Screening and Identification:** What methods worked best to identify learners with disabilities?[4]

Answer: It was impossible to determine a "best" approach based on data available. REFAM utilized existing screening tools (ones already in use by the MoE and one developed by the Malawian organization Sandi Thandiza) and trained over 500 educators and administrators on screening and identification tools. REFAM also advocated at the policy level for indicators related to Malawi's EMIS system. Little is known, however, about the impact of the training in relation to changes in teacher practice, the number of children screened due to training, or the validity and accuracy of screenings when implemented in schools, as REFAM did not include a plan for impact assessment activities. It is unclear how REFAM activities linked or supported screening at the school level beyond the training. MCSIE head teacher interviews revealed that only 16% of teachers were using screening tools after REFAM trainings. However, the REFAM activity attempted to raise awareness of the relationship between screening and teacher practices, introducing relevant concepts like response to intervention (RTI) and linking IEPs to screening and identification in their workshops.

3. **Training:** What training model(s) worked best to provide teachers with the resources and support they need to best meet the needs of learners with disabilities?

Answer: There is not adequate data to determine what worked "best" in REFAM, but several aspects of training appeared to work well for participants. An area of strength for REFAM was its explicit focus on the different dimensions of inclusive teaching and learning based on the principles of UDL in its training, specifically in relation to good practices for learners with disabilities. REFAM provided the project's UDL training series to 755 unique participants, including specialist teachers (nearly all held diplomas in special needs education), head teachers, desk officers, OPDs, and other service providers. The UDL training series was also provided to 90 itinerant teachers, for a total of 845 participants trained. Results of the training indicated that participants had very high satisfaction with the training program; however, REFAM reported on outputs (number of persons trained and materials produced) rather than outcomes, so the evaluation question could not be fully answered. MCSIE evaluation data did, however, demonstrate that 100% of specialist teachers who reported feeling prepared "to a limited extent" to support learners with disabilities prior to REFAM trainings reported feeling "prepared to a great extent" after participating in the training series. Interview and open-ended survey responses from teachers indicated that specialist teachers are embracing the

[4] In relation to the introductory text provided in Section 1.3 above, this Evaluation Question was designed for a three-country review. Information for Malawi does not determine a "best" method but provides information on the approach and processes undertaken by REFAM.

individualized nature of inclusion while also utilizing the UDL-grounded approach emphasized through the REFAM trainings. Although not evaluated for their impact, REFAM also provided follow-on activities that supported the ongoing professional development of teachers, head teachers, and DSNE officials through a 10-week WhatsApp group that reinforced ideas presented in trainings.

Instruction: What instructional models worked best to improve classroom instruction and reading outcomes among learners with disabilities?

Answer: REFAM's UDL focus appeared to be an instructional model that could be implemented in Malawi's schools. REFAM endline data indicates that 59% of teachers were implementing UDL after the training. MCSIE observations found even more—69% of teachers were implementing UDL inclusive education strategies—but there was no project data on whether teachers were using these strategies prior to training. A second area of impact for REFAM was in deaf education. Based on learning from EGRA development, REFAM identified gaps in sign language standardization and usage and produced materials that could be utilized in RCs where children who are deaf receive their education. REFAM also contributed to enhanced opportunities for sign language use in Malawi by developing videos and dictionaries. Despite uptakes in UDL usage and sign language development, a recurring theme in this project was a lack of outcomes data. There is no definitive data on what works best for students because there was no follow-up student assessment after workshops**.**

4. **Unintended Consequences:** Were there any unintended consequences of the activity? What were they?

Answer: Two unintended events presented opportunities for learning about inclusive education activities in USAID programming. First, REFAM became more proficient at inclusive workshop delivery through forced changes due to the global pandemic. Second, REFAM contributed to MSL development in unforeseen ways after learning about the lack of available MSL materials during the EGRA development process.

The findings to support these answers, as well as more information on the possible unintended consequences, are detailed in the full report. In addition, the report highlights key findings generated from the project's implementation, including those that may provide insight into global efforts to support disability-inclusive education.

1.4 Conclusions and Recommendations

REFAM has provided important insights into inclusive education programming in Malawi and beyond. The program highlights key decisions on embedding inclusive education into existing USAID education initiatives. For example, REFAM focused great effort on a systems approach to inclusive education by engaging with government and development partners and successfully

elevating inclusive education as a national priority. Alternatively, REFAM invested comparatively less time and effort in inclusive education implementation at the classroom level by not tracking the impact of its interventions in schools. Thus, little is known about the ways in which UDL, and other innovative training approaches led to changes in classrooms.

REFAM worked primarily with RC stakeholders and had limited direct engagement with general education teachers. However, learners with disabilities are taught in both RC and general education classrooms, and not all general education classrooms or schools have access to a specialist teacher to support learners with disabilities in this setting. Due to Malawi's signing and ratification of the Convention on the Rights of Persons with Disabilities (CRPD), which establishes the right to inclusive education, REFAM missed an opportunity in that the design of programming did not include general education classroom teachers. Additional lessons learned can be gleaned from REFAM's development of EGRAs for learners with specific disabilities. REFAM invested heavily in developing ways to assess reading for specific populations, such as learners who are blind or have low vision and learners who are deaf or hard of hearing. While these efforts were substantive, they may have undermined efforts toward creating a more inclusive EGRA for all learners.

It is important to note that this evaluation should not be read as either a celebration or criticism of REFAM activities. The evaluation's findings should be read through a broader formative lens on lessons learned about USAID's investment in inclusive education. Important lessons were learned from a project that faced significant challenges during the COVID-19 pandemic yet accomplished many of its original or COVID-adjusted goals. Decades of research demonstrate that inclusive education is a process, not a destination, at which systems arrive. To this end, the findings reported below should be considered as case examples to inform USAID's broader commitment to accessible and inclusive education for learners with disabilities.

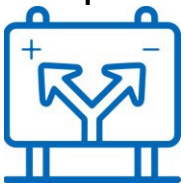
The table below provides a list of "Conclusions" that are based on the findings presented above. These conclusions are not the specific answers to evaluation questions, but summaries of information informed by the EQs. Based on an evaluation of the strengths and challenges of the REFAM program and the conclusions drawn from it,[5] MCSIE outlines several recommendations in this report. These recommendations apply to future programming in Malawi and may provide insights for the development of future USAID-supported inclusive education programming.

[5] Presenting findings, then conclusions and recommendations is a common approach to evaluation that was followed for all three country reports. See https://www.evalcommunity.com/career-center/differences-between-a-finding-a-conclusion-and-a-recommendation/#:~:text=Findings%20should%20be%20presented%20first,the%20purpose%20of%20each%20component

EQ Area	Conclusions	Future Programming Recommendations
Process 	• REFAM engaged at a national policy level and with other development partners. This networked approach infuses USAID activities into other existing literacy development initiatives, which may avoid duplication of efforts or contradictory messaging. • REFAM provided leadership for a TWG and other networks for inclusive education. If these networks are not present in other nations, USAID implementing partners could convene such groups.	• Provide time, staffing support, and encouragement for USAID projects to network, engage with, and provide leadership for policy-level conversations. • Encourage implementing partners to convene or participate in TWGs and other networks aimed at advancing inclusive education within the country.
Screening and Identification 	• Screening training was intuitive and aligned with current practices that built upon existing tools in country, strengthening buy-in to current practices in the environment. REFAM reported that the existing tools were validated; however, information on how these tools were validated is unknown. The process is a critical component for validating screening and identification tools. • Connecting screening to educational practice was innovative and aligned with good practice when training teachers on screening within the school system. However, follow-up on what educators did in the classroom as a result of screening training was lacking. REFAM introduced new concepts, such as how to use screening, and aligned them with IEPs, RTI, and other instructional interventions. These new strategies require follow-up monitoring, coaching, and quality assurance to promote fidelity to interventions. • Institutionalization of changes occurred through advocacy and cooperation with relevant ministries. Data points for learners with disabilities (through EMIS data collection indicators) were updated at the national level as a result of project activities.	• Include time and resources for future projects to understand the screening and identification tools being used and the processes to use them before commencing activity planning and training. • Ensure screening tools and procedures are validated and align with international norms. Only use tools that have a strong track record of accurately identifying learners who may need further evaluation. • Continue to align screening and identification training for all teachers with a focus on IEPs and a philosophy that links the purpose of screening and identification to information on how to best support learners. Avoid using screening as a tool for making placement decisions. • Whenever any new skill or tool is introduced in relation to screening or identification, embed evaluation of the tool through medical verification to ensure that learners are not being over- or under-identified and that tools are not being used for placement decisions. • Continue to link screening and identification to existing data collection processes for the EMIS and for IEP provision. • To the extent possible, develop tools that allow for universal

EQ Area	Conclusions	Future Programming Recommendations
		screening of all children on a routine basis.
Training 	• REFAM's approach to grounding their teacher training series in UDL focused on inclusion for all learners, not just on support for specific characteristics of learners with disabilities. The REFAM teacher training series emphasized reducing environmental and attitudinal barriers while strengthening inclusive practices that could meet the needs of multiple diverse learners at once. REFAM further strengthened the training approach by providing disability-specific support content, particularly for learners who are deaf or hard of hearing, that teachers could pair with the more universal inclusive strategies meant to increase commitment to inclusive practice. • REFAM trained RC and itinerant teachers on how to coach for inclusive teaching practices within the classroom, which provided knowledge to a cadre of educated advocates who could work one-on-one or with small groups of general education teachers to support inclusive education. • REFAM followed up on training with locally available and widely used tools like WhatsApp, which helped reinforce messages, allowed for follow-up questions, and sparked discussion among participants. • REFAM's data on training focused primarily on outputs and not outcomes. While follow-up after training is important, without specific monitoring of interventions, it is impossible to know the direct impact of a training intervention when teachers have opportunities for professional development from multiple sources	• Classroom educators benefit from training related to specific classroom practice versus broad-based theory or focusing on specific disabilities alone. Future educator development activities (i.e., training) should continue to focus on activities teachers can implement to enhance inclusion. • Future teacher training interventions must prioritize coaching for inclusion within their content and across all areas of implementation to advance inclusive education practices. This includes coaching general education teachers on how to screen or identify learners with disabilities and how to make referrals for additional screening and supports. Training teachers and other advocates on how to coach for inclusion is an often-overlooked skillset but may have an important impact on making inclusionary inroads in systems with segregated education settings for learners with disabilities. • Ensure that future training interventions include general education teachers, alongside specialist or resource teachers, to support both targeted and mainstreamed approaches to the progressive realization of inclusive education. Within these trainings, careful tracking of teacher categories (e.g., general education, special needs education, etc.) will be necessary to ensure teachers from various professional backgrounds benefit from activities. • Embed technology-enhanced and in-person follow-up to track the impact of training on classroom practice and to differentiate and isolate specific impacts gleaned from USAID investments.

EQ Area	Conclusions	Future Programming Recommendations
Instruction 	• UDL concepts were intuitive, and participants easily understood them. • Despite inclusive education training, specialist and inclusive education teachers have reservations about the feasibility of inclusive education as a strategy for learners with disabilities. • REFAM used a variety of research and consultative processes to develop adapted EGRAs for learners with learning disabilities, learners who are blind or have low vision, or learners who are deaf or hard of hearing. Some of these adaptations modified the EGRA itself, and others applied accommodations to entire disability groups without individualized consultations. None of the adapted EGRAs made the standard EGRA more accessible. • Informal assessment in the form of "checking for understanding" is a very common practice in Malawi. Teachers did not consider such checks as "assessments," but these could be very valuable as part of an overall assessment agenda. • Head teachers acknowledged the importance of positive teacher attitudes toward learners and inclusive education but also recognized that materials are needed for successful implementation. • REFAM produced and distributed a large number of teaching and learning materials (TLMs), including TLMs for MSL) to meet the needs of learners, their families, and teachers. Developing MSL materials helped fill the gap in available resources for learners who are deaf or hard of hearing. Given close collaboration with other USAID-	• Utilization of a UDL-first and an inclusion-first approach to teacher development appears to have been very effective. Consider framing future calls for teacher development and training to reflect UDL and accessibility rather than training on special educational provision for learners with disabilities. • Consider including general education teachers in inclusive education project interventions and sample groups. Even if a system's current predominant model reflects segregation, engaging with general educators can shape their attitudes and understanding of inclusive education for future development. • Use a Universal Design for Assessment (UDA) approach when developing assessments to ensure that all learners are included. While disability-specific accommodated assessment formats will be necessary to meet learners' needs as appropriate (e.g., providing a braille EGRA for a learner who is blind), future programming should use data and information on the needs of all learners to shape stronger, more valid, and more accessible assessments by using UDA principles. Understand that even a valid and inclusive EGRA will require testing accommodations for individual learners and possibly modifications when it is important to measure different constructs. • Consider larger-scale bilateral TLM agreements between USAID-funded activities that can have a systems-level impact and fill resource gaps in partner countries. Coordinate and align TLM development among USAID-funded activities to increase impact and sustainability. • Develop and report on monitoring and evaluation indicators that go beyond TLM training and distribution to measure the

EQ Area	Conclusions	Future Programming Recommendations
	funded activities, REFAM could have further extended their reach and ensured that work was not duplicated by developing and sharing TLMs with other USAID-funded activities.	inclusivity of environments and processes, such as education practices demonstrated by teachers in supporting learning or inclusive education policies to measure disability inclusion within interventions.
Unintended Consequences 	• REFAM played the useful role of convener because it was based in the capital city with easy access to policymakers, development organizations, and civil society organizations (CSOs). REFAM's leadership in convening regular conversations among key players led to functional TWGs or other fora that will extend beyond the life of the project. • Inclusive education often involves multiple ministerial units. REFAM's networked approach identified and mapped all units within the MoE that played a role in inclusive education implementation. REFAM connected with these units regarding goal convergence, and this can be an effective use of project resources. • REFAM pivoted when it learned about the lack of infrastructure for sign language. Although sign language is often widely used in countries, it may not be institutionalized through materials, curricular requirements, or teacher usage. • REFAM employed effective communication during COVID-19 through using digital platforms.	• Before beginning any implementation work, provide projects with time to understand the inclusive education landscape of a country. Encourage projects to map stakeholders, particularly Organizations of Persons with Disabilities (OPDs), and convene meetings to inform project activities and link those activities to ongoing work in the country. • Develop relationships at the national level with multiple units within education ministries. If inclusive education is a goal of USAID, identify all touchpoints within ministries and establish ongoing contact. This allows projects to benefit from such contact and expands the potential for impact. • Conduct situation analyses of sign language usage and infrastructure prior to developing project objectives. These situation analyses can be conducted as independent contracts prior to solicitations and can be part of broader inclusive education packages to be accomplished before commencing deaf education activities.

2. Introduction

This section of the report provides an overview of the Multi-Country Study on Inclusive Education (MCSIE) evaluation's purpose, Reading for All Malawi (REFAM), and this endline report.

2.1 Purpose of Evaluation

The U.S. Agency for International Development (USAID) is partnering with Inclusive Development Partners (IDP), through the Long-Term Assistance and SErvices for Research Partners for University-Led Solutions Engine (LASER PULSE) mechanism led by Purdue University, to conduct a four-and-a-half-year evaluation of three USAID inclusive education activities in Cambodia, Malawi, and Nepal. These inclusive education activities represent USAID's most concerted efforts to date to build systems to ensure that learners with disabilities have access to quality education. MCSIE seeks to derive lessons learned about what works, for whom, and in what contexts to sustainably advance teaching and learning outcomes for children with disabilities in the target countries. Toward this goal, IDP is using a process evaluation design to develop individual case studies of the inclusive education system in each country and to show how the USAID-funded interventions have affected the respective systems. Five key themes provide a framework for the study: process, screening and identification, training, instruction, and unintended consequences.

USAID and its partners will use the MCSIE evaluation to inform adaptations to its inclusive education activities in Cambodia, Malawi, and Nepal and to plan for new inclusive education programming globally. Researchers collected data for this report in real time, and the findings do not indicate or predict future project activities or long-term project outcomes. Evaluations of this type should be considered part of an iterative and responsive research methodology that generates knowledge over time. The following report outlines the final evaluation findings from REFAM, while IDP will make cross-national comparisons subsequently in future MCSIE work.

2.2 Overview of REFAM and Background Information

USAID's REFAM program was awarded to Juarez & Associates (J&A) in early 2019. The task order totaled $2.9 million to cover fixed fees and reimbursable costs. According to the task order, "REFAM aims to provide a scalable model of an intervention to teach reading to learners with disabilities in one of sub-Saharan Africa's poorest countries, thereby refining an intervention under the umbrella Malawi National Reading Program." Its original theory of change stated:

> *If Malawian learners with disabilities benefit from (a) services provided by an engaged and informed ministry, (b) reading instruction and materials targeted to their needs and abilities, and (c) tutoring and support from their families and communities, then they will better learn how to read and prosper in school (REFAM FY19 Annual Report).*

Due to delays in obtaining local approvals and slowdowns caused by the COVID-19 pandemic, REFAM's original end date of July 31, 2021, was extended through August 31, 2022, and its project scope was modified. Under the task order, REFAM targeted government-funded primary school resource centres (RCs) throughout Malawi. At the time of project implementation, 146 RCs in primary schools were unevenly distributed throughout Malawi to serve all 34 educational districts.

REFAM supported Malawi's National Reading Program (NRP) initiatives and specifically focused on inclusive education and early literacy in Standards 1–4 to improve reading outcomes among children with disabilities. The original task order required the following: early screening documents development, reading materials development, improved teaching practices, awareness raising, increased community support for children with disabilities, and family engagement improvements related to literacy. Because of the delays encountered and COVID-19 impacts, USAID and REFAM pivoted the project's focus to policy-level engagement (national technical working group [TWG] participation), systems strengthening, and development of trainings and/or toolkits on Universal Design for Learning (UDL), individualized education plans (IEPs), screening and identification with support to the Education Management Information System (EMIS), coaching, and family engagement.[6] REFAM also adapted early grade reading assessments (EGRAs) for children with disabilities and, subsequently, provided deaf education training.

It is important to note that Malawi uses an instructional approach for learners with disabilities which establishes that some learners with disabilities will continue to receive instruction in special settings, such as RCs or specialized schools, as the system moves toward inclusive education (National Strategy on Inclusive Education 2017–2021).

According to interviews with teachers, Malawi has several different classifications of teachers who may instruct learners with disabilities. Teachers interviewed described the following roles:

- General education teachers receive a general education teaching diploma and teach in a general classroom.
- Specialist teachers receive a diploma in special education needs and teach in an RC.
- Itinerant teachers receive a diploma in special education needs, or were part of a previous donor-funded activity that provided training in inclusive education and travel between schools.
- Inclusive education teachers receive a diploma in special education needs and typically split their time between an RC and a general classroom.
- Assistant teachers support general education teachers for inclusion purposes.

[6] There was some family engagement between teachers and parents during COVID-19, but it was not linked to REFAM activities.

Specialist teachers, also called RC teachers or special needs education teachers[7] in Malawi, typically obtain a diploma specializing in one disability category (visual, hearing, or learning disabilities). However, many RCs support learners with different types of disabilities. The government may assign a teacher who graduates with a special needs education diploma as a specialist, itinerant,[8] or inclusive education teacher.

2.3 Purpose of Endline Report

MCSIE was originally comprised of four phases: (1) inception, (2) initial data collection, (3) midline data collection, and (4) endline data collection.[9] IDP conducted an initial inception visit to Malawi in December 2019. Because MCSIE's start date began after project implementation commenced in Malawi, IDP was only able to collect data after the initial project start-up and implementation phases. IDP proposed an interim report as an alternative to an initial or midline report due to the restrictions imposed by the COVID-19 pandemic, which halted all in-country data collection for the MCSIE team and slowed many of REFAM's activities. IDP submitted the MCSIE Malawi Interim Report in June 2022, and it was approved by USAID in January 2023. Additionally, through the MCSIE Areas of Intervention Mapping (AIM) Study, IDP has examined and documented the various screening, teacher training, and instructional efforts undertaken broadly in Malawi by other stakeholders, such as local and national non-governmental organizations (NGOs). In October 2022, IDP produced a separate report on this topic.

This endline report seeks to provide a cumulative overview and reflection on the available evidence to answer each of the five areas of inquiry or evaluation (process, screening and identification, training, instruction, and unintended consequences) as they pertain to the work of the REFAM project. The report also sheds light on the status of inclusive education programming for relevant stakeholders in Malawi, others within the USAID network, and global stakeholders who would like to learn from the evidence generated.

3. Methodology

This section provides a general overview of the methods used to obtain data for the report, including information on data collection and analysis methods, the role of evaluative rubrics and checklists, and the limitations of this study.

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[7] For the purpose of this report, and at the guidance of teachers in Malawi, the term "specialist teacher" will be used in lieu of RC teacher, resource teacher, or special needs education teacher for teachers who support learners with disabilities in RC settings.

[8] A previous initiative by a development project and the Ministry of Education (MoE) established a specialized training course for the initial itinerant teachers, but current teachers stated that specialized trainings separate from the special needs education coursework are no longer provided to teachers with this designation.

[9] These phases were subject to change based on the COVID-19 pandemic and shifts in data collection plans and project end dates.

3.1 General Overview

For each of the study's five themes, USAID generated an evaluative question (EQ) to inform the MCSIE evaluation of individual country programs as well as programming across the three countries:

1. **Process:** What worked well/poorly in the process of setting up an efficient, effective, and sustainable system to focus on improving the quality of education for learners with disabilities?
2. **Screening and Identification:** What methods worked best to identify learners with disabilities?
3. **Training:** What training model(s) worked best to provide teachers with the resources and support they need to best meet the needs of learners with disabilities?
4. **Instruction:** What instructional models worked best to improve classroom instruction and reading outcomes among learners with disabilities?
5. **Unintended Consequences:** Were there any unintended consequences of the activity? What were they?

3.2 Methods and Sample

This report uses a **vast** set of data collected from 2019 to 2023[10] for both the interim report and the endline report under the leadership of the Invest in Knowledge Initiative (IKI) and with support from IDP. The following is an abridged summary of these methods and sample sizes (see more details in Annex C). Much of this information was collected via telephone due to the COVID-19 pandemic.

Exhibit 1. Snapshot of Cumulative Primary Data Collection Sample

Type	Sample
Key Informant Interviews (KIIs) or Focus Group Discussions (FGDs)	**293 (total)**
Government (interim + endline reports)	22
Organization of Persons with Disabilities (OPDs)	4
Head Teachers	56
Classroom teachers (specialist and IE teachers, as per definitions found in Section 2.2)	54
Implementing partner staff	8
Training participant KII/FGD	72
Families (12 FGDs)	77
Surveys	**373 (total)**

[10] The REFAM project officially closed in August 2022, but MCSIE data collection on the project continued into 2023.

Type	Sample
Training (pre-post)	318
Teacher survey	55
Observations	**66 (total)**
Teacher training	7
Literacy lessons	59

KIIs or FGDs (total sample: n=293)

- **Government staff.** In total, the team conducted 10 KIIs with national government staff from the Ministry of Education (MoE), with a total of five interviews with 6 persons (4 female, 2 male) for the interim report; 4 respondents were interviewed twice during the interim reporting phase. Five interviews (3 female, 2 male) were conducted with government staff for the endline report. One respondent (male) from the interim report was unavailable due to changing roles. The team also conducted 12 interviews with 15 regional education officers (4 female, 6 male, 5 not disclosed) for the interim and June 2022 trip report.
- **OPDs.** The team interviewed 4 OPD representatives from the Malawi National Association of the Deaf (MANAD), the Malawi Union of the Blind (MUB), and Parents of Disabled Children Association of Malawi (PODCAM) (3 male, 1 female) for the interim report. No further data was collected from this population for the endline report.
- **School directors.** The team interviewed 56 school directors as part of school visits and classroom observations for the interim report.
- **Classroom teachers.** During the school visits' data collection, the team interviewed 54 teachers.
- **Implementing partner staff.** Across the lifetime of the evaluation, the team consulted with 6 implementing partner staff. IDP spoke with 5 implementing partner staff (4 female, 1 male) for the interim report. For the endline report, the team interviewed 1 senior project leader (male).
- **Parents/Caregivers.** For the interim report, IDP conducted 12 FGDs with parents of children with disabilities. The total sample of FGDs was 77 parents or caretakers.

Surveys (total sample: n=373)

- **Pre-post training surveys.** MCSIE received pre-post data from REFAM after inclusive education trainings. In project meetings, stakeholders (including REFAM, USAID, and MCSIE) agreed that two separate surveys would place an undue burden on participants, so REFAM added a limited number of MCSIE items to their own surveys. MCSIE received four pre-post datasets with samples ranging from 59 to 356 participants per data set; 38 responses were removed due to participants not completing both the pre- and post-training surveys. The total sample completing both pre- and post-training surveys was 318 (119 male, 124 female, 75 unknown).

- **Teacher surveys.** From November to December 2022, IKI administered a broader teacher survey (not just focused on training) to the same classroom teachers profiled in the classroom teacher interviews above. In total, this population of 55 teachers (24 male, 31 female) included 47 specialist teachers from RCs and 8 inclusive education teachers from general education classrooms.

Observations (total observations: n=66)

- **Training observations.** MCSIE conducted a total of seven observations of REFAM trainings. These included both in-person and blended trainings (including observation of online activities). All observations were conducted for the interim report, and no further observations were undertaken for the endline report.
- **Classroom lesson observations.** MCSIE conducted 59 classroom observations for the interim report. Data from these reports was also used for this endline report.

Materials Review

- **Secondary source reviews (over 40 materials).** For the interim report, REFAM reviewed over 40 reports from OPDs, other USAID projects (e.g., Malawi Early Grade Reading Improvement Project [MERIT]), development reports from organizations working in Malawi (e.g., United Nations Children's Fund [UNICEF], Save the Children), and relevant research in peer-reviewed sources.

- **Project materials review (over 200 materials).** From interim to endline, the evaluation team reviewed over 200 project resources, including training materials, classroom teaching and learning materials (TLMs), screening materials, coaching materials, community outreach materials used during the COVID-19 pandemic, videos and audio files, datasets, and project reports.

IDP and IKI collaborated closely, across languages and time zones, to collect the above data. This included piloting tools and adapting them with enumerator practice and conducting regular enumerator trainings and training-of-trainer (ToT) sessions virtually with IKI leaders. In addition, data was translated into English as needed.

3.3 Limitations

Due to the COVID-19 pandemic, IDP was unable to visit Malawi in 2020 or 2021, the primary years of data collection for this evaluation. As a result, IDP worked closely with IKI to support their in-country data collection efforts. Ultimately, due to pandemic conditions, these efforts also shifted to virtual formats, such as telephone interviews and surveys. Additionally, because of the pandemic, MCSIE evaluators were sometimes presented with challenges in observing or demonstrating the project's impact. For example, with schools closed for extended and unpredictable time periods in 2020 and 2021, evaluators could not observe classroom-based

instruction until early 2022. At that point, teachers and learners were only beginning to adapt to the new in-school realities. Nonetheless, evaluators have attempted to triangulate data with other sources, such as interviews and surveys, to understand the project's impact wherever possible.

This final report also draws heavily on REFAM's quarterly and annual reports which were provided after the close of the project despite earlier requests. In these reports, there is limited data on outputs and outcomes. REFAM successfully captured data related to participant satisfaction regarding trainings. Data was less clear, however, on changes in Malawian schools that could be attributed to REFAM trainings. Also unclear is the number of "ripple effect" trainings participants may have subsequently provided after REFAM trainings. REFAM reported that head teachers and specialist teachers shared information with others, but it was unclear how much of this sharing was attributable to REFAM trainings or generally part of the work of these actors. Further, REFAM contributed to MERIT's and *Yesani Ophunzira's* (Assess the Learners/YESA) program work, which undoubtedly increased the reach of those projects. However, it is unclear in data reported in annual reports how many of the participants were engaged with REFAM work or how many participants may have been from MERIT and YESA. Finally, schools and districts were confused about how many and which trainings were from REFAM and which were provided by other organizations or projects.

As noted above, teachers and other educators have ample opportunities to participate in trainings in Malawi (e.g., 72% of teachers surveyed had previous in-service training in inclusive education), allowing for value-added skills building. However, it also makes tracking the impact of any particular project difficult. An example of this came from a head teacher survey that MCSIE conducted. On average, REFAM reported in its annual reports that it targeted one specialist teacher or head teacher from each school to expand the project's geographical reach. Head teachers interviewed reported different data about which teachers and how many worked with REFAM and which teachers and how many may have engaged with other projects.

Consideration: Teachers who participated in REFAM training also had opportunities for professional development from other sources, so it was difficult to track the immediate impact of a single training. Without specific follow-up, it may be impossible to know the direct impact.

In MCSIE head teacher interviews, only 63% of head teacher training participant estimates matched REFAM's targeted participants. Head teachers, on average, believed that three teachers from their schools attended REFAM trainings (note: this could be due to teacher transfer, which is common). One head teacher believed that all teachers in the school attended trainings. In total, 55% of head teachers also said they communicated with other schools about the training activities after completing the trainings. Overall, the embedded nature of the REFAM program brought about new opportunities for networks, sustainability, and partnerships. It also, however, created a scenario that makes it difficult to identify directly attributable outcomes for USAID investments.

Similarly, REFAM's reporting about both TLMs (i.e., the family literacy toolkit) and sign language materials focused on inputs. REFAM documented specifically how many materials were

developed and where those materials were distributed. No specific data in any reports, however, indicates how those materials were used, what lessons might have been learned from their use, and how they impacted early-grade literacy (if at all).

Finally, readers should note that using data collected from secondary source materials and post-hoc KIIs has its limits. Although IDP was able to identify programmatic successes and challenges through secondary source data, the reasons behind programmatic decisions were not always apparent. The purpose of the KIIs and FGDs was to shed light on decision points not always readily apparent in secondary source materials.

4. Findings and Conclusions

This section of the report provides an overview of the endline evaluation's findings, divided according to the five EQs.

4.1 Process

EQ1: What worked well/poorly in the process of setting up an efficient, effective, and sustainable system to focus on improving the quality of education for learners with disabilities?

The REFAM program effectively collaborated with Malawi's Ministry of Education (MoE) at all levels and with other literacy-related development programs and projects in the country. By doing so, REFAM focused on systems-level change in Malawi providing an opportunity for scalable and sustainable change through government uptake. REFAM intentionally partnered with policymakers at the national level and inclusive education desk officers at the regional level to both influence policy change in relation to inclusive education and to engage stakeholders who could have a "ripple effect" in Malawi's schools (i.e., desk officers). To this end, REFAM was able to leverage existing infrastructure from the international community, Government of Malawi initiatives, and the private sector, thus avoiding a siloed approach to literacy and development. One project design was a limitation of this model as it focused only on specialist teachers. REFAM had limited direct engagement with and, therefore, limited impact on general education teachers in general education classrooms.

4.1.1 Collaboration and Systems Strengthening

REFAM demonstrated strong collaboration and communication among various stakeholders, especially at the national level, throughout the project. A key strength of the REFAM program was how it embedded project activities into the ongoing NRP, international development, and civil society initiatives. These relationships and communications were especially strong with the Department of Special Needs Education (DSNE)[11] officials at the national level and inclusive education desk officers at the regional level. The strongest evidence of this collaboration was the successful partnership with the MoE and other partners like UNICEF to support developing a draft inclusive education policy in Malawi. Much of this work was facilitated through a TWG on inclusive education. Draft language for the new inclusive education policy includes inputs on screening, referral, and identification co-developed by REFAM. The project also worked closely with other USAID literacy projects to create multiplier impacts for learners with disabilities. REFAM leadership collaborated with other USAID-funded projects like MERIT, YESA, the National Reading Program Implementation and Expansion (NRPIE), and the Malawi Upper Reading Project (UPRead) to promote the inclusion of learners with disabilities in those projects' activities. Examples include providing the MERIT project with specific inclusive education materials for MERIT trainings and providing information on disability-inclusive EMIS inputs for the YESA project. Through strong communication and management, REFAM avoided becoming a standalone project on inclusive literacy and, instead, played an important role as a key partner in developing an infrastructure for inclusive education and literacy in Malawi.

Consideration: OPDs are critical partners for inclusive education initiatives (CRPD, 2006).

OPDs provided important contributions to the project even though partnerships were not formalized. REFAM was required to partner with OPDs throughout interventions; however, the solicitation did not explicitly state that REFAM was required to formally contract or pay OPDs for their contributions to the program. REFAM collaborated with OPDs, such as MANAD, MUB, and PODCAM, on various tasks and importantly utilized members of these organizations as trainers, modeling inclusion. For example, one head teacher interviewed for the MCSIE evaluation stated:

> *When we went for a training in Karonga again, I found a lady who is deaf. She was the one who [was] facilitating everything. I didn't think this one was deaf until I saw the husband interpreting everything. Whatever we ask, the husband has interpreted. We thought those people were failures, and I tell you, they are not failures. They can perform as we perform. That is what surprised me.*

[11] Since the drafting of this report, the Department of Special Needs Education (DSNE) has changed its name to the Department of Inclusive Education (DIE); to keep consistent with the names referenced in REFAM documentation, the name DSNE will be used throughout this report.

However, despite the positive inputs from OPDs, REFAM's engagement with them did not include compensation beyond paying for meals and accommodations for their role in training. Interviews revealed that OPDs were dissatisfied as a result of this. REFAM's FY21 Annual Report mentions budgeting for accessible materials and sign language interpreters but does not mention direct contracting with OPDs for their training services and engagement. Through KIIs, OPD partners expressed that while their capacity had been strengthened through the collaboration, they felt they should have their own budget to implement interventions because it would help with consistent engagement and sustainability. Interviews with the implementing partner staff indicated that they did not develop a mechanism for formal partnerships with OPDs due to cost and out of sensitivity to the relationships among OPDs. Thus, while these collaborations are highly commendable and demonstrated REFAM's commitment to inclusion, the omission of formal partnerships and compensation resulted in concerns from OPDs on sustainability.

4.1.2 Project Design and Staffing

Utilizing partnerships greatly expanded REFAM's reach. With its budget of only $2.9 million, REFAM necessarily had a small staff compared to other USAID projects focusing on literacy and/or disability inclusion. To facilitate the timely completion of activities, REFAM worked with a wide range of consultants and partners. Its internal staff supported the project's overall design; all staff had either experience with national literacy initiatives, disability inclusion, or (in most cases) both. REFAM's 2022 Final Report demonstrated how it used a network of partners to facilitate communication and activities. For example:

> *[Division] and district staff reporting to DSNE were also tasked with the duty of communicating with [specialist] teachers in primary school RCs for any engagements with REFAM. REFAM has in the process strengthened the technical and management capacities of the officers in disability-specific concepts, processes, and tools. (REFAM Final Report, p. 6)*

Furthermore, a strength of REFAM was its close working relationship with other USAID-funded activities—MERIT and YESA—to promote inclusive education with a wider audience of stakeholders. While REFAM was encouraged to leverage lessons learned from MERIT, YESA, and other USAID-funded activities, it was not a mandate. Interviews with implementing partner staff indicated that their close collaboration was partially due to USAID organizing a weekly meeting including each activity's Chief of Party (CoP) during the height of the COVID-19 pandemic. REFAM staff shared that the regular meetings resulted in more frequent informal check-ins with each other on upcoming priorities and tasks, allowing them to find opportunities to collaborate. REFAM participated in several national events with MERIT and YESA and was able to share success stories from REFAM interventions and program achievements. Additionally, REFAM reporting on Custom Indicator 1-2 from the 2022 Final Report shows that through integration with MERIT and YESA, a total of 42,938 educators from general education schools completed professional development activities on teaching learners with special education needs. While the specific content and amount of information on inclusive education within these

programs' professional development were not reported, the large number of general educators that were reached vastly outnumbers the number of educators REFAM reached on their own.

Networks led to contributions at both policy and practice levels. The solicitation for this project required that REFAM engage with the NRP and Malawi's MoE. REFAM's approach created a scenario in which REFAM became a member of a larger network and initiative toward literacy in Malawi. In addition to its governmental collaboration, REFAM also engaged with other organizations to ensure that efforts were not duplicated (or contradictory) within Malawi's inclusive education landscape. Specifically, REFAM worked with Save the Children and the Malawian organization Sandi Thandiza to utilize existing screening instruments already in use in Malawi. Further information on the technical aspects of these tools will be provided in the Screening and Identification section below, but the strategic decision to utilize tools already in use prevented possible confusion among stakeholders about which tool to use for screening in Malawi classrooms. Further, the project utilized content experts for specific trainings and overviews that extended beyond staff expertise. Because relationships were developed with both individuals and institutions, work could be pivoted and redesigned for compressed time periods.

Consideration: REFAM demonstrated that implementing partners can both implement activities and play the role of convener among national and international stakeholders, as evidenced in this project.

The work that REFAM accomplished with the TWG represents an opportunity for lessons learned for USAID projects in general. When the TWG met irregularly, REFAM took responsibility for organizing meetings and ensuring invitations were sent in a timely fashion. A second example of utilizing networks is described in the EGRA sections below. When REFAM discovered there were discrepancies and gaps in Malawi Sign Language (MSL) usage in RCs, they began working with MANAD to establish materials that could standardize MSL usage (with the additional hope of promoting a more sign-language-first pedagogy in RCs). In other cases, REFAM played a more participatory role in USAID trainings and in private sector engagement. The networking approach had notable challenges (i.e., implementation activities were behind schedule even before the COVID-19 disruption, and the above-mentioned payment challenges with OPDs were an issue). However, the REFAM networking approach with other education actors and donor-funded education programs and their advocacy efforts with these different stakeholders present important considerations for USAID as it continues to promote inclusive education worldwide.

4.1.3 Conceptualizing Inclusive and Special Needs Education

REFAM's scope of work followed the current predominant national education model for learners with disabilities, which places children with disabilities in segregated RC settings until they are deemed prepared to transition to general education classrooms. In Malawi, the "special needs education" system targets learners who are identified as having four main disability types: visual disabilities, hearing disabilities, learning difficulties, and physical disabilities. While Malawi policy states the country uses the terminology of twin-track[12] approach to education, in which learners with disabilities have historically been served in special schools or, more frequently, RCs that either stand-alone or are attached to general education schools. Decisions on student placement have historically been made on an interpretation of the "severity" of disability (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2021), but there has been a more recent focus on broad-based inclusion for all learners, including learners with disabilities, since the inception of Malawi's 2017–2021 National Strategy on Inclusion. REFAM's predominant engagement with teachers was with teachers and leaders from RCs (n=755) and the seven special schools in Malawi, while it simultaneously engaged with DSNE inclusive education experts. The program, then, presented a paradoxical approach to technical assistance by supporting inclusive education policy advocacy in governmental conversations, yet engaging predominately with practitioners who work in segregated environments.

Teachers supported inclusion but questioned learners' capacity to advance. MCSIE analyzed survey data from 55 teachers who participated in REFAM programming to understand their perspectives on disability inclusion. Forty-seven (85%) of these teachers were specialist teachers, while the remaining seven (15%) were inclusive education teachers from general education classrooms. The survey was designed to reflect the disability labels present in national policy and those used to communicate in the REFAM project. Exhibit 2 demonstrates that teachers strongly agreed that learners with hearing disabilities, visual disabilities, and learning difficulties (national terminology) could participate in literacy activities. These same teachers, however, had significant doubts about learners' capacity to *advance* in their education in general education classrooms. These results reflect an important orientation toward

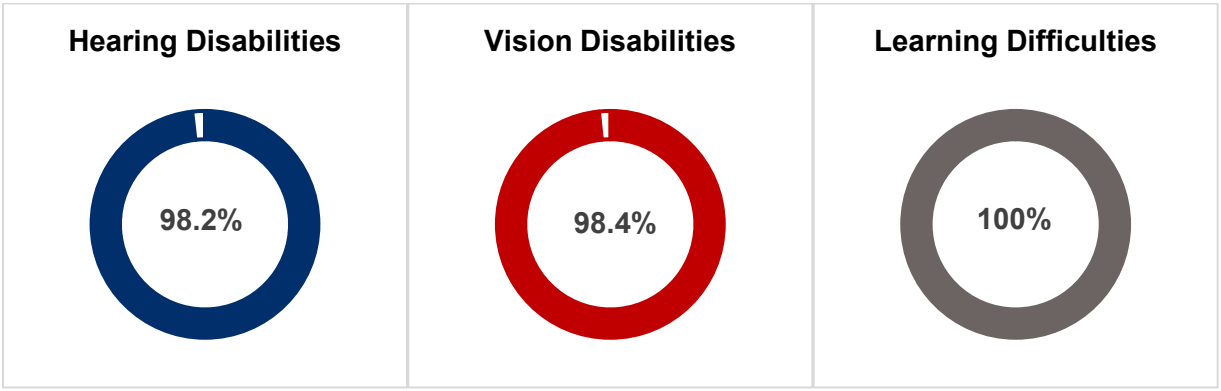
Consideration: While access support was strong in Malawi, doubts that learners could succeed and proceed through educational systems indicates that teachers may benefit from exposure to success stories from learners with disabilities and may need more support and training—and time—to see how shifts in their teaching practice can lead to similar improved outcomes among their own students (Lowrey et al., 2017).

[12] As noted above, the terminology of "twin tracks" used in United Nations documents do not describe educational settings, as they are used in Malawi policy documents. Instead, UNDIS and other documents focus on "targeted" and "mainstreaming" programs that can both be implemented inclusively.

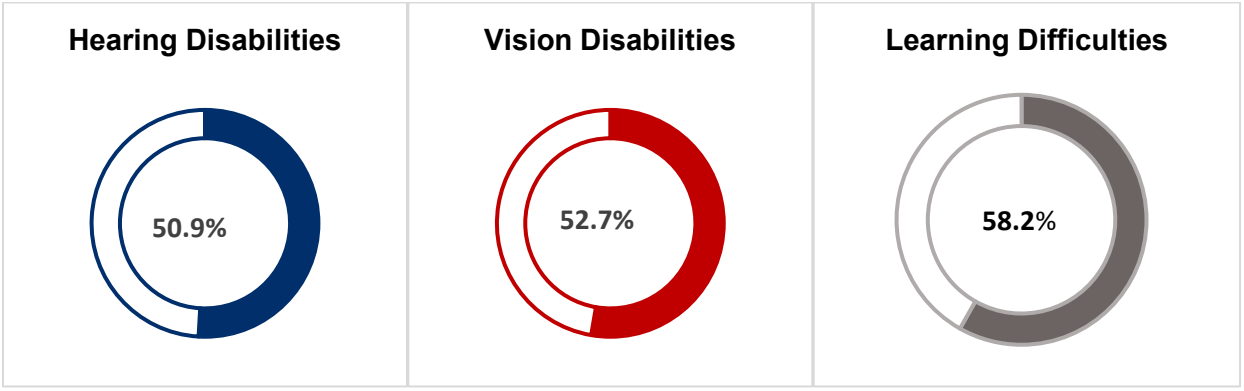
access but not educational success or outcomes, meaning that teachers believed that students could physically participate in classrooms but may not academically learn. In this conceptualization, "inclusion" equates to an opportunity for students to learn and be present in a general education classroom. As a result, only about half of the teachers surveyed agreed that access to general education classrooms would lead to significant advancement of learners with disabilities through the system. Based on survey results, it is unclear if this sense of fatalism is based on a lack of confidence in the general educational classroom system, in the efficacy of the strategies on which they were trained to support learners with disabilities to advance, or in learners' capacity.

Exhibit 2. Teacher Attitudes on Participation and Progression of Learners with Disabilities

Percentage of teachers who agree or strongly agree that learners with disabilities **can learn** in general education classrooms.



Percentage of teachers who agree or strongly agree that learners with disabilities can **advance** to higher grades in general education system.



4.1.4 Sustainability

REFAM emphasized local buy-in of project interventions to promote sustainability. Distribution and sharing of REFAM-produced materials allowed national stakeholders to sustain efforts. Sustainability of impact is impossible to measure in the short-term, but some contributions to this project appear as if they will be sustained, as local partners have assumed responsibility for implementation. For example, as previously mentioned, at the start of REFAM, the project was instrumental in coordinating the inclusive education TWG meetings; this included setting the meeting dates and times, arranging the schedule, and inviting participants. By the end of REFAM, reports indicated that these responsibilities had been handed over to government officials who took the lead on coordinating, setting agendas, and leading these meetings.

Another example of REFAM promoting sustainability was by providing materials to various stakeholders throughout the project. For example, in 2021 (as per REFAM's FY21 Q3 and Annual Report), REFAM produced a series of MSL videos in collaboration with MANAD. That same year, the program provided "parent tip sheets" across 34 districts and distributed reading materials to RCs that were estimated to reach more than 4,000 learners (REFAM FY21 Annual Report). Furthermore, REFAM handed over all UDL materials from the project to DSNE in May 2022, prior to the close of the project. Finally, by including OPDs in training efforts (both as trainers and participants), REFAM helped build OPDs' capacities and reputations as inclusive education experts in Malawi to carry forth advocacy and capacity-building efforts. REFAM emphasized local participation and ensured materials reached multiple levels of stakeholders so that efforts continued after the program's close. Although time will tell if these materials have been used, having materials and enhanced capacity may help Malawian stakeholders to continue to develop inroads for inclusive education.

MCSIE found evidence that stakeholders wished to continue REFAM's work that focused on children with disabilities and expand it to include children with intersectional risks associated with school success. For example, MCSIE conducted interviews with key government stakeholders in March 2023 to retrospectively examine the achievements and challenges experienced with REFAM. During an interview, one government official pointed to work that would not only be sustained from the REFAM project but also be expanded to include children with intersectional risks associated with success in school:

> *Improved engagement from teachers in schools and with parents as a result to coaching [referencing WhatsApp groups] and training on the use of UDL, has helped teachers to communicate to parents so they better understand their role to support their learner at home. It is not just taking the child to school and giving them the supplies. This has extended to siblings, and even schools without specialist teachers. Enhancement of schools and specialist teachers is a plus, but each one of these capacity-building supports requires refresher courses, and we noted that our special teachers are currently lacking and this was brought forward through REFAM [by] not just targeting learners with disabilities but those with diverse needs such as psychological needs, vulnerable*

households, etc. So, we will take this forward. (MoE Official, identifiers withheld for confidentiality)

The government official's remarks highlight two important features related to sustainability. One is that REFAM successfully provided follow-up consultation and network-building with its training participants. REFAM created and monitored WhatsApp groups and provided supplemental information to participants for 10 weeks after trainings were completed (REFAM FY22 Q1 Report). Once the 10 weeks had passed, WhatsApp groups remained active for participants to share ideas, engage each other with questions, and support each other's efforts long past program close. Secondly, as noted above, most of REFAM's efforts were focused on DSNE and RCs. This focus was appropriate, as this is Malawi's current service delivery model. However, due to limited engagement and only a small number of general education teachers being reported as trained through REFAM, it can be inferred that the project had a limited sustained impact on preparing general education schools to become more inclusive beyond the 90 itinerant teachers who attended REFAM trainings.

Consideration: For new learning to be sustained, all training activities need follow-up coaching, often with refresher information and monitoring to assess impact and progress.

Finally, in relation to deaf education, new initiatives emerged from work that was started in REFAM. REFAM collaborated with MANAD to create training and learning materials validated by strategic directorates within the MoE, Montfort, and Machinga Teacher Training College (TTC). Additionally, REFAM presented trainings in collaboration with MANAD, Montfort, and Machinga TTC to help build capacity to support future pre-service and in-service training for teachers. As a result of the collaborative efforts, REFAM engaged the MoE to discuss the development of a pilot course in deaf education and MSL that would utilize and build upon the REFAM training. The Directorate of Teacher Education and Development (DTED) and DSNE committed to piloting a course that could lead to a full three-year diploma, increasing the capacity of lectures at the college and supporting MANAD to recruit qualified educators fluent in MSL to help teach this MSL course (REFAM FY21 Annual Report). A KII with a government official revealed that since the close of REFAM, Machinga TTC has begun planning to pilot an MSL and deaf education training course with approximately 150 teachers. As the course is only being piloted, a full curricular review would be required before becoming part of the curriculum (overseen by Montfort College). However, the government official then shared the following hopes after the two-year pilot diploma course: graduates would be able to help support training other teachers in MSL and deaf education, and the pilot could be rolled out to other TTCs to strengthen MSL and deaf education throughout Malawi. The MoE's commitment to build on REFAM's training materials indicates how influential a program's training approach and materials can be on a government system.

4.2 Screening and Identification

EQ2: What methods worked best to identify learners with disabilities?

Answer: It was impossible to determine a "best" approach based on data available. REFAM utilized existing screening tools (ones already in use by the MoE and one developed by the Malawian organization Sandi Thandiza) and trained over 500 educators and administrators on screening and identification tools. REFAM also advocated at the policy level for indicators related to Malawi's EMIS system. Little is known, however, about the impact of the training in relation to changes in teacher practice, the number of children screened due to training, or the validity and accuracy of screenings when implemented in schools, as REFAM did not include a plan for impact assessment activities. It is unclear how REFAM activities linked or supported screening at the school level beyond the training. MCSIE head teacher interviews revealed that only 16% of teachers were using screening tools after REFAM trainings. However, the REFAM activity attempted to raise awareness of the relationship between screening and teacher practices, introducing relevant concepts like response to intervention (RTI) and linking IEPs to screening and identification in their workshops.

REFAM strengthened awareness of, and buy-in to, screening and identification practices by building upon existing in-country tools used for screening and identification. REFAM's approach to developing screening activities was to leverage existing resources and approaches and include these in trainings. For example, for the project's screening module, REFAM sourced 200 copies of an instrument called the Quick Tool for Vision and Hearing Screening from the Inclusive Education Toolkit (Quick Tool) developed by Save the Children and used by the MoE to screen children. Quick Tool was reportedly validated by the government prior to REFAM; however, the means for validation are unknown.[13] REFAM also developed modules on how to use a Sandi Thandiza screening instrument that is used for identification of learning difficulties. REFAM highlighted in its FY21 Annual Report that it collaborated with Save the Children, Sandi Thandiza, and the MoE to develop protocols and training materials. REFAM trained teachers and

[13] When the validity of a new or adapted screening tool is being established, the outcomes yielded by that screening tool are initially inspected to see whether they correspond to what is regarded as a definitive indicator (i.e., a "gold standard" diagnostic test) of the same target condition to determine if the screening tool is measuring what it is supposed to measure. Generally, it is important to assess a screening tool's sensitivity (e.g., the ability of a test to correctly identify children with disabilities) as well as a tool's specificity (e.g., the ability of a test to correctly identify children without disabilities). This establishes a tool's validity. See American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (Eds.). (2014). Standards for educational and psychological testing. American Educational Research Association.

administrators on these screening tools, using a ToT model to prepare its trainers for sessions with educators. Trainings did not include any direct practice with children or health professionals. The training reach was national, with representatives from seven of Malawi's educational districts, as shown in Exhibit 3. The reported use of screening tools was only 16%. Prior to REFAM's training, few participants reported using tools available to support screening and identification, and this point was further emphasized in FGDs with teachers during validation who shared they were not aware of screening tool resources prior to REFAM. By building upon existing in-country tools and reaching a wide audience with training, REFAM reportedly helped bridge a knowledge gap on tool awareness, therefore strengthening teachers' capacity and buy-in to use them along with other practices, such as talking to parents or observing learners.

Exhibit 3. Participation by Government Unit for Screening Training

Division	Female	Male	Total
Central East Education Division (CEED)	21	53	74
Central West Education Division (CWED)	60	65	125
North Education Division (NED)	27	44	71
South East Education Division (SEED)	23	48	71
Shire Highlands Education Division (SHED)	22	52	74
South West Education Division (SWED)	46	50	96
Total	**199**	**312**	**511**

Source: REFAM FY21 Annual Report

REFAM elevated the importance of screening and identification to the national policy level. REFAM's approach to engaging with policymakers was cross-cutting. For example, REFAM worked closely with UNICEF and YESA to advocate for screening and identification to be included in the drafts of the new Malawi inclusive education policy. REFAM also engaged in policy and procedural advocacy at the national level for screening. One way REFAM contributed to larger national procedures was to recommend changes to the Annual School Census (ASC) to make the Census more sensitive to capturing data about learners with disabilities for Malawi's EMIS system. Specific changes REFAM recommended are provided in Exhibit 4. To institutionalize changes made to the ASC and EMIS, REFAM collaborated with DSNE to appoint a focal person to work with Malawi's Planning Directorate and ensure all changes were entered into final products. REFAM further provided training to the MoE on new protocols for the ASC. Finally, to support understanding and the feasibility of the ASC changes, REFAM piloted the tools during their EGRA development activities in RCs and special schools to assess if the additions better-captured disability prevalence in classrooms. No information on this pilot was reported nor was it clear from KII documentation if the revised tool was used nationally.

Exhibit 4. REFAM Recommended Changes to ASC Tool for Government

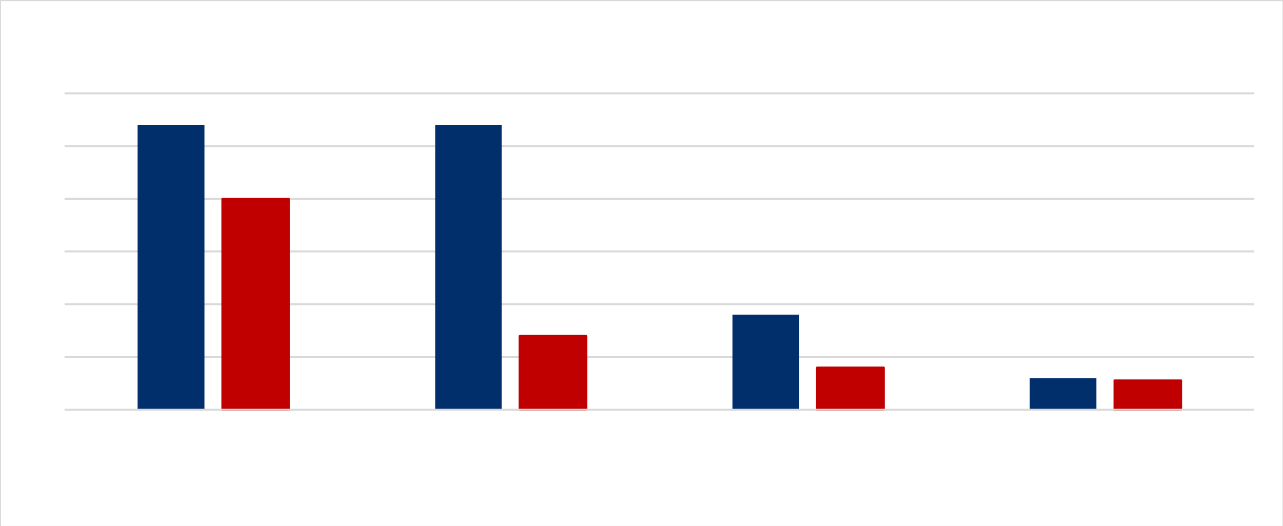
Section	Section Name	Changes
C (4)	Pupils with Special Needs	Added "deafblind," removed "gifted and talented"
C (8)	Number of Dropouts	Added "disability" as a reason for dropping out
C	Infrastructure and Sanitation	Added information on accessibility
D (7)	Furniture for Class	Changed teaching materials to include braille materials, large print materials, audiobooks, adaptive furniture, and assistive materials
F	Teacher Details	Added disability codes for "specialist teachers"; removed "mentally disturbed" as a category of disability for teachers

Source: REFAM FY22 Quarter 1 Report

Teachers disproportionately used teacher observation and parental engagement to complete the screening and identification of learners with disabilities rather than combined approaches or screening tools alone. REFAM developed a thoughtful approach to developing screening and identification training. The trainings relied on existing tools, introduced relevant concepts like RTI, and linked tools like IEPs to screening and identification. Self-reporting on outcomes, however, was not found in REFAM reports. MCSIE then turned to other sources to understand the impact. Exhibit 5 demonstrates how head teachers observed screening and identification in their schools and their perceptions of the effectiveness of various screening methods. The graph represents the number of head teachers who observed strategies being used in their schools and how they gauged the strategy's effectiveness. Data from head teachers revealed that teachers tended to rely on their own observations and parent conversations, but teachers tended not to utilize tools or formal health assessments for screening. These findings represent a gap in the application of training for teachers and head teachers who attended trainings.

Consideration: Good practices in data gathering about children would utilize observation, parental engagement, screening tools, and (where deemed necessary) further assessment by medical or psychological professionals (Maki et al., 2015). A MCSIE head teacher survey revealed that observation and parent discussions were disproportionately used to make identification decisions in schools rather than schools relying on multiple data sources.

Exhibit 5. Screening Methods and Their Perceived Effectiveness



Source: MCSIE Head Teacher Interview Report

Head teachers' perspectives on what comprises effective strategies for screening and assessment demonstrated that a wide range of strategies were employed, even among teachers who attended REFAM trainings. Head teachers provided the following context for their screening and assessment practices:

> *I have noted that [in] the screening itself when we pick a learner for screening using some tools, I think the most effective one is when you give the learner a task you observe how he/she is doing that is where we feel is most effective because you take note of what is happening and record what you see. (Female Head Teacher, MCSIE Head Teacher KIIs)*

> *From my looking at things, the involvement of parents is very effective because the parents know the history of the child. And parents are the owners of the child. We are not transferring the ownership from parents to school. But they should also appreciate that the school or other organizations are assisting them. (Male Head Teacher, MCSIE Head Teacher KIIs)*

Raising awareness, involving parents, and observing learners in the classroom are all positive strategies for identifying potential learners with disabilities when paired with effective tools for screening and identification. These strategies are further strengthened through referral systems to community and health supports for additional screening or disability support services.

4.3 Training

EQ3: What training model(s) worked best to provide educators with the resources and support they need to best meet the needs of learners with disabilities?

Answer: There is not adequate data to determine what worked "best" in REFAM, but several aspects of training reportedly to work well for participants per interviews and survey responses. An area of strength for REFAM was its explicit focus on the different dimensions of inclusive teaching and learning based on the principles of UDL in its trainings, specifically in relation to good practices for learners with disabilities. REFAM provided the project's UDL training series to 755 unique participants, including specialist teachers (nearly all held diplomas in special needs education), head teachers, desk officers, OPDs, and other service providers. The UDL training series was also provided to 90 itinerant teachers, for a total of 845 participants trained. Results of the training indicated that participants had very high satisfaction with the training program; however, REFAM reported on outputs (number of persons trained and materials produced) rather than outcomes, so the evaluation question could not be fully answered. MCSIE evaluation data did, however, demonstrate that 100% of specialist teachers who reported feeling prepared "to a limited extent" to support learners with disabilities prior to REFAM trainings reported feeling "prepared to a great extent" after participating in the training series. Interview and open-ended survey responses from teachers indicated that specialist teachers are embracing the individualized nature of inclusion while also utilizing the UDL-grounded approach emphasized through REFAM trainings. Although not evaluated for their impact, REFAM also provided follow-on activities that supported the ongoing professional development of teachers, head teachers, and DSNE officials through a 10-week WhatsApp group that reinforced ideas presented in trainings.

4.3.1 Training Design, Delivery, and Impact

Participants were satisfied with REFAM trainings, and training materials aligned with inclusive pedagogy. While REFAM was designed more as a policy than a training initiative, the project's important contribution was its focus on UDL, IEPs, coaching, family engagement, and deaf education. According to REFAM reports, participants were highly satisfied with the training series, and classroom observations indicated that observers saw immediate impacts of REFAM trainings, with trained teachers utilizing UDL principles in a little over half of the schools. For example, following trainings, REFAM endline data collection found that 59% of specialist teachers were utilizing UDL approaches (REFAM FY22 Final Report). While REFAM did not train in the general education setting, instead training primarily specialist teachers, REFAM's approach to training aligned with recommended practices worldwide and USAID's commitment to UDL. UDL, IEPs, and coaching are all part of an approach that seeks to provide opportunities for learners

with disabilities in general education classrooms and supports a pathway to the progressive realization of inclusive education.

Educators had some familiarity with concepts before engaging in training. According to MCSIE survey analyses, 72% of the specialist teachers who attended REFAM training had some prior in-service inclusive education training. Those teachers with previous experience were mostly from the northern regions. The mean length of in-service training prior to REFAM was two-to-three days. Because of previous training, inclusive education was not a brand-new concept to Malawian educators; therefore, REFAM training content and activities further promoted activities to use for inclusive education. The content seemed to appeal to educators who had some previous exposure to inclusive education broadly through other programs but, perhaps, had not been exposed to the specific concepts of UDL and IEPs nor access to coaching, according to post-training satisfaction data. Post-training data suggested that some teachers had been exposed to some inclusive education strategies, but not packaged as UDL.

A focus on universal design supported teachers in thinking about ways to both make education accessible for all learners and individualize it as needed. A strength area of REFAM's design was its focus on UDL and IEPs in the project's training series. UDL and IEPs aim to accomplish two classroom goals: accessibility and the documentation of accommodations. UDL is not a disability-specific intervention but a strategy that encourages teachers to use multiple means of engagement, action/response, and representation to meet the educational needs of diverse learners. The strategy (and accompanying philosophy) is intended to create accessible classrooms. Among the 768 participants who engaged in UDL trainings, 90 were itinerant teachers, those who travel from school to school to support inclusion. In its final 2022 report, REFAM reported that 59% of specialist teachers who had been trained in UDL were implementing this strategy in their classrooms.

REFAM trainings focused on the role and responsibility of teachers in promoting inclusion, centering on the social model of disability and not on learner limitations. Teachers' responses to a MCSIE survey showed examples of how teachers reacted to this orientation, as the survey asked about differences in learning experiences between learners with and without disabilities. Teachers acknowledged differences but focused on taking responsibility for learners' success through teaching strategies rather than using a learner's disability as a rationale for teachers' difficulties. Teachers emphasized the need for, and importance of, using disability-inclusive instructional techniques to reduce or eliminate the differences between children's opportunities to learn.

In their own words…Focusing on inclusive pedagogy.

"[Everyone] has individual differences, so we use one-by-one to help them according to their disabilities." (Female Teacher, Central West Education District)

"We do not notice any differences [between learners with and without disabilities], but we make them understand easily." (Female Teacher, Central East Education District)

"[As with the] methodology used, there may be differences [between learners with and without disabilities] if methods applied with learners are not right according to disabilities. When methods are in line with each [disability] the difference could not be there." (Male Teacher, South East Education District)

"The difference in educational experience comes if students with different disabilities are taught by not using adaptive methods but [instead] if adaptive methods are used to accommodate different disabilities with the right aids to each disability. There is no difference." (Female Teacher, Shire Highlands Education District)

The quotes above should be interpreted with nuance. It does not appear that teachers are saying no difference exists between learners with and without disabilities. Instead, their comments can be interpreted as supportive of equitable educational strategies that aim to level the playing field for learners with and without disabilities, especially in inclusive classrooms. Teachers embracing the individualized nature of inclusion while also utilizing the UDL-grounded approach emphasized through REFAM trainings highlights a progressive step toward realizing inclusion and education for all within Malawi.

Consideration: Teacher training focusing on inclusive pedagogies and practices (like UDL) helps reinforce a social model of disability, which focuses on removing barriers to student learning rather than student deficits (Wilson, 2017).

REFAM provided further training on IEPs, key support measures to promote and ensure inclusive education. In addition to UDL training, REFAM developed trainings on developing IEPs and linked those trainings to their screening and identification trainings. IEPs serve an important role in inclusive education by specifying the accommodations and (when appropriate) modifications that will enhance students' learning. IEPs provide a second level of support for learners with disabilities after UDL. Although a universally designed classroom may reduce the need for accommodations and modifications on an individual level, IEPs ensure that accommodations and modifications are available to individuals who need them. A MCSIE survey of RC and general education teachers who participated in REFAM trainings indicated that the program successfully introduced UDL and IEP topics, as well as others, as strategies for inclusive education, with 90.2% of respondents reporting that they felt "prepared to a great extent" to utilize the practices on which they were trained.

REFAM prioritized sign-language-first instruction for learners who are deaf and partnered with key stakeholders to promote the advancement of deaf education and MSL through trainings. In addition to UDL, IEP, parent engagement, and coaching trainings, REFAM developed specialized deaf education trainings. According to the REFAM FY21 Annual Report, these trainings covered the following topics:

- Understanding deafness, deaf culture, and language
- Recognizing deafness
- Sign language and MSL
- Deaf education
- General practices for including and teaching learners who are deaf or hard of hearing

REFAM's engagement with deaf education was required in its contract but was later informed by visits to special schools and RCs during the EGRA development phase of the project, which will be outlined in the section below. During their visits to special schools and RCs, REFAM noted a dearth of sign language materials and a total-communication approach rather than a sign-language-first approach to deaf education. A sign-language-first approach would pair sign language and gestures with visuals and spoken and written language, as well as include a print-rich environment. This would benefit all learners, not just learners who are deaf. However, during this phase, schools that were not specifically for students who are deaf (including general education schools with RCs and special schools for children with multiple disabilities) also expressed to REFAM staff that they wanted additional training on MSL and deaf education to effectively support learners who are deaf or hard of hearing (REFAM FY21 Q3 Report).

REFAM delivered effective trainings that would promote inclusive education and the integration of learners with disabilities in general education settings, but learners with disabilities are still typically taught in RCs. REFAM trainings were well-received by educators[14] because they presented a practical and intuitive approach to creating inclusive classrooms. For example, REFAM's facilitator and participant guides for UDL and IEPs provided opportunities for participants to examine the classroom environment and how barriers could be reduced and what material resources, including TLMs or assistive technologies, were available to support learners. The training then discussed how creating an inclusive environment, paired with the use of UDL and IEPs, can help further mitigate barriers faced by learners, thus improving their access to learning. However, the vast majority (approximately 80%) of stakeholders who participated in REFAM trainings were affiliated with RCs or special schools, and general

[14] REFAM used the term "educators" when referring to its trainings. The majority of the trainings of "educators" was provided to specialist teachers (including itinerant teachers) who teach in resource rooms and inclusive education desk officers.

education teachers were not targeted for training[15]. There is no project data to suggest that the trainings made any impact in general education classrooms. An important lesson learned from these trainings was that, despite thoughtful design and inclusive presentation, dominant models of education remained throughout the project. In post-project interviews with government officials and head teachers, general education teachers were consistently identified as a missing group in the project. Teacher interviews on learner placement indicate segregation (separate learning) and integration (students must ”earn” their way into general education classrooms) are still present in Malawi:

> *All learners with disabilities do not mix with other learners. When a learner [with a disability] has been upgraded to the mainstream classroom, they do not go back to the resource room unless they complain that they didn't get what the teacher was saying. But otherwise, they don't learn together. (Female Teacher, Southern Educational District)*

> *Two systems are used: general system—these are learners who stay full-time in the resource room; they don't go to the mainstream class. Pull-out system—these learners have graduated from the resource room to the mainstream class. There is no specific day these students meet in the mainstream class. (Male teacher, Southern Educational District)*

A strength of the REFAM approach that was repeated throughout this evaluation was that the project immersed itself into Malawi's existing structures, stakeholder groups, and policy environment. From the standpoint of training, this may have reinforced existing systems. Although specialist teachers are currently on the frontlines working with learners with disabilities in Malawi, these centres work within an existing segregation model.

Consideration: A missed opportunity was that the project did not work with more general education schools and their stakeholders to create readiness and demand for inclusive education. Facilitating inclusive education opportunities is a core commitment related to Malawi's CRPD signatory status (CRPD, 2006).

4.3.2 Coaching

Coaching training related to disability and inclusive education provided skills for training participants to share information with others. In some ways, the strategic focus on RCs did not change the current structures in place in Malawi, in other ways, teachers gained knowledge on new approaches. Specifically, REFAM trained itinerant teachers, specialist teachers, heads of schools, and DSNE desk officers on ways to coach other teachers on disabilities and inclusive education, which had the potential for inclusive outcomes. The main aim of the coaching training

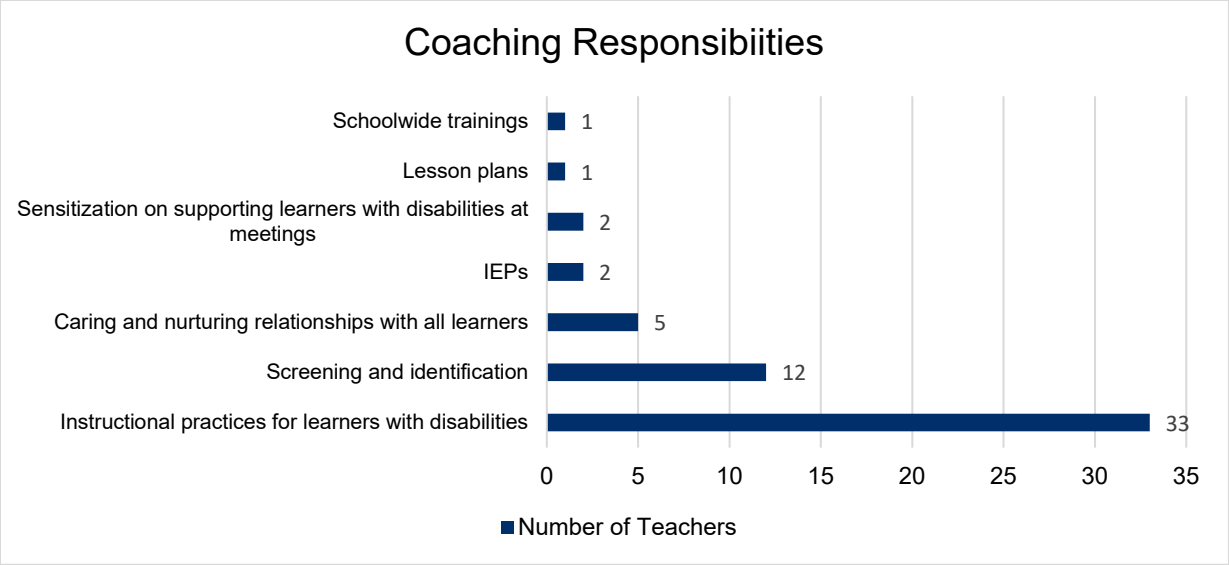
[15] This figure does not include itinerant teachers, for whom post-data was not reported by REFAM.

was to create a cadre of knowledgeable advocates who could work with teachers in one-on-one or small group settings to promote inclusion and share ideas on how to implement it. Among the 55 teachers MCSIE surveyed after training, 46 identified as specialist teachers in RCs. Teachers were asked open-ended questions on the type of coaching they provide to other teachers in their schools. Responses were qualitatively analyzed into themes and are presented in Exhibit 6.

Although REFAM did not directly coach in general education schools, it presented trainings on "how to coach" to specialist teachers, itinerant teachers, heads of school, and DSNE staff. According to MCSIE data obtained through interviews and survey responses, many specialist teachers have already begun coaching in their schools. Exhibit 6 provides a broader look at coaching responsibilities; however, the quote below demonstrates how one specialist teacher provided coaching:

> *[I] Provide guidance and counseling on how [general education teachers] can stay with those learners [during] the time they are in the mainstream class. [I] Provide [general education teachers] with skills that can help them handle learners with disabilities. (Female Teacher, Central West Education District)*

Exhibit 6. Coaching Responsibilities



Source: MCSIE Teacher Survey

Ongoing coaching and communication occurred through WhatsApp and other platforms, showing an innovative and cost-effective way to support teachers. REFAM did not perform extensive school visits and follow-up coaching directly in schools, as noted in the MCSIE Malawi Interim Report. One way REFAM maintained contact with participants was to create a WhatsApp group for trainees. The WhatsApp groups used the following procedures to reinforce concepts:

- REFAM created WhatsApp groups with participants of specific trainings.
- Shortly after training was completed, REFAM offered refreshers through short bursts of information broadcasted through WhatsApp groups.
- To further facilitate training, DSNE personnel facilitated and managed WhatsApp groups and sent regular prompts to members.
- Prompts generally followed training information and included discussions about inclusion, multisensory instruction, scaffolding, igniting interest in pupils, IEPs, screening and identification, and referral and assessment (REFAM FY22 Q1 Report).
- WhatsApp groups provided prompts and information for 10 weeks following trainings, and REFAM sent posts twice per week (on varying days).
- A WhatsApp group was also created to support deaf education training and MSL to allow teachers to share resources.
- WhatsApp groups reinforced family engagement in the learning process.

WhatsApp coaching provided a low-cost, locally relevant approach to following up on training and providing ongoing coaching. No data is available on response rates or qualitative engagement in WhatsApp groups, but it was clear that the tool was used by teachers and their mentors to communicate about inclusive education. Future evaluations may benefit from having an embedded evaluator on WhatsApp groups to track conversations, prompts, participation, and more.

Teachers reported feeling more confident in teaching learners with disabilities after training. One data point that is clear in this evaluation is teacher confidence. MCSIE evaluated data from 55 teachers (47 specialist teachers and 8 inclusive education teachers) before and after trainings, with post-training surveys occurring four months after REFAM's close. Post-training surveys revealed that teachers felt more confident to teach learners with disabilities after completing training and that this confidence remained well after the REFAM trainings. This confidence possibly relates to the how REFAM demystified inclusive education, providing simple points of entry through the UDL framework, and reinforcing that inclusive education strategies can be applied for all learners in a classroom. MCSIE analyses of teacher survey data indicated that among teachers who reported they were prepared to a "limited extent" (14.8% of teachers) for teaching children with disabilities prior to REFAM trainings, all perceived that they were prepared "to a great extent" after REFAM trainings. Similarly, nearly all teachers who reported they were prepared "to some extent" to teach children with disabilities later perceived themselves to be prepared "to a great extent" after trainings. Only one teacher who attended REFAM trainings perceived they were prepared to a "limited extent" before and after trainings. Although it is unclear exactly how many teachers immediately implemented changes as a result of REFAM trainings, it was clear that teachers who attended trainings had a sense of confidence in their own capacity to implement inclusive education effectively.

4.4 Instruction

EQ4: What instructional models worked best to improve classroom instruction and reading outcomes among learners with disabilities?

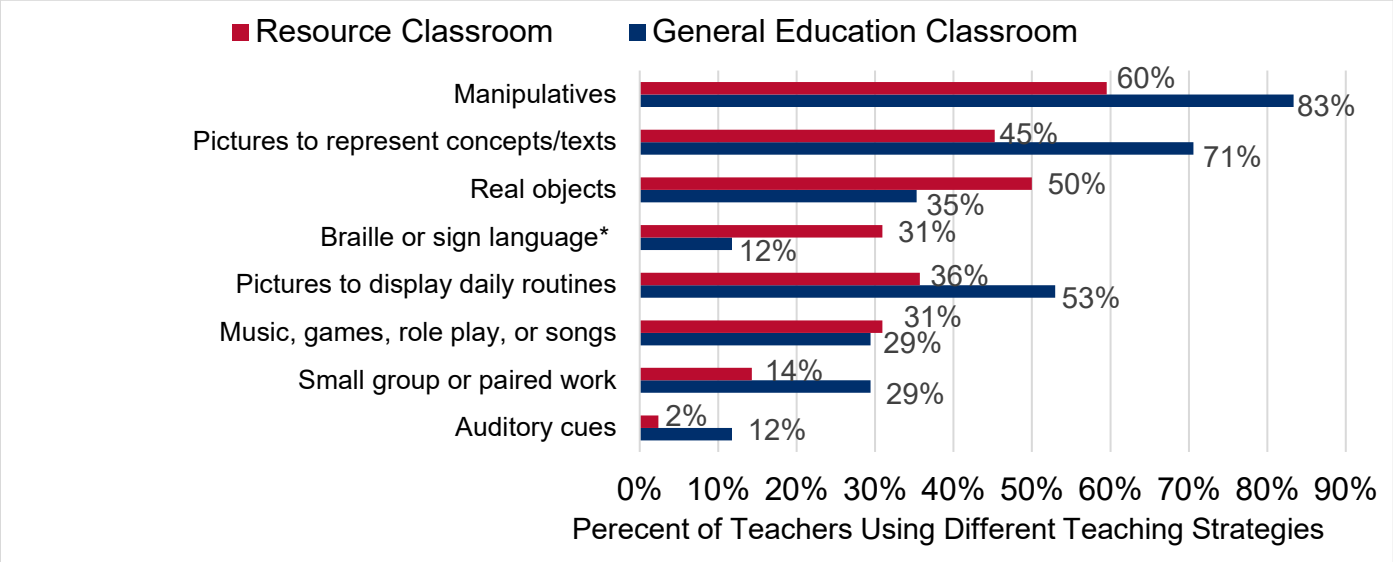
Answer: REFAM's UDL focus appeared to be an instructional model that could be implemented in Malawi's schools. REFAM endline data indicates that 59% of teachers were implementing UDL after the training. MCSIE observations found even more—69% of teachers were implementing UDL inclusive education strategies—but there was no project data on whether teachers were using these strategies prior to training. A second area of impact for REFAM was in deaf education. Based on learning from EGRA development, REFAM identified gaps in sign language standardization and usage and produced materials that could be utilized in RCs where children who are deaf receive their education. REFAM also contributed to enhanced opportunities for sign language use in Malawi by developing videos and dictionaries. Despite uptakes in UDL usage and sign language development, a recurring theme in this project was a lack of outcomes data. There is no definitive data on what works best for students because there was no follow-up student assessment after workshops.

4.4.1 Inclusive Instructional Approaches Observed or Reported in Classrooms

A majority of observed or surveyed teachers employed UDL strategies in the classroom. REFAM data reported that 59% of teachers observed through MCSIE classroom observations (n = 59) were using UDL strategies after project trainings. MCSIE investigated data further to better understand how teachers were engaging with inclusive pedagogies in their classrooms in both RC and general education classrooms, as REFAM's theory of change indicated that training specialist teachers and coaching general education teachers would help infuse inclusive pedagogies indirectly into the general education classrooms. MCSIE data on how teachers integrated inclusive pedagogies into classrooms and how students engaged with these strategies is limited because REFAM conducted additional trainings after MCSIE observations had taken place. Despite these limitations, important findings emerged from the study, especially in relation to REFAM's approach to centering UDL throughout all training topics. Teachers in RCs (the target group of REFAM training and the majority group that was observed in MCSIE observations) appear to be more comfortable using real objects, music/songs, and braille/sign language. However, teachers in general education classrooms were more likely to use pictures, manipulatives, small group work, and auditory cues. Exhibit 7 provides a visual overview of

differences among classrooms. It is unknown whether these teachers used the listed strategies prior to UDL training.

Exhibit 7. Teacher Strategies Captured in RC and General Education Classroom Observations, % per sample



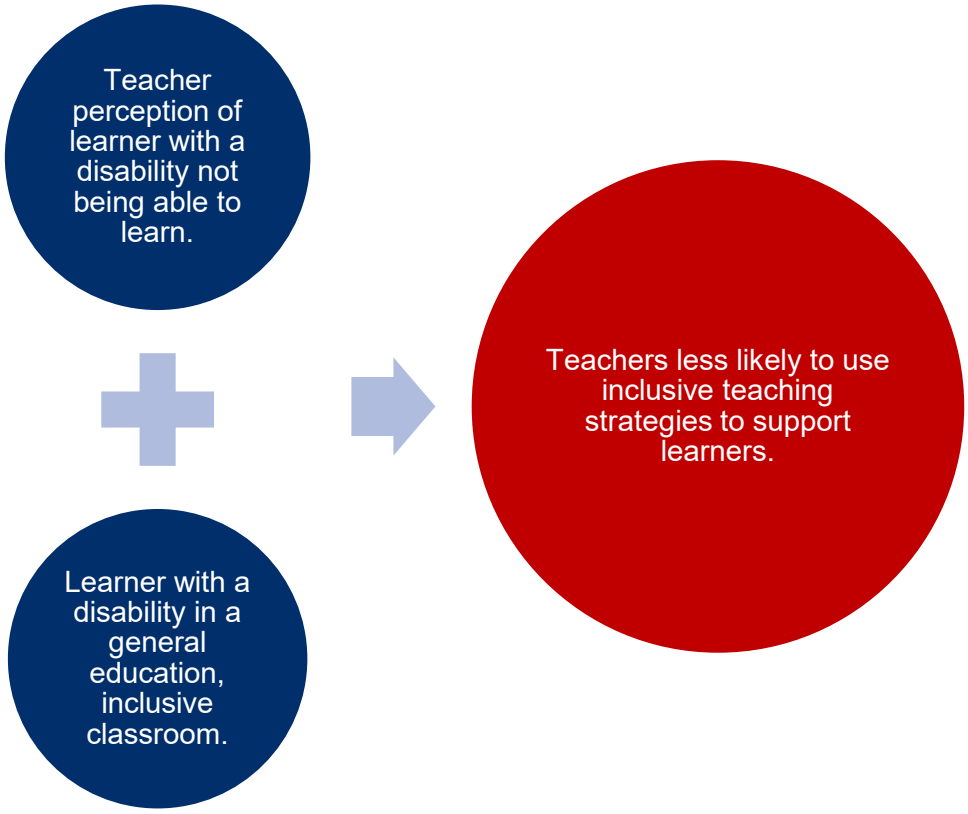
Source: MCSIE Classroom Observation Analysis Report

Percentages of teachers reflect those from the small sample size and should not be read as generalizable for Malawi's teachers. In this survey, 52 teachers worked in resource rooms and 7 in general education classrooms. Percentages are reported within groups so that uneven sample sizes do not unequally weight results. Data collected demonstrated that less than half of teachers in either setting were using music, small group work, or auditory cues. In most categories, general education teachers who did not receive REFAM training were using a wider range of strategies than the specialist teachers in the sample, including a statistically significant difference in small group or peer work (c^2=.4, p>.05). General education classrooms with teachers who did not receive REFAM training were observed as a control group. Observation data was limited, and interviews did not ask *why* teachers chose particular strategies, but variables such as class size, student demographics, and previous training may all have informed their choices. Small sample sizes also may have impacted the findings, so results should be read with caution. Data collected on teacher perceptions of learner capabilities and is reported below.

Teachers' attitudes about learner capabilities informed the number of strategies they used. Teacher perceptions about learners with disabilities being able to learn or lacking competence were correlated with the number of teaching strategies they employed. In this case, the more teachers perceived that students with disabilities could learn, especially in inclusive environments, the fewer teaching strategies they employed in classrooms. The evaluation team found that

teachers who perceived children to be able to learn employed a narrower range of strategies than their peers who perceived that all children cannot learn in general education classrooms (r^2 = -.28, p < .05). There was no follow-up qualitative data that explained these relationships. It is plausible that integration practices are at work (i.e., when students with disabilities "fit in" they are treated like other children) with a narrow range of activities that may be found in large group settings. However, there is no teacher data to explain this counterintuitive finding. Exhibit 8 provides a visual representation of this point.

Exhibit 8. Teachers' Perceptions of Learners and Teaching Strategies Used



Source: MCSIE Teacher Survey

4.4.2 Teaching and Learning Materials

REFAM produced TLMs for learners, sign language materials, and family literacy toolkits to provide teachers with a model to support learners with disabilities, but it is unknown how these materials were deployed or used. In 2021, REFAM distributed alphabet cards, early reading sheets, and MSL alphabet sheets to training participants that were intended to further be

distributed to families; the materials were sufficient to reach 4,778 readers. Annex B outlines the various types of materials distributed according to a table found in REFAM's FY21 Annual Report. REFAM also included explicit step-by-step guides for teachers to explain to families how to use the TLMs as part of the family literacy toolkit. Annex B also summarizes family toolkit products. Commonly used early reading materials, such as alphabet cards, flashcards, and easy reader stories, were provided to parents. REFAM specifically also addressed inclusive practices by providing a sign language chart and large-print and braille books. In May 2022, REFAM held a handover event with the MoE where they provided the set of TLMs produced, along with all training materials, that reportedly "set up a model on the best adaptations required for learners with disabilities that the MoE might adapt going forward." (REFAM FY22 Final Report). As with other areas of this evaluation, REFAM reported inputs (number of materials) but there was no follow-up data to see how materials were used, if they reached families, or how they impacted children's literacy.

REFAM committed to supporting deaf education at its current level within Malawi's education system and developed MSL materials that previously had not existed. Based on their experiences developing adapted EGRA assessments (described in the section below), REFAM recognized that the project's original objective to develop MSL fluency among teachers would be difficult due to the existing systems and lack of MSL knowledge. As referenced previously, REFAM advocated for the MoE to develop a policy that would emphasize a sign-language-first approach to address systemic challenges while also shifting focus to develop materials that would help advance deaf education in Malawi. REFAM developed an MSL alphabet and number materials to be used by parents and teachers, a booklet with common MSL signs and phrases, and an MSL video. The materials aimed to develop MSL skills among teachers and parents that would further promote a sign-language-first approach to deaf education. The materials developed carefully followed sign language conventions in their organization and utilized local expertise. For example, the phrasebook clusters signs by topic, and sentences use MSL grammar. To pilot the materials, REFAM shared MSL videos with seven deaf schools and six RCs for learners who are deaf (REFAM FY22 Final Report).

Most government officials were pleased with the handover of REFAM materials; however, monitoring and evaluating TLMs is vital to assess their impact on future programming. Government KII participants spoke frequently about the importance of learning materials, and the majority of interviewees were pleased that REFAM made a concerted effort to provide materials to the MoE at project close. One government official said:

> *Malawi involvement is investing in resources, but they are very expensive materials and equipment that we cannot say we are doing good, but we are managing our budget to do what we can. The beauty is that we have partners who are supporting this, especially with specialized TLMs, to support schools in Malawi and that can support learners. (MoE Official, identifiers withheld for confidentiality)*

However, another high-ranking government official spoke to continued challenges:

> *Programs look beautiful on paper but on the ground, it is much harder. Learning outcomes are not always happening. We need to provide more direct capacity to classrooms and materials to foster learning—just let [the] teacher serve as the facilitator. (MoE Official, identifiers withheld for confidentiality)*

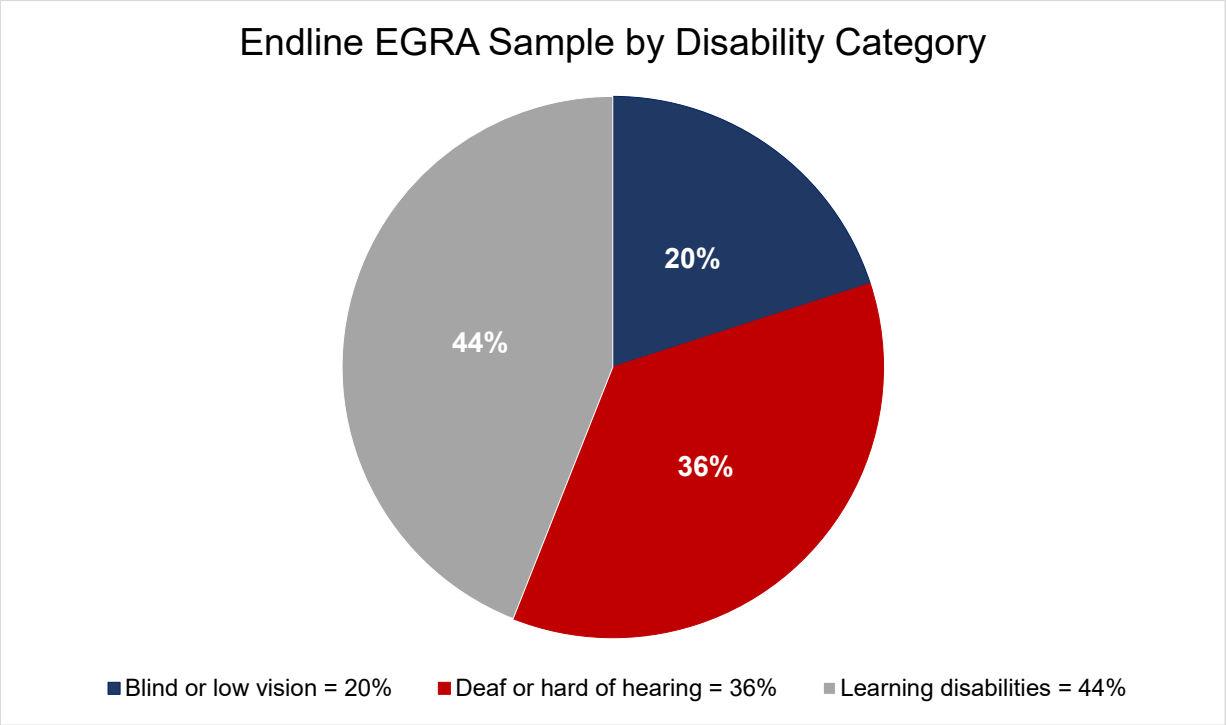
This second government official called for a deeper engagement of USAID projects in general (not necessarily only REFAM) that would support and track learning outcomes at the classroom level. The government official also stated that more materials may be needed. A theme across all government KIIs was a concern that Malawi, in general, did not have enough TLMs available for learners and teachers and that these materials were expensive to produce.

Consideration: Providing materials can be a beneficial part of interventions; however, it is critical to monitor and evaluate materials to assess their impact on learner outcomes and identify if additional or revised materials are needed. A core component to all USAID programming is to ensure that investments are effective. Without evaluation data, it is impossible to know if materials were effective (USAID, n.d.).

4.4.3 Assessment of Learning

REFAM's main assessment efforts in the project focused on developing modified EGRAs. At the start of the project, USAID, the MoE, and REFAM observed a lack of usable data to understand the literacy gains of learners with disabilities. A central approach in addressing this dilemma was to adapt the EGRA so that it could be used for learners who are blind or have low vision, learners who are deaf or are hard of hearing, and learners with learning disabilities (who broadly fit into the Malawian disability category of "learning difficulties"). In total, REFAM assessed 1,089 learners with these identified disabilities. For the endline assessment, REFAM developed an intake process and selected 299 learners in 28 schools. The disability categories of the learners are provided in Exhibit 9.

Exhibit 9. EGRA Endline Sample



Source: REFAM FY21 Annual Report

The assessment of learners covered several standard EGRA subtasks plus subtasks developed by REFAM, which the project concluded were more developmentally and linguistically appropriate for sign language users than the standard EGRA subtasks. Exhibit 10 provides an overview of the subtasks.

Exhibit 10. Adapted EGRA Subtasks

Subtask	Language	
Adapted Subtasks	**English**	**Chichewa**
Listening comprehension	X	X
Letter sound identification	X	X
Non-word reading	X	
Syllable reading		X
Familiar word reading	X	X
Oral passage reading (complex)		X

Subtask	Language	
Reading comprehension (complex)		X
Oral passage reading (simple)	X	X
Reading comprehension (simple)	X	X
Modified Subtasks		
Compensatory skills – braille reading mechanics (blind)	X	X
Receptive and expressive vocabulary (deaf or hard of hearing)	X	X
Finger spelling and demonstration (deaf or hard of hearing)	X	X
Picture story (deaf or hard of hearing)	X	

Source: REFAM FY22 Q3 Report

REFAM produced a data-informed EGRA adaptation guide that can serve as a resource for other early grade reading (EGR) activities. A major accomplishment of this project was the production of the report *Early Grade Reading Assessment Adaptation Guide for Learners with Disabilities.* This report chronicled the steps REFAM took to adapt EGRAs in Malawi and general principles for adapting the EGRA in other locations. REFAM's conceptual framework for this adaptation guide was UDA, an assessment approach that evolved alongside UDL in the early 2000s but has distinct features.

Consideration: Adapting assessments by disability category is not a UDA approach. USAID solicitations need clear language and purpose about goal(s): whether the goal is a more accessible EGRA for all learners or whether the goal is specific assessments for learners with certain disabilities. In some contexts, both approaches may be appropriate (Thompson et al., 2002).

Classroom assessment was mainly conceptualized as a formative "check for learning." Further, teachers surveyed by MCSIE often interpreted the term "assessment" as part of what occurs in the screening and identification process. One female teacher from the Southern District, for example, said:

> *Assessment tools can assist in screening and identification and teachers' guides; if available, [tools] can play a big role. And if students are provided with necessary aid according to the need, this can improve their performance.*

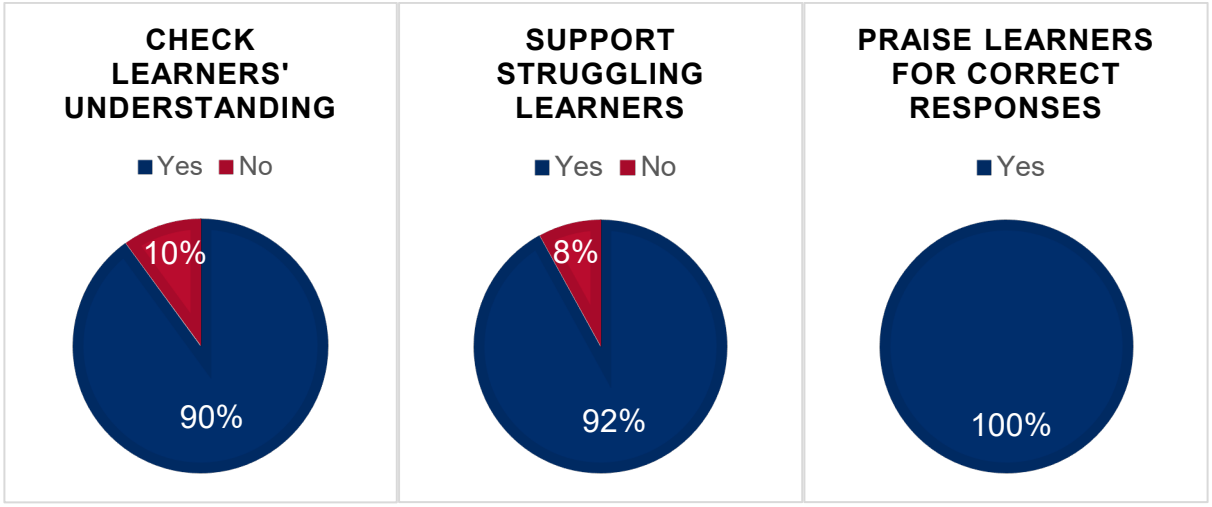
However, a widespread practice in schools that REFAM observed was "checking for understanding," a good UDL strategy used to informally assess learner understanding. Checking-for-understanding practices can be strengthened by linking these informal checks with learners to assessment agendas. In a formal sense, this checking for understanding occurs through NRP materials such as skill charts, which teachers are supposed to be using and which were included in REFAM trainings on IEPs. In REFAM classroom observations, MCSIE did not observe teachers using skill charts, but did observe a very high percentage (90%) of teachers checking for student understanding of content during lessons. The box below contains text from the MCSIE REFAM Classroom Observation Report (August 2022) and a visual demonstrating the extent to which teachers used checks for understanding in classrooms. This checking appeared to be linked to both support for struggling learners and praise for learners who were understanding content. Without further data, it is not clear the extent to which these checks for understanding were attributable to training or whether these were already an everyday practice in Malawi. Regardless of attribution, however, it is important to note that informal assessment is occurring, even when framed using the term "check for understanding" rather than "assessment."

Consideration: REFAM used terminology like "checking for understanding" to help teachers understand informal assessment. Although teachers did not conceptually link checking for understanding and "assessment," future trainings can link teachers' everyday activities and language with broader inclusive assessment agendas (Fisher & Frey, 2014).

Data from Classrooms

Teachers in 90% of the classrooms (N=53) checked learners' understanding throughout the lesson by calling on individuals and walking around the room checking the learners' work. When learners performed incorrectly, in 88% of the classrooms (N=52), the teacher corrected responses and gave the learner an opportunity to try again. Examples of when teachers gave learners the opportunity to try again included having the learner repeat the given correct answer and having the learner receive peer assistance. For example, one observer noted, "The teacher uses peer assistance whereby when a learner performs incorrectly, he calls a friend to assist." When a learner provided a correct response or behavior in the classroom, 100% of the teachers observed praised all learners, regardless of the classroom setting.

Exhibit 11. Proportions of Teachers Who Check Learners' Understanding, Praise Learners for Correct Responses, and Support Struggling Learners



Source: MCSIE REFAM Classroom Observation Report (2022)

4.4.4 Teacher Attitudes

A majority of specialist teachers supported inclusive education, but some teachers' survey responses were not as supportive. MCSIE analyzed survey data from 55 specialist and inclusive education teachers to understand their attitudes about learners with disabilities participating in general education classrooms. Most specialist teachers either strongly (25%) or somewhat (38.1%) agreed with the statement that learners with disabilities should participate in general education classrooms. However, data from those who identified as inclusive education teachers in general education schools was less clear. Among the seven respondents, only three respondents agreed that learners with disabilities should participate in general education learning.

Exhibit 12. Teacher Perceptions of Learner Placement

Learning in General Education Classrooms	Inclusive Education Teacher	Specialist Teacher[16]	Total
Strongly disagree	3 (42.9%)	3 (6.8%)	6 (11.8%)
Somewhat disagree	1 (14.3%)	13 (29.5%)	14 (27.5%)
Somewhat agree	1 (13.4%)	17 (38.6%)	18 (35.3%)
Strongly agree	2 (28.6%)	11 (25.0%)	13 (25.5%)

[16] This data set did not include itinerant teachers because this group of teachers was engaged after the survey was distributed.

Teacher data above indicates the conclusions suggested earlier in this report: the REFAM project effectively supported specialist teachers, but barriers to inclusion still exist. Related to these gaps, a head teacher suggested that if trainings could be expanded beyond the small representation of who attended, there might be shifts in how whole schools engage with learners with disabilities:

> *I would prefer if REFAM, whenever [they have] another training, if they should have to consider the other teachers that are still in that school to be trained also so that each and everyone should have the very same language in assisting learners with diverse needs.*

In general, head teachers acknowledged the importance of positive attitudes about inclusive education but tempered their statements with reflections on the material realities of attempting to develop inclusive education in low-resource settings. The qualitative results below were drawn from head teacher interview responses about what is important (and needed) for inclusive education. Head teachers suggested that attitudes were important, but material support was also needed.

In their own words…What impacts have school directors in general education schools observed?

Attitude

"The first factor is that the moment they are in this class, the teacher has now the capacity to handle both the abled and the disabled learners. So, the fact that the teacher is capable of handling the learners you find that the learners are now receiving the kind of treatment they were supposed to receive whilst the other learners are also benefiting from the same resources which are being used by their colleagues. I will give you an example of the pictures that the teachers develop with the aim of helping the disabled learners also helps the other learners to know how the letter 'a' is to be written." (Head Teacher, gender not identified)

"The first one is attitude of teachers, head teachers, [and] educational officials towards inclusive education that matters most: if each of us have a positive attitude, things can work." (Male Head Teacher)

Resources

"To be given enough resources as books so that each and every learner has [one], even to take it home, for that learner also to be assisted by their relations like brothers, sisters who are at least in upper classes [can] assist them in reading." (Female Head Teacher)

"We need material support, first and foremost. [I] am driving at things like [braille] machines. We have only one which is based at the resource centre for transcribing the work into [braille] and the machines that is used by the [visually impaired] learners are not much effective. We

> have two of them, but most of them are not…operational, so we may need such a machine, we also need [braille] papers—that is also needed most. If [we] get those, [they] will get us going. We may also need other things like books already printed into [braille]. I think that will help, and in some cases, we may also need books printed in large prints for learners with albinism. They really struggle with the normal prints that we are using." (Male Head Teacher)

Head teachers' answers to two questions further demonstrated the balance between attitudes and material resources. The first question asked what was needed to make schools more inclusive, and the second asked what factors contributed to student success in inclusive schools. Data indicated that head teachers acknowledge the importance of both materials and attitudes in the ways they answered questions. Materials, according to head teachers, are needed for a more inclusive school. Student success, however, relies on teacher attitudes and efforts and parental support. Exhibit 13 provides an overview of the two questions and responses for each.

Exhibit 13. Supports for Inclusive Schools and Factors Leading to Learner Success

Supports*	Frequency of Responses	Percentage of Responses
Availability of TLMs and other resources	39	68%
More trainings for teachers and administrators	22	37%
Improved RC	13	23%
Improved infrastructure	11	19%
Hiring more teachers	9	16%
More assistive devices	8	14%
Sensitization	2	2%
Success Factors*	**Frequency of Responses**	**Percentage of Responses**
Extra work from teachers with learners	20	35%
Teacher encouragement and motivation	15	23%
Support and encouragement from parents	14	19%
Teacher work ethic in general	10	18%
Community or other organizations that support students	8	14%
Teacher training and preparation	5	8%
Collaboration between general education and specialist teachers	5	8%
School-provided TLMs	3	5%

*Head teachers were allowed to select multiple responses.
Source: MCSIE Malawi Head Teacher Interviews Report

4.5 Unintended Consequences

EQ5: Were there any unintended consequences of the activity? What were they?

Answer: Two unintended events presented opportunities for learning about inclusive education activities in USAID programming. First, REFAM became more proficient at inclusive workshop delivery through forced changes due to the global pandemic. Second, REFAM contributed to MSL development in unforeseen ways after learning about the lack of available MSL materials during the EGRA development process.

REFAM's responses to crises created more inclusive training approaches than planned or expected. As a result of unplanned external events (COVID-19 and extreme weather events), REFAM was forced to rethink its approach to training. The project pivoted to a blended model allowing participants from across all 34 of Malawi's districts to participate. REFAM developed training approaches so that materials could be shared in advance and activities could be completed either virtually or face-to-face. Training materials were developed so that a consistent format with clear instructions and expectations was set for each topic regardless of its delivery modality. This reportedly helped with participant engagement and understanding (REFAM Final Report). The blended trainings also required REFAM to disseminate workshop materials in advance to participants, which is a good practice for accessibility and can be replicated in future programs. Finally, REFAM supported follow-on conversations through WhatsApp, which was not in the original program design, demonstrating an innovative and inclusive way to keep participants engaged long after trainings had been completed. An unintended impact of these forced changes was that REFAM began to model the way that different modalities for instruction can be used in a UDL approach. Although the project only intended to use face-to-face PowerPoint training delivery, accessible approaches emerged when the project pivoted in response to COVID-19. Additionally, though COVID-19 was the catalyst for the change in training modalities, it also allowed REFAM to have a wider geographic reach, particularly with hard-to-reach teachers according to interviews with implementing partner staff.

A lack of available MSL materials and resources during early stages of implementation resulted in REFAM adapting a project objective to emphasize MSL material development more than anticipated. Objective 2.2.8 of the project required REFAM to help teachers develop MSL fluency to better support learners. Additionally, REFAM was tasked with developing an adapted EGRA for learners who are deaf and hard of hearing. However, as noted previously in

this report, REFAM discovered a lack of available materials to draw from in Malawi resulting in shifts within the program design. One of the reasons for this lack of materials was the focus on total communication in schools for learners who are deaf. MCSIE reported in the interim report that many teachers working in RCs or special schools for learners who are deaf do not know any sign language. REFAM data collected during EGRA development practices confirmed this data. Data collection from EGRA sites revealed that only 7% of teachers in general education schools and 14% of teachers in RCs or special schools predominately used MSL in the classroom (Review of Research Insights from the REFAM Project, 2021). In response to this lack of materials, REFAM worked with MANAD and other organizations to develop both MSL videos and phrasebooks. REFAM also provided deaf education training for educators in 2021.

A positive unintended consequence of the programmatic shift is the impact REFAMs awareness raising and advocacy efforts had within the Malawi education system. Due to the lack of materials, REFAM developed materials before the end of the project period and implemented trainings before the end of 2021. However, no data is available on how trainings have been implemented and to what extent end users have integrated MSL into teaching and learning activities. Prior to the end of the project period, REFAM also started conversations with the MoE about sign-language-first policies in relation to schools for children who are deaf. REFAM was also in preliminary conversations with Machinga TTC and the MoE prior to the end of the project to explore pre-service teacher trainings in MSL. Since the close of REFAM, the MoE and Machinga TTC have continued to work toward developing and implementing pilot coursework on MSL and deaf education at the college. These examples are provided to reinforce how any new initiative (including sign-language-first approaches) often requires multiple touchpoints and collaborators, often at both the levels of policy and practice. Through post project interviews and the evaluators validation visit, stakeholders shared that a MSL Dictionary was produced and is being disseminated to teachers through the MoE. Additionally, the MoE, MANAD, and the teacher training colleges are actively engaging in conversations and planning to provide more MSL training to any teacher who is interested in learning. The spotlight REFAM put on deaf education, material development and MSL appears to have positively advanced the Malawi education system to support learners who are deaf or hard of hearing.

5. Conclusions and Recommendations

This section aims to draw from this report's findings to generate conclusions and recommendations. These conclusions and recommendations are intended to inform the broader MCSIE project, which was designed to provide information to USAID about its work and future directions for inclusive education. The recommendations have been divided into two parts within each EQ: (1) lessons learned from REFAM on particularly successful practices that can benefit other projects and (2) programming recommendations that could further strengthen such project activities in the future.

5.1 Process

Conclusions

- ✓ REFAM engaged at a national policy level and with other development partners. This networked approach infuses USAID activities into other existing literacy development initiatives, which may avoid duplication of efforts or contradictory messaging.
- ✓ REFAM provided leadership support to DSNE in an existing TWG and other networks for inclusive education. If these networks are not present in other nations, USAID implementing partners could convene such groups.

Recommendations for Future Programming:

- Provide time, staffing support, and encouragement for USAID projects to network, engage with, and provide leadership for policy-level conversations.
- Encourage implementing partners to convene or participate in TWGs and other networks aimed at advancing inclusive education within the country.

5.2 Screening and Identification

Conclusions

- ✓ Screening training was intuitive and aligned with current practices that built upon existing tools in country, strengthening buy-in to current practices in the environment. REFAM reported that the existing tools were validated; however, information on how these tools were validated is unknown. The process is a critical component for validating screening and identification tools.
- ✓ Connecting screening to broader educational practice was innovative and aligned with good practice when training teachers on screening within the school system, but also requires caution about uses and possible misuses. How information was used is not known because follow-up on what educators did in the classroom as a result of screening training was lacking. REFAM introduced new concepts, such as how to use screening, and aligned them with IEPs, RTI, and other instructional interventions. These new strategies require follow-up monitoring, coaching, and quality assurance to promote fidelity to interventions and to ensure that screening alone is not being used to make instructional decisions.
- ✓ Institutionalization of changes occurred through advocacy and cooperation with relevant ministries. Data on learners with disabilities (whether through screening practices or EMIS data collection) became a priority at the national level as a result of project activities.

Future Programming Recommendations

- Include time and resources for future projects to understand the screening and identification tools being used locally and the processes to use them before commencing activity planning and training.
- Ensure screening tools and procedures are validated and align with international norms. Only use tools that have a strong track record of accurately identifying learners who may need further evaluation.
- Clarify within trainings that screenings are not an all-defining source of information for children's needs, and that parallel naturalistic information-gathering are also important for developing IEPs.
- Whenever any new skill or tool is introduced in relation to screening or identification, the tools must be validated and should not be used for placement decisions.
- Continue to link screening and identification to existing data collection processes for the EMIS and for IEP provision.
- To the extent possible, develop tools that allow for universal screening of all children on a routine basis.

5.3 Training

Conclusions

- ✓ REFAM's approach to grounding their teacher training series in UDL focused on inclusion for all learners, not just on support for specific characteristics of learners with disabilities. The REFAM teacher training series emphasized reducing environmental and attitudinal barriers while strengthening inclusive practices that could meet the needs of multiple diverse learners at once. REFAM further strengthened the training approach by providing disability-specific support content, particularly for learners who are deaf or hard of hearing, that teachers could pair with the more universal inclusive strategies meant to increase commitment to inclusive practice.
- ✓ REFAM trained RC and itinerant teachers on how to coach for inclusive teaching practices within the classroom, which provided knowledge to a cadre of educated advocates who could work one-on-one or with small groups of general education teachers to support inclusive education.
- ✓ REFAM followed up on training with locally available and widely used tools like WhatsApp, which helped reinforce messages, allowed for follow-up questions, and sparked discussion among participants.
- ✓ REFAM's data on training focused primarily on outputs and not outcomes. While follow-up after training is important, without specific monitoring of interventions, it is impossible to know the direct impact of a training intervention when teachers have opportunities for professional development from multiple sources.

Future Programming Recommendations

- Classroom educators benefit from training related to specific classroom practice versus broad-based theory or focusing on specific disabilities alone. Future educator development activities (i.e., training) should continue to focus on activities teachers can implement to enhance inclusion.
- Future teacher training interventions must prioritize coaching for inclusion within their content and across all areas of implementation to advance inclusive education practices. This includes coaching general education teachers on how screenings can be used for information-gathering about children and appropriate use of screening data. Training teachers and other advocates on how to coach for inclusion is an often-overlooked skillset but may have an important impact on making inclusionary inroads in systems with segregated education settings for learners with disabilities.
- Ensure that future training interventions include general education teachers (those who do not have any previous training in special education needs). Including these teachers, who will ultimately engage students in inclusive classrooms alongside specialist or resource teachers, may support a twin-track approach to the progressive realization of inclusive education. Within these trainings, careful tracking of teacher categories (e.g., general education, special needs education, etc.) will be necessary to ensure teachers from various professional backgrounds benefit from activities.
- Embed technology-enhanced and in-person follow-up to track the impact of training and to differentiate and isolate specific impacts gleaned from USAID investments.

5.4 Instruction

Conclusions

- ✓ UDL concepts were intuitive, and participants easily understood them.
- ✓ Despite inclusive education training, specialist and inclusive education teachers have reservations about the feasibility of inclusive education as a strategy for learners with disabilities because many believe children with disabilities do not have the capabilities to advance through Malawi's education system.
- ✓ REFAM used a variety of research and consultative processes to develop adapted EGRAs for learners with learning disabilities, learners who are blind or have low vision, or learners who are deaf or hard of hearing. Some of these adaptations modified the EGRA itself, and others applied accommodations to entire disability groups without individualized consultations. None of the adapted EGRAs made the standard EGRA more accessible.
- ✓ Informal assessment in the form of "checking for understanding" is a very common practice in Malawi. Teachers did not consider such checks as "assessments," but these could be very valuable as part of an overall assessment agenda.
- ✓ Head teachers acknowledged the importance of positive teacher attitudes toward learners and inclusive education but also recognized that materials are needed for successful implementation.

- ✓ REFAM produced and distributed a large number of TLMs (including TLMs for MSL) to meet the needs of learners, their families, and teachers. Developing MSL materials helped fill the gap in available resources for learners who are deaf or hard of hearing. Given close collaboration with other USAID-funded activities, REFAM could have further extended their reach and ensured that work was not duplicated if they developed or shared TLMs with other USAID-funded activities.

Future Programming Recommendations

- Utilization of a UDL-first and an inclusion-first approach to teacher development appears to have been very effective. Consider framing future solicitations that include teacher development and training that reflects UDL and accessibility rather than training that focuses on the deficits of learners with disabilities.
- Consider including general education teachers in inclusive education project interventions and sample groups. Even if a system's current predominant model reflects segregation, engaging with general educators can shape their attitudes and understanding of inclusive education for future development.
- Use a Universal Design for Assessment approach when developing assessments to ensure that all learners are included. While accommodated assessment formats will be necessary to meet learners' needs as appropriate (e.g., providing a braille EGRA for a learner who is blind), future programming should use data and information on the needs of all learners to shape stronger, more valid, and more accessible assessments by using UDA principles. Understand that even a valid and inclusive EGRA will require providing accommodations for individual learners and possibly modifications when it is important to measure different constructs.
- Consider larger-scale bilateral TLM agreements between USAID-funded activities that can have a systems-level impact and fill resource gaps in partner countries. Coordinate and align TLM development among USAID-funded activities to increase impact and sustainability.
- Develop and report on monitoring and evaluation indicators that go beyond TLM training and distribution to measure the inclusivity of environments and processes, such as education practices demonstrated by teachers in supporting learning or inclusive education policies to measure disability inclusion within interventions.

5.5 Unintended Consequences

Conclusions

- ✓ REFAM played the useful role of convener because it was based in the capital city with easy access to policymakers, development organizations, and civil society organizations (CSOs). REFAM's leadership in convening regular conversations among key players led to functional TWGs or other fora that will extend beyond the life of the project.

- ✓ Inclusive education often involves multiple ministerial units. REFAM's networked approach identified and mapped all units within the MoE that played a role in inclusive education implementation. REFAM connected with these units regarding goal convergence, and this can be an effective use of project resources.
- ✓ REFAM pivoted when it learned about the lack of infrastructure for sign language. Although sign language is often widely used in countries, it may not be institutionalized through materials, curricular requirements, or teacher usage.
- ✓ REFAM employed effective communication during COVID-19 through using digital platforms.

Future Programming Recommendations

- Before beginning any implementation work, provide projects with time to understand the inclusive education landscape of a country. Encourage projects to map stakeholders and convene meetings to inform project activities and link those activities to ongoing work in the country.
- Develop relationships at the national level with multiple units within education ministries. If inclusive education is a goal of USAID, identify all touchpoints within ministries and establish ongoing contact. This allows projects to benefit from such contact and expands the potential for impact.
- Conduct situation analyses of sign language usage and infrastructure prior to developing project objectives. These situation analyses can be conducted as independent contracts prior to solicitations and can be part of broader inclusive education packages to be accomplished before commencing deaf education activities.

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REFAM (2022) *Reading for All Malawi Quarterly Report, FY22 1st Quarter*
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REFAM (2019) *Early Grade Reading Assessment of Standard 2 and 4 Blind and Low Vision Learners in Malawi Primary Schools Draft Report*
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REFAM (n.d.) *DHH Baseline 2020 Learner Intake: Criteria Questions*
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REFAM (n.d.) *Reading for All Malawi Variable Names Codebook – Climate Observation – DHH*
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REFAM (2019) *2019 Malawi Early Grade Reading Assessment National Reading Program Baseline – LD*
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REFAM (2020) *Malawi Early Grade Reading Assessment: Protocol Baseline 2020 – Hard of Hearing English EGRA*

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REFAM (2020) *Reading for All Malawi Baseline 2020: Field Work Daily Summary Sheet – Team Report*
REFAM (2020) *Reading for All Malawi Baseline Deaf/Hard-of-Hearing Classroom Observation Tool*
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REFAM (2019) *Reading for All Malawi English Assessment – LD modified*
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REFAM (2022) *Reading for All Malawi 2022 School Observation Checklist*
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REFAM (2022) *Reading for All Malawi 2022 Head Teacher and Teacher Interview*
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Miscellaneous

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REFAM (n.d.) *Notes on Teacher Questionnaire Data*
REFAM (2020) Invitation to Attend Review of the EMIS Workshop
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REFAM (2022) *Reading for All Malawi Tangerine Variables: Head teacher and teacher Interview*
REFAM (2022) *Reading for All Malawi 2022 Coversheet Field Work Data Collection (2 files)*
REFAM (2022) *Reading for All Malawi 2022 Learner Sample (3 files)*
REFAM (2022) *Reading for All Malawi 2022 Teacher Sample (2 files)*

Annex B. TLMs Produced by REFAM

Standard 1–2		Standard 3–4	
Type of material	**Quantities Received**	**Type of Material**	**Quantities Received**
REGULAR PRINT (Deaf, Hard of Hearing, and Learning Difficulty)			
Alphabet cards	2427	Family tip sheet	1545
Flash cards	2427		
MSL chart	386		228
Family tip sheet	2427		
Zakudya zomwe ndimadya	2427	My village	1545
Zinthu zopangidwa ndi zikopa	2427	Share it fairly	1545
Zodabwitsa za ku Malawi	2427	Mangoes	1545
What do you see	2427	*Mpanda kwawo akanidwa*	1545
When I grow up	2427	*Mkango owopa kugonja*	1545
Monkey's camera	2427	Monkey's camera	1545
BRAILLE (Blind and Deafblind)			
Alphabet cards	124		
Flash cards	124		
Family tip sheet	124	My village	49
Zakudya zomwe ndimadya	124	Share it fairly	49
Zinthu zopangidwa ndi zikopa	124	Mangoes	49
Zodabwitsa za ku Malawi	124	*Mpanda kwawo akanidwa*	49
What do you see	124	*Mkango owopa kugonja*	49
When I grow up	124	Monkey's camera	49
Monkey's camera	124		
LARGE PRINT (Low Vision and Albinism)			
Zakudya zomwe ndimadya	284	My village	349
Zinthu zopangidwa ndi zikopa	284	Share it fairly	349
Zodabwitsa za ku Malawi	284	Mangoes	349
What do you see	284	*Mpanda kwawo akanidwa*	349
When I grow up	284	*Mkango owopa kugonja*	349
Monkey's camera	284	Monkey's camera	349
Totals	25,049		13,431
Total distributed for standard 1–4	38,480		

Annex C. Tools

IDP and IKI researchers collected data for the evaluation using the tools below.

Exhibit 14. List of Data Collection Tools

Type	Tool	Name
KII	A	Government KII – Interim
KII	B	Government KII – Endline
KII/FGD	C	OPD KIIs/FGD
KII/FGD	D	Teacher KII/FGDs at Training Workshops
KII/FGD	E	School Directors KIIs/FGD
KII	F	School-Based Teacher KIIs
KII	G	School-Based Teacher KIIs: RCs
KII	H	Implementing Partner Staff KIIs
FGD	I	Family FGD Questionnaire
Survey	J	Pre-Post Instructional Training Survey (from REFAM)
Survey	K	MCSIE Teacher Survey
Observation	L	Training Observation Tool
Observation	M	Classroom Lesson Observation Tool
Secondary Source Review	N	Material Review

Annex D. Sample Demographics

Demographic information is presented below for data collected from each of the data sources listed in Annex C. If a data collection tool is not listed within a given table, the respective demographic data summarized therein was not documented.

Exhibit 15. Sample Size and Description by Tool Type

Key Informant Interviews/Focus Group Discussions			Total Sample: 293
Tool	**Sample Size**	**Sample Description**	
A	17	5 national government official KIIs with 6 individuals (some individuals interviewed twice) and 15 district officials; 12 regional government KIIs	
B	5	5 national government official KIIs	
C	4	4 interviewees from 3 national OPDs	
D	72	REFAM training participant KIIs (40 specialist teachers, 32 itinerant teachers)	
E	58	Head teachers interviewed during school visits	
F	53	General education teachers interviewed during school visits	
G	45	Specialist teachers interviewed during school visits	
H	8	KIIs with key staff and two CoPs over the course of the project	
I	77	FGDs ranged from 3 to 9 participants, 12 total	
Surveys			Total sample: 373
Tool	**Sample Size**	**Sample Description**	
J	318	REFAM pre-post surveys in trainings (356 responses provided, sample reduced to exclude participants that only completed either pre or post survey)	
K	55	Teachers (47 RC, 8 general education) who participated in REFAM trainings	
Observations			Total observations: 66
Tool	**Sample Size**	**Sample Description**	
L	7	Seven observations across four trainings	
M	59	59 distinct classroom observations of teachers	
Secondary Source Review (Over 200 materials)			Total Sample: Over 200
Tool	**Sample Size**	**Sample Description**	
N	200+	Project resources reviewed by the evaluation team from the interim report through endline included training materials, classroom TLMs, screening materials, coaching materials, community outreach materials used during the COVID-19 pandemic, videos and audio files, datasets, and project reports.	

Exhibit 16. Sample Distribution by Region/District for RCs and Special Schools

RCs Targeted by REFAM Endline Activities	District	Division	Specialized Disability Category[17]
Zingwangwa	Blantyre	SWED	LD
Makande primary	Chikwawa	SWED	BLV
St. Mathew's	Chikwawa	SWED	LD
Montfort demonstration*	Chiradzulu	SHED	BLV/LD/DHH
Mary View School for the Deaf	Chiradzulu	SHED	DHH
Chiradzulu	Chiradzulu	SHED	LD
Chirimba	Blantyre Urban	SWED	DHH
Nthaliwe School for the Deaf	Chitipa	NED	DHH
Chitipa Model	Chitipa	NED	LD
Mua School for the Deaf	Dedza	CWED	DHH
Kalinyeke Model	Dedza	CWED	LD
St. Mary's boys	Karonga	NED	BLV
Karonga School for the Deaf	Karonga	NED	DHH
St. Mary's boys	Karonga	NED	LD
Chilanga	Kasungu	CEED	BLV
Chisuwe RC	Kasungu	CEED	LD
Lilongwe Demonstration	Lilongwe Urban	CWED	LD
Malingunde School	Lilongwe West	CWED	BLV
Nkope Hill	Mangochi	SEED	BLV
Ekwendeni school for VI	Mzimba North	NED	BLV
Ekwendeni school for LD	Mzimba North	NED	LD
Embangweni School for the Deaf	Mzimba South	NED	DHH
Kaphuta primary school	Mzimba South	NED	DHH
St. Maria Goretti for BLV and LD	Nkhatabay	NED	BLV
Bandawe School for the Deaf	Nkhatabay	NED	DHH
Nkhotakota LEA	Nkhotakota	CEED	BLV
Nsiyaludzu School for the Blind	Ntcheu	SWED	BLV
Gumbu primary school	Ntcheu	CWED	DHH
Salima primary school	Salima	CEED	BLV
Mountain View School for the Deaf	Thyolo	SHED	DHH
Luchenza	Thyolo	SHED	LD

Source: REFAM Concept Note for the Intake Process for Endline

[17] Specialized disability category of the RCs listed was given by the REFAM project staff based on the predominant disability type among learners in the sample schools.

Exhibit 17. Gender Distribution

Tool	Male	Female	Unspecified
A	8	8	5
B	2	3	0
C	3	1	0
D	8	8	56
E	39	11	8
F	24	21	8
G	20	19	6
H	1	4	0
I	29	37	11
J	119	124	1
K	24	31	0
M	31	28	0

Exhibit 18. Age Distribution

Tool	18–24 years	25–39 years	40–60 years	Over 60 years
E	Not asked	Not asked	Not asked	Not asked
F	Not asked	Not asked	Not asked	Not asked
K	0	23	32	0

Exhibit 19. Teaching Experience

Tool	0–3 years	4–6 years	7–10 years	Over 10 years
E	0	0	0	44
K	14	15	12	14

Exhibit 20. Disability Status

Tool	Identified Disability	No Identified disability
E	Not asked	Not asked
F	Not asked	Not asked
K – Self Disclosed	8	47
K – Close contact	33	22
M – Learners Identified	17	N/A

Note: This table summarizes data on disability status from the following tools: (1) when respondents were asked whether they self-identify as having a disability themselves in the teacher survey, (2) when

respondents were asked in KIIs whether the respondent had one or more children with disabilities in their school/classroom, and (3) the disability status of learners observed in classrooms.

Exhibit 21. Disability Type

Tool	Physical Disability	Intellectual Disability	Visual Disability	Hearing Disability	Learning Disability	Other/Not Disclosed
K – Respondent Disclosure	0	3	3	0	2	0
K – Learner Disability Type Reported	10	10	13	17	10	0
M – Learner Disability Type Observed	0	0	4	5	10	0

Note: For respondents who identify as having a disability, this table summarizes their reported disability type(s). Student disability type is also reported from the classroom observation data and KII data. Respondents could report more than one disability type when multiple disabilities were present. Examples of "other" disabilities reported include speech impairment, autism, and epilepsy.