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USAID | *Aprender a Ler (ApaL)*

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FINAL REPORT

Aug 2012 – Dec 2016

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Acronyms & Key Terms

ApaL	USAID <i>Aprender a Ler</i> (Learn to Read)
APAL/IE	USAID <i>Aprender a Ler</i> Impact Evaluator
AWP	Annual Work Plan
CLIN	Contract Line Item Number
COP	Chief of Party
DIPLAC	Direcção de Planificação e Cooperação (<i>Directorate for Planning and Cooperation</i>)
DNEP	Direcção Nacional de Ensino Primário (<i>National Directorate of Primary Education</i>)
DNFP	Direcção Nacional de Formação de Professores (<i>National Directorate for Teacher Training</i>)
DNQ	Direcção Nacional de Qualidade (<i>National Directorate for Quality</i>)
DPEDH	Direcção Provincial de Educação e Desenvolvimento Humano (<i>Provincial Directorate of Education & Human Development</i>)
FY	Fiscal Year
ICP	Institutional Capacity Plan (also Plano de Capacitação Institucional or PCI)
IEG	Impact Evaluation Group
IFP	Instituto de Formação de Professores (<i>Teacher Training Institute</i>)
IGA	Institutional Gap Analysis
INDE	Instituto Nacional de Desenvolvimento de Educação (<i>Curriculum Development Institute</i>)
IR	Intermediate Result
LEI	Local education institution
LT	Lead Trainer (selected Master Teacher or Pedagogical Director)
LOC	Letter of Commitment (in lieu of MOU agreements at provincial level)
MEP	Monitoring and Evaluation Plan
MINEDH	Ministry of Education & Human Development
PCG	Provincial Coordination Group
PD	Pedagogical Director
QR	Quarterly Report
RPG	Reading Planning Group (located at district level)
RRP	Reading Reinforcement Program
SD	School Director
SDEJT	Serviço Distrital de Educação, Juventude e Tecnologia (<i>District Education, Youth and Technical Services</i>)
SLP	Scripted Lesson Plan
SMT	School Management Tool
SOW	Scope of Work
STTA	Short-Term Technical Support
TLA	Teaching and Learning Aid (for reading instruction)
TOR	Terms of Reference
UP	Universidade Pedagógica de Moçambique (Pedagogical University of Mozambique)
USAID	United States Agency for International Development
WEI	World Education Inc.
ZIP	Zonas de Influência Pedagógica (<i>School Clusters</i>)

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Annex C: EGRA Data Analysis – Key Takeaways (Dr. Haiyan Hua)

Annex D: EGR National Reading Benchmarks Report (English)

Annex E: Communications Report (April – November 2016) (Portuguese)

Annex F: Success Story – Partnerships & Sharing

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Annex H: USAID & MINEDH Final Results Presentations Slides (Port/Eng)

Annex I: Impact Evaluation Baseline Report (2013)

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Annex L: Impact Evaluation Endline Report (2015)

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APRENDER A LER
... hoje, para o meu futuro

Final Report: Aug 2012 – Dec 2016

I - USAID|Aprender a Ler General Project Information

Project Duration: 4 years (3 years with additional 2016 Option Period)

Start Date: July 18, 2012

Life of Project Funding: \$24,464,624.00

Geographic Focus: Nampula and Zambézia provinces

2 - Project Objectives

The overall goal of the USAID | *Aprender a Ler* (*ApaL*) – Learn to Read – project was to improve reading outcomes of students in grades 1- 3 in over 1,000 urban and rural target schools in the Zambézia and Nampula provinces. The ultimate measure of project success was “more children reading” in Zambézia and Nampula, in keeping with the overall goal of the project and USAID’s Education Strategy.

To achieve this goal, USAID|*ApaL* provided key training, coaching, and technical assistance to improve the quality of basic education services, with a specific emphasis on improving early grade reading outcomes. Training and technical assistance was limited to the provinces of Zambézia and Nampula, but incorporated frequent collaboration with central institutions in Maputo.

Project goals have been closely aligned with the efforts of the Mozambican authorities to improve quality of education as stated in the Strategic Plan for Education 2012-2016. One of the key goals, as indicated in the contract and accompanying documents, was to build the capacity of Local Education Institutions (LEI) to implement and manage USAID|*ApaL* activities. A key indicator of project sustainability will continue to be the ability of these local stakeholders to assume responsibility for activities beyond the scope of direct implementation. USAID|*ApaL* worked hard towards full handover of responsibilities based on the demonstrated ability of LEIs to take this on. The project was, therefore, implemented using participatory and learning-by-doing approaches, based on WEI’s extensive experience, to strengthen the technical and organizational skills of LEIs in line with established structures and processes to ensure the sustainability. This final report aims to give a thorough overview of the development of the *ApaL* approach and note key accomplishments throughout the process.

Key Expected Results

Project activities focused on two Intermediate Results (IRs):

IR1. Improved **QUALITY** of reading instruction in grades 1-3 in targeted schools

Sub IR 1.1: Improved In-Service Teacher Training & Coaching

Sub IR 1.2: Increased Availability of Learning Materials for Students & Teachers in Grades 1-3

IR2. Increased **QUANTITY** of reading instruction in grades 2-3 in targeted schools

Sub IR 2.1: Strengthened School Management

To achieve these goals, USAID|ApAL:

- trained over 5,000 teachers in early grade reading instruction and continuous learning assessment in reading and over 1,000 school directors in school management to increase classroom reading time;
- developed high-quality reading and instructional materials for students and teachers; and
- developed and adapted summative and formative assessment instruments to measure improvements in reading ability, instruction quality, and school management skills.

3 - Results Overview

3.1 - Impact Evaluation Structure

At the start of the USAID|ApAL program, USAID commissioned an external impact evaluator to evaluate data collected on the reading outcomes of second and third grade students, using an EGRA (Early Grade Reading Assessment) alongside a separately developed SMA (School Management Assessment) tool.

The main purpose of the impact evaluation was to assess the effectiveness of the intervention, the cost-effectiveness of each piloted approach, and sustainability of two separate intervention levels by returning to see how schools performed a year after receiving direct support via USAID|ApAL.

The two levels included **Medium Treatment** - which focused on improved student learning through a reading intervention (developed during implementation as the RRP described in the Technical Approach section) - and a **Full Treatment** - which added components for more effective school management (developed to be known as the aforementioned SDTC program). Data was also established for a set of control schools in the target provinces with similar characteristics of the schools/districts where the pilot interventions were taking place. Schools were randomly allocated to the three groups (full, medium, and control) with a baseline conducted prior to intervention establishing that student reading performance and other characteristics were statistically identical between the three groups. This allowed attribution of any gains seen in the interventions schools to be reliably attributed to the intervention of the program.



Figure 1 USAID|ApAL student in Nampula, Mozambique, participating in an RRP lesson.

After the first school year, students from all three of the groups demonstrated improved reading outcomes (as seen in the graphs below). A detailed analysis at each step of the evaluation can be found in the IBTCI Impact Evaluation reports, included as Annexes I, J, K, and L). Contributing to these gains were significant improvements in attendance by both students and teachers, an aspect of the system targeted by the full treatment intervention. One year after USAID support ended, students continued to show improvements in critical aspects of reading, as seen below. Additionally, the full treatment group, incorporating both literacy and school-based management, was also found by the external evaluator to be the more cost-effective approach. For these reasons, the full treatment intervention was approved for scaled up activities in the academic school years of 2015 and 2016.

An overview of the geographic scale of the intervention, specific numbers of beneficiaries, and select data on program results can be found in this section.

3.2 - Target Districts:



Figure 2 Maps of USAID|ApaL target provinces of Nampula and Zambézia. Initial six program districts (2013-2015) are highlighted in red, while expansion districts (2016) are shown in blue.

2013-2015: Six districts in Zambézia (Mocuba, Quelimane, and Nicoadala) and Nampula (Monapo, Murrupula, and Nampula City) where USAID|ApaL initially implemented a pilot 1-year intervention. Based on analysis from the external Impact Evaluator, USAID|ApaL expanded to full school coverage in all six districts.

2016 Expansion (14 total districts): Eight districts – within the same provinces – added for expanded implementation and pilot of a second straight year of the USAID|ApaL full treatment intervention.

3.3 - Project Beneficiaries:

Group	2014	2015	2016	TOTAL
Districts	Monapo, Murrupula, Nampula Mocuba, Nicoadala, Quelimane		Monapo, Murrupula, Nampula Malema, Mecuburi, Mossuril, Ribáuè Mocuba, Nicoadala, Quelimane Gurué, Ile, Lugela, Namacurra	14
Schools	122	538	611	1,213
ZIPs	23	102	114	227
Students	50,000	110,000	177,231	320,435
Teachers	849	2,002	2,657	4,908
School Directors	61	538	612	1,153
Reading Coaches	171	638	785	1,526
Books Distributed	832,318	1,275,462	2,494,400	4,602,180

3.4 - Impact Evaluation Data Collections

The design for the Impact Evaluation included a baseline in the beginning of the 2013 academic year, two midline collections for results at the end of 2013 and 2014, respectively, and a final collection to test for sustainability at the end of the 2015 school year. Each data collection and subsequent analysis evaluated the results from a Control group, a Medium Treatment group, and a Full Treatment set of schools (as explained above), with approximately 60 schools per sample. This evaluation helped the USAID|ApaL program to identify areas for improvement and revise program materials and activities each year based on current data.

Up through 2014, as outlined above, USAID|ApaL reached 122 schools across 6 districts in the provinces of Nampula (Nampula, Monapo, Murrupula) and Zambézia (Quelimane, Nicoadala, and Mocuba). This included schools where both the full treatment and the medium treatment were being piloted. An additional 60 schools served as a control set in these districts.



Figure 3 Data collections for the IBTCI evaluation included approximately 180 schools. This allowed for 60 control schools, 60 Medium Treatment schools, and 60 Full Treatment schools.

3.5 - Why the Full Treatment?

As summarized in several of the tables below, the impact evaluation showed significant improvement in student performance in both treatment groups across all competencies measured by the Early Grade Reading Assessment when compared to the control group of schools. In addition, grade 2 and 3 teachers in treatment schools showed improved pedagogical practices. Full treatment schools showed lower rates of student and teacher absenteeism (as

noted in Figure 4), and a cost effectiveness analysis showed that the Full Treatment had a larger impact on student performance relative to the Medium Treatment. The Impact Evaluation from 2014 (e.g. Midline 2) therefore concluded that USAID|ApaL had a significant impact on student reading outcomes and should be continued and expanded under the Full Treatment model, which was then carried on in 2015 and 2016.

Some notable findings from the 2014 results are as follows:

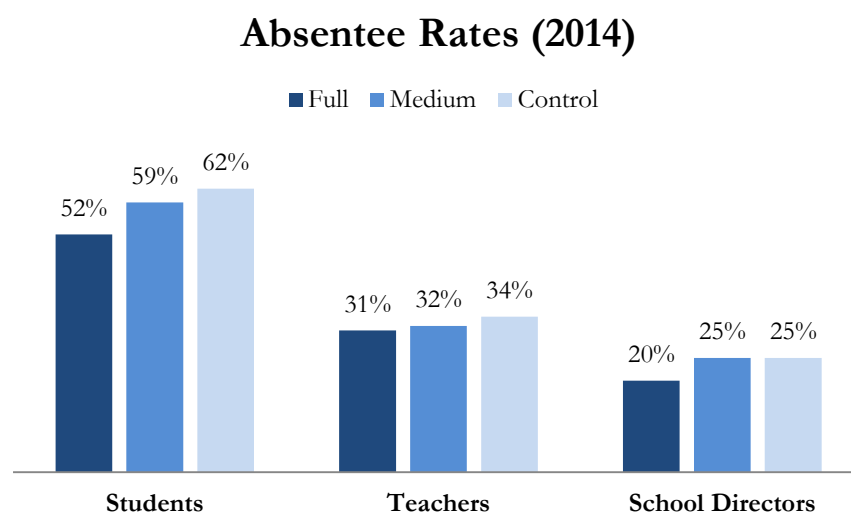


Figure 4 Results from the 2014 EGRA data showing student, teacher, and school director absentee rates for all three groups (Full, Medium, and Control).

- In program schools, over 80% of 2nd and 3rd grade children were observed on an unannounced visit to have program-developed reading books in their possession. In non-program schools only 10% of children had reading books.
- Oral reading fluency (number of correct words read from a text in one minute) increased from a baseline value of 2 words per minute to 15 in full treatment schools for 3rd grade students.
- Over 35% of students in Full Treatment schools responded correctly to at least one comprehension question that was asked based on the text read. In control schools only 10% responded to one or more questions correctly.
- While school director, teacher, and student absentee rates remained high, full treatment schools demonstrated significantly better school management practices and significantly stronger reading performance by students.
- By all measures, boys were outperforming girls in all groups. However, in *ApaL* schools, the gap was significantly smaller. In program schools, 3rd grade boys read 20% more words than girls, while in control schools boys read 51% more words than girls.



Figure 5 A Reading Coach helps teachers working with *ApaL* scripted lesson plans during an INSET (In-Service Training) weekend session.

These positive findings from the 2014 school year were a result of constant revision and improvement throughout implementation. The project put a strong emphasis on using data – as outlined in the technical approach sections to follow – and results to help schools and communities find ways to improve. Likewise, USAID/*ApaL* staff and its partners were constantly looking for ways to adjust, and the results from the impact evaluation played a large part in further revisions and efforts to improve as WEI headed into the scale-up phase in the 2015 school year and into 2016.

3.6 - Maintaining Quality at Scale

In 2015, USAID/*ApaL* scaled interventions in Nampula and Zambézia to 538 schools in the original 6 districts of Nampula (25), Monapo (100), Murrupula (93), Quelimane (60), Nioadala (74), and Mocuba (186). Implementing in the same districts from the 2014 pilot intervention allowed USAID/*ApaL* to cover all remaining schools within the districts, apart from the control school cohort, which was at the time still part of the impact evaluation. These control schools were subsequently covered by the program in 2016 to truly achieve full coverage, after the impact evaluation study by IBTCI had concluded.

Adjustments were made to maintain quality at scale as implementing the Full Treatment across the districts posed many new challenges. The program needed to cover larger geographical distances while maintaining the same level of supervision that resulted in successes in 2013 and 2014. While results varied between districts (see Figure 6), positive results were maintained and lessons were taken forward into the 2016 expanded implementation model beyond the six districts.

Reading Fluency - Grade 3 (2015)

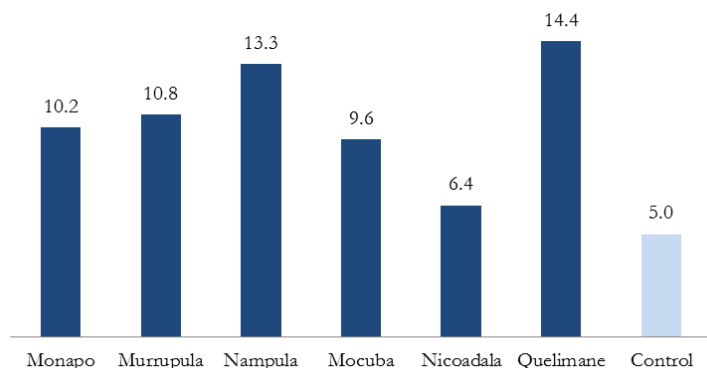


Figure 6 During the 2015 scale-up phase to full district coverage with the Full Treatment intervention, ApaL maintained positive results across the program, as compared with the control group seen above. Decentralized trainings and more intensive local government engagement were important considerations for these successes.

As part of the approach, a cohort of trainers was selected and received extensive direct training at the beginning of the year. These trainers worked with USAID|ApaL staff to facilitate the new decentralized reading and school management trainings at the district levels. This was a change from the original design, as major trainings in the cascade model took place centrally in the provincial capitals. The trainers also monitored the regular ZIP-level teacher training sessions (e.g. INSETs) to help ensure the quality of the cascade.

In addition to decentralized trainings, a focus in this larger-scale implementation model was to engage local governments as much as possible in all districts and to strengthen the role of the school-cluster coordinators where the program is implemented. This not only included typical education institutions, such as SDEJT and DPEDH, but also the District Administrators, governors, and other relevant points of authority. This kind of engagement paved the way for smoother entry into new communities and ongoing collaboration and awareness around the program. While the USAID|ApaL original program design did not include community-focused components, this type of engagement has increased with annual revision of the programs. Activities such as Reading Day competitions and work with local radio stations helped to create more excitement around literacy and its importance for early grade students.

Reading Fluency by Treatment Group and Year (Grade 3)

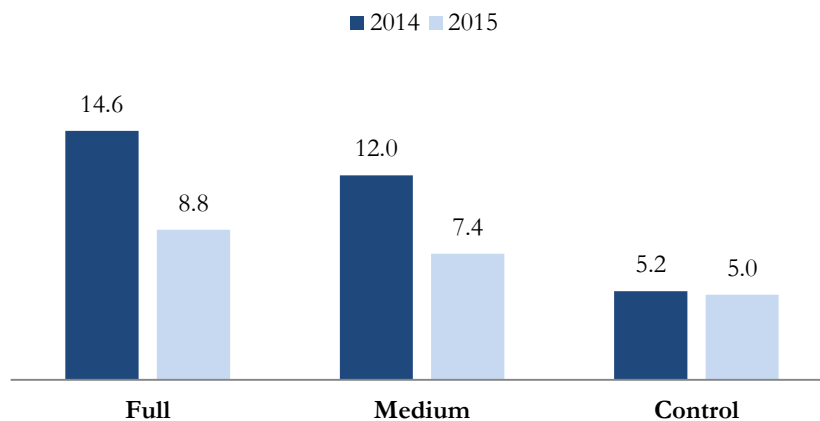


Figure 7 These results from the impact evaluation's sustainability study (returning to schools one year after ApaL support has ended) reflects a decrease in reading levels. However, a year later the students are still performing better than the control group of schools.

3.7 - Are the Effects of the Intervention Sustainable? (1 Year Later)

As noted in the description of the IE design, the 2015 data is meant to understand the sustainable effects of the 1-year ApaL intervention a year after USAID support had ended (see Figure 7 above). Even

while WEI - as approved by USAID - scaled up the full treatment intervention in an additional 538 schools in 2015 (and subsequently in 2016), the study returned a year later to schools which had received the treatment in 2014, to see what effects were retained. The table below (Figure 9) outlines the skill levels in 2015 of each EGRA sub-task as a percentage of what was found in those same schools in 2014 (after having received a full year of *ApAL* support).

EGRA Subtests 2015 as % of 2014	Grade 2			Grade 3		
	Full	Medium	Control	Full	Medium	Control
Oral Comprehension	92%	90%	95%	92%	64%	98%
Concepts about Print	88%	80%	94%	89%	92%	97%
Letter Recognition	54%	42%	109%	68%	69%	102%
Familiar Word Reading	71%	55%	109%	70%	74%	102%
Text Word Reading	65%	57%	118%	60%	61%	95%

Figure 8 This table, taken from IBTCI's impact evaluation results 1 year after *ApAL* support had ended, reflects the 2015 skill levels – broken down by EGRA subtask - as a percentage of what they achieved in 2014. Even with a decrease in results, levels continue

While the scores went down after the end of the program, the full intervention schools continued to significantly outperform the control schools in both Grade 2 and 3. Additionally, to emphasize the effectiveness of the full treatment intervention a year later, the results in the graph below highlight the fact that the students in medium treatment schools (i.e. schools with no School Management intervention) returned to levels almost equal to those of the control schools. These effects, in addition to the results from a sample of schools receiving a second straight year of intervention in 2016 (discussed below), highlight the potential that could be realized by extending the duration of support for LEIs, teachers, students, etc.

Oral Reading Fluency: # of Words Per Minute - Grade 3

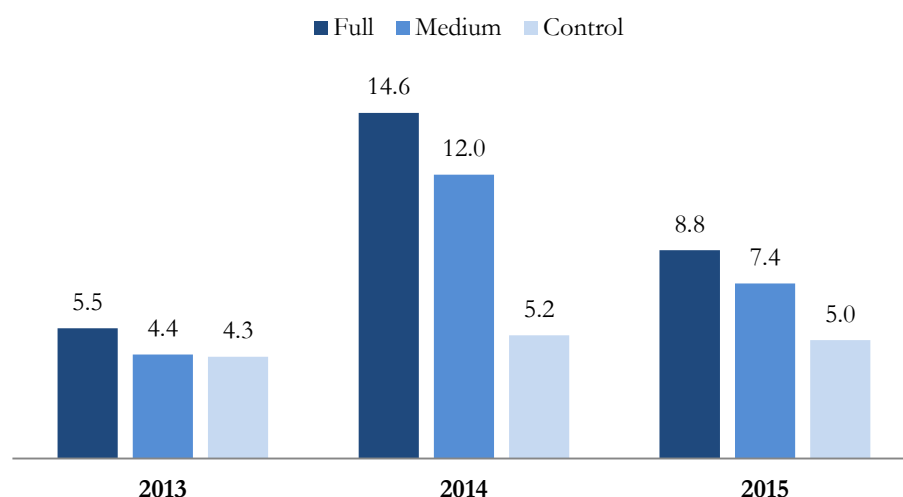


Figure 9 This table also incorporates baseline results to offer a comparison of fluency scores before, during, and after the *ApAL* program support. Even with a decrease in fluency, levels were maintained above the baseline results.

3.8 - 2016 Option Year

Upon receiving authorization from USAID to implement an additional year in the target provinces of Nampula and Zambézia using the Full Treatment intervention, WEI began moving forward with several new changes to the program. In addition to expanding implementation into eight new districts (4 added in each province) - for a total of 14 districts for 2016 - the program expanded into Grade 1 in all new schools (in addition to G2 and G3). The G1 program (explained under the *Technical Approach* section below) was developed with an eye to reflecting USAID's longer-term strategy of using mother-tongue based instructional approaches in the early grades, as well as to help MINEDH in their proposed 2017 transition to using local languages.

While the G1 program was only introduced in the new districts, WEI also returned to the original 6 districts to: A) provide support to the control schools from the impact evaluation, as that study had concluded at the end of 2015; and B) to test the effects of a second straight year of the *ApaL* intervention in a sample of schools who had already been part of the program in 2015.

As hypothesized, results showed a positive impact in Grade 3 students after receiving a second straight year of the program when compared to students who had only received one year of support (see Figure 10 below). These children participated in the program as 2nd graders in 2015, and then received a second year of support as 3rd graders in 2016.

Oral Reading Fluency (Grade 3) -- 1 Year Intervention vs 2 Year Intervention

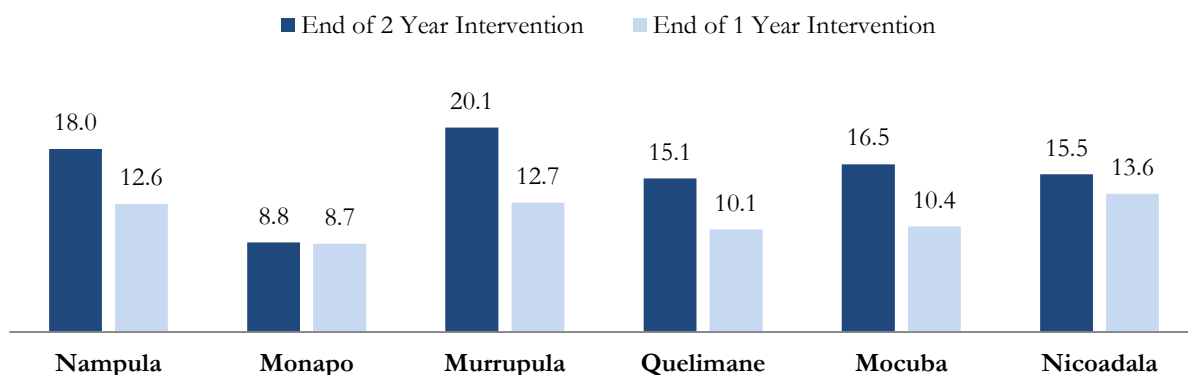


Figure 10 Results from a study completed in 2016 comparing students who received 1 year of *ApaL* support in their school to students who received 2 years of support. While the impact evaluation showed levels of sustainability 1 year after the program concluded its intervention, this data suggests that an additional year – or more - of treatment would continue to improve student outcomes.

Aside from trying to understand the effects of a second straight year of intervention, *ApaL* continued to see positive results in 2016 in the new districts when implementing the decentralized model developed for the 2015 school year. Adding eight new districts in one year posed a whole new set of challenges, but in order to adapt the model for true sustainability and handover, *ApaL* continued refining the lessons learned in 2015 when the program was scaled-up to cover full districts. This included maintaining decentralized district-centered trainings for teachers and SDs, empowering SDEJT and ZIP Coordinators with more responsibility for modeling and supervision, continuing to simplify materials such as the SMTs (School Management Tools) to be more effective, and even involving local governments and communities in all program activities. In this revised model, more of the accountability measures are focused in the districts and ZIPs to ensure that activities are properly carried out.

As seen in the results from Grades 1-3 in the tables below, the gains made by students in the program were roughly equivalent to an additional year of school in terms of letter recognition and oral reading fluency (e.g. 10.7 letters read in grade 2 treatment schools compared to 8.4 letters for grade 3 control schools) (see Figures 11 and 12). Not only does this provide evidence that the intervention is helping to improve reading outcomes in the short-term, but by intervening to improve these literacy skills at such an early stage it is likely that students will be more prepared and engaged as they pass to the next grade.

Along with positive gains in reading outcomes, 2016 results also continued to illustrate the need for progress on issues related to absenteeism and overall school management. Student absenteeism continues to be one of the largest factors influencing student performance (see Annex C for further detail), and is only perpetuated by the additional problem of absent teachers and school directors. Absentee rates not only vary significantly by groups, but also vary substantially within and between districts and provinces. In tables 13 and 14 below, it is clear that some districts struggle more with this issue than others, but overall where the *ApaL* program is present the rates improve significantly.

Letters Read per Minute 2016 (by Grade)

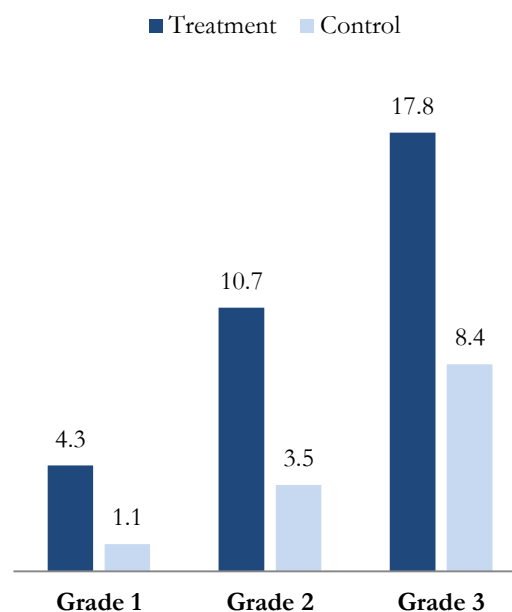


Figure 11 Results showing positive improvements in all three grades receiving *ApaL* support in 2016, when compared to a sample of Control schools.

Correct Words per Minute 2016 (by Grade)

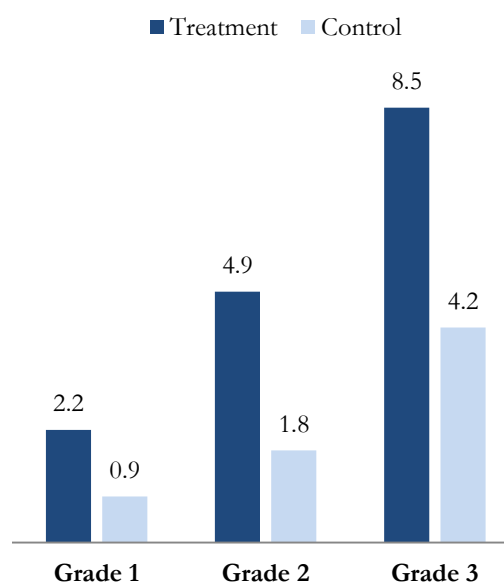


Figure 12 Results from the 2016 intervention reflecting positive results in all three grades (1-3).

Absentee Rates 2016 - Control Schools

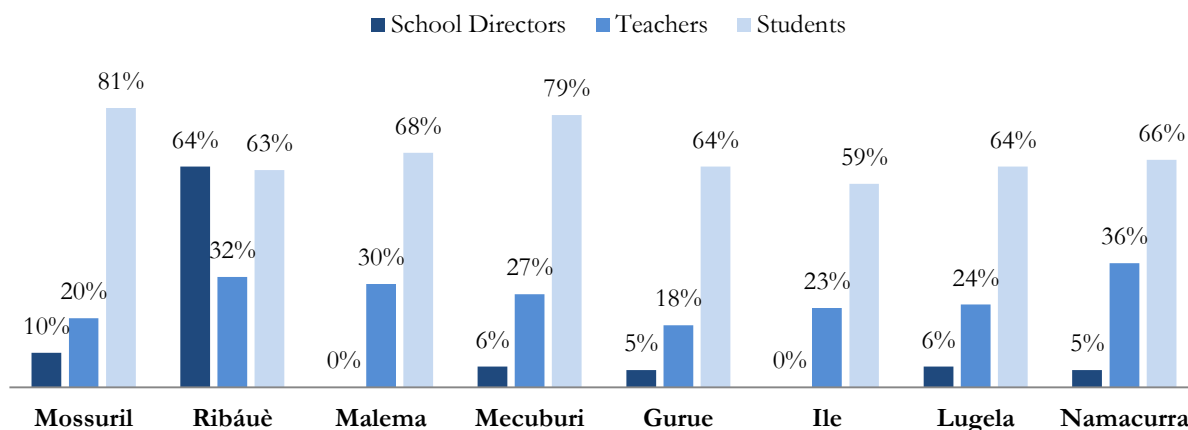


Figure 13 Control schools in seven districts new to USAID|ApAL in 2016 show high rates of absenteeism for School Directors, Teachers, and Students. There continues to be substantial variation between and within districts and provinces in Mozambique.

Absentee Rates 2016 - Treatment Schools

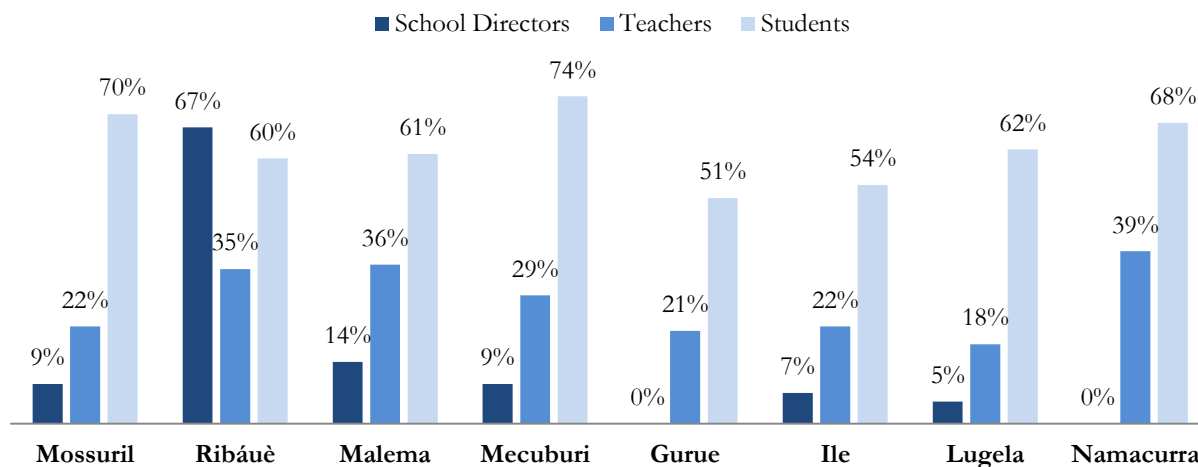


Figure 14 When comparing absenteeism across districts where the USAID|ApAL program implemented, there is a decrease in rates among School Directors, Teachers, and Students. Absenteeism continues to be one of the largest factors affecting student performance.

4 - Project Structure

4.1 - Main Components

The USAID|ApaL program, which was designed to reinforce the Ministry of Education and Human Development (MINEDH), has included the following components to achieve its goals:

4.1.1 - Reading Reinforcement Program (RRP)

The RRP provided critical training, coaching, and teaching and learning materials to teachers in target schools. The RRP was designed so that teacher professional development, daily scripted lesson plans, and in-school pedagogical support merged to create a comprehensive program addressing all five key components of reading instruction. A Reading Coach is trained in each school to give daily support to teachers on reading instruction. They also help to ensure correct use of teaching and learning materials, and confirm that teachers participate in continuous training activities organized throughout the year at the school cluster-level, also known as ZIPs (Zonas de Influência Pedagógica).

4.1.2 - School Director Training and Coaching (SDTC) Program

The School Management component, or the SDTC program as it came to be known, provided training, coaching, and practical School Management Tools (SMTs) to School Directors (SDs) in order to support their efforts to improve student achievement – the ultimate indicator of a well-managed school. To this end, the SDTC Program aimed to equip SDs with skills in school leadership, effective communication, giving and receiving feedback, using practical school management tools for data-based decision making, and building community participation.

4.1.3 - Institutional Capacity Building (ICB)

The ICB component worked with local education institutions (LEIs) to prepare them to eventually take on direct implementation of program activities demonstrated to have impact. This was done through learning-by-doing approaches, direct training, and assessment to build the organizational and technical capacity of all relevant counterparts.

4.1.4 - Measuring Impact for Evidenced-Based Decision-Making



By way of the M&E component, the program developed and integrated data for decision-making throughout all program activities. This was done through a rigorous monitoring and evaluation process that included the Rapid School Assessments (RSA). These biannual assessments allowed district education officers to collect quantitative data on reading and school management outcomes and use this data to provide targeted management and pedagogical support. The RSA has strengthened existing MINEDH pedagogical supervision practices by making them evidence-based and focused on learning outcomes, and has been partially adapted and integrated by the central government in their supervision activities throughout Mozambique.

4.2 - Technical Approach

The sections that follow aim to outline the development and evolution of the technical approach used throughout the USAID|ApAL program. One of the strengths of the WEI team throughout the program was the ability to adapt and revise aspects of the technical approach quickly. This was even more effective due in part to the fact that it was a 1-year intervention. Each year materials were revised based on internal lessons learned, input from various local stakeholders such as SDEJT and USAID, and recommendations from ApAL's external impact evaluation reports.

4.2.1 - Development & Pilot of the Reading Reinforcement Program (RRP)

In response to baseline results early on in 2013, as well as other similar assessments, and with the ending of the contractual relationship with UTSA (University of Texas – San Antonio, who was originally contracted to contribute to materials development), USAID|ApAL staff developed and implemented a pilot reading program aimed at foundational reading skills in late 2013. The Reading Reinforcement Program (RRP) incorporates phonics-based reading instruction practices and focuses specifically on foundational literacy skills in which student performance was found to be low during the baseline. The RRP is an evidence-based strategy that leverages international research and proven best-practices to improve reading skills within the context of primary school classrooms in Mozambique. The interventions of the RRP have been carefully designed to ensure that the program appropriately reflects learning needs as well as the culture, context, curriculum standards, and unique language considerations of Mozambique. The two primary components of the program are as follows:

- Professional development and support that will provide effective early grade reading instructional strategies to Mozambican 2nd and 3rd grade teachers; and
- Effective supplementary reading materials aligned to national goals and standards, aimed at ensuring that children will become fluent readers by the end of grade 3.

The RRP is designed so that teacher professional development, daily lesson plans, and pedagogical support merge to create a comprehensive program, which addresses five key components of reading instruction. In brief, to become an effective reader, a child must develop skills in all five Reading Components¹ as graphically depicted in Figure 17 and briefly summarized below:



Figure 15 RRP Reading Components.

¹ https://www.eddataglobal.org/.../index.../EGRA_Toolkit_Mar09.pdf?...%E2%80%8E

1. **Phonemic Awareness:** Words are created from sounds (phonemes). This includes the ability to identify, isolate, and blend sounds into words.
2. **Phonics:** Sounds and letter symbols are integrally connected. After learning phonemes, children need to learn the connection between letter sounds and written script.
3. **Vocabulary:** Vocabulary refers to the meaning of words. Children need to learn the meaning of new words to progress in reading ability to more difficult text. Teachers need to continually teach the meaning of new and unfamiliar words to increase children's knowledge and understanding. This can be both oral vocabulary (listening) and written vocabulary (reading).
4. **Fluency:** Reading fluency requires that a child read with sufficient speed, accuracy, and expression. Fluency allows the reader time to comprehend what they are reading; the more fluent a reader is, the greater potential there is for good comprehension.
5. **Reading Comprehension:** Reading comprehension is the ultimate goal. It involves all other aspects of reading and could be summarized as the meaning that the reader makes from the text that is read.

USAID|ApaL believes that the synergy between these five components is crucial. However, teachers need training and coaching support in order to translate this theory into practice in their classrooms. Too often, theoretical frameworks do not translate into daily practice or rely on resources that are simply not available. The RRP therefore was based on an instructional program that includes daily lesson plans, teaching aids, and pedagogical support to guide teachers into improved reading instruction practice. Through thorough professional development and training and ongoing pedagogical support through coaching and classroom observation, teachers gain experience, understanding, and confidence. All these elements were needed to make RRP a natural part of the daily instructional practice, providing improvements to the reading environment which educators can continue to use beyond program implementation.

During Year I, the RRP was implemented as a 15-week high-impact program designed to achieve results in key foundational reading skills over a shortened implementation period. Following ApaL's basic structure, the RRP included both teacher training and development and distribution of teaching and learning aids. Teacher training in reading instruction was implemented through the existing cascade model (Lead Trainers who hold regular ZIP-level training sessions for 2nd and 3rd grade teachers, and 1st grade teachers after grade I inclusion in 2016) and centered around a series of scripted lesson plans distributed to teachers for use in the classroom, as detailed further below. Program components (including new teaching and learning materials, teacher training materials, a series of scripted lesson plans, and a structure of ongoing classroom assessments) were developed and distributed to schools. USAID|ApaL Lead Trainers received training on the new program and subsequently held teacher INSET sessions within their ZIPs, during which teachers were introduced to the program and instructed in the use of scripted lesson plans and instructional materials.

4.2.3 - Development of Scripted Lesson Plans

In 2013, USAID|ApaL also developed and implemented a series of innovative daily lesson plans to address each of the five key components of reading in every lesson. All lessons were designed following the same template, so that initially teachers were provided with an effective framework to guide them, and over time, they would gain familiarity with the instructional routines and be able to consistently apply quality instruction practices which address all five key components of reading.

Through the RRP lesson plans, the teacher learns to incorporate a simple and effective routine – “*I do, We do, You do*” – that guides children in the process of learning the core phonemic awareness and phonics skills, lesson components that take approximately 15 minutes of each daily 45 minute lesson. Each lesson also contains activities and additional learning strategies for teachers to use to increase vocabulary, fluency, and reading comprehension skills.

The manual with lesson plans was designed following a user-friendly template that allows the teachers to use the manual, not only during the preparation of the lesson, but also *during* the lesson. Each lesson is 45 minutes long and follows a concentric model in which the children learn one new letter and two oral vocabulary words, but also build upon knowledge and skills from previous lessons. This approach allows children to shift from recognizing individual letters to decoding simple words and eventually short sentences. A brief schematic overview of the lesson plans is shown below:

“I do, We do, You do” Instructional Model

STEPS

‘I do’	The teacher demonstrates the activity and asks the children to observe and listen closely.
‘We do’	The teacher prompts the children to practice the activity together.
‘You do’	The children are asked to respond without the teacher participating – they are practicing the skill independently so the teacher can assess and correct if necessary.

Outline of Scripted Lesson Plan (SLP)

Objective	Letters and words taught in the lessons
Preparation	Activities to be done by the teacher before the lesson can be given
Material needed	Material needed during the lesson
Review	Assessment of the skills and knowledge from the previous lessons and checking the homework activities.

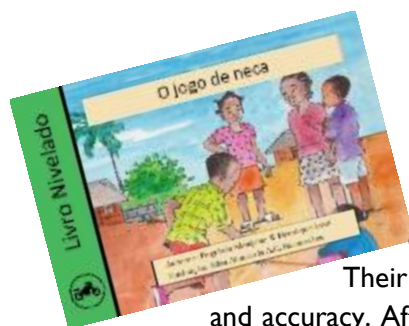
Phonemic Awareness	Practice new letter sound and pronunciation. Beginning sound flashcards with pictures that begin with the sound of each letter are used to help scaffold learning so that children can identify the correct sound of each letter (when there is more than one sound per letter, the simplest sound is introduced first).
Phonics	Learning to link the letter sound to the grapheme and practice segmenting and decoding with short words and sentences.
Fluency	Increase speed and accuracy of reading letters and words or recognizing previously learned vocabulary.
Vocabulary	Learning new vocabulary by teaching children new words that they do not know the meaning of in Portuguese, and explaining the meaning in the local language.
Reading and listening	Building understanding of text through reading out loud by the teacher and guided with a set of comprehension questions for the children. Later in the program, children will read decodable books of 6-8 pages with stories that include words that children have learned to read.
Homework	Review of the letters or words learned by making creative assignments that can be done by children individually.

4.2.4 - Development & Distribution of RRP Teaching and Learning Aids (TLAs)

In addition to the lesson plans described above, *ApaL* developed and distributed a package of simple teaching and learning aids to all schools. These aids evolved over the life of the program as lessons learned were incorporated from year to year. These materials are referenced in the manuals distributed to teachers and the lesson plans help them to regularly use these materials in their classrooms. In the first fase of the project a set of letter banners, flashcards and read alouds were developed to support classroom teaching. After this 3 month period, the project continued to add decodable books that were close linked to the scope and sequence of letter taught in the different grades.



Figure 16 Sets of Decodable readers developed by USAID | *ApaL* and local specialists for easy classroom use and to allow students to take home materials to read.



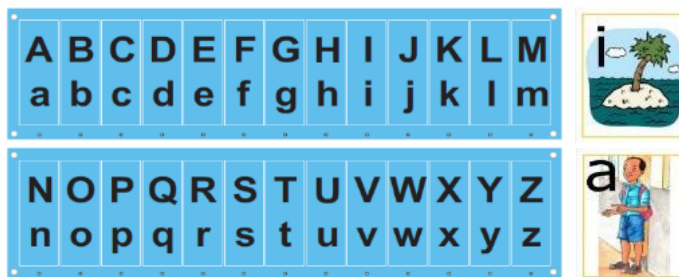
All material had undergone a gender screening, after which small changes in regards to illustrations and storyline were made. Over the course of the project, more and more children were able to reach levels of fluency and comprehension that exceeded the difficulty levels of the decodable books.

Their purpose was much more practicing of decoding and building reading speed and accuracy. After this observation, USAID|ApaL, in cooperation with a working group from INDE and MINEDH, continued on to develop levelled readers, which contained richer stories. These readers also included comprehension questions to be answered by those children who were able to master the books.

A central element in the RRP approach is the integration of the material into the lesson plans. This is necessary to ensure regular and proper use. In the 2nd and 3rd grade (and later the 1st grade as well), teachers were trained to assess the children and to determine what texts (decodable books, leveled books, etc) children could read. By registering reading entry levels and books that children needed to read at home, they were able to observe and register the progress of students.



Figure 17 Images of common and locally relevant words were included so that the teacher/facilitator can demonstrate words that use that specific letter. The “Other letters or syllables” side includes other common letters and combinations. Once students have mastered A-Z, it is important to begin learning these combinations and their corresponding sounds.



In regard to all material used in the RRP, modifications were made in coordination with a group of specialists from UP, UEM and INDE whenever needed or deemed more practical. An example of this would be the inclusion of syllables into the scope and sequence after discussions with MINEDH and their interest in having that included. Another, more pragmatic example, has been the change of the letter banner into the letter

chart, which is a more practical format and easier to use in non-conventional classrooms or when classes are given under the tree, as is the case in numerous project schools.

Simple and effective teaching and learning aids is a key element in a successful reading program. There has been a lot of interest in the development and use of the books and training material developed in USAID|ApaL. The project has been able to share decodable books, levelled books, as well as grade I material with other NGOs and MINEDH partners in order to reach even more children (and adults) (see Annex F for more on work with partners).

4.2.5- Finalization of School Management Training and Coaching Model & Materials

The full articulation and implementation of the school management model was a primary challenge during FY14 (Years 2 & 3) for the program. While unforeseen personnel shifts hampered this process, WEI quickly sought solutions and completed the components final deliverables.

The USAID|ApaL in-country team was supported by WEI HQ staff throughout the process to develop the School Director Training and Coaching Framework (SDTC). This document was accompanied by a School Director Cluster-Based Coaching Model and a Facilitator's Guide for the School Director Training Program. Thereafter, a Guide to School Management Tools and guidance on facilitation of INSET sessions for ZIP Coordinators were developed. Revisions of these documents were completed throughout Q2 and Q3 of FY14 prior to final approvals from USAID.

The USAID|ApaL SDTC model works to improve the basic operational capacity of schools by strengthening both management and leadership capabilities of SDs. As concluded by the external impact evaluator, the full USAID|ApaL treatment including both the RRP & the SDTC program significantly improved reading outcomes in the target schools (see Annexes I - L for detailed conclusions and accompanying descriptions of the interventions) This approach entails: (1) re-framing school management and school-level functions to focus on basic professional standards of accountability; and (2) implementing training, coaching, and continuing learning, which combines management and leadership skills to focus on improving performance of school-level personnel.

The diagram below presents the overall focus and primary themes of the SDTC Framework. These themes guide all SD training and coaching activities.

In further articulating the SDTC model and working to increase quantity of instruction in schools USAID|ApaL developed the 5 USAID|ApaL school management routines. These are 1) efficient school assembly; 2) maintaining a regular school bell schedule; 3) management routines for students of absent teachers; 4) TLA usage routines; and 5) use of school management tools (SMTs, which are outlined below). Additional tools include weekly and monthly summaries, TLA inventory, and TLA usage register. These routines are

incorporated into all SD trainings and reinforced through SD INSET sessions throughout the year. These routines were introduced to SDs in trainings and reinforced through INSET sessions.

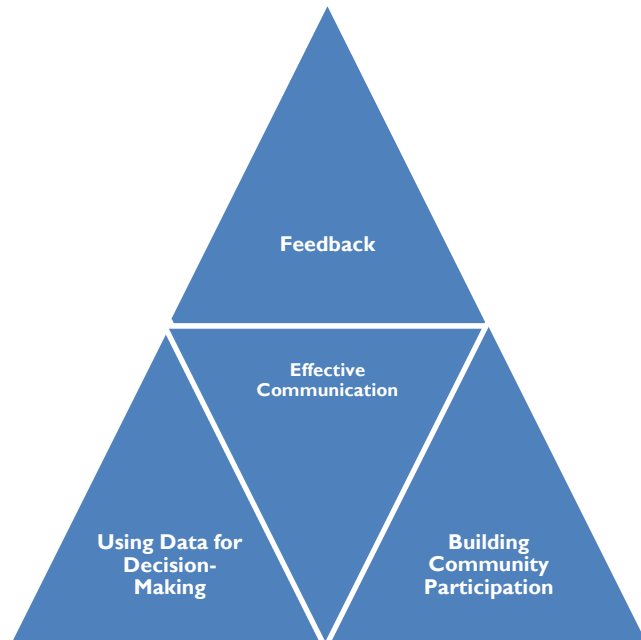


Figure 18 Key foundational principles for ApaL's School Management component.

What are the 5 School Management Routines promoted by USAID|ApaL?

1. Daily assembly of students...



2. Use of school bell to mark start of lessons...



3. Strategies for dealing with absenteeism...



4. Register & promote daily use of TLAs...



5. Use SMTs...



The project conducted annual technical revisions of all frameworks and materials used for training and materials used by SDs in the schools. Based on challenges observed and on feedback from School Directors, MINEDH personnel, and USAID|ApaL staff, significant improvements had been made over several years. One of the most crucial resources developed under the School Management component are the aforementioned SMTs, or School Management Tools. These tools have played, and will continue to play, a large role in improving data use and accountability where the program intervened. A description of each of the tools is outlined below:

- **Teacher Attendance and Punctuality Register:** This is filled out every day at the end of each shift and shows the attendance and punctuality for each teacher. It is used as a tool for giving feedback to teachers based on data evidence. These registers are printed in a large format so that they can be placed on a wall and are visible to anyone who passes. This will reinforce, through social pressure, the importance of attendance and punctuality.

- **Monthly School Register for Improved Reading and School Management:** School Directors will use data from the Teacher Attendance and Punctuality Registers, as well as information provided by the Reading Coach to complete this register on a monthly basis. This register tracks information on the implementation of key reading and management activities in the school for each 1st, 2nd, and 3rd grade teacher. Completing this form requires that SDs and Reading Coaches jointly track the progress of teachers on a regular basis. This allowed SDs to be more involved in the monitoring and supervision of the Reading Reinforcement Program.

- **Monthly Report for Improved Reading and School Management:** At the end of each month, SDs worked with the Reading Coach to

review the Monthly Register for Reading and School Management Improvement and compile a simple monthly summary report. This report was sent to SDEJT and USAID|ApaL staff using the smartphone provided by the program. One copy was also submitted to the ZIP Coordinator. The report includes indicators on teacher attendance, punctuality, participation in INSET, use of the 'livro de turma' by teachers to track student attendance, provision of coaching by Reading Coaches,

and use of continuous assessments by teachers. This tool allows SDEJT and ZIP Coordinators to get information on a regular basis and compare data reported with the ones collected during the monthly school support visits and Rapid School Assessments. It also allows them to identify areas of improvement in schools; to identify factors that limit performance (e.g. absenteeism) and their magnitude; to create a dialogue about these challenges in order to generate solutions; and lastly, to track progress in eliminating these challenges in order to improve performance. It provides an opportunity for directors to set monthly targets in areas relating to quantity and quality of instruction. The progress towards these targets were shared with district education staff in order to create a dialogue around supporting improvements for better school management and ultimately improved learning for students.

- **Teaching and Learning Materials Inventory:** This is a simple form for School Directors to register materials provided to the school by *ApaL*. The inventory should be updated on a regular basis to ensure that materials are properly maintained.
- **Teaching and Learning Materials Management Register:** This register is used by teachers whenever they make use of teaching and learning materials. By verifying the quantity returned each time, school directors can ensure that books do not go missing. This register can also be used by directors to quickly see how often teachers are using the materials they have. In case teachers are not using TLAs on a daily basis, they can then also give feedback.
- **INSET Attendance Register for School Directors:** School Directors must regularly monitor INSET attendance to ensure that teachers properly take advantage of this professional development opportunity. SDs should immediately follow up on teachers who were not present at a given INSET.
- **Decodable Book Register for Students Reading at Home:** This register is used by teachers whenever they give decodable books to the students for reading at home.
- **ZIP Coordinator Coaching Register:** This form is used by ZIP Coordinators during coaching visits to School Directors in their ZIP. It provides a summary of the coaching session and can serve as a guide for carrying out the coaching visit. Between SD INSET sessions, ZIP Coordinators are supported by the project to carry out monthly visits to each school in the ZIP through one-on-one peer coaching sessions. During the coaching visit, the ZIP Coordinator will support SDs of his/her ZIP to improve performance in reading and school management. When possible, the ZIP Coordinator should meet with all school staff to give feedback on any performance issues noted in the rapid assessments or school management tools.

4.2.6 - Development of the Institutional Capacity Building Plan

During Year 1, the ICP was drafted based on results of an Institutional Gap Analysis. This process faced a number of challenges, which limited the strength of the conclusions. As a result, at the start of Year 2, the ICP was still in development. During Q2 and Q3 of FY14, USAID|*ApaL* completed several revisions to the document and received significant feedback from USAID. On April 26th, 2014 the ICP and accompanying Rapid Organizational Assessment instruments (discussed below) received final approval. Following this, all institutional capacity building activities were adjusted to conform with the revised and approved ICP.

The approved ICP outlined the scope and plan for institutional capacity building activities under USAID|ApaL. The objective of project capacity building activities was to prepare Local Education Institutions (LEIs) to support and eventually take on direct implementation of USAID|ApaL activities that have been proven effective in improving the reading skills of 1st, 2nd, and 3rd grade students in Mozambique. The approved ICP outlines:

- The relevant LEIs to take on specific components of USAID|ApaL implementation, namely Direcção Provincial de Educação e Cultura (DPEC), Serviço Distrital de Educação, Juventude e Tecnologia (SDEJT), and Institutos de Formação de Professores (IFPs);
- A process for developing the technical and organizational capacity and increasing the engagement of these institutions; and,
- An assessment framework for evaluating the capacity of these institutions to implement program activities.

The overall USAID|ApaL capacity building approach is founded on a cycle of learning-by-doing, direct training, and assessment.

Learning-by-Doing: From the start of the 2014 school year, LEI staff have been integrated into all program activities as participants and as co-implementers. This includes RRP and SDTC trainings, INSET supervision, conducting rapid assessments in schools and presentation of assessment data in districts, and training and implementation of EGRA/SMA data collection. The goal of this integration was to build the technical and organizational knowledge of LEIs with regard to program interventions and to ensure sustainability to conduct activities.

Direct Training: Direct trainings cover core technical areas of the RRP and the SDTC Program, training for conducting rapid assessments, EGRA/SMA Training of Trainers (ToT) and supervisor training, and training focused on organizational capacities needed to implement INSET (i.e. planning, financial management, data management, and reporting).



Figure 19 USAID|ApaL Institutional Capacity Building team participates in a quarterly district PMG meeting in Murrupula.

Assessment: USAID|ApaL conducted additional regularly capacity assessments to monitor progress in increasing LEI management responsibility for implementation of program activities. The assessment strategy consists of three main approaches.

- **Technical Capacity Assessments** have been developed to allow program technical experts to assess the ability of DPEDH, SDEJT, and IFP staff to implement components of the program.
- **Rapid Organizational Assessments (ROA)** have been developed to assess aspects of organizational support within LEIs required for implementation of specific program components. This stage of capacity development was focused at the district level with SDEJT and the ROA was limited in scope to the organizational capacities required for implementation of USAID|ApaL activities at the district level (e.g. INSET and rapid assessment).

- **EGRA/SMA:** EGRA scores continued to be the ultimate indicator of capacity building efforts throughout implementation. Along with outcome-level indicators of quantity and quality of instruction coming from the SMA and Rapid Assessment instruments, these data provided quantitative insight on the quality of program implementation led by the LEIs.
-

How does USAID|ApaL engage Local Education Institutions (LEIs) throughout activities?

Training	<ul style="list-style-type: none"> • Instituto Formação Professores • Pedagogical University • Expert Reading Coaches • ZIP (Regional)
Regular Coaching & Analysis	<ul style="list-style-type: none"> • District Education Office (SDEJT) • Provincial Education Office (DPEDH) • Ministry of Education (MINEDH)
Monitoring and Evaluation (RSA + EGRA)	<ul style="list-style-type: none"> • SDEJT • DPEDH • MINEDH
Materials Development	<ul style="list-style-type: none"> • MINEDH • INDE • Local experts from universities

4.2.7 - Rapid School Assessment (RSA)

This instrument is a condensed version of the EGRA/SMA instrument, facilitates data collection, and has even been adopted in part by the central Ministry of Education and Human Development as it aims to improve its own supervision policies. It provides important information for monitoring the quality of the reading program. Based on these data, SDJECT, DPEDH, and the reading team visited INSETs to offer additional technical support. Data collected from the Rapid Assessment Tool were collected using Smartphones.

USAID|ApaL Reading, School Management, Institutional Capacity Building, and M&E teams worked together to develop the Rapid School Assessment protocol. As previously noted, as a condensed version of the EGRA/SMA instrument, this practical tool facilitates data collection on the following key reading and school management indicators:

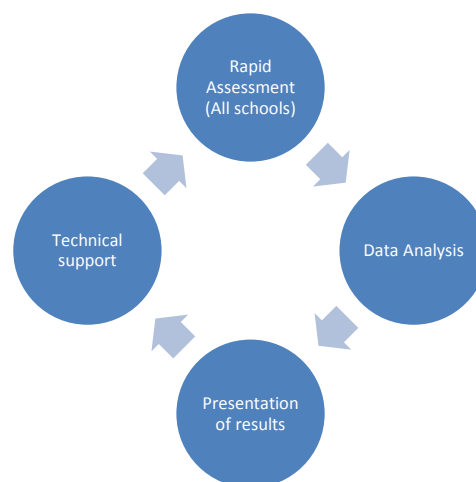


Figure 20 A simple cycle of churning out fast, reliable, and most importantly up-to-date data to empower decision-makers with the right information

1. Reading Indicators

- a. % of teachers receiving coaching visits in the last month;
- b. % of teachers observed to have implemented the written assessment in the last month
- c. Average scores on written assessment (if implemented);
- d. Fluency assessments in 2nd and 3rd grade;
 - i. Letter reading (2nd grade) measured in letters per minute;
 - ii. Word reading (3rd grade) measured in words per minute;
- e. Whether teachers were observed using TLAs (Alphabet Chart, Key Word Cards, Read Aloud Books, Decodable Books, Letter/word charts)

2. School Management Indicators

- a. Whether SD was present and if present time of arrival at school
- b. Minutes late for start time of shift
- c. SD use of School Management Tools (SMTs)
 - i. Teacher Attendance Register (include INSET attendance)
 - ii. Teacher Arrival Register
 - iii. Student Attendance Register
 - iv. Monthly Teacher Coaching Register
- d. Teacher attendance rate on day of visit
- e. Student attendance rate (in randomly selected classes) on day of visit
- f. Management of TLAs
 - i. Identification of safe and accessible storage site
 - ii. Existence of materials inventory
 - iii. Existence of materials usage register
 - iv. Existence of evidence of students checking out books to read at home

The Rapid School Assessment (RSA) is designed such that one person can collect all the data in a school in less than two hours. In this way, one person can cover two to three schools per day, and a team of six can easily cover nearly 20 schools. Training on the RSA protocol was conducted in 1.5 days and included a practical field exercise to ensure clear understanding of the protocol.



Figure 21 SDEJT technical officer conducting Rapid School Assessment in Zambézia.

The RSA protocol is similar to the EGRA/SMA protocol in that teams arrive in schools prior to the start of the first shift to observe the start of the day. Upon arrival at the school one 2nd grade and one 3rd grade class are randomly selected using field appropriate procedures. In order to keep the time required for complete data collection to a minimum, if schools only have 2nd grade or 3rd grade in session during the visit, two classes of that grade are selected. In each classroom, a total of five students are randomly selected to participate in the fluency assessments. Fluency assessments were developed by the USAID|Apal Senior Reading Expert and consist of a simple one-minute, timed oral assessment of letter recognition for 2nd grade students and word recognition for 3rd grade students.

During USAID|Apal, data were collected using a smartphone equipped with the Magpi data collection application making the process of data collection, data entry, data analysis, and the presentation of results extremely efficient.



Figure 22 DPEDH staff in Zambézia conducting fluency assessment during the Rapid School Assessment.



Figure 23 Implementation of the revised SMA instrument.

Technical officers from Local Education Institutions (SDEJT and DPEDH) were integrated into all aspects of the Rapid School Assessment process in order to support program capacity building objectives. This included planning, data collection, presentation of results, and follow-up in schools based on data. Data collection was implemented using smartphones running the Magpi mobile data collection application. Once data were entered using the phone, they were uploaded to a web-based database which can be immediately downloaded and analyzed. One of the goals of capacity building efforts was to support SDEJT staff to eventually manage this online database.

For this, they need to learn how to conduct the data analysis, report and present results, and make data available to technical officers to inform the pedagogical and management support they provide to schools. In the years after the RSA protocol was established, SDEJT, DPEDH, and even members from MINEDH conducted the data analysis alongside Apal's technical team and prepared the results to be disseminated in their own districts/provinces.

4.2.8 - Development & Revision of the School Management Assessment (SMA) Tool

A revised SMA instrument was developed in collaboration with USAID|ApaL technical experts in reading, school management, and M&E, with additional consultation with WEI/Boston M&E senior staff (Dr. Haiyan Hua). The revised SMA consists of two main components (Classroom Observation and School Management Interview) and integrated a number of questions into the existing EGRA teacher questionnaire. The Classroom Observation instrument is meant to be a set of low-inference, observable teaching practices which, if implemented regularly by teachers, is expected to lead to improvements in student reading skills. The School Management Interview consists of (in addition to school director and pedagogical director background information) a set of questions looking for documentary evidence at the school that is indicative of a wide range of school management practices. After initial feedback from the USAID|ApaL IE (IBTCI), the instrument was refined and then piloted in 8 schools (4 school in Quelimane City and 4 schools in Nicoadala) by USAID|ApaL technical staff. During the pilot, USAID|ApaL staff conducted joint classroom observations and the agreement was found to be greater than 80% between observers. Based on feedback from the pilot, the instrument was further refined and finalized.

5 - Key Highlights

5.1 - Maputo Project Launch



The USAID|ApaL national project launch was held in Maputo on July 10, 2013. The launch was well attended by many donors, partners, stakeholders, and press. The event was opened by the U.S. Ambassador to Mozambique at the time, Douglas Griffiths, and the then Minister of Education, Augusto Jone Luis.

Other speakers from the USAID|ApaL project and USAID included: Jim Dobson (USAID/Mozambique Education Team

Figure 25 (left) US Ambassador Douglas Griffiths and Minister of Education Augusto Jone answer questions during a press conference following the project launch on July 10, 2013.
Photo credit: USAID/Mozambique



Leader and ApaL COR), Shirley Burchfield (WEI Vice President), Corrie Blankenbeckler (ApaL Acting COP), Suely Vasconcelos (ApaL Reading Technical Officer, Zambezia), and Zaida Cabral (Senior Institutional Capacity Building Specialist). The event was closed by Manuel Rego, from DIPLAC - MINEDH.

Figure 24 (left) All five MINEDH national directors working closely with the project were in attendance: Manuel Rego – DIPLAC; Antuia Soverano – DINEP; Albertina Moreno – INDE; Feliciano Mahalambe – INFP; and Abel Assis – DNQ. At right: (left to right)
Photo credit: USAID/Mozambique

5.2 - Nampula / Zambézia Provincial Project Launches

While USAID|Apal held the major national project launch in Maputo, the program additionally held similar activities in Year 2 in the target provinces. The primary objective of these launches was to introduce the project in a general way at the provincial level and reaffirm the partnership between USAID and MINEDH. Representatives of the central Ministry of Education, representatives of the USAID education office, USAID, and USG partners working in Nampula, local education instructions, and school and school cluster representatives were invited to attend in both provinces.

The provincial launch in Nampula was held on October 25, 2013. Attendees included the Provincial Governor of Nampula, Cidália Chauque; Murrupula Administration; and the City of Nampula. National-level representatives included the Director of Basic Education, Antuia Soverano; and the Director of Planning and Statistics, Manuel Rego. Representatives of USAID; the Provincial Director of DPEDH; heads of Department of Planning and Education; heads of Division of Basic Education and Teacher Training; and the Directors of SDEJT Nampula, Monapo, and Murrupula were also in attendance, as were project ZIP Coordinators, IFP trainers, and representatives of several education organizations located in Nampula.

In Zambézia province the launch was held on November 1, 2013. Provincial-level attendees included the Provincial Director of Education, Lemos Filipe Aranica; and the President of the Municipal Council of Quelimane, Manuel de Araujo. National MINEDH attendees included Dr. Manuel Rego, Director of Planning and Coordination and Antuia Soverano, Director of Primary Education (representing the Minister of Education). USAID was represented by Dr. Jim Dobson, Education Team Leader and USAID|Apal COR.

5.3 - 2013 Project Relocation

In accordance with the communication from the Contracting Officer (CO) dated October 26, 2013 (Ref.: AAO/I4/012), WEI submitted a proposal on November 8, 2013 for relocating the USAID|Apal project headquarters office to Nampula. This proposal was made in response to USAID recommendations that WEI relocate key senior technical personnel (Senior Reading Expert, Senior School Management Expert, and Institutional Capacity Building Expert), as well as the Chief of Party (COP) to the contract place of performance. Following negotiations with USAID, provisional approval to the budget modification was given on November 20, 2013. During the period of November 20 – December 31, 2013, USAID|Apal closed operations in Maputo and relocated to new premises in Nampula. In addition, field office financial and administrative processes were reviewed and changed as necessary to accommodate the relocation of headquarters operations.

5.4 - Impact Evaluation Results Presentation

USAID|ApaL participated in the preparation and presentation of the IE results and USAID|ApaL program overview during the Symposium on Literacy and Development organized by the ApaL IE on December 12th in Maputo. Graca Machel – who was also Mozambique’s first Minister of Education - was the keynote speaker at the event, which also included key contributions from US Ambassador Douglas Griffiths, the director for INDE, and other non-profit, education, and business leaders.



Figure 26 Literacy Symposium in Maputo. Graca Machel and Ambassador Griffiths reviewing USAID|ApaL materials (left). Magda Rupp (ApaL IE) and David Noyes (USAID|ApaL COP) answering questions from participants (right).

5.5 - 2016 Option Year

5.5.1 - Scaled-Up Implementation

WEI’s proposed 2016 option year expanded the USAID|ApaL program into eight new districts, while maintaining limited activities in the original six target districts. Major activities, in addition to the materials revision and development, included:

- Hiring and training District Officers and Logistics Assistants to support expanded implementation’
- Program launch and planning meetings in all 8 new districts and 6 old districts. This included the participation of district government (administrator, permanent secretary, local leaders), SDEJT (District Director, technical officers from basic education/REG, administration and planning/RAP, and human resources/RH), and ApaL staff (including District Officers).
- District-level trainings to maintain quality at scale (identification of space for training, food service



Figure 27 Decentralized USAID|ApaL district training in the 2015 school year.

providers, materials subcontracts, M-PESA agent identification to facilitate more efficient and safer wide-scale money transfers, etc.)

5.5.2 – Grade 1 RRP

WEI proposed, during the course of the project as part of the scale-up, to also include grade 1 in the schools where the RRP was implemented. The rationale was that language and reading development does not start in grade 2, but much sooner and therefore an implementation model was written that aimed to tackle the hurdle in grade 1; children who would come into schools with no, or very limited Portuguese language skills. USAID|ApaL developed a grade 1 program that initially focused on building vocabulary in local languages and in Portuguese. This took place in a period of 12 weeks at the start of the school year. The Grade 1 RRP included a full sequence of daily scripted lesson plans for the 45-minute Portuguese lesson period, simple decodable books, conversation posters (as seen in Figure 28), alphabet chart and a set of 7 local language (LI) Read Aloud stories.

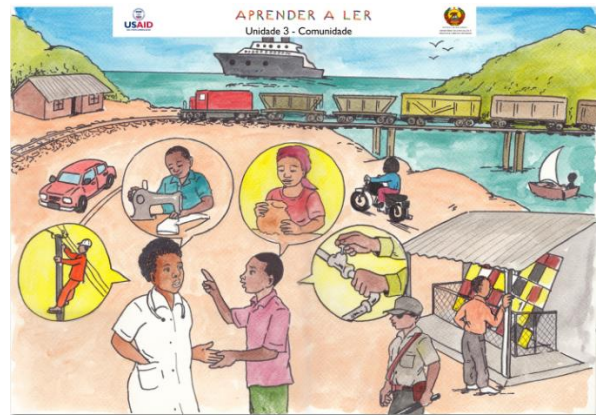
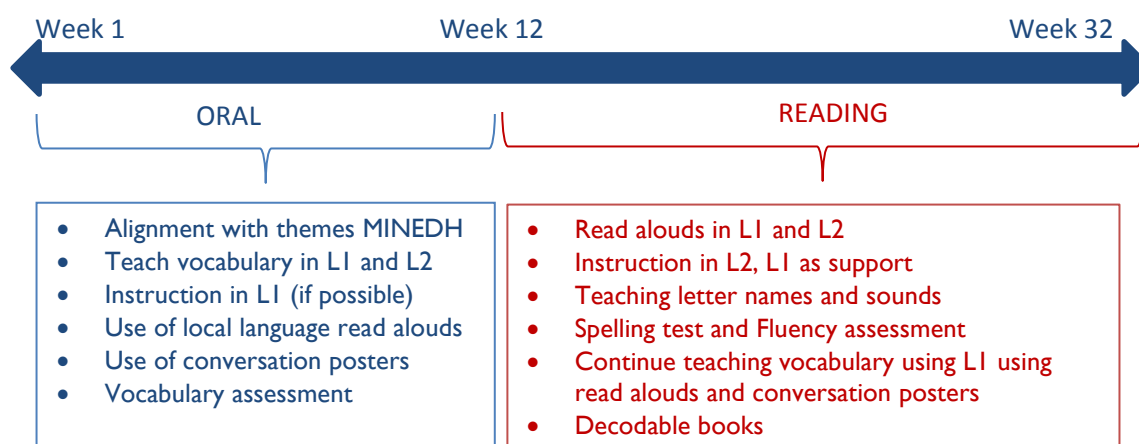


Figure 28 1 of 4 Conversation Posters developed for the Grade 1 RRP in 2016.

Based on information from SDEJT, DPEDH, and research from INDE and SIL, the project defined three languages within the districts where it worked in 2016. During the RSA visits, additional information was assembled about LI language proficiency from the teachers in those districts to assess where extra training during the INSETs - on use of local languages - was needed.

The Grade 1 pedagogy had a focus on the following aspects:

1. **Introductory phonological awareness:** children learn to identify and produce sounds of letters and syllables in their LI and in Portuguese.
2. **Building oral vocabulary in LI and Portuguese:** learning a target of 8 *unfamiliar* words per week. This was to be in combination with vocabulary taught by means of transition from LI to L2. Teaching a defined number of Portuguese vocabulary words in Grade 1 to facilitate comprehension of texts in Grade 2.
3. **Effective teaching and learning aids.** Students learned to read small words and sentences following the RRP model, as used in grade 2. The project utilized teaching routines and materials, such as the simple decodable books, to practice decoding.



1. Introductory phonological awareness

During the first twelve weeks, teachers teach phonological awareness using L1. There is compelling evidence that phonological awareness contributes to reading fluency and comprehension. Following the model of cross language transfer in which phonological awareness in L1 facilitates learning to read in L2², the project uses L1 vocabulary to practice segmenting and blending of phonemes. It is important to include phonological awareness with sounds strongly related to the Portuguese phonemes and syllables that will be taught at a later stage. This supports phonological awareness in L2 during weeks 13-32 of the program.

A second reason to include this practice was to provide teachers with a teaching routine using the “I do, we do, you do”- strategy that they can apply as well in the remainder of the year and in grade 2 and 3. A simple and consistent lesson structure is crucial to build teaching routines.

2. Building oral vocabulary in L1 and Portuguese

During the first 12 weeks of the GI RRP, vocabulary is taught in the local language and aims to transition meaning and use of the taught vocabulary from L1 to Portuguese. Research shows it is beneficial for children to learn in their own language first, after which they can apply the concept in a second language as well.³ This is especially helpful in the initial stages of learning a second language. After the initial period the focus shifts to applying the taught L2 vocabulary in an L2 context.

In implementing the program describe above, it is important to script the lessons tightly for teachers. A modified routine for teaching vocabulary based on Marzano’s⁴ model is included in each lesson.

² Cross-linguistic transfer in literacy development, Durgunoglu, 2002

³ Instructed second language vocabulary learning, Schmitt, 2008

⁴ ‘A six step process for teaching new terms, Marzano, 2004

Step	Objective	Routine
1	Introduction	Explanation using visual of the object or verb on the conversation poster.
2	Definition	Child friendly definition of the word in LI.
3	Example	Teacher uses word in context, students repeat.
4	Verification	Students construct other examples of use of the taught vocabulary.

After following these steps in LI, the teacher transitions to Portuguese, giving students the Portuguese equivalent of the word. After this, the teacher will practice pronunciation and verify understanding using total physical response, enabling students to acquire and practice with vocabulary by listening and carrying out spoken commands.

Language of instruction.

In grade 1, teachers used the local language as a means of instruction throughout the year. In the first period they solely used the local language to facilitate comprehension.

After 12 weeks, a vocabulary assessment was done by the teachers to assess whether students were able to understand basic Portuguese vocabulary that was being used in the remainder of the lessons throughout the year. Based on these outcomes, and on continuous verification of students' comprehension during the lessons, the teacher needed to determine the transition from LI to L2 as the language of instruction. Teachers used simple techniques to assess whether students understood the language of instruction and when to continue to use LI when needed.

Due to the system of teacher allocation and training in Mozambique, the project encountered teachers who did not speak the local language well enough to use it as the language of instruction. For this reason, the lesson plans were written in Portuguese and only the LI vocabulary was in the local language orthography. These teachers still needed to teach LI vocabulary during the lessons and the project included INSET training to use the correct teaching strategy and pronunciation. For this purpose, USAID|ApaL has developed audio files that can be used during coaching and INSET training.

3. Effective teaching and learning aids

USAID|ApaL had developed a set of TLAs to be used for the 'Oralidade' (oral) period and 'Reading' period. For the oralidade period, four thematic conversation posters were developed that include illustrations of vocabulary to be taught. Such posters can be easily adapted to support MINEDH in its ambition to introduce LI education, and are currently being used by partners outside of the project as well. Specialists from SDEJT and DPEDH involved in the INDE bilingual pilot project have supported the creation of a list of Portuguese and LI words, which will be incorporated into the lesson plan sequence. These themes and list of words are aligned with the MINEDH grade 1 vocabulary.

In addition to the four thematic conversation posters, the team of specialists identified seven read aloud books that are aligned with the theme and vocabulary taught. These read alouds have been translated into the three chosen local languages and integrated into the lesson plans. Throughout the year,

teachers used the bilingual read alouds as well as the Portuguese equivalent. If teachers were not able to read out the stories, they could make use of the provided radio on which the story and questions are recorded to be used during teaching. An overview of material for this 12 week program is shown in the table.

Weeks	Theme – Conversation poster	Local Language Book Titles	Pages
1-3	Escola	1. Ema vai escola 2. O futebol	24 24
4-7	Familia	1. Ei sei fazer isso 2. A tartaruga que queria voar	24 24
8-10	Comunidade	1. O que semeamos na machamba 2. Concurso de dança	24 24
11-12	Ambiente	1. As vozes dos animais	24

After the Oralidade period, teachers started with teaching Portuguese letter names and sounds, after which they continued teaching simple decoding skills using the format and material of the Grade 2 program. During this period, they regularly continued to use the conversation posters and bilingual readers to teach additional vocabulary in L2.

The Grade 1 RRP has shown impact with children in grade 1 being able to read twice as many letters as children in control schools from the target *ApaL* districts. Valuable lessons were learned in regard to linguistic aspects of the local languages and its variants, as well as the challenges related to the time needed to transfer from L1 to L2. These lessons, and all material developed in L1, will be taken into account for future bilingual interventions, including the follow-on USAID program being introduced in the same provinces of Nampula and Zambézia.

5.6 - Community Engagement

5.6.1 - Dia de Leitura



Figure 29 Communities learn about the different interventions used by the USAID|*ApaL* program during the Dia de Leitura event in Namacura in Zambézia province.

Being one of the bigger events of the project, Dia de Leitura (Day of Reading) is a day in which reading is celebrated. A day in which schools invite communities to learn about USAID|*ApaL*, about the importance of reading, and their role in helping children to learn to read.

In the weeks leading up to Dia de Leitura, teachers and Reading Coaches were trained to set up classroom-based reading competitions.

The winners of these reading competitions were to participate in the school-based competition during Dia de Leitura. The participants and winners were given prizes by a jury made up of members of the school council, local community leaders and school personnel. Small packages of decodable books, t-shirts, and other prizes were distributed to all schools to be given to the best readers. Although the reading competition is arguably the part that creates the best atmosphere towards appreciation of good readers, other parts of the events often included:



Figure 30 A proud father with a proud son who participated in the reading competition during Dia de Leitura.

- Explanation of the *ApaL* intervention by the Reading Coach. The Reading Coach typically demonstrated the material available during teaching and simulated a flashcard activity. He/she also explained how materials are used in the classroom and that the decodable books are to be taken home by the students to practice daily as homework activity. Parents, even the ones who are not literate, can help the students by reminding them about this and asking them to read out some sentences, words, or letters.
- Motivation by the School Director to reinforce the use of the books by parents and children at home. Through a school-based library system, organized and managed by the school, the children could borrow any of the levelled readers, decodable books, or read alouds to use at home. Many schools reported that students from grade 4 to 7 were especially interested and were also invited to make use of the system. School Directors explained how parents should ensure their students go to school on time and how they should verify if the children have done their homework.
- A demonstration lesson in grades 1,2, and 3 by the teachers of the school for students and parents. It is uncommon in Mozambique for parents to take part in an actual lesson and therefore this part of the day created a special ambience in which parents were learning as if

they were students, while seeing also that their own children were interacting in the lesson with the material from USAID|*ApaL*. They witnessed first-hand how the teacher used effective teaching routines such as 'I do, we do, you do', decoding activities with the letter board, and other routines included in the 7 step lessons.

- Lastly, many schools invited local community authorities, religious leaders, or other influential people to participate. They often reinforced the message from the school about the importance of reading.

In each district, the project, with help from SDEJT and DPEDH, chose one school with exceptional results found through the RSA to organize a district event. This district event received some support in organizing the event from the project through the appropriate district official. This included assistance in organizing a podium for the children and others to present their activities. Some assistance was given by inviting district officials to the central event as well as local media to cover the activities.

Throughout the provinces, trainers and technical staff were sent out to participate in as many events as possible. More than 300 people from UP, IFP, SDEJT, DPEDH, Reading specialists, and *ApaL* staff visited events and represented the project in leading and monitoring the activities. These visits are highly motivational for the schools in which these participate since many of these schools are remote and hardly receive any official visits from outside of the project.

5.6.2 - Radio Broadcasts

USAID|ApaL, in addition to teacher training interventions and working with school directors, also introduced radio programs with different themes /stories called "Let's Read." The initiative began in February 2016 with the aim to involve and encourage the community and parents to support their children in completing their homework and maximizing the pleasure of reading through the radio. These programs were pre-recorded and transmitted by different community radio stations in the districts covered by the project, including Rádio Mozambique in Nampula and Zambézia provinces.

The programs had the following objectives;

- Teach students vocabulary in Portuguese;
- Motivate the parents to improve their students' regular attendance in the school;
- Encourage students to take reading books available in schools to read at home.

1. Transmission of Radio Programs

From February to September there were sixty total 20-minute transmissions of programs.

2. Production and broadcast local programs

After observing the need to engage the community, students, teachers, parents, and the school directors in radio programs, ApaL introduced a new program profile in June. The action plan consisted of the production of eight radio programs with local content, produced on the basis of the visits of some target schools in ApaL districts. Of the eight, half were broadcast in Portuguese and half in the local language.

To maximize the quality of these programs, the radio reporter interviewed students, teachers, parents, school directors and community members, who spoke about the impact of ApaL activities in improving reading fluency, school management of the students, as well as community involvement in day-to-day school. Following this development, an addendum to the contract was signed with the radio stations. The agreement advocated production of ten programs: five in Portuguese; and an equal number in local language lasting twenty minutes each.

Based on the successes achieved in the production experience at the district level, the project moved forward with one more addition to the programs with local content. The first programs were produced based on visits to schools where they were interviewed students, teachers, school director, parents, and the community members. In this second addendum, there were twenty programs created lasting twenty minutes each: 10 being in Portuguese; and the others in the local language.

In general, as a result of contracts signed between World Education, Inc. with eleven broadcasting stations in Nampula and Zambézia provinces, there were 28 radio programs produced and transmitted. Of these, fourteen were in Portuguese and an equal number in the local language. In order to ensure their preservation, the radio programs were collected and recorded on a CD which is now part of the historical record of the project. Note that some CDs were shared with partners such as IREX-



Figure 31 One of the project posters distributed in Zambézia to promote participation in ApaL radio broadcasts.

Mozambique Media Strengthening Program, CAICC-Center of Support to the Information and Community Communication for further outreach and sustainability.

5.6.3 - Reading Clubs

NAMPULA		
Districts	Students	Volunteers
Ribáuè	9598	384
Malema	4664	172
Mossuril	3495	133
Mecuburi	4053	139
Nampula	704	23
Monapo	1339	55
Murupula	785	40
TOTAL NPL	24,638	946

The reading club intervention had been a success with its introduction in 2016. After initial doubts, particularly from School Directors on whether schools and communities would be able to find volunteers, it turned out that almost all schools were able to find at least 2 volunteers committed to organize reading club activities on a weekly basis. Many schools did find more volunteers, based on the number of students wanting to participate. The guideline of USAID|ApaL was to find 2 volunteers per group of 25 students.

ZAMBÉZIA		
Districts	Students	Volunteers
Ile	2591	94
Nicoadala	443	26
Quelimane	525	30
Mocuba	525	45
Namacura	2105	99
Gurué	3289	136
Lugela	3341	118
TOTAL ZBZ	12,819	548

See Figure 32 for an overview of the number of volunteers and children involved on a weekly basis per district. With a total of almost 38.000 students involved, the project sees reading club activities as very important for any reading intervention. In EGRA results, it was also found that children from 3rd grade who were participating in the reading club had on average a level of fluency that was twice as high as students who did not participate. While there is undoubtedly an influence of self-selection, it can't be denied that the reach and impact of the activity has a lot of potential.

Total NPL/ZBZ:	37,457	1,494
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Figure 32 Participant numbers involved in 2016's Reading Clubs.

Related to this potential was the attention of the Carr foundation involved in the [National Park of Gorongosa](http://www.gorongosa.org/our-story/human-development)⁵. As part of their community interventions, they were interested to learn more about the reading material, training structure, and reading club activities in the field.

After an initial meeting in Maputo between ApaL staff and the director of Human Development of the Gorongosa Park, a visit was organized on November 18 in which the Senior Reading Advisor and two staff members from the Gorongosa Education team visited a reading club session in Muezia in Nampula district. Afterwards, the project offered reading materials and relevant research on reading interventions in communities.

⁵ <http://www.gorongosa.org/our-story/human-development>

During the last quarter of the academic year, the project distributed t-shirts to all volunteers in the reading club as an acknowledgement for their efforts. Based on the number of students in each reading club, the project was also able to distribute additional kits for books to clubs who had more than 100 students per session. This will allow volunteers to use the material not only during the sessions, but also to allow children to borrow books and read them at home.

5.6.4 - School Councils

Over the course of implementation, regular discussions were held in which the importance of community involvement was stressed. Not an initial focus of USAID|ApaL, it was quickly recognized that more needed to be done with parents, local leaders and others who could influence school attendance and reading results. Besides the already mentioned 'Dia de Leitura' and radio programs, the project started to invite school councils in different activities as well. Typically a body that focused more on practical issues such as building classrooms and latrines, USAID|ApaL invited the president of the school council into the School Management INSET to discuss other tasks of the council in teacher absenteeism, monitoring the quality of the lessons and to discuss ways of informing parents about school activities and the importance of reading at home and ensuring that children would arrive on time in schools.

The school council had also been involved in community programs such as Dia de Leitura and the aforementioned creation of out of school reading clubs. The school council had been instrumental in finding the volunteers and informing parents about the activity. They have registered the children in their communities to participate regularly, at least once a week.

Many members of the school council have been empowered by providing training to the school council and by explaining to them how they could be involved in the education of their children.

Reading Club Participation Fluency Levels

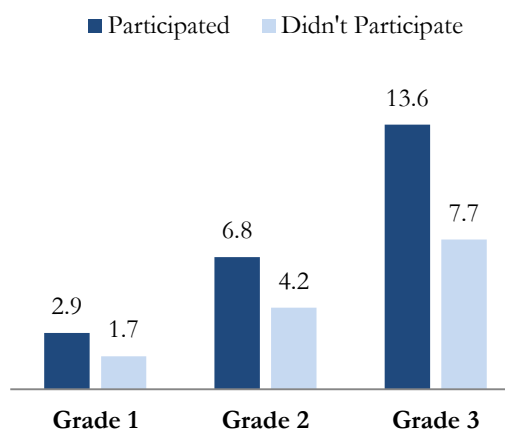


Figure 33 The graph above shows the fluency levels of participants who participated in Reading Clubs vs those who did not participate. It should be noted that there is some influence of self-selection, but the potential of Reading Clubs as an intervention is clear.

5.7 - Fluency Benchmarks

Identifying Top 10% Students CWPM

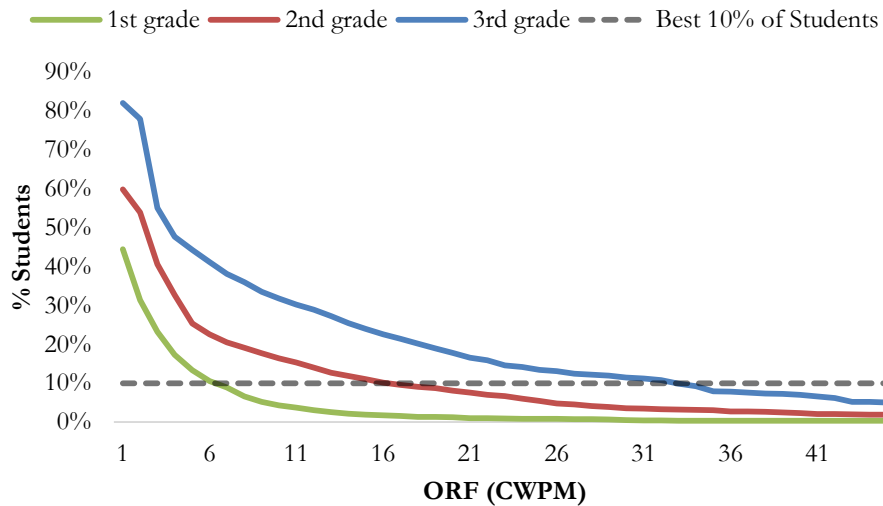


Figure 34 Top 10% of readers used to determine grade level benchmarks.

After multiple presentations to MINEDH and INDE about the high 45 cwpm (correct words per minute) standard held as one of the objectives of USAID|*ApaL*, the question came as to what realistic fluency benchmarks in Mozambique would look like in the early grades. To address this question, the program began a fluency benchmark study in March 2016. Through a working group consisting of representatives from INDE, DNEP, UEM, field experts from schools, and DPEDH, *ApaL* staff aimed to set benchmarks for each grade based on a large-scale assessment in Nampula and Zambezia. While a brief explanation of the findings is found below, a comprehensive description and explanation of the process and findings can be found in Annex D.

In order to set the benchmarks for each grade, the Working Group determined to “ground” their recommendations on the basis of the current situation in each grade (as measured by the large-scale Early Grades Reading Assessment (EGRA, n=13,000). The Working Group used the scores of the top 10 percent at each grade level as the starting point for establishing a grade level benchmark (see Figure 34).

From this data, the Working Group identified the top ten percent as follows:

	Best 10 % Students CWPM	Recommended Benchmark CWPM
Grade 1	6 or greater	10
Grade 2	16 or greater	25
Grade 3	32 or greater	45

The Working Group then discussed targets for annual improvement. Using improvement data based on large-scale assessments of impact from *ApaL* interventions, the Working Group observed that it was possible to propose an improvement arc that rose steeply during the first four years, doubling the

efficiency of the system reflected in the doubling of the percentage of learners at each grade level who were meeting or surpassing the oral reading benchmark for their grade level.

The Working Group proposed the following improvement targets for five years:

Grade	CWPM	Year 1	Year 2	Year 3	Year 4	Year 5
1	10	5%	10%	20%	40%	60%
2	25	5%	10%	20%	40%	60%
3	45	5%	10%	20%	40%	60%

The table above reflects the percentage of learners at the end of each grade level who are meeting or surpassing national benchmarks. The improvement in the percentage of learners meeting or surpassing the benchmark for their grade, shown horizontally, reflects the impact of improved efficiency in the education system. For example, a grade one teacher who implements effective teaching methods for improving oral reading fluency in year one will continue to improve her expertise with increasing impact each year. Other interventions such as revised curricula, new grade leveled texts, improved monitoring and supervision, and the on-boarding of new teachers better prepared to teach reading will also support continued gradual improvement at each grade level.

A very positive sign during the meeting were the comments made by the INDE director, Dr. Ishmael Nheze, that the work presented was a request from INDE and indeed a result from the work done by the whole working group. It is, as explained by the director, the responsibility of INDE to present the recommendations and to take the process further.

5.8 – Use of Technology

The project developed an M-learning framework in 2013 and 2014 that encompasses the interventions done with smartphones, radios, and SMS. As a critical companion to training, coaching and overall school-community support for reading, USAID|ApaL's M-Learning approach used mobile technology to enhance and support training, coaching, data collection, and delivery of audio visual content for teachers, parents, and children.

USAID|ApaL applied technologies using four innovative approaches to improve teacher training, coaching and community involvement and revised the model each year moving forward:

- #1. Mobile data collection (promoting quick turnarounds for viewing results with fresh data)
- #2. Radio programs to improve learning and community involvement
- #3. Smartphones to improve teaching and coaching (including demonstration video clips for teaching aids)
- #4. SMS messages to improve teaching and training (encouraging with best practices and task reminders)

5.8.1 - Mobile Data Collection

One notable part of this approach based on the framework which garnered particularly positive reactions from MINEDH in Mozambique is related to the use of smartphones in monitoring and coaching. Staff members from SDEJT and the IFPs (Teacher Training Institutes) were trained on the use of the smartphones in data collections (#4 mentioned above). Using the Magpi app (data collection platform), digital forms were installed on each phone and staff members used forms to monitor teacher in-service sessions and conduct Rapid School Assessments. The data collected through the forms are

sent to a web-based server from where it can be downloaded to an excel sheet for analysis (more details on this process can be found under the development of the RSA).

This process is fast, simple, and allows the project to react to observed indicators in specific ZIPS (school clusters identified by the Ministry). For example, the project can monitor poor attendance rates during in-services or lower fluency levels by using actual data. During monitoring meetings with School Directors and Ministry officials, findings from the Rapid School Assessments were presented and points for improvement were defined.

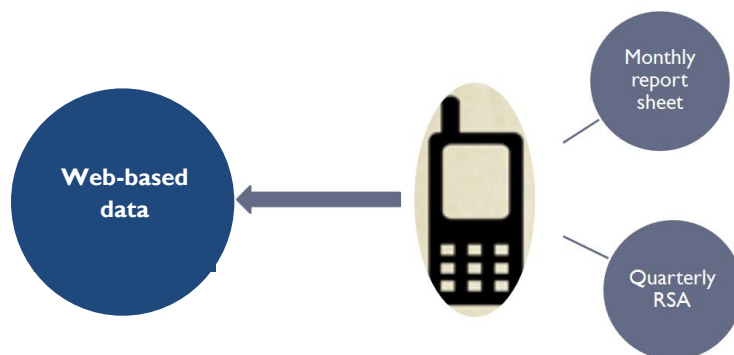


Figure 35 Using the Magpi data collection platform for mobile phones, monthly reporting on INSETs and classroom observations was done quickly. Rapid School Assessments also utilized this method of data collection, as it allowed data to be uploaded at a later time from phones where there was low quality phone reception.

5.8.2 - Radio

Radio programs

As stated above, USAID|Aprender a Ler used various technological ways of increasing skills, knowledge and raising awareness about the importance of reading. One prominent intervention has been the use of radios. Through cooperation with the local NGO CMFD and USAID|Aprender a Ler staff, a set of 15 radio programs were developed to support teaching and learning.

The radio programs had several means of use; primarily they were to be broadcasted by local radio stations to inform the parents and community about reading and their roles and responsibilities to assure their children would attend school and practiced reading at home. The programs later evolved to include local language broadcasts as well as Portuguese.

The programs were developed around the set of read aloud books which were tied to educational themes as defined by MINEDH. Each read aloud book has a central theme around which the story evolves. Within the book, a set of vocabulary words is used. The radio program had as a central activity a read aloud session of the book after which the reader would launch listening comprehension questions. After this there would be games with the

Program	First broadcast
1. Introduction to ApaL	February 27
2. Interest in reading	March 3
3. Importance of reading	March 17
4. Theme -School	April 7
5. Theme- Artists	April 21
6. Theme-Environment	May 5
7. Theme-Professions	May 19
8. Theme- Animals 1	June 9
9. Theme- Animals 2	June 23
10. Theme- Food	July 7
11. Theme- Reading	July 21
12. Theme- Plants	August 4
13. Theme- Dance	August 18
14. Theme- Sports	September 8
15. Theme- Market	September 22

Figure 36 The radio program (15 broadcasts) developed to support teaching and learning.

vocabulary words in which the listeners were stimulated to guess the correct use of the words and to apply the words at home.

Aside from these activities there are other games, interviews with children, people with different professions, role plays and many other fun activities involving the listeners.

Another element that became more important over the course of the project was the use of the books at home. While each school was provided a set of books in year 1, over the years more titles and different readers were added such as decodable books and levelled readers. Children and parents were encouraged to come to school and borrow the books to read at home.

Radios with preloaded content

After development of the radio programs, the project continued to expand the intervention as it was observed that many parents and children were listening to the programs on their local community radios.

However, other communities reported not being able to listen to the programs due to bad reception or simply because they did not have a radio. To facilitate this, the project procured a solar and manual powered radio that could be preloaded with audio. The Lifeline player (seen in Figure 38) has been designed for rural circumstances and has a sturdy casing. The use of this device has been a success, the radios were very popular and proved to be strong enough to last at least until the end of the project.

Radios were preloaded with the 15 radio programs and could be listened to before school hours. The radios were used in reading club sessions as well. When the reading club intervention started, the project sought and found more affordable radios with almost the same specifications for a bigger group of beneficiaries. All reading clubs in all project schools received a radio to use.

INSET training and Local language

Another use of the radio has been in the form of training material for teachers and School Directors. In the INSET, the Lead Trainers were urged to use the radios to practice letter and syllable sounds and to have teachers listen to the aforementioned programs. This has been important since teachers with different local languages needed to practice the correct Portuguese pronunciation, – which could be done with examples of those letters and words on the radio. Each INSET session, the trainer would play the letters of the week ahead and practice them with the teachers.



Figure 37 The Lifeline MP3 and radio combines a radio, media player, and recorder powered by a solar panel and fail-safe winding mechanism. Image and description from Lifeline's website: www.lifelineenergy.org

In the development phase of Grade 1 material, the use of the radio was also perceived as very helpful. Teachers in grade 1 could use the radio which was preloaded with LI material in their lessons as well as in the INSET Training.

Each radio was equipped with local language stories, the same as the grade 1 reading books, and vocabulary that was supposed to be taught in the first 12 weeks of the grade program. These stories and words were recorded with a group of technicians from SDEJT and DPEDH Bilingual Education staff.

Local language programs

In the last phase of the project, when the use of local languages became more important, *ApaL* approached local radio stations with the request to produce programs on reading and the reading club interventions in their communities. Journalists were sent out by those radio stations to create a report in the local language in which they explained the activities but also had children read out on the radio.

5.8.3 - Smartphones

Audiovisual support



Figure 38 USAID|*ApaL*-trained enumerator collecting mobile data during a Rapid School Assessment.

Smartphones have been used since the first phase of the project by preloading them with visual and audio tools to teach the phonics-based approach. Before the letter sounds were loaded on the radios, the project experimented with smartphones with the same purpose. An android application was developed that showed letter cards while playing the correct sound of the letter shown.

Aside from the phonics app, the phones were also distributed with a variety of modelling videos. Examples of these are videos in which a teacher demonstrates the use of the flashcards and decoding activities using the blackboard. The trial, although very motivating, proved to be somewhat difficult to sustain because of the higher costs of the phones in Mozambique. While some smartphones were reported stolen, it should be noted that this was only on rare occasions, as schools signed contracts to maintain the phones and returned them to the project after use.

After the trial period with smartphones, it was decided to continue using the radios for the phonics instruction. The modelling videos as a training method continued to be used in the project in central training moments, using an LCD projector.

M-Pesa

As with all aspects of implementation, USAID|*ApaL* staff was constantly looking for innovative ways to streamline processes and add efficiency to ongoing activities. In this case of making payments for per

diems and training activities, the program engaged in a Public-Private Partnership with mobile communications company Vodacom, who graciously provided USAID|ApaL beneficiaries with phones and SIM cards to get the idea off the ground. Vodacom's mobile payment system, M-Pesa, quickly became incorporated into USAID|ApaL's payment process and greatly reduced the risks associated with cash distributions originating in the capital cities.

Before using the M-Pesa system, USAID|ApaL staff located in each district – District Officers or DOs– were required to come to the capital in the days leading up to the training, request funds from the office, wait in long bank lines for withdrawals, and spend extensive time on the commute back to their districts to distribute payments. The M-Pesa system made this travel unnecessary as District Officers received payment confirmation on their phones and could then withdraw funds from a Vodacom payment agent or bank.

While there were issues with the lack of comprehensive network coverage in some target areas of implementation, ApaL combated this by providing the GPS coordinates of schools to Vodacom and they continued working to increase coverage in target districts.

District Officers and the ZIP Coordinators working with them to distribute training payments gave very positive feedback for M-Pesa and it is considered one of the key operational success stories in the program. DOs and central ApaL staff experienced the advantages of the time saved and the reduction of risk with transporting large sums of money out to remote areas.



Figure 39 Vodacom M-Pesa payments being made at one of USAID|ApaL's weekend INSET trainings.

5.8.4 - SMS Messaging

From 2014 to the end of the project, SMS messaging was used to inform stakeholders about training moments and to invite them to participate. A central database had been established and a local NGO was contracted to maintain the infrastructure. USAID|ApaL developed every year a set of messages to be sent to the different groups involved. On top of invitations for training and presentations, the SMSs also included motivational messages in which specific schools and ZIPs were complimented on their good results in the RSA or educational tips on the use of the TLAs. Different messages for trainers, school directors, Reading Coaches, Lead Trainers and teachers were gradually developed, depending on observations from the field. The use of SMS proved to be a simple and effective way of sharing information and additional instruction when needed.

6 – Lessons Learned / Recommendations

As evident by the continuous revisions described throughout this report, the USAID|ApaL program learned and adapted over the implementation period to deliver the most effective program alongside local institutions to improve early grade reading outcomes in Mozambique. In addition to highlighting some best practices, this section aims to emphasize important aspects of the program to be considered for future interventions operating in this unique context.

6.1 - Data Collection and Use

A major challenge faced by government institutions in Mozambique is the capacity to manage and disseminate results from data. This was one of the strengths of the USAID|ApaL program and a major factor when encouraging local buy-in, from the communities up to the central government.

The program focused on building up institutional capacity of government institutions to carry out supervisions in schools, and create practical protocols for these processes to be effective and sustainable. This has been especially important with the rollover and

loss of many staff who work in the education sector.

As seen in Figure 41, various tools were used at different levels in order to produce up-to-date results for decision-making. This should continue to be a focus of any intervention, as buy-in from parents in communities up to MINEDH officials is crucial to tackle chronic issues affecting schools such as absenteeism and tardiness.

Provincial	• Impact Evaluation
District	• Rapid School Assessment
Cluster	• INSET monitoring and support
School	• Classroom Observation • School Management Tools
Classroom	• Continuous assessment • Fluency assessment

Figure 40 Types of assessment used in USAID|ApaL broken down by level (province down to classroom) to help ensure accurate and up-to-date reporting for evidence-based decision-making.

6.2 - Gender Gap

The achievement gap between boys and girls continues to be a challenge throughout the country in Mozambique. While the USAID|ApaL program worked tirelessly to promote this issue throughout the life of the program, differences persist and must be a focus of any future programming.

As seen from 2015 results in Figure 42 below, the ApaL program had closed more than half of the gender gap in EGRA results (clpm and cwpm). Girls' EGRA results showed significantly higher results than boys.

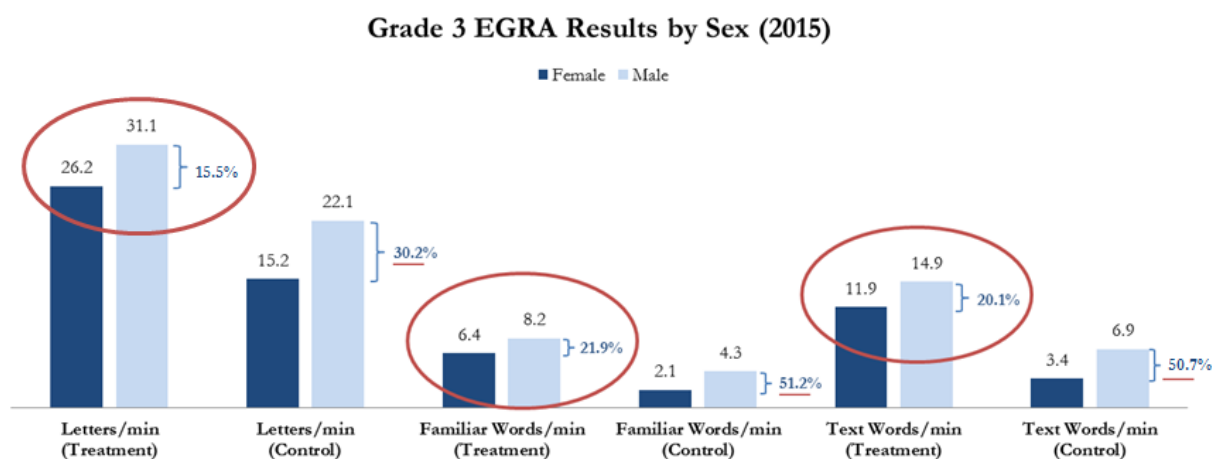


Figure 41 EGRA results for Grade 3 students in 2015 broken down by sex. The USAID|ApaL intervention has helped to decrease the gap in results between boys and girls.

Throughout *ApaL* development, new revisions to address this issue were incorporated. Some of the key innovations were:

- RRP trainings integrated gender themes and how to support girls equally in classrooms. This included gender appropriate activities in the lesson plans, the way classrooms should be arranged, protocols for calling on girls as often as boys, etc.
- Gender review was done for all materials, including both RRP and SDTC programs. Language to highlight the issue was used throughout (e.g. todas/todos)
- Data was always presented on these differences to different stakeholders to call their attention to the issue and encourage more discussion
- School Directors were always encouraged to exhibit gender sensitive management, whether in reference to teachers or students
- INSET trainings and materials included guidance for discussion on what could be done at home to encourage success for girls, who may be disproportionately occupied with responsibilities in the home.

6.3 - Multi-year Interventions

Retaining Key Staff to Build Up Institutional Knowledge - Capacity building of central and local MINEDH and education staff has been a key element of the USAID|ApaL project. They are the staff responsible for developing new policies and materials to monitor its implementation and to provide support when needed. It has been observed that, in *ApaL* experience with a multi-year intervention, several well-trained key staff members were transferred or retired. This often led to the inclusion of new people who, up until then, were not well-informed about the general approach and project interventions. It would be recommended to set up technical working groups on a central level, carefully selecting - with MINEDH - a group of skilled technicians who would be able to commit their time over a longer period.

Another recommendation would be to discuss this issue with DPEDH and SDEJT to avoid any transfers of teachers, SDs and DAPs (Pedagogical Directors) who have received training from the project to avoid loss of skills and knowledge, which essential to the success of the project. Transfers should only take place when there is another person trained in the school to substitute the staff member to be transferred.

More Training for Teachers/Education Staff - An intervention such as *ApaL*, while already demonstrating significant impact, could benefit from a longer intervention period in many ways. In the current model, a one year intervention in schools has its limitations. Sustainable change is more likely with more years of training and monitoring. This does not only relate to teachers being transferred after one year to other schools as mentioned above, but also the teacher inability to transfer skills and knowledge to other grades. A teacher trained in the methodology of grade 1 does not automatically apply this in grade 2 or 3.

Long-Term School Management Improvements - Immediate impact could be realized in areas such as efficiency related to materials distribution, Oral Reading Fluency rates, and other areas, but especially in school management. Addressing such issues so embedded within the education system, such as tardiness and absenteeism, benefit from longer support to schools to create new routines and habits. Behavioral changes in teachers' and students' attitudes needs monitoring and support over a longer time to sustain change, and institutions such as SDEJT and DPEDH need time to develop standard protocols for carrying these processes out.

6.4 - Holistic Approach

New programs should strive for a more holistic approach in which the reading program is taught as part of a schoolwide program of active learning and teacher/student interactions, which incorporates all disciplines within the curriculum. In the case of USAID|*ApaL*, it sometimes occurred that the project was seen as an intervention separate from the MINEDH program while in reality it was not. It is recommended to present new projects as programs that do not substitute the regular curriculum, but rather serve to reinforce what is already being done.

6.5 - Focus on Communities

Promoting Literacy - Initially not part of the USAID|*ApaL* interventions per contract, WEI promoted the inclusion of more community activities to address attendance and community involvement for in and out of school reading activities. As part of this effort, and after several discussions with USAID and LEIs, *ApaL* agreed to set up reading clubs in the communities. Despite skepticism related to finding volunteers willing to help, it proved to be a very successful innovation when looking at the number of volunteers and children participating. *ApaL* highly recommends the inclusion of community awareness campaigns – such as Dia de Leitura - and out of school activities in the communities for reading programs to ensure

more reading time in schools and at home. Volunteers in the communities can be identified and trained by local school councils to inform parents and involve the students.

Language of Instruction - In addition to their role in promoting specific activities, communities are an important, yet often overlooked, focal point in discussions around language of instruction. Since Mozambique's independence, there has been a strong movement in the country where people from different groups are sent to other areas to live and work. These types of interactions were aimed at stimulating national unity and a peaceful climate, and even extended to education institutions such as the IFPs (Teacher Training Institutes), where teacher candidates were sent to study in provinces outside of their own. In order to further stimulate this unity, the government established the use of Portuguese as a national language. In communities, even in rural areas where people speak a local language in daily life, a strong perception remains that Portuguese is the language that is needed to succeed in schools. It should be taken into consideration that these impressions remain in many communities and could pose barriers to future bilingual education interventions. Communities should be involved in these interventions from the beginning, not only understanding the immediate benefits of using local languages in studying and reading, but also understanding that the ultimate goal is to become better readers in LI and in Portuguese.

6.6 - Materials Development & Revision

Over the course of the project, many Teaching and Learning Aids (TLAs) had been developed. While initially this material was developed by the project due to time constraints and lack of local resources, it gradually became a set of products developed with and by central and provincial MINEDH and INDE staff. The process of coordinating involvement of skilled technicians can be somewhat challenging because most of the knowledgeable staff within the different departments are very busy with all kinds of activities.

A recommendation based on these *ApaL* experiences would be to set up technical working groups of technicians who would be able to assist with material development and revision over a longer period of time. This should be done at the start of any program so that the technical staff and their approach will also contribute and evolve alongside the intervention. This would be a structure in which MINEDH staff and others involved would also be able to present their own work to central MINEDH staff, and which could encourage crucial buy in to ensure the sustainability of new programs.

Another recommendation, related to classroom materials being developed for reading interventions, is to collaborate with MINEDH on how to consolidate reading instruction periods through a combined curriculum. One *ApaL* RRP lesson per day clearly had impact, but it would have been better if all reading instruction during the day was delivered during the RRP block of classes. In the *ApaL* model, the RRP was taught in one class while MINEDH literacy instruction was during a different period. This caused confusion and did not always allow for teachers to transfer their effective literacy instruction routines from RRP to MINEDH. During observations it was found that some teachers would fall back on old routines during MINEDH lessons which did not engage students as much.

6.7 - Focus on Reducing Absenteeism

One of the biggest challenges for the School Management component, and in turn the overall program, was how to more effectively address the issues of widespread absenteeism in schools for students, teachers, and even school directors. On average, according to ApaL, but also as shown in the *Service Delivery Indicators Report from the World Bank*⁶, 56% of teachers are absent from the classroom on an average day. With this in mind, the School Management intervention was included to understand the effects of management on student outcomes. The assumption driving this aspect of the design is that when schools are managed more effectively, tardiness and absenteeism can be reduced, and students are in classrooms with more time for quality instruction to help improve reading outcomes.

USAID|ApaL's work on this issue caught the attention of MINEDH. In 2015, ApaL was invited by MINEDH to demonstrate the School Management Tools and explain how they are used. Several of these tools have even been adopted by MINEDH and a national campaign was started to focus on the absenteeism issue. As the program developed and WEI included new innovations to the intervention, efforts were also directed to getting local government and communities involved more directly to hold teachers and students accountable for their presence. One particularly interesting revision was to promote enforcement of existing policies that hold teachers accountable for unexcused absences through salary deductions and other disciplinary measures. This policy is driven at the ZIP and district levels and is a sustainable way of increasing instruction time with teachers in classrooms. ApaL leveraged meetings with district, provincial, and national stakeholders to emphasize the importance of this policy and specifically engaged the Chief of DAF (Director of Admin and Finances) in the provinces to follow through in all districts.

In closing, it is our strong belief that any intervention should stress the importance of adjusting and improving based on what is being observed and experienced in the initial implementation phase. While this may seem obvious, it is important to take time to establish relationships and develop a quality design alongside the appropriate institutions. USAID|ApaL, being a pilot program, has been able to do that, but it should also be considered during scale-up phases and follow on programs (i.e. even after a pilot intervention has been established).

⁶ <http://documents.worldbank.org/curated/en/287341468181503193/pdf/95999-WP-PUBLIC-Box391432B-ADD-SERIES-ENGLISH-WB-Mozambique-SDI-Brief.pdf>