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

Acknowledgements

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Acronyms

ACL	All Children Learning
ACR	All Children Reading
AIM	Areas of Intervention Mapping
ASL	American Sign Language
CDPF	Capacity Development Partnership Fund
CDPO	Cambodian Disabled People's Organization
CLA	Collaborating, Learning, and Adapting
CSL	Cambodian Sign Language
DCHA	Democracy, Conflict, and Humanitarian Assistance
DDP	Deaf Development Program
EGR	Early Grade Reading
EGRA	Early Grade Reading Assessment
EQ	Evaluation Question
FGD	Focus Group Discussion
GPE	Global Partnership for Education
IDP	Inclusive Development Partners
IP	Implementing Partner
IVR	Interactive Voice Response
KII	Key Informant Interview
KT	Krousar Thmey
LASER PULSE	Long-Term Assistance and SErvices for Research Partners for University-Led Solutions Engine
MCSIE	Multi-Country Study on Inclusive Education
MEL	Monitoring, Evaluation, and Learning
MoEYS	Ministry of Education, Youth, and Sport
MoH	Ministry of Health
NEP	Non-Governmental Organization Education Partnership
NGO	Non-Governmental Organization
NISE	National Institute of Special Education
OPD	Organization of Persons with Disabilities
RTI	Research Triangle Institute
SED	Special Education Department
TLM	Teaching and Learning Material
UDL	Universal Design for Learning
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

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 2018 USAID Education Policy (USAID, 2018b) and the 2019–2023 U.S. Government Strategy on International Basic Education (USAID, 2018a). 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. It is against this backdrop that 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 All Children Reading Cambodia (ACR-Cambodia), an inclusive early grade reading (EGR) activity that ran from September 2016–December 2021.

ACR-Cambodia delivered an early grade Khmer literacy programming to learners from upper preschool (referred to as "preschool" in this document) to Grade 2 in target provinces, with a focus on supporting learners with and without disabilities. Activities from the project's inception in 2016 until its close in 2021 include developing teaching and learning materials (TLMs), including student supplementary books, teachers' guides, and resources adapted for braille and Cambodian Sign Language (CSL); delivering in-service teacher training workshops and school-based literacy coaching; conducting school-based screenings to identify learners with hearing or vision difficulties; and monitoring student learning outcomes through early grade reading assessments (EGRAs).

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 an 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 Cambodia, IDP has collaborated with the Cambodia Disabled People's Organization (CDPO) to evaluate inclusive education initiatives within the All Children Reading (ACR) Cambodia project led by Research Triangle Institute (RTI) International.

1.2 Methodology

This report is an endline evaluation of ACR-Cambodia's activities related to inclusive education through its closure in 2021. 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 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 disabilities, (4) the inclusive instructional models to improve reading outcomes, and (5) the project's unintended consequences.

To shed light on core themes and findings in Cambodia, IDP and the CDPO teams collected thousands of data points over a period of nearly three years. This included conducting over 300 key informant interviews (KIIs) or focus group discussions (FGDs), over 400 surveys, 152 training or classroom observations, and a review of over 280 secondary source project materials. Stakeholder groups were diverse, including but not limited to project staff, families, teachers, school directors, literacy coaches, government representatives, and organizations of persons with disabilities (OPDs)[1]. This approach was subject to limitations, including a largely remote data collection process due to the COVID-19 pandemic.

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.

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: ACR-Cambodia has benefited from strong project management that allows staff to leverage partnerships and communications with government, non-governmental organizations (NGOs), families, and community members in a highly collaborative manner, successfully supporting its original aims of large-scale national literacy reform. It has generally done so despite a national environment where limited inclusive education expertise is available, a challenge the project confronted head-on in staff recruitment and project implementation. Stakeholders' lack of a shared conceptual understanding of both disability and inclusive education was a shortcoming that affected the project's implementation in school communities and was associated with a siloed inclusive education team that often operated in parallel with other project teams. Furthermore, while sustainability for the implicitly inclusive early grade reading (EGR) package is highly likely, resourcing constraints diminish the potential sustainability of disability-focused interventions.

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

Answer: Although numerous efforts were made in the area of screening, the project ultimately determined that the ACR-Cambodia screening activities were largely ineffective to flag learners with hearing or vision difficulties for referral, and as a result, diagnosis and

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[1] Organizations of Persons with Disabilities (OPDs), also known as Disabled Persons' Organizations (DPOs), are civil society organizations managed by and for persons with disabilities.

follow-up support were also lacking. Overall, the project identified learners with disabilities at a much lower rate than anticipated. Screening activities struggled with multiple barriers, including the use of an unreliable hearing screening tool and teachers' lack of fidelity in implementing teacher-led screening. Once learners were screened in schools,[2] the project found that the broader referral and specialist health service sector in Cambodia was not prepared to support referred learners, hindering the project's ability to scale screening efforts, which then raised ethical questions for moving forward. The project relied on a presumed rate of 10% of learners with disability in the classroom.

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: The analysis of training-related data collected through MCSIE showed that ACR-Cambodia delivered a well-coordinated, structured training approach that supports teachers to develop foundational skills for teaching the Khmer EGR package. The project closely collaborated with government stakeholders on content development, and training delivery adhered to evidence-based adult learning principles[3] and was consistent with Universal Design for Learning (UDL) practices[4]. Trainees also reported being very satisfied with the training package overall and had few critiques or complaints. However, a limited focus on inclusive education may have impacted teachers' enactment of inclusive practices in the classroom. While principles of inclusion consistent with UDL were subtly embedded into the reading package itself, training did not connect these teaching strategies to the implementation of inclusive education. Teachers also did not make the link between inclusive education and the likely presence of students with unidentified disabilities in their own classrooms, often expressing support for inclusion in theory but claiming it did not currently apply to them as their classes had no students with disabilities. As the adaptation of the in-service package to the pre-service curriculum did not broaden or expand an emphasis on inclusion, the pre-service package may also perpetuate these same gaps.

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

Answer: Despite the minimal focus on inclusion or UDL during teacher training, inclusive principles were embedded implicitly (and in some cases, explicitly) throughout TLMs, and teachers within the intervention schools demonstrated significantly more knowledge of

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[2] According to the June 2019 Screening Report, the project screened 770 boys and 695 girls (n=1,465) in upper preschool and 2,211 boys and 1,918 girls (n=4,129) in Grade 1 for a total of 2,981 boys and 2,613 girls (n=5,594).

[3] Examples include applied and experiential learning, connecting learning to personal experience, and providing information through multiple formats and methods (Knowles, Holton, & Swanson, 2015).

[4] UDL strategies help to support all students including struggling learners, as described in the *Universal Design for Learning to Help All Children Read* toolkit (Hayes, Turnbull, & Moran, 2018) and resources such as those provided by CAST (2018).

inclusive strategies as well as the capacity to apply them during reading lessons, compared with teachers in Control group schools. Data collected from teachers and through lesson observations indicates that more work is needed to raise teacher awareness of the existence of "hidden" disabilities in Cambodia. However, data observed during reading lessons also showed that ACR-Cambodia teachers have been given the tools needed to recognize and support struggling learners (even if teachers are not aware of the cause of their disabilities) based on the principles of inclusion embedded in TLMs. While student learning outcomes data specifically for children with disabilities is not available[5], ACR-Cambodia's endline EGRA showed significant gains among students in project schools, suggesting the possibility that students with disabilities who received the same inclusive instruction as their peers without disabilities were also able to improve their reading skills.

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

Answer: In any activity, consequences arise that were not anticipated in the original project design. In the case of ACR-Cambodia, these were both positive and negative. While the COVID-19 pandemic caused project delays and shifts, it showcased a number of project strengths related to adaptive management, literacy materials development, and stakeholder coordination. Other uncovered unintended consequences included a lack of conceptual clarity about disability-inclusive education and misunderstandings about the likely prevalence of disability in communities, which were not consistently corrected during project implementation.

The findings to support these answers as well as more information about the Bridge Program for students who are deaf (not included above) 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 for global efforts to support disability-inclusive education.

1.4 Conclusions and Recommendations

ACR-Cambodia's legacy, both its successes and challenges, offer rich knowledge for a global community of practice interested in inclusive education, a relatively new field of focus in international development. ACR-Cambodia had numerous successful practices, such as its collaborative approach with government, development of high quality TLMs, and focus on doing no harm to children with disabilities. ACR-Cambodia also helped to shed light on lessons learned for future projects, including recommendations that can help inform design and implementation. The following tables summarize some of these key conclusions and recommendations, which are elaborated further in Section 5 of this report.

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[5] Learning outcomes data was not disaggregated for disability status in general education settings due to challenges in identifying learners with disabilities. Instead, the project presumed a prevalence rate of 10% of learners with disabilities based on national statistics (Evans et al., 2014).

EQ Area	Conclusions	Future programming recommendations
Process	• ACR-Cambodia ensured collaboration, communication, and high levels of project management, which are strong foundations on which to build large-scale education programming. • USAID and ACR-Cambodia utilized the CLA approach to benefit inclusive education programming in novel contexts by allowing lessons learned from project implementation to drive a responsive, ethical approach that Does No Harm.	• In solicitations, embed inclusive education in all aspects of project design, require OPD engagement, outline a theory of change, and define terms such as disability and inclusive education to ensure stakeholders have a shared conceptual understanding. • Support teachers to understand the widespread nature of "hidden" disabilities in order to link inclusive education training to their own context, where students with "visible" disabilities are not present.
Screening and identification	• Prior to implementing screening activities, ACR-Cambodia conducted a mapping of disability services and referral pathways, and shared this information with schools. • ACR-Cambodia modeled transparency by publishing its screening pilot findings, even though the results did not meet original expectations. ACL-Cambodia's (2019) screening report provides ample data, reflection, and insight to inform how other projects can avoid confronting similar challenges.	• Plan for sufficient time and resources (human and fiscal) to pilot and validate screening tools, develop and refine screening protocols, and consider partnerships with community and health resources. Screening and identification at the school-level is an emergent practice that merits careful consideration in program design. Validated and reliable tools may not be available. • Encourage schools and teachers to move forward with inclusive practices consistent with UDL even if screening breakdowns occur. Raise awareness of disability diversity, move away from labels, and focus on inclusive pedagogy.
Training	• The project ensured content development and training delivery was a collaborative effort with key stakeholders, particularly government trainers and decision-makers. • The project team ensured training design was reflective of adult learning principles and UDL, including using multiple methods to present information to trainees and providing ample time for practice. • ACR-Cambodia used teacher training workshops as opportunities to destigmatize disability and promote sensitization around inclusive education.	• Ensure training that embeds inclusive education principles makes an explicit, not implicit, link between inclusion and the subject matter discussed. • Ensure that sufficient focus is afforded to key messages related to inclusive teaching, as too little time spent on the topic may limit the impact of training on teacher understanding and practice. • Always include people with disabilities as stakeholders and counterparts in training facilitation, and never ask non-disabled trainees to simulate the experience of having a disability themselves.

EQ Area	Conclusions	Future programming recommendations
Instruction	• The project successfully engaged a broad and representative group of stakeholders in TLM development, which increased contextual appropriateness and inclusive representation within materials while promoting host country buy-in and ownership. • The project team embedded implicitly and explicitly inclusive instructional strategies within teacher guides and supplementary materials to increase their use, which benefits all learners.	• Place explicit emphasis during training and coaching on the existence of "hidden" disabilities and the ways that inclusive teaching practices benefit these learners. • Test and refine adapted reading assessments for children with disabilities, drawing on the latest efforts within the EGR community of practice.
Unintended consequences	• Early during implementation, ACR-Cambodia focused on forging strong relationships with government partners, development partners, and donors. This positioned the project team very well to be adaptive to changing conditions, such as those imposed by pandemic-related school closures.	• Clearly define the roles of a project's inclusion team, including how it will interface with all aspects of the project. Provide training to all project staff on inclusive education, regardless of their role. • Educate teachers and government staff, on "hidden" disabilities and international disability prevalence rates. This can help to combat stakeholders' misperceptions that disability prevalence is low when screening and identification activities do not yield their intended results.
Bridge program	• The project team was creative about the use of human and material resources when providing education to out-of-school students. For example, they used community volunteers to provide instructional support, while advocating for long-term pathways to formal education. • ACR-Cambodia collaborated with CSL experts who are Deaf, including with government actors, to produce additional teaching and learning resources (such as CSL videos) for future use on a national basis.	• Carefully consider what consequences may ensue from creating pilot or standalone disability-inclusion initiatives if they are not sustained. Sustainability in resource-intensive inclusion initiatives is a broad challenge. This does not necessarily mean initiatives should not be pursued, but rather sustainability merits consideration early and often.

2. Introduction

This section of the report provides an overview of the Multi-Country Study on Inclusive Education (MCSIE) evaluation's purpose, All Children Reading (ACR) Cambodia, 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 an evaluation of three USAID inclusive education activities in Cambodia, Malawi, and Nepal. These inclusive education activities represent USAID's most concerted effort to date to build systems to ensure learners with disabilities have access to quality education. MCSIE seeks to derive lessons learned about what works, for whom, and in what context 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 findings are not indicative or predictive of future project activities or final 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 ACR-Cambodia, while cross-national comparisons will be made subsequently in MCSIE work.

2.2 Overview of ACR-Cambodia

In September 2016, Research Triangle Institute (RTI) International became the prime awardee of the ACR-Cambodia project that sought to improve the early grade reading (EGR) abilities of children in preschool to Grade 2, and project activities commenced in 2017.[6] ACR-Cambodia proposed to achieve its goals by developing, testing, and implementing a rigorous, practical, and scalable intervention in the Khmer language for this student population in at least two provinces. These provinces originally included Kampong Thom and Kampot but expanded further over the life of the project (MCSIE focuses on these original provinces). RTI worked with the Cambodian Ministry of Education, Youth, and Sport (MoEYS), its implementing partners (IPs), and nongovernmental organizations (NGOs) to implement this activity, while also supporting the Ministry in developing plans and building its capacity in order to eventually scale up the EGR program at a national level.

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[6]The initial target population were children in Grades 1–3.

Furthermore, RTI partnered with several international sub-awardees with a long-term presence in Cambodia, including Room to Read, Save the Children, World Education, and World Vision, and initially partnered with local institutions, including Krousar Thmey (KT). As part of the ACR-Cambodia project, RTI also collaborated with the Global Partnership for Education (GPE) activities, which include both Khmer literacy and mathematics activities implemented in other provinces in Cambodia. In September 2017, RTI received additional funding from USAID under the All Children Learning (ACL) award to expand the integration of inclusive education principles into existing EGR programming.[7] Although two funding streams supported this activity, all project reports refer to the work generally as ACR-Cambodia.

With the infusion of additional funding, ACR-Cambodia's revised mission was to support EGR for all children, including those with disabilities. As such, the project featured broad messaging on inclusive education. Early activities included a situation analysis on disability-inclusive education conducted in 2017 (Hayes & Bulat, 2018), followed by the incorporation of inclusive education strategies into teachers' guides and Khmer-language teaching and learning materials (TLMs). ACR-Cambodia also adapted TLMs for braille and CSL, primarily for use in special segregated schools, and developed an adapted early grade reading assessment (EGRA) for the same population of students with hearing or vision disabilities. ACR-Cambodia also implemented a hearing and vision screening pilot in general education schools. Additionally, ACR-Cambodia, under the Bridge Program, supported a small number of learners who are deaf to receive CSL instruction from volunteer community members with the ultimate aim of helping these learners transition to formal schooling in the future. These and many other strategies to support both inclusive and special education will be discussed in this endline report.

2.3 Purpose of Endline Report

MCSIE originally comprised four phases: (1) inception, (2) initial data collection, (3) midline data collection, and (4) endline data collection.[8] IDP conducted an initial inception visit to Cambodia in November 2019. Since MCSIE's start date began well after project implementation commenced in Cambodia, IDP was only able to collect data closer to the midline and endline of project implementation. Furthermore, 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 put a halt on all in-country data collection for the MCSIE team and slowed many of ACR-Cambodia's activities. Finally, 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 Cambodia by other stakeholders, such as local and national NGOs. In August 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

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[7] USAID's Bureau for Democracy, Conflict, and Humanitarian Assistance (DCHA) contributed funding for these integration efforts. The official start date of these activities began under the ACR Asia award on September 30, 2016.
[8] These phases were subject to change based on the COVID-19 pandemic and shifts in data collection plans and project end dates.

identification, training, instruction, and consequences), as they pertain to the work of the ACR-Cambodia project. The report also serves to shed light on the status of inclusive education programming for relevant stakeholders in Cambodia, 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.

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?

Although not part of the original EQs, this study also examines for whom the programs work or do not work and what specific contextual factors may influence successes or create barriers.

3.2 Methods and Sample

This report uses a **vast** set of data collected from 2019–2022 for both the interim report and the endline report under the leadership of CDPO and with support from IDP. The following is an abridged summary of these methods and sample sizes (see more details in Annex A). Much of this information was collected via phone due to the COVID-19 pandemic.

Exhibit 1. Snapshot of Primary Data Collection Sample

Type	Sample
Key Informant Interviews (KIIs) or Focus Group Discussions (FGDs)	
Government	32
Organizations of persons with disabilities (OPDs)	5
Teacher trainees	36
School directors	64
Classroom teachers	119
Bridge Program families	4
IP staff	27
Literacy coaches	17
Surveys	
Teachers (related to training)	91
Teachers (not focused on training)	114
Families	205
Observations	
Teacher training	8
Literacy lessons	144

KIIs or FGDs (total sample: 304)
- **Government staff.** In total, the team conducted KIIs and FGDs with 32 national or subnational government staff from the MoEYS (25 male, 7 female); this included 24 national and subnational government staff for the interim report and further meetings with 8 subnational government staff for the endline report (some stakeholders may have overlapped between interim and endline meetings).
- **OPDs[9].** The team interviewed 5 OPD representatives from ACR-Cambodia's geographic service area (Kampong Thom Province or Kampot Province, 4 male, 1 female) for the interim report. No further data was collected from this population for the endline report.
- **Teachers at training workshops.** In January–February 2021, FGDs at ACR-Cambodia trainings included a total of 36 teachers (8 male, 26 female).
- **School directors.** Between February–October 2021, the team conducted a total of 64 KIIs with school directors or deputy directors, 60 across Kampong Thom and Kampot provinces (49 male, 11 female) and 4 representing special schools (2 male, 2 female).
- **Classroom teachers.** During 2021, evaluators conducted a total of 119 unique interviews with Grade 1 or 2 classroom teachers (29 male, 90 female), among whom 30 were teachers in Battambang Control schools, 82 were teachers across Kampong Thom and Kampot ACR-Cambodia schools, and 7 were special school teachers.
- **Families of Bridge Program students.** In August 2021, the team conducted interviews with 4 families of students in the Bridge Program (4 female).

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[9] Organizations of Persons with Disabilities (OPDs), also known as Disabled Persons' Organizations (DPOs), are civil society organizations managed by and for persons with disabilities.

- **IP staff.** Across the lifetime of the evaluation, the team consulted with 27 IP staff. IDP and CDPO spoke with 13 IP staff (4 male, 9 female) for the interim report. For the endline report, the team conducted additional KIIs or FGDs with 4 senior project leaders (3 male, 1 female), 6 deaf education or Cambodian Sign Language (CSL) expert staff (5 male, 1 female), and the inclusive education field team (4 male) (some stakeholders may have overlapped between interim and endline meetings).
- **Literacy coaches.** In August 2021, 17 (5 male, 12 female) literacy coaches and literacy coach supervisors participated in FGDs conducted across the four evaluation districts: Stueng Sen and Kampong Svay in Kampong Thom Province and Kampot Town and Kampong Trach in Kampot Province.

Surveys (total sample: 410)
- **Pre-post training surveys.** Before and after trainings in early 2021, 91 (26 male, 65 female) classroom teachers from Kampong Thom and Kampot participated in surveys.
- **Teacher surveys.** From April–September 2021, the team 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 114 teachers (23 male, 90 female, 1 not known) included 84 teachers from Kampong Thom or Kampot and 30 teachers from Battambang Control schools.
- **Household surveys.** From November 2021–March 2022, CDPO evaluators surveyed 200 parents or caregivers of students in Kampong Thom and Kampot provinces who completed Grade 2 in ACR-Cambodia classes (students were generally in Grade 3 by the time of the survey) and a further snowball sample of 5 families of children with disabilities in these provinces (total 77 male, 128 female).

Observations (total observations: 152)
- **Training observations.** CDPO staff observed teacher training or training-of-trainer sessions on 8 occasions from December 2020–February 2022.
- **Classroom lesson observations.** From February–April 2022, CDPO staff conducted a total of 144 Grade 1 or 2 classroom observations: 7 in ACR-Cambodia-supported special school classes across provinces, 108 across ACR-Cambodia-supported classes in Kampong Thom and Kampot, and the remaining 29 in Battambang Control schools.

Secondary Source Reviews (over 280 materials)
- **Material review.** From interim to endline, the evaluation team reviewed approximately 200 project resources, including 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.
- **Equity and Inclusion Checklist.** From October 2021–January 2022, IDP and CDPO team members adapted and piloted USAID's new Equity and Inclusion Checklist with ACR-Cambodia's student TLMs. This checklist was used to review 81 Grade 1 and 2 decodable storybooks and sensory stories, from which 51 materials were analyzed in detail.

IDP and CDPO worked together constantly, across languages and time zones, to collect the above data. This included piloting tools and adapting them with practice, conducting regular enumerator trainings and training-of-trainer sessions virtually with CDPO leaders, and meeting twice monthly to recap evaluation progress. In addition, data was translated to English as needed with the help of Akhara Translation, a firm based in Cambodia.

3.3 Limitations

Due to the COVID-19 pandemic, IDP was unable to visit Cambodia in 2020 or 2021, the primary years of data collection for this evaluation. As a result, IDP worked closely with CDPO to support their in-country data collection efforts. Ultimately, these efforts also shifted to virtual formats, such as telephone interviews and surveys, due to pandemic conditions. Additionally, because of the pandemic, it was challenging for both the project itself and MCSIE evaluators to gauge the project's impact. For example, with schools closed for nearly two years, evaluators could not observe classroom-based instruction until early 2022, at which point teachers and students were only beginning to adapt to the new in-school realities. Such prolonged school closures also had a direct impact on the project's activities and results, since teachers had less time to practice using the new teaching strategies and materials than originally anticipated. Nonetheless, evaluators have attempted to triangulate data with other sources, such as interviews and surveys, to demonstrate the project's noteworthy impact wherever possible.

Finally, readers should be reminded that this evaluation began more than two years after the start of the ACR-Cambodia project. Therefore, the snapshot provided from this evaluation does not offer a pure baseline-endline comparison.

4. Findings

This section of the report provides an overview from the endline evaluation's findings, divided according to the five evaluation questions (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?

Answer: ACR-Cambodia has benefited from strong project management that allows staff to leverage partnerships and communications with government, non-governmental organizations (NGOs), families, and community members in a highly collaborative manner, successfully supporting its original aims of large-scale national literacy reform. It has generally done so despite a national environment where limited inclusive education expertise is available, a challenge the project confronted head-on in staff recruitment and project implementation. Stakeholders' lack of a shared conceptual understanding of both disability and inclusive education was a shortcoming that affected the project's implementation in school communities and was associated with a siloed inclusive education team that often operated in parallel with other project teams. Furthermore, while sustainability for the implicitly inclusive early grade reading (EGR) package is highly likely, resourcing constraints diminish the potential sustainability of disability-focused interventions.

4.1.1 Communication and Management

Strong project management, coordination, and communication all supported the project in successfully achieving its aims. With very few exceptions, government actors, educators, and caregivers commended the ACR-Cambodia project for its success in supporting EGR in Cambodia. Teachers, school directors, and subnational government respondents praised ACR-Cambodia's support to improve student reading outcomes, increase teacher capacity through training, and implement a government-endorsed uniform and user-friendly approach, all of this in spite of a two-year pandemic. These noteworthy successes align with the project's own self-reported performance outcomes, such as providing over 2 million high-quality TLMs to more than 9,600 classrooms, reaching a saturation of 38% of primary schools in Cambodia and benefitting over 300,000 pre-primary and primary-aged learners.[10] MCSIE evaluators observe that such successes can be partially attributed to the following management and communication strategies:

- **Regular communication between project staff.** Project staff held regular all-team meetings virtually, conducted in-person visits between provinces to coordinate project activities, and held biweekly meetings between RTI and core subcontractors. These

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[10] Although a cost analysis was not conducted as a part of this work, evaluators observed the project's apparent value-for-money in that the project managed to achieve all aims despite the pandemic and a budget significantly smaller than some USAID-funded national EGR programs in other countries.

meetings were used to discuss activities both directly and indirectly related to the ACR-Cambodia project, serve as a space to synthesize information between the different stakeholders, and promote a more comprehensive, holistic approach to early grade learning and inclusive education program implementation within the country. The inclusive education team also conducted regular meetings and maintained close communication despite working in the field.

- **Constant communication and collaboration with government.** Project staff built in explicit check-in points and communication processes to leverage government buy-in at the national and subnational levels. The project conferred with MoEYS counterparts on a regular basis to collaboratively co-develop project resources and training packages and to ensure that government staff endorsed and ultimately led major literacy reforms. Staff also established a physical presence at local offices within the MoEYS. The inclusive education team organized monthly meetings with the National Institute of Special Education (NISE), the Special Education Department (SED), and provincial stakeholders to share their progress and plans and address challenges as they arose.

- **Active participation in various multi-stakeholder working groups and forums.** ACR-Cambodia staff often participated in existing national working groups and, at times, led the convening of stakeholders. ACR-Cambodia leveraged the MoEYS's Technical Working Group for Early Grade Reading, which includes members from various departments within the Ministry and NGOs, as a vehicle for collaboration and partnership. In April 2021, the project also assisted the NGO Education Partnership (NEP) in designing and leading the Ninth National Forum on Inclusive Education to examine "Building Capacity of Teachers to Teach All learners with Special Educational Needs, at All Levels of Education." Communication between ACR-Cambodia and project partners (including the MoEYS) was further enhanced by the publication of ACR-Cambodia's quarterly community of practice newsletter and regular use of the project's Facebook page.

- **Reaching out to caregivers through diverse channels before and during the COVID-19 pandemic.** The project regularly communicated with families of learners with and without disabilities through social media, print materials, and verbal communication, according to the activity and parent context. These efforts only intensified during the COVID-19 pandemic, when learners urgently needed family-led literacy practice, and included the use of multimodal communication strategies through Facebook Messenger, Telegram, interactive voice response (IVR) technologies, and direct phone calls to families. Dedicated teachers also contributed to these efforts; in KIIs, trained teachers reported the following: 94% communicated with families via phone during the pandemic, 49% visited students' homes, 32% asked students to collect and return assignments to school, and 26% provided small group instruction as feasible.

  - **ACR-Cambodia leadership's awareness and appreciation of the strong ethical influence they held in decisions related to inclusive education for children with**

disabilities. Interviews with ACR-Cambodia staff shed light on the project team's consideration of its ethical impact on Cambodian students, especially those with disabilities. In KIIs, ACR-Cambodia's leadership recognized their responsibility to USAID to implement project activities that align with the solicitation and produce quality data; however, they also reflected on the importance of taking a person-centered approach that reduces the potential risk of harm to project beneficiaries. ACR-Cambodia's consideration of ethics in its program implementation was most evident when respondents discussed screening and identifying learners with disabilities (discussed later in this report). Instead of proceeding at scale with methods that were ineffective, the project team paused and pivoted to alternative approaches at a smaller scale. Project staff reported that USAID strongly supported this collaborating, learning, and adapting (CLA) approach that shows a willingness to reflect and reframe the activities according to emerging lessons learned.

4.1.2 Conceptualizing Inclusion and Disability

Inclusive education featured as a clear aspect of ACR-Cambodia implementation, but was not defined early or consistently in the project. USAID provided additional funds to RTI, namely through the All Children Learning (ACL) award mechanism to integrate inclusive education practices throughout ACR-Cambodia implementation[11]. ACR-Cambodia had already been considering an inclusive approach and the additional funds made it possible to have a more targeted focus on inclusive education. However, the project did not define inclusive education, outline a theory of change in the ACL solicitation, nor develop a shared understanding among stakeholders of this concept's application in the project.

Analysis. Although ACR-Cambodia was designed and strengthened to be inclusive, inconsistent perceptions around key inclusive education terms from both project staff and external stakeholders presented challenges with implementation. Not having consistent definitions of disability or inclusive education allowed stakeholders both divergent and inconsistent interpretations of the project's aims. For example, some stakeholders perceived that inclusive education could take place in any setting -including segregated schools - so long as it supported children with disabilities.

Teachers in both Control and ACR-Cambodia schools expressed less awareness of "hidden" disabilities than disabilities that can be visually recognized. When asked about the meaning of "disability" in KIIs, a large majority of ACR-Cambodia teachers (79%) and Control teachers[12] (83%) mentioned disabilities that can be seen by looking at a person or, as commonly stated by teachers, a loss of physical functioning in one or more limbs or organs (see Exhibit 2 below). The prominence of visually recognizable disabilities, such as hearing, vision, or physical disabilities, and the lower recognition of "hidden" disabilities, such as intellectual disability, speech disabilities, learning disabilities, or autism, is consistent with SED's broader national definitions, as SED does not distinguish learning disabilities as its own category in its own policies. The similar

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[11] ACR-Cambodia initially focused on early grade reading without defining a clear scope for disability-inclusive education. With additional DCHA funds, the ACL award allowed ACR-Cambodia to strengthen its focus on disability inclusion.

[12] Control teachers are teachers with similar demographic characteristics (grade level, region, gender) outside of the ACR-Cambodia intervention group (i.e., who were not engaged in ACR-Cambodia activities).

responses across ACR-Cambodia and Control teachers suggest that, despite the inclusive practices taking place within ACR-Cambodia schools, teachers may not realize that they are implicitly supporting learners with "hidden" disabilities in their own classrooms because they have limited awareness that such disabilities exist.

Exhibit 2. Teachers' Differing Definitions of "Disability"

What does the term "disability" mean to you?	ACR-Cambodia teachers (N=81)	Special school teachers (N=7)	Control teachers (N=29)
Broad recognition of various disability types	22%		24%
Physical	79%	100%	83%
Vision	79%	100%	69%
Hearing	74%	100%	48%
Learning disabilities	1%		
Intellectual disability	38%	43%	55%
Autism	1%		3%
Speech disabilities	9%		3%

During KIIs, ACR-Cambodia teachers expressed a much greater familiarity with and nuanced understanding of inclusive education, compared with Control teachers, but some ACR-Cambodia teachers lacked an appreciation for how this applied to them personally. In KIIs, only 13% of ACR-Cambodia teachers were unfamiliar with the term "inclusive education" compared to a large majority of Control teachers (73%), as shown in Exhibit 3. While limited and not a central focus of the intervention, ACR-Cambodia greatly increased awareness

Analysis. The project could have shared clearer definitions of disability-inclusive education, including describing a wider variety of disabilities, including "hidden" disabilities, to challenge teachers' narrow perceptions of disability as purely physical in nature. This may support teachers to understand the relevance of inclusive teaching strategies embedded in the ACR-Cambodia reading package and relate them to their own practice.

about inclusive education and disability among educators, an awareness-raising strategy that supports the enactment of inclusion in practice. Yet, at the same time, by not using training to broaden teachers' perceptions of what constitutes disability, some teachers did not understand how inclusive education impacted their own practice. When asked what barriers learners with disabilities face to accessing an inclusive education, common responses included, "The barrier of inclusive education in my school and community is not bad because we seem to have no students with disabilities" (Female, Grade 1 Teacher) and "Personally, I have no difficulties because there are no students with disabilities" (Female, Grade 1 Teacher).

Exhibit 3. Teachers' Differing Definitions of "Inclusive Education"

What does the term "inclusive education" mean to you?	ACR-Cambodia teachers	Special school teachers	Control teachers
Have not heard term/don't know	13%, N = 11	0	73%, N = 22
Integrating students together	65%, N = 53	100%, N = 7	10%, N = 3
No discrimination	28%, N = 23	29%, N = 2	13%, N = 4
Ideals of equality, equity, and education	15%, N = 11	0	7%, N = 2

The project had little impact on perceptions about learners with disabilities' capacity to learn to read, with ACR-Cambodia and Control teachers generally sharing similar beliefs. A survey asked teachers whether they believe learners with certain types of disabilities have the ability to learn to read in regular classrooms when provided with appropriate teacher instruction and support. Overall, most teachers agreed that learners with physical, hearing, and vision disabilities can learn in regular classrooms, while they disagreed that learners with intellectual, learning, and speech disabilities can do the same. No statistically significant differences were found between ACR-Cambodia and Control teachers when comparing beliefs across all six of the disability types.

Analysis. More effort is needed to increase teacher perspectives around the prevalence of speech, learning, and intellectual disabilities in general education classrooms. Teachers may either perceive these cognitive difficulties as more difficult to teach than physical disabilities or may not be aware of what these disabilities are.

4.1.3 Project Design and Staffing
ACR-Cambodia staff reported limited experience in the field of inclusive education and noted difficulties in recruiting and hiring qualified inclusive education staff in Cambodia, which impacted project timelines. The educational inclusion of learners with disabilities in general education settings is a relatively new phenomenon in Cambodia, meaning that few professionals in Cambodia have extensive experience in this field. ACR-Cambodia staff reported hiring challenges for inclusive education positions due to a limited pool of qualified candidates in Cambodia, and sometimes ACR-Cambodia had to advertise multiple times for the same role. This barrier was corroborated by the MCSIE Areas of Intervention Mapping (AIM) Study that found the same challenge across NGO partners in Cambodia. ACR-Cambodia attempted to mitigate this challenge by hiring international staff with related expertise, such as inclusive education specialists and reading specialists, and providing extensive training. Furthermore, project reports described that staffing challenges for a few of the inclusive education positions—combined with the pandemic—diminished some of the project's desired impact. Specifically, delays in hiring inclusive education field staff, particularly a deaf education specialist, impacted ACR-Cambodia's timeline for implementing inclusive education project activities, such as its ability to pilot screening

tools and adapted assessments. Additionally, the project had turnover in both the international inclusive education staff position and the national inclusive education director role.

ACR-Cambodia's inclusive education leadership—with support from RTI home office professionals—provided the inclusive education team with training that ranged in length on a variety of topics related to inclusive education. Topics included advocacy and community awareness, including parental engagement; disability laws and policies on child protection; OPD engagement; instructional approaches for students with and without disabilities; use of illustrations and TLMs to promote UDL and inclusive principles; education of students with vision or hearing difficulties; Deaf culture and CSL; disability screening and referral processes for hearing and vision; and education for learners with intellectual disability. Local NGOs who have content-specific knowledge and/or inclusive education project staff often provided training according to the team's evolving needs. In the early days of the ACR-Cambodia project, newly hired staff would receive a specific training and then go into the field to observe classroom practice in general education and segregated schools. This training was only limited to the inclusive education team and generally did not cross over to other project staff, such as literacy coaches.

Project staff working on inclusive education elements of the project expressed that their knowledge and the application of their knowledge felt siloed and disconnected from the larger overall picture of inclusive education. The ACR-Cambodia inclusion team focused primarily on the Bridge Program for deaf or hard of hearing students, and less on inclusive education in general education classroom contexts. Specifically, the eight-person inclusion team focused chiefly on one province with 14 Bridge students. The team seldom were asked for input on broader teacher training activities or classroom-level supports in general education classrooms. Members of the inclusion team noted that if they had been involved in the initial program design, the knowledge and expertise they brought to the Bridge Program could have been more overtly included in the broader literacy curriculum and classrooms to improve impact and scale. Project staff reflected on this at the project's conclusion, describing a desire to focus more on UDL strategies in inclusive settings in future project work as a twin-track approach alongside special educational supports.

> **Analysis.** The fact that the inclusive education staff felt siloed from the broader project team and required extensive training can provide useful lessons learned to other projects encountering similar challenges globally. For example, projects may wish to consider including lead-up time for training, developing strategies to embed inclusion throughout staff's job responsibilities, and providing inclusion training to all project staff.

Although the project brought in a diverse group of local NGOs with relevant sectoral and geographical experience, OPD engagement was limited. Throughout interviews, respondents highlighted the importance of ACR-Cambodia having partners and additional stakeholders with expertise in specific areas to aid program implementation. Major partners of RTI, such as Room to Read and World Education, provided insight into how the organizations collaborated in some areas and provided technical leadership in others. Yet, OPD engagement was not required in the

project solicitation, and some OPD interviewees only became aware of ACR-Cambodia when they were invited to participate in interviews for this evaluation in 2020. In early stages of the project in Kampong Thom, the project team did involve OPDs when connecting families with health centers, and OPDs supported the project's communication efforts within local communities of one province by distributing leaflets as well as recruiting Bridge teachers for learners who are hard of hearing. In later stages of the project, ACR-Cambodia recruited OPD members representing different types of disabilities to participate in informational training videos on inclusive education, and persons who are deaf or hard of hearing received significant project support to lead the CSL committee to develop more CSL materials.

ACR-Cambodia's Monitoring, Evaluation, and Learning (MEL) Plan did not have explicit or comprehensive evaluative approaches for inclusive education efforts, and while data on inclusive teaching was collected, it was not systematically analyzed. ACR-Cambodia's MEL Plan had output indicators specifically about learners with disabilities or "vulnerable persons"; these output indicators were used to track teachers' professional development on inclusive education (the number of teachers trained) and track adapted assessments (the number of learners with disabilities assessed and the number of ministry or partner staff trained to administer adapted assessments). However, there was a lack of outcome indicators specific to learners with disabilities and related to these students' learning outcomes, an effort that may have been complicated by a lack of identified learners with disabilities in general education settings. Project staff also acknowledged that school-level data was not specifically analyzed from an inclusion perspective on a regular basis.

4.1.4 Sustainability

The project used a variety of strategies to support the sustainability of its efforts. These strategies vary widely from making all TLMs publicly available and accessible on virtual platforms (including newly produced CSL videos), to requiring local partners to develop sustainability plans, to using government-employed educators as lead trainers and co-trainers of teachers, and to embedding the evidence-based, in-service package[13] into the pre-service course developed with ACR-Cambodia's support. A common theme across these approaches is the sharing of high-quality resources with Cambodian stakeholders widely and openly and viewing public, government, and local NGO partners as core stakeholders in sustaining the

Analysis. While the project has received government support to sustain the EGR package, some inclusion-focused aspects of the project that will not be sustained are a poignant reflection on the limitations of donor-funded initiatives that lack government endorsement or long-term funding. Such challenges are not unique to this project and may be more common in emerging thematic areas such as inclusive education.

successes of the literacy program. Furthermore, one project respondent noted that the slowed pace of instruction can be viewed as a meaningful legacy that will persist with the MoEYS's

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[13] Kim et al., 2016.

leadership, along with the use of TLMs and instructional approaches developed through the project.

Despite ACR-Cambodia's efforts, some project components are unlikely to be sustained without external resourcing. One subnational government respondent flagged "that support needs to extend beyond short-term pilot projects in a handful of districts because then activities end when [partners] leave at the end of a pilot project" (Focus Group Participant). Examples of such sustainability challenges, largely linked to the need for ongoing financial resources, include the following:

- **Resourcing for screening and assistive devices.** Regarding hearing and vision screening, project respondents were fairly unified in their perception that teacher-led screening practices are neither highly effective nor sustainable and that future efforts would benefit from close collaboration with the Ministry of Health (MoH). A related sustainability issue is identifying which government ministry will assume responsibility for providing assistive devices, such as glasses or hearing aids, to students in the future.

- **Resourcing and oversight of the Bridge Program.** The Bridge Program's provision of one-on-one or small group instruction to learners who are deaf will not be sustained. Specifically, the government did not put Bridge volunteers on the payroll to continue their support of learners who are deaf in their own communities, which has since necessitated the transfer of these learners to residential segregated special schools so they can continue their education. Project staff were reluctant to include a continued Bridge Program model in the follow-on project as it has the risk of creating "false hope" for these learners.

- **Coaching models led by NGO staff.** Despite evidence that coaching practices are supportive of behavior change and EGR outcomes (Piper et al., 2018), the coaching and mentoring model used by ACR-Cambodia was resource-intensive and involved dedicated NGO-employed coaches visiting schools regularly, a practice that would not be scalable under the MoEYS in the future.

When asked about sustaining ACR-Cambodia's impact in the future, subnational government respondents also offered creative suggestions for future consideration. For example, they suggested the need for a comprehensive plan for the government to support teacher training, especially in response to the inevitable turnover among teachers trained in the new reading packages; the need for increased teacher-to-teacher mentorship within schools to support inclusion; the need to set up inclusive schools to model pedagogical practices; and the need for facilitating an exchange of expertise between provinces.

In their own words…what is next for inclusive education?

We see that the government has set up a pedagogical school, but we do not have many people who specialize in inclusive education … Basically speaking, inclusive education puts an emphasis on disability, which is still incomprehensive because there has only recently been a special education institute [i.e., NISE] in Phnom Penh and that special education institute focuses on students and vision and hearing impairment … Children with vision and hearing impairments are very important in learning in the classroom, while [supports to addressing] other problems are [still] non-existent.

– Subnational government employee on the need to expand support to other types of students with disabilities (translated)

4.2 Screening and Identification

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

Answer: Although numerous efforts were made in the area of screening, the project ultimately determined that the ACR-Cambodia screening activities were largely ineffective to flag learners with hearing or vision difficulties for referral, and as a result, diagnosis and follow-up support were also lacking. Overall, the project identified learners with disabilities at a much lower rate than anticipated. Screening activities struggled with multiple barriers, including the use of an unreliable hearing screening tool and teachers' lack of fidelity in implementing teacher-led screening. Once learners were screened in schools, the project found that the broader referral and specialist health service sector in Cambodia was not prepared to support referred learners, hindering the project's ability to scale screening efforts, which then raised ethical questions for moving forward. The project relied on a presumed rate of 10% of learners with disability in the classroom.

Screening tools were selected using a consultative process with relevant NGOs. The ACR-Cambodia project consulted with a variety of organizations that were already screening and conducting more comprehensive assessments aimed at identifying children with disabilities. For example, before starting any activities, ACR-Cambodia consulted with KT, Save the Children, the Hope Foundation, the Starkey Foundation, All Ears Cambodia, and the Fred Hollows Foundation. According to KIIs, the screening process ACR-Cambodia developed was the result of piloting and internal conversations about which tool would be most appropriate, cost-effective, and easy for

teachers to use within their existing classroom frameworks. ACR-Cambodia used the LEA Symbols Chart (a non-alphabetic screening tool) for vision screening, which is consistent with the evidence base. In the end, a non-alphabetic eye chart was chosen because the Tumbling E Chart was deemed inappropriate for users of the Khmer language, which is aligned with normative practice[14].

The noise test selected by ACR-Cambodia for hearing screening is not considered a reliable, evidence-based tool (American Education Research Association et al., 2014). For the hearing screening tool, a teacher stood one meter behind the student and made sounds (e.g., clapping their hands) and asked the child to raise their hand if they could hear the sounds. If the child could not hear those sounds, they were referred for further testing with parental permission. KIIs with teachers and school directors indicated that background school noise was a barrier to implementing this tool. Other tools also reviewed by the project—such as an app-based test—had other challenges, such as challenges related to sustainability and scalability in particular. Complementary to the noise test, an informal parent questionnaire was also problematic, as the accuracy of parent responses could not be assured. Furthermore, among KII respondents who said they were involved in screening activities (N=85), only two teachers mentioned the parent questionnaire, and no school directors referenced it.

In advance of implementing screening activities, ACR-Cambodia conducted a scoping or "mapping" of disability services for learners with disabilities in the Kampong Thom Province and used the information to create a local referral source, the Online Disability Service Directory for Cambodia; however, its use and resulting impact is unclear. ACR-Cambodia introduced this resource to teachers and school directors during screening training, and on surveys, teachers and school directors indicated that the availability of assistive devices is a high need. ACR-Cambodia also met with local NGOs/service providers to determine their capability to provide further assessment and/or assistive devices for those in the two pilot districts (for vision: Eye Hospital and Fred Hollows Foundation; for hearing: Hope Cambodia and All Ears Cambodia). This approach is consistent with suggested practices on referral mapping (Hayes et al., 2018), yet teacher survey data suggests that providing information related to existing services did not necessarily lead to the provision of assistive devices, as no differences were found between the control and intervention groups when asked about the availability of assistive devices in their schools.

According to project reports, training for hearing and vision screening was well-planned and executed as planned, including the provision of detailed manuals and engagement of relevant government counterparts, yet OPD engagement was largely absent from training.

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[14] The Snellen Tumbling E chart, although used in many countries, is generally not recommended for use with children under the age of eight, as it requires spatial orientation skills young children have not yet developed (Nottingham Chaplin & Bradford, 2011). Additionally, the letter E is not a letter found in the alphabet in many languages, including Khmer in Cambodia. In a study of 62 children and adults, the LEA symbols had been shown to measure visual acuity at least one line more accurately than the Tumbling E chart (Dobson, Maguire, Orel-Bixler, Quinn, & Ying, 2003).

Training could have benefited from additional monitoring to ensure that screening was applied at the school-level. While OPDs were supposed to be part of ACR-Cambodia's Inclusive Education Community Mobilization Strategy to support school screening and identification activities, according to OPD interviews, OPDs were not asked to participate in the project in this way. In KIIs, government officials also noted a need for increased coordination between ministry officials and OPDs during training. In addition, the ACL-Cambodia Screening Report (2019) noted it was not possible to monitor all teachers but could have served "to build their confidence and to encourage their use of the tools" (p. 5). In KIIs, teachers also noted the did not know how to apply the tools in their schools: "I used to get trained about the screening tests, but I have never practiced it. If I were asked whether I had done it, I would answer no, but I used to learn about it " (Female, Grade 1 Teacher). Practice opportunities with children may have helped teachers to better understand the time, approach, and strategies needed to successfully screen large numbers of children in their schools.

In the pilot, rates of learners identified as having a hearing or vision disability (prevalence rates) were lower than expected, and scores reported made ACR-Cambodia suspect teachers were not implementing screening with fidelity. This finding is confirmed through MCSIE's evaluation. Overall, of the 5,594 children screened in 2019, only "0.27% of students were confirmed to have a vision impairment and 0.07% had a hearing impairment" (ACL-Cambodia, 2019, p. 5). ACR-Cambodia hypothesized that one reason for this low rate of identification was the inconsistent screening by teachers (for example, ACR-Cambodia reported that all learners in one class had the same results). In surveys, 82% of teachers indicated they were trained in screening methods by the project, and 83.3% of surveyed teachers stated all children in their classrooms had been screened. Yet, when teachers were asked in KIIs to describe their experience with screening, only 69% of teachers in ACR-Cambodia schools mentioned applying these methods in practice. Younger teachers (age 25–39 years), teachers with post-secondary degrees, and teachers with disabilities were significantly more likely to report participating in screening practices (p<.01). Government officials noted the need for more attention to the implementation fidelity of screening tools overall. In addition, project staff interviewed shared the following concerns related to the role and capacity of teachers in identifying and responding to struggling learners:

> **Analysis.** Lessons learned around teacher-led screening offer significant evidence to a global community of practice interested in learning what approaches to pilot in their own projects and, importantly, what *not* to pilot.

> *I worry that the sector, the educators in the sector, have a much higher expectation of teachers' capacity to actually be able to identify struggling students, assess their ability, and then be able to provide appropriate support. I think that is an extremely complex skill that even well-trained teachers in highly resourced countries struggle with themselves.*

A note on terminology. MCSIE evaluators noted the challenges in identifying which learners have disabilities from both project reports and school-level data collection. As a result, the evaluation takes a broader approach to learning about teacher support to struggling learners or students with difficulty learning. Evaluators presume that some students with learning difficulty may have undiagnosed "hidden" disabilities, in addition to other barriers faced from poverty, family dynamics, etc.

ACR-Cambodia teachers differed slightly from Control teachers in their approach to recognizing learners with possible disabilities. When asked "How do you know which students have disabilities?" ACR-Cambodia and Control teachers responded similarly but at different levels, observing student appearance or behavior in the classroom being the most common response (76% ACR-Cambodia teachers and 92% Control teachers). The large majority of teachers across groups (89% of ACR-Cambodia and 75% of Control) said they know which students are struggling or have learning difficulties through their own informal and ongoing observation of the students in their class during lessons. Across groups, most teachers focused their answers on students with vision or hearing disabilities or those who struggle to hear or see during lessons.

As a result of limitations, the pilot implemented multiple other approaches to screening and referral with limited success. In the ACR-Cambodia 2020 Annual Report, authors reported using additional screening approaches, including using healthcare workers as screeners, which is aligned with guidelines established by school health departments. In five schools in the Kampong Svay and Stueng Sen districts, clinic staff agreed to screen children at ACR-Cambodia schools at no extra cost; however, staff had not been trained on screening. As a result, health and school staff reported no children needing referrals. Other approaches included providing referral information in teacher training workshops to teachers who suspect students in their classrooms may have disabilities, having teachers screen new students in project schools after watching a screening refresher video, and having project field staff assist teachers with screening. As a result of these efforts, only seven referrals emerged from this referral-awareness approach. The project then used an adapted referral protocol and referred children with disabilities to medical services to improve their health; in total, 53 children with disabilities were referred to medical services according to the ACL-Cambodia Annual Report (2021).

ACR-Cambodia was unable to update its presumed prevalence of 10% of learners with disabilities[15] due to screening data limitations. The MEL Plan generalized reading outcomes based on a presumed prevalence of 10% of learners with disabilities in the classroom, following the low number of children identified through project-led screening efforts. The decision to presume that "hidden" disabilities approximate to 10% of students is

Analysis. Due to the emerging nature of screening activities for children with disabilities, projects may presume disability rates in the classroom, but would benefit from developing proxy measures of inclusive education to demonstrate progress.

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[15] This rate is based on the 2014 Cambodia Demographic Health Survey (CDHS) (Evans et al., 2014).

linked to the project's desire to demonstrate its presumed impact on students with disabilities in the absence of an ethical, scalable, or reliable means to screen each learner. According to the ACL-Cambodia Final Report (2022, p. 148):

> *For all other program activities, it is assumed that 10% of the student population has some form of impairment or disability… At this point in time, the screening methods are still being refined and cannot be used to make generalizable statements for other populations. Targets were set by estimating 10% of direct beneficiaries (number of learners) reached in reading programs at the primary level based on data from [Evans et al. (2014)].*

ACR-Cambodia provided limited information to teachers from an instructional approach on what to do as a result of screening data. Screening training focused heavily on eye/ear health and referral but provided limited information to teachers about the implications of hearing and vision disabilities on literacy instruction. Documents reviewed found that the 45-page Screening Training Manual contained only two paragraphs on what to do from an instructional approach if a child has a suspected vision or hearing disability. In addition, the broader training on the reading package mentioned instructional approaches very little, other than to speak loudly and clearly for students who struggle with hearing and to use large print for those who have low vision. In KIIs, only *four* teachers with identified students with disabilities through screening indicated they made instructional modifications (preferential seating and increased attention toward the identified student), and in KIIs, school directors stated that teachers made no modifications as a result of the screening process.

The ACR–Cambodia project ultimately concluded that school-based screening processes are problematic and that the processes should only result in facilitating referrals for students of concern to healthcare resources. The project suggests instead that teacher-led efforts should focus on UDL and pedagogical practices that improve learning for all students. ACL-Cambodia stated in its Final Report (2022) that school-based screening, led by teachers, should never attempt to categorize or diagnose any student suspected of having a disability. In a context where few-to-no medical professionals are skilled to diagnose disabilities, this conclusion matches MCSIE evaluators' understanding. The project concluded by suggesting the National Plan reduce the attention given to the identification and diagnosis of learning disabilities and instead focus more on UDL for teaching practices that improve learning for all students no matter what disability they may have. By doing so, the project asserts this will enable teachers to teach better even when their students have not been fully diagnosed with any form of disability.[16] Government interviewees expressed that the project has helped to expose the nuances around screening and identification, including the limitations of current approaches. To respond to these challenges, ACR-Cambodia staff, together with the

> **Analysis.** Despite the project's intentions of linking screening with inclusive teaching, in practice, screening did not directly result in widespread instructional modifications for learners with disabilities.

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[16] Incidentally, this conclusion aligns with the recommendations offered by the MCSIE Cambodia team for its own AIM Study.

MoEYS, continue to review alternative approaches moving forward to develop a national plan for inclusive education and screening children and stated, "If we do not search, we do not know." According to the ACL-Cambodia Final Report (2022, p. 27):

> *The resulting disability identification demonstrated difficulties with the methodology for screening, particularly due to using teachers as the leading implementers of the process. Ultimately, the process yielded poor results and identified only a very limited number of children with more extreme disabilities.*

The project continued to use its lessons learned in this area by collaborating with the SED to develop national screening and referral plans for Cambodia up until the project's closure.

4.3 Training

EQ3: 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: The analysis of training-related data collected through MCSIE showed that ACR-Cambodia delivered a well-coordinated, structured training approach that supports teachers to develop foundational skills for teaching the Khmer EGR package. The project closely collaborated with government stakeholders on content development, and training delivery adhered to evidence-based adult learning principles and was consistent with Universal Design for Learning (UDL) practices. Trainees also reported being very satisfied with the training package overall and had few critiques or complaints. However, a limited focus on inclusive education may have impacted teachers' enactment of inclusive practices in the classroom. While principles of inclusion consistent with UDL were subtly embedded into the reading package itself, many trainees did not recognize that these teaching strategies they learned were supportive of the implementation of inclusive education. Teachers also did not make the link between inclusive education and the likely presence of students with unidentified disabilities in their own classrooms, often expressing support for inclusion in theory but claiming it did not currently apply to them as their classes had no students with disabilities. As the adaptation of the in-service package to the pre-service curriculum did not broaden or expand an emphasis on inclusion, the pre-service package may also perpetuate these same gaps.

4.3.1 Training Design, Delivery, and Impact

Primary and secondary source analysis of the training package indicated that training design was organized and practical. According to training observations, teacher FGDs, secondary source material review, and staff KIIs, training design used an explicit, structured approach designed with practical application in mind and consistent with UDL principles. Examples of this approach included scripted training plans to promote consistency in delivery among trainers, the presentation of content in multiple ways (i.e., lecture, discussion, and role play), and the embedding of inclusive practices within training delivery (i.e., modeling the use of sign language, games, and instructional materials). This, in turn, left many teachers feeling prepared to implement the new methods in their classrooms, as stated in the examples below.

In their own words…what impacts have training activities yielded?

When I received the training sessions on the Reading Program of the World Education Organization, I thought it was active from entering until leaving the classroom. There are differences, such as firstly, students are active; secondly, teachers are not free [inactive]; and thirdly, children do not get bored easily because there are funny gestures [sign language] and beautiful picture books [that] are nice and the colors are also beautiful, which makes children love to learn.

– ACR-Cambodia general education teacher (translated)

The teachers treat students more equally compared to their past attitudes. They were not caring or paying attention to the students with disabilities. After the training, the teachers give special attention to students with disabilities. The way they communicate to students also has changed. Prior to the training, the teachers didn't really give a chance or give more time to students with disabilities. They would prioritize the typical students, but [they have] been motivating the struggling students more lately. The teachers inspire; [they] give students time [to finish work] or [students] can choose to finish the exercises at home. The questions from students are always welcomed; they can either ask questions at break or free time. Teachers extra carefully check students' worksheets.

– ACR-Cambodia school director (translated)

Inclusive education as a standalone topic was limited in training, while inclusive teaching strategies in general were implicitly embedded in reading content. Teacher training agendas indicate that explicit inclusive education coverage was extremely limited, with only one 90-minute dedicated session on one day of the Grades 1 and 2 trainings, and no dedicated session in the pre-primary training. Exhibit 4 below shows the amount of training time offered to each stakeholder group for training on inclusive education (prior to the COVID pandemic).

Exhibit 4. Duration of Teacher Training Focused on Inclusive Education

Stakeholder group	Total training per year	Dedicated inclusion training
Pre-primary teachers	5 days	None
Grade 1 teachers	9 days	One 90-minute session
Grade 2 teachers	9 days	One 90-minute session
School directors (of Grade 1 teachers only)	2 days	One 90-minute session

A detailed review of the training design in general shows it did embed inclusive teaching practices implicitly, such as referencing inclusive teacher tips throughout sessions, modeling of student-centered instructional practices consistent with UDL throughout lesson practice and role play, and using TLMs, which present information through large print, color-coding, and vivid imagery.[17] Although the project did embed such approaches throughout most training packages, some trainees did not realize or remember that this constituted training on inclusive education. Specifically:

- **Although training participants were supportive of inclusive education, they did not consider the presence of learners with disabilities in their own classrooms.** In FGDs immediately following training delivery in 2020, some respondents alluded to their willingness to practice inclusive education but a concurrent belief that learners with disabilities were not actually present in their own classrooms. This is consistent

  Analysis. Although ACR-Cambodia's focus on hearing and vision disabilities in teacher training was intended to link to the disabilities that could be screened and identified during the course of the project's activities, in practice, this may have obscured the message that students with "hidden" disabilities are likely present in every general education classroom in Cambodia, as they are globally.

  with the MCSIE team's subsequent large-scale teacher phone interviews, where the average general educator believed they had zero (mean=0.41) learners with disabilities in their classroom. Training content did focus on supporting all learners, including those who struggle to read, yet it did not emphasize the presence of "hidden" disabilities that cannot be recognized by looking at a student, such as learning or speech disabilities. Although this emphasis was originally in the project design, KIIs with project leadership suggested this lack of emphasis was intentional in order to focus on hearing and vision disabilities that could be screened and identified during the course of the project's activities.

- **Over time, training recipients struggled to remember what they learned about inclusive education from the workshops.** When the MCSIE team asked training recipients, long after they were trained, what they learned from the ACR-Cambodia

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[17] Another good example is the inclusion of videos positively representing persons with disabilities produced during the COVID-19 pandemic; however, the MCSIE team interviewed project beneficiaries prior to the dissemination of these materials.

training about inclusive education, 53% of teacher respondents from general education classes, 51% of school directors, and several subnational FGD government respondents provided vague but positive responses to this question. Some were direct in stating that, over time, they had forgotten what they learned, as one trained teacher said, "I … attended the training workshop two years ago. I think the training on inclusive education was just one day. I seem to forget about it since it was a long time ago. I only remember that inclusive education is to put students to learn together regardless of students with or without disabilities, and we never leave them alone" (Focus Group Participant).

- **A minority of respondents could name specific instructional strategies they learned to support inclusive education.** General education teachers who listed specific inclusive strategies most frequently listed preferential seating for learners with disabilities (27%), use of letter picture cards (10%), sign language (10%), and making written text visible (7%). Training respondents did not widely mention the strategies that ACR-Cambodia promoted in its own package, such as explaining content slowly and clearly or facing students when speaking, as inclusive approaches. Although teacher respondents were much more adept at describing general literacy strategies they learned through training (including participatory methodologies, I do/we do/you do, and the use of diverse TLMs), it was uncommon for them to explain how these general literacy approaches were implicitly supportive of students with and without disabilities.

The 90-minute session originally required persons without disabilities to simulate the experience of being disabled, which is inconsistent with international best practice on disability inclusion[18]**.** Trainees were instructed to be blindfolded, plug their ears with tissues, or place one arm behind their back to act out the experience of students who are deaf, blind, or have a physical disability. Following this simulation, a debriefing activity engaged participants to describe their experience as learners with disabilities to identify strategies teachers can use to be more supportive to these learners in their classroom. International scholarship suggests such simulation activities have the potential to inadvertently perpetuate bias and discrimination.

Pre-post training survey data shows improved attitudes toward inclusive education. Pre-post survey data of 88 teachers in Kampong Thom and Kampot from immediately prior to and following in-person teacher trainings in early 2020 (prior to the pandemic) shows that after the training ACR-Cambodia teachers were significantly less likely[19] to believe learners with physical or intellectual disabilities can only learn in special schools or classes than before the training (suggesting an increased support for inclusion). The same positive change took place regarding teachers' beliefs that learners with disabilities cannot advance to higher grades, with the same 88 trained teachers significantly less likely to agree with this statement[20] than before the training.

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[18] Disability simulations involve training participants without disabilities imitating or acting out the experience of having a disability. Silverman (2015) cautions that such simulations may be misleading and conflate the short-term experience of having a disability to the experience of having a disability over a person's lifetime.

[19] (p=.000)

[20] (p=.000)

This aligns with post-training FGDs, where respondents described inclusion as an act of care for all students and an act of non-discrimination for learners with disabilities.

4.3.2 School-Based Coaching

Despite their remit to extend professional development into the classroom, literacy coaches described struggling to support teachers with providing inclusive education and lacked clarity on their role in this area. Literacy coaches received the same amount of training on inclusive education as the teachers they coached; FGDs indicated this limited their expertise in coaching on issues of inclusion. As one literacy coach respondent stated, "The

> **Analysis.** Literacy coaches would have benefited from a more explicit linkage of the literacy package to inclusive education and more extensive training on inclusive teaching practices. Coaches should have been encouraged to discuss issues of inclusion during each visit, coordinating with the inclusive education field team accordingly.

inclusive education training we've received is so short-term. I, myself, do not practice it every day, so it seems like we've learned it, but will soon forget it because we do not use it" (Focus Group Participant). In FGDs, literacy coaches were adept at detailing their roles and responsibilities in supporting teacher instructional practices related to literacy but were less consistently able to articulate their own role in promoting inclusive education in general education settings. While the original intent was for the inclusive education field team to coordinate teacher observations and feedback sessions with the respective literacy coaches in general education classrooms, the FGDs with Kampong Thom literacy coaches provided anecdotal evidence to the contrary. Indeed, some literacy coaches described not feeling responsible for promoting inclusion for learners with disabilities because of the presence of the inclusive education field team in these districts. One literacy coach from Kampong Svay reflected this sentiment: "In relation to the meeting [with teachers] every Thursday, the literacy coaches help solve problems with the teachers, but for inclusive students [with disabilities], there is RTI to support and work on inclusive work. They go to teach and help students [with disabilities], but we do not go to support [these] students" (Focus Group Participant).

Despite limited explicit training on inclusive education, some literacy coaches were skillful in linking the literacy package to inclusive education. When asked if training on inclusive education was sufficient in the program design, two literacy coaches (out of 17) provided insightful feedback on ACR-Cambodia's implicit support for inclusion by describing the ways that the training and materials promoted inclusion through specific activities and teaching strategies. One coach said, "All in all, the implementation of the Reading Package doesn't demonstrate inclusive education [per se], but all the activities in the observation form and in the instructional guides are supporting an inclusive classroom."

4.3.3 Pre-Service Training

The project was successfully able to scale up its reading package to a pre-service format with three modules that focused on Khmer literacy instruction and assessment. Yet, while existing embedded inclusive strategies will likely be featured in the pre-service curriculum given their presence within the in-service materials (e.g., inclusion tips), there was not a concerted effort to expand or further embed inclusion principles beyond what had been done in the in-service training package.

Analysis. The scaling of the reading package to a preservice format was a great success for the project in supporting sustainability for future generations of teachers. However, the project missed an opportunity to increase the interaction between literacy instruction and inclusive education during pre-service course development. By transforming in-service training content into pre-service content and increasing the emphasis on inclusion rather than just maintaining the focus on inclusion in the in-service package alone, ACR-Cambodia would have had a stronger sustainability strategy.

4.4 Instruction

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

Answer: Despite the minimal focus on inclusion or UDL during teacher training, inclusive principles were embedded implicitly (and in some cases, explicitly) throughout TLMs, and teachers within the intervention schools demonstrated significantly more knowledge of inclusive strategies as well as the capacity to apply them during reading lessons, compared with teachers in Control group schools. Data collected from teachers and through lesson observations indicates that more work is needed to raise teacher awareness of the existence of "hidden" disabilities in Cambodia. However, data observed during reading lessons also showed that ACR-Cambodia teachers have been given the tools needed to recognize and support struggling learners (even if teachers are not aware of the cause of their disabilities) based on the principles of inclusion embedded in TLMs. While student learning outcomes data specifically for children with disabilities is not available, ACR-Cambodia's endline EGRA showed significant gains among students in project schools, suggesting the possibility that students with disabilities who received the same inclusive instruction as their peers without disabilities were also able to improve their reading skills.

4.4.1 Inclusive Instructional Approaches Observed or Reported in Classrooms

During KIIs, project staff described negotiating with government collaborators to slow the pace of instruction in Grade 1, an inclusion-specific strategy that may enable learning improvements for all students, including those who may be struggling. Noting the quantity of new phonics content introduced in the official Grade 1 textbook, the project collaborated extensively with stakeholders to produce a scope and sequence that is an appropriate and accessible developmental pace for young learners. These changes then carried over to the MoEYS's realistic approach in slowing the pace of content upon resuming lessons after COVID-19 pandemic school closures. Multiple interview respondents reflected on the positive impact of this slowed pace of instruction, and one staff person emphasized the slowed pace as "a really important safety net" in light of the COVID-19 pandemic, especially because the first semester of Grade 2 is a review of Grade 1 foundational literacy skills, which is consistent with research that shows children need this review, especially in complex languages such as Khmer.[21]

Observation and survey data showed that ACR-Cambodia teachers use a variety of strategies to support struggling learners significantly more than their Control school counterparts. A slight majority of ACR-Cambodia teachers[22] (56%)—significantly more than their Control school counterparts (35%)—were observed providing support to learners who appeared to be struggling during the lesson.[23] This

> **Analysis.** Data from surveys and interviews with teachers as well as lesson observations indicate that the ACR-Cambodia project has provided teachers with a greater ability to notice struggling learners and to use a range of strategies to support them depending on their needs.

support took multiple forms, including checking for understanding, a one-on-one conversation with a student, and facilitating additional practice. Similarly, in observations of ACR-supported special school classes, 100% (N=7) teachers provided students with support and praise and checked on students' understanding throughout their lessons. Self-reporting via the teacher survey also showed significant differences between ACR-Cambodia and Control teachers with regard to supporting struggling learners. Teachers most commonly reported seating struggling learners near the teacher or where they learn best (preferential seating), with 89% of ACR-Cambodia teachers saying they employ this approach compared to 63% of Control teachers.[24] Additionally, 79% of ACR-Cambodia teachers said that they provide additional lessons or attention as well as spend extra time with these students (60% and 50% of Control, respectively).[25] In contrast, while few teachers in either group said that they provide detailed

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[21] Appropriate pacing of new instructional content is important to scope and sequence development, including sufficient instructional time to support learners in developing automaticity with new skills (Evans, Srikantaiah, Pallangyo, Sugrue, & Sitabkhan, 2019; Kim et al., 2016). As a language with an opaque orthography and 74 letters (including consonants, dependent vowels, independent vowels, and diacritics), the Khmer alphabet has the most letters of any known alphabet (Huffman, 1970). Explicit and systematic instructional strategies can aid in the development of early grade reading programming, including allotting additional time for teaching visually complex orthographic symbols (Kim et al., 2016, p. 19).

[22] This term refers to general education teachers supported through ACR-Cambodia, unless denoted otherwise.

[23] $p<.05$

[24] $p<.001$

[25] $p<.05$ and $p<.01$, respectively

instructions or break down complex tasks, Control teachers reported this the most (20% Control versus 6% ACR-Cambodia).[26] Overall, ACR-Cambodia teachers used significantly more strategies to meet the needs of all learners in their classroom compared to Control teachers.[27] However, teachers *reported* providing support to struggling students to a greater degree than they were *observed* doing so. Nevertheless, more than half of ACR-Cambodia teachers—many more than Control teachers—were observed offering support to individual students during reading lessons, and survey findings indicate that ACR-Cambodia teachers have a substantial toolbox of strategies to offer students.

KII responses corroborated and expanded on observation and survey findings and indicated that both ACR-Cambodia and Control teachers have a range of similar ways that they support students who need it during lessons, but ACR-Cambodia teachers were able to name specific strategies at higher rates than Control teachers. ACR-Cambodia teachers mentioned supporting struggling learners by providing additional practice, repetition, or attention and by arranging preferential seating. Control teachers predominantly mentioned providing encouragement and motivation (see Exhibit 5). ACR-Cambodia teachers also commonly said they encourage parental support (40% ACR-Cambodia versus 33% Control), while Control teachers

Analysis. ACR-Cambodia teachers' ability to name specific inclusion strategies at higher rates than Control teachers likely indicates that ACR-Cambodia teachers feel more prepared to respond to struggling learners in tangible and targeted ways. Yet, the fact that both control and intervention teachers listed such different strategies between the questions relating to "disability" versus "struggling learner" suggests a limited awareness among teachers in general that some struggling learners may constitute students with unidentified disabilities.

mentioned providing study materials (40% Control versus 31% ACR-Cambodia). Some ACR-Cambodia teachers also mentioned using large writing, print, or text (15%) and providing writing assistance to learners with low vision (11%)—strategies not mentioned by Control teachers. In sharing how they support students who struggle or have a disability, ACR-Cambodia teachers were able to name specific strategies at higher rates than Control teachers, who more generally said they try to encourage and motivate such students.

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[26] *p*<.05
[27] *p*<.001

Exhibit 5. Support for Students with Disabilities vs. Struggling Learners[28]

Name of strategy	How do you support students with disabilities?		How do you support struggling students or students with learning difficulties?	
	ACR-Cambodia	Control	ACR-Cambodia	Control
Preferential seating	80%, N = 64	44%, N = 12	12%, N = 9	3%, N = 1
Additional practice, repetition, attention, or rewards	71%, N = 57	59%, N = 16	86%, N = 67	73%, N = 22
Encouragement and motivation	64%, N = 57	74%, N = 20	60%, N = 47	77%, N = 23
Encouraging/facilitating peer support	31%, N = 25	0	24%, N = 19	33%, N = 10
Encouraging parental engagement	0	4%, N = 1	40%, N = 31	33%, N = 10
Providing study materials	0	4%, N = 1	31%, N = 24	40%, N = 12

ACR-Cambodia teachers were twice as likely as Control teachers to use multiple approaches versus a single approach in delivering lesson content,[29] while Control teachers were significantly more likely to use whole-class teacher imitation as the primary instructional technique.[30] While ACR-Cambodia teachers were not specifically trained on the UDL principle of "multiple means of engagement," evaluators observed classrooms to see how teachers recruited student interest in diverse ways as an implicit inclusion strategy. Specifically, classroom observers took note of the diverse range in ways teachers presented lesson material and found that ACR-Cambodia teachers were more likely to use pictures to illustrate concepts and to use creative representation methods like music/games/role play/songs[31]—methods that were also emphasized during training.[32] Teacher survey data corroborates these observations. These instructional approaches along with small group work (ACR-Cambodia teachers used 50%

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[28] Few ACR-Cambodia or Control teachers believe that they have learners with disabilities in their own classrooms, but they do believe that struggling learners are present in their classrooms. As a result, the evaluation takes a broader approach to learning about teacher support to struggling learners or students with difficulty learning, since teachers feel they have applied experience in supporting this population of students. Evaluators presume that some students with learning difficulty may have undiagnosed "hidden" disabilities, in addition to other barriers faced from poverty, family dynamics, etc.

[29] $p<.001$

[30] 66% Control versus 32% ACR-Cambodia, $p<.001$; ACR-Cambodia special school teachers 29% (not statistically analyzed)

[31] Teacher survey data found that ACR-Cambodia teachers were significantly more likely than Control teachers to use games, songs, or movement activities ($p<.05$); 38.1% reported using this strategy compared with 13% of Control teachers.

[32] 33% ACR-Cambodia versus 10% Control, $p<.05$ and 57% ACR-Cambodia versus 21% Control, $p<.001$, respectively. Although it did not feature in the statistical analysis, ACR-Cambodia special school teachers used music/games and small group work most frequently, with braille or sign language also used according to the student population.

more group work than Control teachers,[33] especially pair-work[34]) were the most commonly observed and represent low-cost, simple ways that teachers can better include all learners, particularly learners who do not respond as well to whole-group, lecture-based lessons. From their training, ACR-Cambodia teachers also frequently recalled the I do/we do/you do instructional technique (32%) and the five components of literacy instruction (24%)[35].

Methods that are less conducive for use on the spot without advance preparation—such as using real objects to connect concepts (e.g., bringing an object related to the day's letter or vocabulary) and using sign language—were rarely or never observed across ACR-Cambodia and Control schools. Overall, ACR-Cambodia teachers demonstrated an ability to differentiate instructional approaches consistent with UDL approaches and favored simple, flexible strategies that required minimal advance preparation or planning.

ACR-Cambodia teachers were 60% more likely than Control teachers to accept multiple ways for students to engage with lesson content and show their understanding and to check student understanding throughout the lesson.[36] Although ACR-Cambodia's teacher training did not explicitly reference UDL, evaluators observed lessons to see how teachers used the UDL principle of multiple means of action and expression. Classroom observers noted whether or not teachers allowed students to respond through writing (not copying); drawing or using images; gestures, pointing, or use of CSL; and individual student consultation with the teacher. While in some classrooms observers saw none of these strategies, in others, observers saw all four take place. On average across all schools, observers saw students responding to the lesson in one or two of these ways, with response-through-writing being the most common and at similar rates in ACR-Cambodia and Control classrooms. ACR-Cambodia teachers were observed accepting gestures, pointing, or use of CSL more often than Control teachers as a means of student expression (67% ACR-Cambodia versus

Analysis. ACR-Cambodia teachers' ability to check student understanding throughout lessons and to invite them to show their grasp of new concepts in a variety of ways is an important approach to include more learners, particularly those who are less likely to respond verbally. A teacher noticing when a student is struggling and responding with direct action to support them is a key method to create an inclusive learning environment that does not leave learners who struggle—due to a disability or for any other reason—behind their peers. Many ACR-Cambodia teachers have demonstrated their intention as well as their ability to apply these inclusive techniques.

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[33] *p*<.001. In addition, the teacher survey data showed that ACR-Cambodia teachers were significantly more likely than Control teachers to use small group work or working in pairs or other peer engagement (*p*<.05); 31% of ACR-Cambodia teachers reported using this strategy, compared with 10% of Control teachers.

[34] *p*<.001

[35] I do / we do / you do is a form of explicit instruction associated with the gradual release of responsibility method. It involves the teacher modeling a new skill or activity, then practicing it with the students, before allowing students to practice independently. The five components of reading are phonological awareness, phonics, reading fluency, vocabulary, and reading comprehension (Kim et al., 2016).

[36] 97% ACR-Cambodia versus 79% Control, *p*<.001

24% Control[37]). Additionally, while observers saw the majority of teachers in both groups checking for student understanding throughout the lesson, ACR-Cambodia teachers almost universally practiced this technique (97% ACR-Cambodia versus 79% Control). Overall, ACR-Cambodia teachers checked student understanding throughout lessons and invited learners to show their grasp of new concepts in a variety of ways.

Parents and caregivers of children in ACR-Cambodia general education classrooms reported a highly supportive educational environment. Exhibit 6 below shows the results from a household survey of 200 ACR-Cambodia families regarding the environment in the general education classroom. These results are not specific to families of students with identified disabilities, yet 81% of respondents to this survey had concerns about their child's ability to learn. Therefore, evaluators presume that given the low rates of disability identification, this random sample is likely to include families of students with unidentified "hidden" disabilities, as well as students who may struggle to learn for a variety of other reasons, including learning loss from the COVID-19 pandemic.

Exhibit 6. ACR-Cambodia Household Survey Results on Classroom Environment

Domain	Percentage
The teacher treated their child with respect.	99%
The teacher provided instruction that helped their child learn.	98%
The teacher appeared to have received adequate training/coaching to support their child.	94%
The teacher appeared to be prepared to support their child's learning needs.	90%
The teacher understood their child's learning strengths and needs.	88%
The teacher ensured their child is treated well by their peers.	86%
The teacher communicated their child's progress and successes to them.	86%
The teacher communicated their child's challenges to them.	50%

Caregiver perceptions of teacher ability to support learners significantly differed across districts, with respondents from Kampong Trach District reporting the highest levels of teacher support behaviors. Respondents who reported at least one positive teacher behavior also tended to report that their child's reading skills had improved (showing a significant positive relationship between perceived teacher behavior and children's improved literacy). Caregivers' correlation between their perceptions of positive teacher behavior and their child's improved reading aligns with the global evidence that a supportive educational environment leads to improved learning outcomes (Wang et al., 2020).

[37] This strategy was used by 86% of ACR-Cambodia special school teachers (6/7).

4.4.2 Teaching and Learning Materials

Ministry officials were engaged in material development from the project's inception, which KII participants credited as the reason materials were approved and ultimately used in classrooms. During interviews, government collaborators were generally quick to praise ACR-Cambodia's consultative approach to developing TLMs directly with relevant government counterparts. Government and project staff descriptions of material development

Analysis. ACR-Cambodia's inclusive and collaborative process of developing TLMs led to largely representative materials being produced and facilitated government buy-in and ownership, which ultimately paved the way for the TLMs to be used in classrooms.

inevitably mentioned a diverse group of participants who were involved in the process, from national and subnational ministry staff, to representatives of disability-specific departments including SED and NISE, to classroom teachers, and to disability and generalist NGOs, including Epic Arts and the Asia Foundation. This also included a detailed process of checking and receiving permission from the MoEYS for all new content developed and ensuring the materials developed would be treated as official government materials as opposed to one-off NGO variations, as in the past stakeholders have viewed NGO-created materials with skepticism. Interviews described a similarly consultative process in the production of CSL materials in collaboration with NISE, KT, SED, and persons with disabilities directly.

Project staff facilitated a training activity with a cohort of story writers, illustrators, and publishers, where they explicitly discussed the importance of reflecting inclusive principles in all aspects of materials development, including writing story content, portraying individuals in illustrations, and developing accessible publications. KII participants stated they believe that the inclusive materials help to improve attitudes about learners with disabilities and reduce discrimination among peers in inclusive classrooms. New materials have also been field-tested among children in inclusive classes. When evaluators asked school directors how the project-provided materials compared to the materials that teachers had used prior to ACR-Cambodia, the vast majority (84%) reported the new materials were better than what was previously used.

Using an Equity and Inclusion Checklist to analyze print materials, the MCSIE team found that Grade 1 and 2 student books are representative of gender and, to an extent, disability.[38] Gender representation for all student books was 50%, meeting the targeted goal for representation, and disability representation was 8.6%, falling short of the checklist's benchmark of

Analysis. TLMs included depictions of persons with physical, vision, and hearing disabilities, suggesting that a more diverse array of disabilities could be included in student books, while also revealing the broader limitation of using images to depict "hidden" disabilities.

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[38] Evaluators used USAID's draft Checklist for Promoting Equity and Inclusion in Educational Materials. Since text was simplistic in nature due to the primary grade reading level of student books, evaluators reviewed gender and disability representation via images.

15%. When represented in books, characters with disabilities were treated with respect and had support from their peers and families, and books clearly conveyed themes of equal participation, empowerment, and ability. However, at times, the visual imagery of disability was inaccurate or unclear. For example, in one illustration, a prosthetic hand looked unrealistic, and in another, the assistive devices were not quite accurate, showing that the consistency and accuracy of images across materials was not carefully monitored.

Supplementary materials were consistent with numerous principles of inclusive education and implicitly UDL, and materials promoted teacher engagement with learners with diverse strengths and needs. The strategies that explicitly intended to help teachers support struggling learners and learners with disabilities included:

- Publishing easy-to-read books in large print for learners with an identified need.
- Using imagery that promotes student engagement and story content that reflects principles of inclusion.
- Developing letter/picture flashcards that have different colors for different consonant groups and dependent vowels.
- Setting systematic standards about decodable texts, scaffolding the review of prior content, and avoiding overloading teachers with too many new strategies at once.
- Developing sensory stories and pattern books. In Grade 1 sensory stories, teachers were provided with story excerpts and activities which provided students multiple means of engagement with the story book through the students' five senses.

Similarly, ACR-Cambodia's teacher guides were not explicit about UDL, but they embedded principles of inclusion throughout and highlighted "inclusion tips" (though inconsistently across semesters). This included lesson plans guiding teachers to use strategies, such as I do/we do/you do; multiple means of engagement, such as songs and games; group or pair work; and continuous informal assessment of learner understanding. One school director said, "Now that [teachers] have books introducing each step in detail, teaching becomes easier. It is not difficult to find teaching methods, so they will have a pattern to know what to do to teach Grade 1, Grade 2, and next steps [and so on]" (Male, School Director). However, inclusion tips were inconsistent across guides and semesters. Teacher guides suggested accommodations for learners who have vision or hearing challenges but did not reference additional support for other types of disabilities. According to staff KIIs, this was intentional because they wanted content to link to screening efforts that focused on hearing and vision, but staff said that broader inclusion tips were designed to support all students, including struggling learners and those with disabilities.

In classroom observations, while nearly all ACR-Cambodia and Control teachers were prepared to teach the day's lesson, ACR-Cambodia teachers had access to and used more TLMs during literacy lessons than their counterparts in Control schools and also rated TLMs as more accessible. Classroom observers noted whether or not teachers used each of seven

> **Analysis.** ACR-Cambodia teachers had access to more TLMs and also used TLMs more during lessons, compared with Control teachers. This is important because, globally, quality TLM availability is correlated with better student reading outcomes (Kim et al., 2016).

types of TLMs during the literacy lesson. These included student books, story books, read aloud books, letter picture cards, mobile letter cards, word cards, and student textbooks from the MoEYS. (The ACR-Cambodia project provided several TLMs to teachers, so Control teachers typically had fewer TLMs available.) Some teachers did not use any TLMs during the lesson, while others used as many as four. Overall, across the full sample, the average number of TLMs used during a lesson was one or two. When comparing TLM use among ACR-Cambodia teachers and Control teachers, analysis showed that ACR-Cambodia teachers used 50% more TLMs during literacy lessons ($p<.01$), implying, at the very least, that increased availability of TLMs may lead to increased TLM use. In addition, while similar proportions of ACR-Cambodia and Control teachers described in KIIs that classroom materials were accessible to all children (including those with learning difficulties or disabilities) "to some extent" (71% ACR-Cambodia versus 63% Control), a significantly greater proportion of ACR-Cambodia teachers found them accessible "to a great extent" (13% ACR-Cambodia versus 0% Control).[39] In terms of the availability of ACR-provided TLMs in project schools, of the 108 intervention classrooms observed, all but 11 classrooms (10%) made these books available and accessible to every student.[40]

4.4.3 Assessment of Learning

More ACR-Cambodia teachers are employing a wide range of specific strategies for measuring student progress compared to Control teachers. During KIIs, ACR-Cambodia and Control teachers described how they measure the academic progress of students over time. ACR-Cambodia teachers listed a wider range of strategies and relied less on observation than Control teachers (as depicted in Exhibit 7 below). For example, ACR-Cambodia teachers commonly described using daily, monthly or semesterly paper tests (60% ACR-Cambodia versus 13% Control) and assessing students individually or as a group (55% ACR-Cambodia versus 33% Control), strategies that were also built into the ACR-Cambodia reading package. ACR-Cambodia special school teachers also all reported measuring learners' progress over time although the types and frequency of their assessments varied.

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[39] $p<.05$
[40] The 11 classrooms where project TLMs were not available to all students were located in Kampot Province, which received support from ACR-Cambodia for less time compared to Kampong Thom Province.

Exhibit 7. Classroom-Based Assessment

How do you measure the academic progress of students over time?	ACR-Cambodia teachers (N=77)	Control teachers (N=30)
Daily, monthly, or semesterly paper tests	60%	13%
Assessing individually or as a group	55%	33%
Observation	17%	40%
Copy/dictation tests	16%	7%
Project-provided tests and assessments	16%	0%
Daily reading, writing, or speaking tasks, sometimes in combination with homework	16%	0%
Writing challenging words on the board for struggling students to practice reading frequently	6%	0%
Engaging students in partner/paired reading or having students read books to the teacher	4%	0%
Listening to individual struggling students read	8%	0%
Reading lessons/competitions	0%	7%
Assessing with manipulatives	0%	3%
Assessing homework	0%	3%

ACR-Cambodia emphasized continuous assessment through a range of approaches during teacher training, and the teacher responses above provide evidence that this training influenced their classroom practice. These assessments provided built-in opportunities for teachers to know which students are grasping lesson content or falling behind and to what extent, as one teacher describes below.

In their own words…how do teachers assess learning?

At the beginning of the academic year, I tested their ability, then we conducted monthly tests … I sought to test how much knowledge [students] acquired in the previous year. After teaching for a week, I [gave] a weekly test for the first month of the academic year. In the second month, I tested it once every two weeks; then in the third, fourth, and subsequent months, I only tested it once a month and [gave] the semester test. I always changed my test format. For example, I gave them a written test the first week and an oral test the second week. There are always written tests for the monthly and semester tests, but I've included verbal tests in some of the monthly tests. I would like to know whether or not they get the same result between written and oral tests in case they are copied from books.

– Kampong Thom teacher (translated)

ACR-Cambodia developed and field-tested adapted versions of the EGRA for use with learners who are blind or have low vision and learners who are deaf or hard of hearing but were unable to continue testing and refining the instruments due to the COVID-19 pandemic. These small pilots primarily intended to lay the groundwork for potential larger-scale adapted EGRAs in the future and were not to serve as an outcome measure for the ACR-Cambodia project. Following the pilots, staff expressed the need for more research and testing related to the adapted EGRAs' subtask presentation and content, ideally with larger samples of students. However, due to the pandemic, no additional testing was possible. This, in conjunction with a lack of reliable screening data for identifying and drawing a sample of learners with disabilities, meant that it was not possible to measure learning outcomes among this subpopulation outside of special schools.

Although the COVID-19 pandemic presented challenges in measuring student learning outcomes, there is evidence that ACR-Cambodia learners' reading skills improved. ACR-Cambodia's endline EGRA for the entire program showed significant gains among students in project schools, indicating the possibility that learners with disabilities who received the same inclusive instruction as their peers without disabilities were also able to improve their reading skills. This is consistent with school directors' own perceptions that learning outcomes had improved in their schools as a result of the ACR-Cambodia project, where all but one (98%, N = 52) confirmed that learning outcomes had overall improved. As explained by one male school director, "Regarding student learning outcomes, I noticed a change. What has changed is that students are learning better." Another school director (male) also attributed a reduction in student repetition rates to the project: "Before the project arrived, rate of repeating students was high for Grade 1 and 2 because of their acquisition ability. After the implementation of the project, teachers used new methods and the rate of repeating students decreased."

Parents and caregivers of ACR-Cambodia students reported improved learning outcomes. A household survey asked respondents[41] if their child's learning outcomes had improved as a result of the ACR-Cambodia Early Grade Reading Program. The majority of respondents indicated an improvement in their child's reading skills (90%) and writing skills (91%) and noted improvements in their child's efforts (100%) and their own efforts (90%) to focus on schoolwork at home; these measurements were subjective and parent opinion and not linked to assessment data. Of caregivers, 97% felt more hopeful about their child's future as a result of ACR-Cambodia.

Analysis. While student learning outcome data specifically for children with disabilities is not available, ACR-Cambodia's endline EGRA showed significant gains among students in project schools, suggesting the possibility that students with disabilities (whether identified or not) who received the same inclusive instruction as their peers without disabilities were also able to improve their reading skills. Educators and caregivers also perceived improvement.

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[41] While the household survey did capture a small number of families of children with identified disabilities, these results are representative of the entire sample, including the 81% of families who describe concerns about their child's ability to learn.

4.4.4 Teacher Attitudes

ACR-Cambodia teachers reported feeling more _comfortable_ than Control teachers with teaching learners with disabilities or learning difficulties in their classrooms, and the vast majority of ACR-Cambodia teachers reported that the project had _prepared_ them to do so. Both ACR-Cambodia and Control teachers rated their level of comfort teaching learners with disabilities or struggling learners, and 54% of the intervention teachers felt "to a great extent" comfortable compared to 20% of Control teachers.[42] ACR-Cambodia teachers were also asked to what extent they felt the project had prepared them to teach learners with disabilities or learning difficulties, and the vast majority (93%) reported feeling "to some extent" or "to a great extent" prepared.[43] ACR-Cambodia teachers who were female, who identified as having a disability themselves, or who received prior literacy training and/or training on disability-inclusive education were significantly more likely to report feeling prepared than males, those without a disability, or those without prior training.[44] Relatedly, in their reflections on instructional quality and effectiveness during reading lessons, classroom observers noted that ineffective teachers appeared to lack confidence, whereas effective teachers appeared to exhibit self-confidence.

Analysis. Although ACR-Cambodia's explicit focus on inclusive education was minimal, teachers within the intervention nevertheless came away expressing higher degrees of comfort teaching learners with disabilities or learning difficulties than those outside the project, and ACR-Cambodia teachers overwhelmingly expressed a sense of preparedness for supporting these students in their classrooms. This perception was confirmed during classroom observations, as observers saw more effective teaching among ACR-Cambodia teachers than among Control teachers.

In their own words…what impacts have school directors observed?
Students are active and there is a change between teachers and students, resulting in a different learning and teaching habits. Previously, students sat and listened to teachers but now teachers sit and listen to students. Owning to the student-centered method and adequate materials, teachers only raise the problems, and students are the ones who do the activity.

– ACR-Cambodia school director (translated)

In the past, when we asked them, they did not dare raise their hands to answer our questions because they were afraid of the teacher blaming them [if they answer incorrectly], but now they compete with others to raise their hands to answer the questions; whether they know it or not, they dared to answer the teacher's questions.

– ACR-Cambodia school director (translated)

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[42] _p_<.01.
[43] "To some extent prepared" was 52%; "to a great extent prepared" was 41%.
[44] _p_<.01; _p_<.05; _p_<.05; _p_<.01

4.5 Unintended Consequences

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

Answer: In any activity, consequences arise that were not anticipated in the original project design. In the case of ACR-Cambodia, these were both positive and negative. While the COVID-19 pandemic caused project delays and shifts, it showcased a number of project strengths related to adaptive management, literacy materials development, and stakeholder coordination. Other uncovered unintended consequences included a lack of conceptual clarity about disability-inclusive education and misunderstandings about the likely prevalence of disability in communities, which were not consistently corrected during project implementation.

A siloed "inclusive education" field team, focused on supporting students in segregated settings, was linked with a lack of inclusive education ethos in general education settings. The inclusive education field team worked to support learners with vision or hearing disabilities in segregated educational settings, in part because so few learners with identified disabilities were accessing general education schools during the project's lifetime. At the same time, it was primarily the EGR team that focused on embedding inclusive teaching and learning strategies in general education settings, and the inclusive education field team was not highly integrated into this work. Project documents and staff interviews suggested it was challenging, and at times confusing, to create a shared vision among project staff for their plan to implement inclusive education for students in general education settings. In interviews with various project staff, staff understanding differed in how inclusive education was conceptualized and defined, which could be due to translating this terminology into the Khmer language. In other instances, some field-based project staff did not see themselves as responsible for implementing inclusive education. For example, some literacy coaches in Kampong Thom claimed to defer to the inclusive education field team for school-level support to learners with disabilities, while in practice the inclusive education field team was not involved in coaching and mentoring efforts in general education schools.

The ACR-Cambodia screening activities may have unintentionally reinforced stakeholders' inaccurate beliefs that disability does not exist in their community. Despite various efforts and iterations throughout the project lifetime, ACR-Cambodia was largely unsuccessful in identifying children with hearing or vision disabilities in target communities, a reality acknowledged in its own reporting. As the MCSIE AIM Study shows, this is linked in part with systemic national challenges around screening and identification not specific to the project. Yet, unintentionally, the result may have caused some stakeholders to conclude that learners with disabilities are absent

from their communities, instead of considering that they have yet to be identified and are widely present. For example, one subnational government interviewee involved in ACR-Cambodia implementation reflected this sentiment:

> *For the small numbers of [students with disabilities] found, I think it's good; usually we do not want to have a child with a disability. We know that in some villages, there are no children who are hearing or visually impaired.*

Teacher interviews also echoed the same sentiment, and many trained teachers expressed support in principle for inclusive education but simultaneously lacked an awareness that unidentified learners with disabilities were likely present in their own classrooms and in their broader community.

While the COVID-19 pandemic school disruptions halted students' in-person education, they exposed some foundational strengths of the project's design and implementation. Specifically, the ACR-Cambodia team was able to negotiate with the MoEYS prior to the pandemic to slow the instructional pace of complex literacy concepts for young learners. This, in turn, helped learners have more time and opportunity to continue learning, even with less access to instructional support in home-based learning than in the classroom. Furthermore, prior to the pandemic, the ACR-Cambodia team consistently noted a collaborative relationship with USAID leadership, who were supportive of the project's need to pivot or make adaptations to the design according to changing conditions and lessons learned. This, in turn, lent itself to a strong adaptive management approach between ACR-Cambodia and USAID when school closures began in 2020.

As a result of the COVID-19 pandemic, project resources and activities shifted to increase parental engagement and provide hard copy literacy resources in the home. Project staff noted, "Parents in Cambodia contextually have not been confident in their ability to help children learn at home," but as a result of learning at home during the pandemic, parents felt that they "can actually support [their] children at home." In addition, parents commonly stated that the most helpful resource was having hard copy materials in their home. The MoEYS appealed to development partners, who were then coordinated by the United Nations Children's Fund (UNICEF)[45] through the Capacity Development Partnership Fund (CDPF), to fund these home learning packages that went to every Grade 1 and Grade 2 child. This included the project's Khmer supplementary student book as well as the home learning workbook. The production and distribution of these materials showcased the importance of development partner collaboration and how, through collaboration, learning can reach hundreds of thousands of students in challenging conditions.

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[45] UNICEF is the managing agent for the CDPF, a multi-donor mechanism which includes the European Union, Swedish International Development Cooperation Agency, USAID, Global Partnership for Education, and UNICEF. CDPF funded the distribution of the Home Learning Package (developed by ACR-Cambodia for reading) to all grade one and two students in Cambodia.

4.6 Bridge Program

Due to the distinct nature of the Bridge Program for learners who are deaf or hard of hearing and the fact that it seldom overlapped with other project activities, the analysis of the Bridge Program's implementation is provided separately below. ACR-Cambodia supported 14 young learners in Kampong Thom who are deaf and did not previously have access to any form of education. These learners were instructed through one-on-one or small-group lessons offered by volunteer community members (referred to as facilitators) trained in CSL—none of whom are deaf themselves. Some lessons took place in community settings while others took place in separate classrooms (integrated classes) in general education schools. ACR-Cambodia actively worked to develop engaging and age-appropriate TLMs, using the expertise of deaf education experts, so these learners could acquire basic CSL skills. The aim was originally to support these learners to transition (or "bridge") into integrated classes[46] in the province or into a segregated special school in a more distant province.

Findings are broken down below according to EQ.

Process

The Bridge Program was well-received by government counterparts with communication cited as a key factor in the program's success. In both interviews and project reports, project staff stated that the government, teachers, and schools were supportive and welcoming of this work, and schools provided contract teachers to participate in program activities. Multiple interviews highlighted that communication among all parties (families, teachers, and community members) was supportive and encouraging. Parents specifically mentioned how they valued teacher communication about their child. All parents reported that regular communication paired with explicit student and caregiver instruction on how to use materials led to student success in the program.

Document review and IP interviews suggested that curriculum development must take into consideration how sign language is used and taught nationally. KII respondents noted that varying approaches to Deaf education are in use nationally. KT and the NISE-led special schools have a historically used American Sign Language (ASL) in their education system but coded into Khmer, while the Deaf Development Program (DDP) uses a CSL approach generated by local

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[46] In Cambodia, an "integrated" class is a term used to describe a segregated class of five or more students with the same disability. While these classes are described as "integrated," in practice, they are actually classes composed only of children with disabilities but physically located in or near general education schools.

communities and has historically opposed national standardization of sign languages. These divergent perspectives posed challenges in agreeing on curriculum development for deaf education in Cambodia, which ACR-Cambodia attempted to support through the CSL committee. ACR-Cambodia ultimately helped to push boundaries and make progress in this domain by encouraging stakeholders to reach agreements on common signs, an effort that was led entirely by those who are Deaf from the different stakeholder groups. Yet, it also showcased the planning, time allocation, and resourcing that is required for curriculum development in sign language if a uniform foundation is absent.

The Bridge Program supported learners who are deaf or hard of hearing, intentionally excluding support to learners with other types of disabilities. Learners with other identified medical conditions or disabilities, such as heart conditions or cerebral palsy, were outside the program's target population and removed from the sample. This conscious decision to focus on learners who are deaf or hard of hearing was described by one staff member, who stated, "[It was] heartbreaking to draw lines about who we can support and who we can't."

Analysis. The Bridge Program's decision to support only learners who are deaf or hard of hearing touches upon the challenging decisions that projects with limited budgets have to face in countries where the need exceeds the capacity to provide support and is not matched by government assistance.

Training

Representation of persons with disabilities working on the project promoted positive views among stakeholders toward the Deaf community. Having a consultant who is deaf was an important contributor to changing stakeholders' views toward the Deaf community and their ability to work and contribute to society when negative stereotypes persist. The consultant stated, "As I am a hearing-impaired person, I also have education and a job, which means that the people with hearing impairment can learn, work, and earn money by themselves as well as I want to get the experience from this job."

The project found that collaborative and continuous models of training and capacity development are necessary when low baseline levels of knowledge exist. Through developing Deaf education programming, the government, NGOs, and persons who are deaf or hard of hearing and their families took a collaborative approach and built their capacity and the momentum for deaf education. KII respondents noted that having regular training and planning meetings with Bridge volunteers was one contributor to the success of the program, while the training and retention of skilled CSL facilitators and volunteers was an ongoing challenge due to low levels of baseline CSL knowledge (as the group of CSL facilitators was entirely hearing).

A family approach to training for learners who are deaf not only improved literacy skills for the learner and family but also improved communication within the home and the community. Families were trained along with their children and, as a result, families and staff

reported that the families are now better able to communicate with their child at home. However, now that the program has ended, these children will enroll at a school for the Deaf in Siem Reap, so they will no longer be educated in their local communities.

Instruction

Bridge students and their families accessed CSL education for the first time in their lives, and families described CSL communication as invaluable and transformative. Overall, a significant success, noted by ACR-Cambodia's deaf education consultants and specialist staff (some of whom are themselves deaf), was the positive impact the Bridge Program had on

Analysis. The resources required for the Bridge Program were substantial but helped to expand the reach of CSL materials and instruction to populations never before reached and build a library of CSL resources that can benefit future learners.

students' confidence and their development of CSL-related literacy and communication skills. As one respondent described in focus group regarding student outcomes: "I could see that many students improved a lot. They were braver, dared to ask, answer, and communicate with each other much better than before." In addition to children making literacy gains, some families were also motivated to learn CSL, reporting that they read the CSL books too and learned with their children. The ACL-Cambodia Final Report (2022, p. 37) states, "The key behavioral change noted by the team is that parents of children in the [Bridge and integrated classrooms] are now expecting, and in some cases even demanding, that their children receive quality education. This feedback is in stark contrast to attitudes in the early months of the project, when parents did not feel that there were any viable learning pathways for their deaf children."

The Bridge Program used community volunteers to help learners develop basic CSL communication skills and school-readiness skills. With very few adults proficient in CSL, ACR-Cambodia developed a community-based volunteer network and capacity-building system supported by a deaf education specialist and a broader inclusive education team. Efforts began to recruit and train volunteers who would support younger learners (ages 4–7) who were not currently attending school with an aim to transition the learners to preschool or Grade 1 formal education settings. Although the project attempted to locate volunteers who are deaf and proficient in CSL, none could be located in the province, and therefore, all volunteers and staff are hearing and have little knowledge of CSL. Despite this, families gave positive feedback regarding volunteers. For example, one mother stated, "[Bridge Program volunteers] have been very supportive, and not just for [my daughter]. They always wrote and gave comments and motivated parents to encourage their children to study and motivated students until they diligently studied."

ACR-Cambodia developed unique TLMs for Bridge students, which KIIs revealed was a major undertaking of the inclusive education team. In response, the team led the development of weekly activity guides for volunteer teachers who used the curriculum to support learners to develop CSL skills related to different topics, such as their homes, bodies, and food, as well as

social-interaction and school-readiness skills. Deaf education programming supported the development of diverse TLMs that the NISE and schools will sustain beyond the lifetime of ACR-Cambodia. Even with the pandemic, staff in collaboration with the CSL committee were still able to develop TLMs, helping to significantly expand national resources for Deaf education beyond the Bridge Program. KII respondents cited that the collaboration between Bridge Program teachers and volunteers contributed to the development of TLMs and included materials developed by persons who are deaf or hard of hearing.

To support student success, the project invested significant resources into providing TLMs for this student population. Respondents cited the NISE Elephant App, a main deliverable of the project, as one factor that contributed to the program's success and had the most impact on student learning, even though the app was reported to be challenging to use given the high number of pictures to navigate. Other materials included teachers' manuals; CSL videos and books; flashcards; online learning, including chatgroups, tablet resources, and money to purchase internet credit to access remote learning during COVID-19 closures; and realia.[47]

Despite project activities, the Bridge Program lacked sustainability, effectively ending after the ACR-Cambodia project closed. While the project included an exit strategy for the Bridge Program and a transition of Bridge students to integrated classrooms to ensure sustainability, the transition of Bridge students to national, residential special schools marked the end of the community-based Deaf education model that ACR-Cambodia piloted and required the learners who are deaf or hard of hearing to live away from their families to continue their education. The exit strategy included intensifying the teaching and learning of CSL students to better master CSL and literacy so these students can access inclusive education classes; developing a training program for general education teachers to learn basic CSL to assist incoming students; introducing families to special schools and informed decision-making; and advocating that the MoEYS cover teacher cost and continue the program in Kampong Thom, which proved ultimately unsuccessful. As one mother stated, "I don't want the program to end. I want the program to continue until my child finishes studying and gets a job." Sending the children to Siem Reap for their education will remove children from their home communities, and families fear for their small children who will be traveling and living far from home.

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[47] Realia are objects from real life used in the classroom to improve students' understanding.

5. Conclusions and Recommendations

This section aims to draw from this report's findings to generate conclusions and recommendations. These conclusions and recommendations are relevant to USAID project design and implementation, and broadly to projects by any implementer that aim to support inclusive education. The recommendations have been divided into two parts within each EQ: lessons learned on particularly successful practices from ACR-Cambodia that can benefit other projects, and future programming recommendations that could further strengthen such project activities in future.

5.1 Process

Conclusions

The following aspects may be considered successful practices in ACR-Cambodia's project implementation, and can benefit other projects in any field of work. Specifically, related to the process of implementing with a focus on inclusive education:

- ✓ The project successfully ensured collaboration, communication, and high levels of project management, which are strong foundations on which to build large-scale education programming.

- ✓ USAID and ACR-Cambodia utilized the CLA approach to benefit inclusive education programming in novel contexts by allowing lessons learned from project implementation to drive a responsive, ethical approach that Does No Harm.

- ✓ ACR-Cambodia leadership responded to the small number of qualified applicants for inclusive education positions by recruiting early and widely, offering comprehensive training to new hires, and offering on-call technical expertise according to project need.

Future Programming Recommendations

- USAID project solicitations should embed inclusive education in all aspects of project design, require OPD engagement, clearly outline a theory of change, and clearly define terms such as disability and inclusive education to ensure stakeholders have a shared conceptual understanding.

- Teachers should be supported to understand the widespread nature of "hidden" disabilities in order to link their inclusive education training to their own context. Striking a balance between increasing teachers' awareness of disability prevalence while emphasizing they are not responsible for identifying or diagnosing such disabilities is a challenge but may support teachers' personal connections to implementing inclusion in their own classes.

Sustainability in resource-intensive inclusion initiatives is a broad challenge. This does not necessarily mean initiatives should not be pursued; however, early on in project design and implementation, USAID and project implementers should consider what consequences may ensue from creating pilot or standalone disability-inclusion initiatives if they are not sustained.

5.2 Screening and Identification

Conclusions

The following aspects may be considered successful practices in ACR-Cambodia's project implementation, and can benefit other projects in any field of work. Specifically, related to the process of screening and identification:

✓ Prior to implementing screening activities, ACR-Cambodia conducted a mapping of disability services and referral pathways in order to connect learners with disabilities with medical diagnoses, supports, and services. ACR-Cambodia attempted to share these resources widely and clearly with schools and communities. In future, this information could also be embedded into administrator and teacher trainings along with clear connections between the identification of disabilities and instructional approaches for including children with disabilities in the classroom.

✓ ACR-Cambodia demonstrated a model for other projects by publishing its findings from the screening and identification pilot, even though the results did not meet original expectations. ACL-Cambodia's (2019) detailed screening report provided ample data, reflection, and insight to inform how other projects can avoid confronting similar challenges. In an area of work where there are still major gaps in understanding of what works well, such transparent sharing of on-the-ground lessons learned is informative to a global audience.

Future Programming Recommendations

- Screening and identification at the school-level is an emergent practice that merits careful consideration in program design. Validated and reliable tools may not be available. Projects should plan for sufficient time and resources (human and fiscal) to pilot and validate screening tools, develop and refine screening protocols, and consider partnerships with community and health resources.

- While screening and referral may take place, countries may struggle with limited resources for diagnosis and follow-up services, especially in rural areas. Future projects may consider these limitations in deciding the scale at which to pilot screening and identification activities, and the necessary budget for costs such as transportation from rural areas to access service providers.

- Future projects should exercise caution in assigning teachers responsibilities to lead school-based screening activities. Teacher-led screening struggles with a lack of implementation fidelity for multiple reasons and may not yield reliable screening data, which can impact school and government stakeholders' beliefs on the prevalence of disability in communities.

- Encourage schools and teachers to move forward with inclusive practices consistent with UDL even if screening breakdowns occur. Raise awareness of disability diversity, move away from labels, and focus on inclusive pedagogy.

5.3 Training

Conclusions

Embedding inclusive education into national EGR training is likely to be encountered by education actors globally, including other USAID-supported EGR activities. The following aspects worked very well in the ACR-Cambodia training module and can be considered elsewhere, in any subject matter:

✓ ACR-Cambodia ensured content development and training delivery was a collaborative effort with key stakeholders, particularly government trainers and decision-makers.

✓ ACR-Cambodia designed scripted, structured, and explicit training activities that focused heavily on practice and application.

✓ The project team ensured training design was reflective of adult learning principles and UDL, including using multiple methods to present information to trainees and providing ample time for practice.

✓ The ACR-Cambodia team used teacher training workshops as opportunities to destigmatize disability and promote sensitization around inclusive education.

Future Programming Recommendations

- When embedding inclusive education principles throughout a training package, ensure that the link between inclusion and the subject matter being discussed is explicit, not implicit. This can help ensure that trainees take away an understanding of the connection between what they are learning and their own enactment of inclusion in schools.

- Explain to trainees how the strategies they are already learning to use (i.e., small group work, scaffolded teaching, high-quality TLMs) are also supportive of an inclusive teaching approach.

- Ensure that sufficient focus is afforded to key messages related to inclusive teaching, as too little time spent on the topic may limit the impact of training on teacher understanding and practice. Further, if a training on inclusive education is offered to some grade-level instructors, ensure it is offered to all.

- Always include people with disabilities as stakeholders and counterparts in training facilitation, and never ask non-disabled trainees to simulate the experience of having a disability themselves.

- Provide ample training to field-based coaches to understand what role they play in promoting inclusive education (i.e., through UDL approaches), even in contexts where students' disability statuses are not known.

- Use naturally occurring training revision work (i.e., when a new package is designed from year-to-year or when an in-service package is adapted for pre-service) to reflect on opportunities for increased focus on inclusive teaching strategies.

5.4 Instruction

Conclusions

ACR-Cambodia utilized a variety of successful practices to support high-quality teaching and learning in early grade reading in Cambodia. The following instructional practices in ACR-Cambodia's project implementation can benefit other projects in any field of work:

✓ The project successfully engaged a broad and representative group of stakeholders in TLM development, which increased contextual appropriateness and inclusive representation within materials and promoted host country buy-in and ownership.

✓ ACR-Cambodia produced materials that are colorful, engaging, accessible, and depict all types of learners. These qualities made them more likely to be used by teachers to support classroom instruction.

✓ The project team embedded implicitly and explicitly inclusive instructional strategies within teacher guides and supplementary materials. This approach helped to support the application of these strategies, which benefits all learners.

✓ MCSIE data collected from ACR-Cambodia teachers and control teachers showed that teachers who understand how to identify struggling learners and respond to their needs with concrete actions are more confident and comfortable in the classroom.

Future Programming Recommendations

• Place explicit emphasis during training and coaching on the existence of "hidden" disabilities and the ways that inclusive teaching practices benefit these learners.

• Continue testing and refining adapted reading assessments for children with disabilities, drawing on the latest efforts within the EGR community of practice.

• Ensure all learners—especially those with "hidden" or unidentified disabilities—benefit from inclusive teaching practices grounded in UDL that provide them with multiple ways to show their understanding of lesson content and to receive support when needed.

5.5 Unintended Consequences

Conclusions

The nature of unintended consequences is such that, by definition, they are not anticipated. When ACR-Cambodia faced unexpected situations, there were foundational approaches in place that helped position it to respond adeptly to these unintended situations. Specifically, other projects can consider that:

✓ Early during implementation, ACR-Cambodia focused on forging strong relationships with government partners, development partners, and donors. This positioned the project team very well to be adaptive to changing conditions, such as those imposed by pandemic-related school closures.

Future Programming Recommendations

- If a project employs a dedicated inclusion team, the project should clearly define the inclusion team's purpose and plan for the inclusion team to link to other project teams frequently.
- Whether or not a project employs a dedicated inclusion team (or individual), all staff should receive training on inclusive education so they can identify and enact their own roles in supporting inclusion.
- Projects should educate core stakeholders, including teachers and government staff, on "hidden" disabilities and international disability prevalence rates. This can help to combat stakeholders' misperceptions that disability prevalence is low when screening and identification activities do not yield their intended results.

5.6 Bridge Program

Conclusions

The ACR-Cambodia team worked hard to provide an education for students with hearing disabilities in Kampong Thom Province who would have otherwise been unlikely to access any form of education. Some successful practices stemming from the Bridge program that can benefit other projects include:

- ✓ The Bridge program used community volunteers to provide intensive instructional support to students who lacked access to any other form of schooling, while continuing to advocate for long-term pathways to access formal schooling.

- ✓ ACR-Cambodia ensured each Bridge student had access to a tablet for home-based study during the pandemic, and provided monetary support to families for internet connectivity to access CSL videos and other TLMs.

- ✓ The project team provided intensive staffing support at the central office and in the local province, to ensure close monitoring and management as emerging needs arose.

- ✓ ACR-Cambodia collaborated with CSL experts who are Deaf, including with government actors, to produce additional teaching and learning resources for future use on a national basis.

Future Programming Recommendations

ACR-Cambodia's own team offers an insightful reflection on the lessons learned from the Bridge Program and integrated class activities that MCSIE findings fully support. While the interventions helped to demonstrate what is possible for students with disabilities, they also showcased the need for more government leadership in mobilizing resources to support their education. The ACL-Cambodia Final Report (2022) states that in Cambodia:

- "The MoEYS should support surveys [to collect] data on children who are deaf and blind and have never attended schools.

- The MoEYS should also address the lack of established minimum standards and service[s] available to children who are deaf and are unable to access current general education. Solutions need to be sought that could enable this largely hidden population of children to access education and succeed on their learning pathways.

- In particular, solutions that enable children who are deaf to remain and learn in their own communities should be prioritized over the only other available option, i.e., special school education and boarding facilities.

- In support of the above objective, SED should seek out solutions that would, at minimum, bring children to a level of literacy adequate enough to engage with the primary curriculum through CSL, as a medium of instruction. It is this literacy that would ultimately enable them to continue on a learning pathway in their communities.

- The success of the online live-teaching of CSL and literacy used while [Bridge and integrated classrooms] were closed due to COVID-19 indicates that remote teaching of children who are deaf is possible."

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Annex A. Tools

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

Exhibit 8. List of Data Collection Tools

Type	Tool	Name
KIIs/FGDs	A	Government KIIs/FGD
	B	Organizations of Persons with Disabilities (OPDs) KIIs/FGD
	C	Teacher FGDs at Training Workshops
	D	School Directors KIIs/FGD
	E	Parent FGDs: Bridge Program
	F	School-Based Teacher KIIs: Battambang General Education Classrooms
	G	School-Based Teacher KIIs: Kampong Thom and Kampot General Education Classrooms
	H	School-Based Teacher KIIs: Special Schools
	I	Implementing Partner Staff KIIs/FGDs
	J	Literacy Coach FGDs
Surveys	K	Pre-Post Instructional Training Survey
	L	School-Based Teacher Survey
	M	Household Survey
Observations	N	Inclusive Education Training Observation Tool
	O	Classroom Lesson Observation Tool: Battambang, Kampong Thom, and Kampot General Education Classrooms
	P	Classroom Lesson Observation Tool: Special School Classrooms
Secondary Source Review	Q	Material Review
	R	Equity and Inclusion Checklist

Annex B. Sample Demographics

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

Exhibit 9. Sample Size and Description by Tool Type

Key Informant Interviews/Focus Group Discussions (Total Sample: 304)		
Tool	**Sample Size**	**Sample Description**
A	32	National and subnational government staff involved in the ACR-Cambodia program. Of the 32 total national or subnational staff interviewed, 24 were interviewed for the interim report, and further meetings were conducted with 8

		subnational government staff for the endline report.
B	5	OPD representatives from Kampong Thom or Kampot provinces. All interviews were conducted for the interim report. No further data collection followed for the endline report from this population.
C	36	FGDs were conducted in January–February 2021 at ACR-Cambodia trainings with teacher trainees from both Kampong Thom and Kampot provinces.
D	64	School directors or deputy directors participating in ACR-Cambodia. Of the 64 school director interviews conducted between February–October 2021, 60 were across Kampong Thom and Kampot provinces, and 4 represented special schools.
E	4	Parents of students in the Bridge Program were interviewed in August 2021.
F	30	General education Grade 1 teachers in Battambang Control schools interviewed in 2021.
G	82	General education Grade 1 teachers in Kampong Thom and Kampot ACR-Cambodia schools interviewed in 2021.
H	7	Special school Grade 1 teachers who completed the ACR-Cambodia inclusive education training interviewed in 2021.
I	27	Across the lifetime of the evaluation, the team consulted with 27 IP staff. IDP and CDPO interviewed 13 IP staff for the interim report. For the endline report, additional KIIs or FGDs were conducted with 4 senior project leaders, 6 Deaf education or CSL expert staff, and 4 inclusive education field team members (some of whom overlap with those interviewed for the interim report).
J	17	Literacy coaches and literacy coach supervisors across the four evaluation districts participated in FGDs in August 2021.

Surveys (Total sample: 410)		
Tool	**Sample Size**	**Sample Description**
K	91	Before and after trainings in early 2021, classroom teachers from Kampong Thom and Kampot participated in surveys.
L	114	From April–September 2021, a broader teacher survey (not just focused on training like Tool K) was administered to the same classroom teachers profiled in the teacher interviews above (in Tools F and G). Of the total 114 teacher population, 84 teachers were from Kampong Thom or Kampot, and 30 were from Battambang.
M	205	Parents/caregivers of students with or without disabilities in Kampong Thom or Kampot who completed Grade 2 in ACR-Cambodia classes (students were generally in Grade 3 by time surveyed). From November 2021–March 2022, 200 parents/caregivers were surveyed by CDPO evaluators, followed by a further snowball sample of 5 parents of children with disabilities in these provinces.

Observations (Total observations: 152)		
Tool	**Sample Size**	**Sample Description**

N	8	CDPO staff observed Early Grade Reading/Literacy and Inclusive Instruction teacher trainings or training-of-trainer delivery on 8 occasions from December 2020–February 2022.
O	137	CDPO staff observed literacy lessons in Grade 1 and 2 classrooms from February–April 2022, 108 of which were ACR-Cambodia supported classrooms in Kampong Thom and Kampot, and the remaining 29 were in Battambang Control schools.
P	7	CDPO staff observed literacy lessons in ACR-supported special school classes in each province where special schools are located.

Secondary Source Review (Over 280 materials)

Tool	Sample Size	Sample Description
Q	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.
R	81	From October 2021–January 2022, IDP and CDPO team members adapted and piloted the use of USAID's new Equity and Inclusion Checklist with ACR-Cambodia student TLMs. This checklist was used to review 81 Grade 1 and Grade 2 decodable storybooks, from which 51 were analyzed in detail.

Exhibit 10. Sample Distribution by Region/District for Intervention and Control Schools

Tool	Intervention				Control
	Kampong Thom Province		Kampot Province		Battambang Province
	Kampong Svay District	Stueng Sen District	Kampot Town	Kampong Trach	
D	N = 21, 35%	N = 9, 15%	N = 18, 30%	N = 12, 20%	
F					N = 30, 100%
G	N = 23, 28%	N = 18, 22%	N = 20, 24.4%	N = 21, 25%	
K	N = 19, 22%	N = 3, 3.4%	N = 63, 71.6%		
L	N = 23, 20%	N = 19, 17%	N = 19, 17%	N = 23, 20%	N = 30, 26%
M	N = 51, 25%	N = 54, 26%	N = 50, 24%	N = 50, 24%	
N	N = 1, 13%	N = 1, 13%	N = 6, 75%		
O	N = 24, 18%	N = 30, 22%	N = 21, 15%	N = 33, 24%	N = 29, 21%

Exhibit 11. Sample Distribution by Region/District for Special Schools

Tool	Battambang Province	Kampong Cham Province	Phnom Penh Thmey	Siem Reap Province
H	N = 1, 14%	N = 4, 57%	N = 1, 14%	N = 1, 14%
P	N = 2, 29%	N = 1, 14%	N = 2, 29%	N = 2, 29%

Exhibit 12. Gender Distribution

Tool	Male	Female
A	N = 25, 78%	N = 7, 22%
B	N = 4, 80%	N = 1, 20%
C	N = 8, 22%	N = 28, 78%
D	N = 51, 80%	N = 13, 20%
E	N = 0, 0%	N = 4, 100%
F	N = 6, 20%	N = 24, 80%
G	N = 22, 27%	N = 60, 73%
H	N = 1, 14%	N = 6, 86%
I	N = 16, 59%	N = 11, 41%
J	N = 5, 29%	N = 12, 71%
K	N = 26, 29%	N = 65, 71%
L	N = 23, 20%	N = 90, 79%
M	N = 77, 38%	N = 128, 62%
N	N = 31, 28%	N = 79, 72%
O	N = 20, 15%	N = 117, 85%
P	N = 1, 14%	N = 6, 86%

Exhibit 13. Age Distribution

Tool	18–24 years	25–39 years	40–60 years	Over 60 years
K	N = 3, 3%	N = 52, 60%	N = 29, 33%	N = 3, 3%
L	N = 2, 2%	N = 73, 64%	N = 39, 34%	

Exhibit 14. Grade Level

Tool	Pre-Primary	Grade 1	Grade 2	Grade 3
C		N = 16, 44%	N = 20, 56%	
F		N = 30, 100%		
G	N = 1, 1%	N = 81, 99%		
K		N = 65, 74%	N = 23, 26%	

Tool	Pre-Primary	Grade 1	Grade 2	Grade 3
M			N = 202, 99%	N = 3, 1%
N	N = 2, 25%	N = 4, 50%	N = 2, 25%	
O		N = 33, 24%	N = 104, 76%	
P		N = 3, 43%	N = 4, 57%	

Exhibit 15. Teaching Experience

Tool	1–3 years	4–6 years	7–10 years	Over 10 years
L	N = 2, 2%	N = 12, 11%	N = 19, 17%	N = 81, 71%

Exhibit 16. Disability Status

Tool	Identified Disability	No Identified disability
D	N = 24, 41%	N = 35, 59%
F	N = 11, 39%	N = 17, 61%
G	N = 21, 26%	N = 61, 74%
K	N = 3, 3%	N = 85, 97%
L	N = 6, 5%	N = 108, 95%
M	N = 9, 4%	N = 196, 96%
O	N = 59, 43%	N = 78, 57%
P	N = 63, 100%	

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) whether the child that the respondent was reporting on in the household survey had an identified disability, (3) whether the respondent had one or more children with disabilities in their school/classroom in the KIIs, and (4) the disability status of students observed in classrooms.

Exhibit 17. Disability Type

Tool	Physical Disability	Intellectual Disability	Vision Disability	Hearing Disability	Learning Disability	Other/Not Disclosed
D	N = 8, 10%	N = 10, 13%	N = 37, 48%	N = 4, 5%		N = 18, 23%
F	N = 5, 46%	N = 3, 27%	N = 2, 18%	N = 1, 9%		
G	N = 5, 16%	N = 8, 26%	N = 10, 32%	N = 2, 7%		N = 6, 19%
L	N = 1, 14%		N = 3, 42%			N = 3, 42%
O	N = 5, 5%	N = 17, 15%	N = 26, 23%	N = 11, 10%	N = 52, 46%	N = 3, 3%
P			N = 40, 64%	N = 24, 38%		

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.