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IMPACT EVALUATION (IE) FOR THE USAID/APRENDER A LER PROJECT IN MOZAMBIQUE - Inception Report & Communication and User Engagement Plan

November 8, 2012

This report was prepared for USAID/Mozambique by Magda Raupp, Bruce Newman and Luis Revés under Evaluation Services IQC Task Order AID-656-TO-12-00002 awarded to International Business and Technical Consultants, Inc. (IBTCI), with Global Surveys Corporation (GSC Research) as sub-contractor. The authors' views expressed in this plan do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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TABLE OF CONTENTS

Acronyms and Abbreviations	ii
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Part 1: Inception Report

Introduction	1
1. Evaluation Questions.....	2
2. Evaluation Design	5
3. Description of Proposed Data Sources	12
4. Qualitative Data Instruments	13
5. Proposed Methods for Data Collection and Analysis.....	16
6. Coordination Between and Among Organizations	21
7. Summary of IE constraints and limitations.....	22
8. Detailed Final Evaluation Work Plan.....	24
ANNEX 1. Student Random Selection at the Classroom Level.....	26
ANNEX 2. Suggested Profile and Responsibilities of Aprender a Ler Enumerators.....	28
ANNEX 3. Profile and Responsibilities of IE Supervisors	29

Part 2: Communication and User Engagement Plan

Introduction	31
1. Dissemination Strategies	32
2. Key Strategic Components	33
3. Risks	35
Summary	37

ACRONYMS AND ABBREVIATIONS

CAP	Concept About Print
CBOs	Community Based Organizations
EGRA	Early Grade Reading Assessment
FBOs	Faith Based Organizations
GOM	Government of Mozambique
GSC	Global Surveys Corporation (GSC Research)
IBTCI	International Business & Technical Consultants, Inc.
IE	Impact Evaluation
IFP	Instituto de Formação de Professores (Teacher Training Institutes)
INE	Instituto Nacional de Estatística
MINED	Ministry of Education
NGOs	Non-Governmental Organizations
PD	Pedagogical Director
RCT	Randomized Control Trial
RFTOP	Request for Task Order Proposal
RTI	Research Triangle Institute
SDEJT	District Service for Education, Youth and Technology
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development
USG	United States Government
WEI	World Education, Inc.
ZIPs	Zonas de Influência Pedagógica

Part 1: Inception Report

INTRODUCTION

In July 2012, USAID/Mozambique awarded the International Business & Technical Consultants, Inc., (IBTCI) Task Order AID-656-TO-12-00002 under the Evaluation Services IQC to conduct the Impact Evaluation (IE) for the USAID/*Aprender a Ler* Project. *Aprender a Ler* is a four-year USAID-funded project designed to improve student reading outcomes in grades two and three in selected schools in the Nampula and Zambézia Provinces of Mozambique. Managed by World Education, Inc. (WEI) and supported by local subcontractor, Universidade Politécnica and subcontractor, University of Texas at San Antonio (UTSA). *Aprender a Ler* will work with the Ministry of Education in Mozambique (MINED) to improve quality and increase the quantity of reading instruction. The project includes teacher training and coaching, development of training, learning and reading materials, school management training and coaching for school directors, and student assessment. These elements will be implemented in a holistic approach designed to improve reading outcomes in the early grades. The project was originally titled *Early Grade Reading Assessment Plus Quality Instruction and Management (EGRA+QIM) in Mozambique*.

Evaluation has many faces and purposes—process, formative, summative, impact. The purpose of an impact evaluation is to examine a well-defined set of results and seek to establish the relationship between interventions and the results obtained. Our mandate is not to assess the *Aprender a Ler* project or follow its implementation but rather to assess the effects of the project interventions on a well-defined indicator—early grade reading outcomes.

The IE calls for qualitative and quantitative analysis of 180 schools along the economic corridors of the two Provinces using the Randomized Control Trial (RCT) methodology, with 60 schools receiving “Full” treatment, 60 schools receiving “Medium” treatment, and 60 no-treatment “Control” schools. Working in close collaboration with USAID mission, WEI, implementers of the USAID/*Aprender a Ler* project, and national and Provincial MINED offices, IBTCI and its Mozambican partner, Global Surveys Corporation (GSC Research), will conduct a RCT in a sample of schools where *Aprender a Ler* will intervene and implement one of the two treatments. During the initial year, the *Aprender a Ler* project will be operational in 120 schools in Nampula and Zambézia. Therefore all intervention schools will be included in the sample. Sampling procedures to select the possible Districts and clusters known as Zonas Pedagógica de Influência (ZIPs) as well as the selection of individual students in each school are detailed in Section 5.

The use of RCT is the most effective way to measure impact for three main reasons. First, it allows for direct attribution of the *Aprender a Ler* interventions to improved outcomes because the RCT model controls for all other possible determinants of the outcome. Second, the random component of RCT eliminates the effects of potential unobservable differences between treatment and control groups on the outcome. Third, an RCT will provide the most rigorous evaluation method to obtain accurate and valid results to inform plans to scale up the most effective and cost-effective intervention.

The purpose of this Inception Report, as delineated in the Impact Evaluation Statement of Work (SOW), and required to be submitted to USAID, is three-fold.

- To demonstrate our understanding of the tasks to be conducted;
- To contextualize the IE in relation to the USAID/*Aprender a Ler* project and the reality of the Provinces where the project will be implemented; and,

- To provide more detail on targets to be achieved from the mobilization of the IBTCI/GSC team in Mozambique in September 2012 to the finalizing of the IE in December 2014.

This Inception Report represents our understanding of the tasks to be performed given the information we have as of October 31, 2012.

1. EVALUATION QUESTIONS

An evaluation starts with a question or a set of questions to guide the effort. The main evaluation question to be addressed by the Impact Evaluation (IE) is:

To what extent have USAID/Aprender a Ler treatment interventions improved early grade reading outcomes for students in second and third grades in the target schools in the Nampula and Zambézia Provinces?

From this general guiding question flows a set of focused questions to be answered by the Impact Evaluation. Specifically, the IE will address four questions related to the impact of the “Medium” and “Full” intervention models:

Question 1: To what extent does the “reading instruction support” treatment intervention cause early grade reading outcomes to improve for students in grades two and three in target schools whose teachers have received training, coaching and support?

The RCT allows for direct attribution of the *Aprender a Ler* intervention to improved learning outcomes because the model controls for other possible determinants of the outcome. When an instrument of established validity and reliability is used to measure outcomes, improvement on test scores can be attributed to the intervention. A comparison of reading scores obtained pre- and post-intervention and, most importantly, as compared to results obtained by the non-intervention group (“Control”) will provide an understanding of how students in the “Medium” treatment group would have performed without the benefit of the intervention.

Of course, this assumes that the intervention was technically sound and instructionally relevant in its design and that implementation was conducted according to well thought-out plans. However, this is not a process evaluation and our task is not to assess levels of success of implementation of project activities. We expect that the process implementation data collected by the *Aprender a Ler* Monitoring and Evaluation system will focus on a set of specific and measurable indicators and those results will be available in electronic format to the IE team in order to be integrated into the final IE report.

Question 2: To what extent does the treatment intervention of additional “school management” training, coaching and support to school directors cause a significant and additional improvement in early grade reading outcomes when coupled with “reading instruction support” in target schools?

This question will be addressed in the same manner as the previous one.

Question 3: Cost-effectiveness - To what extent are the “Medium” and “Full” treatment interventions cost-effective? Specifically, what are the most significant reading outcome effects and unit costs per student, per teacher, per school director, per school of the key treatment interventions?

An educational system confronts many difficult choices in the provision of services to children. To make informed choices, it is necessary to learn about the impact of services and programs, to assess their costs, and to weigh and consider the consequences of choosing one option over another. The purpose of cost-effectiveness analysis in education is to examine which intervention or combination of interventions can achieve particular objectives at the lowest cost in relation to the results obtained. The purpose of cost-effectiveness analysis from the perspective of the Impact Evaluation is to determine which intervention, “Full” or “Medium,” can achieve specific objectives at the lowest cost. Thus, for the *Aprender a Ler* project, the “Full” treatment or intervention is cost-effective if its impact is greater than the “Medium” treatment, all other factors being equal. Or for a given level of impact, “Medium” is cost-effective if its cost is less than “Full,” all other factors being equal, but reading outcomes are still significantly improved. The cost of each intervention is defined as the value of the resources that were necessary to conduct the intervention.

To assess the cost-effectiveness of the two interventions we will:

- Identify the “ingredients” (materials, textbooks, hours of training, number of training sessions, labor intensiveness of the training, etc.) utilized by the *Aprender a Ler* project for each of the two interventions;
- Once the ingredients have been identified we will calculate their costs and the overall costs of each intervention, taking into account both development and recurrent or “marginal” (the cost of adding an additional ZIP, school, director, teacher or student) costs. These costs will act as the numerator, with the denominator specified by the actual number of ZIPs, schools, directors, teachers and students in order to arrive at an average cost per unit;
- Finally, we will analyze the costs¹ in a decision-oriented framework and express the cost-effectiveness of the “Full” and “Medium” interventions per student, per teacher, per director, and per school. The cost-effectiveness ratio is the effectiveness (in the present case, changes in reading outcomes achieved) of an alternative divided by its average cost. When this is done for each alternative, it is possible to see which of the alternatives yields the best outcomes per unit of cost.

We will depend on *Aprender a Ler* for the detailed identification of ingredients included in the interventions to ensure that all resources are included and described adequately so that we will be able to place cost values on them and use these costs in an analytic framework to determine cost-effectiveness per the desired unit.²

Question 4: Management Sustainability – Of the most cost-effective interventions, which fall within the existing technical and financial management capacity of local education institutional personnel? What capacity-building activities would be required to ensure sufficient MINED

¹ In education, typically cost-effectiveness is expressed in terms of a ratio where the denominator is a gain from a measure (scores on a test) and the numerator is the cost associated with the gain.

² Cost-effectiveness analyses are often visualized on a cost-effectiveness plane consisting of four-quadrants. Outcomes plotted in Quadrant I are more effective and more expensive, those in Quadrant II are more effective and less expensive, those in Quadrant III are less effective and less expensive, and those in Quadrant IV are less effective and more expensive. (WHO Guide to Cost-Effectiveness Analysis, Geneva, 2003)

technical and financial management capacity to implement the interventions?

There are two aspects of sustainability: financial and technical. From the point of view of the District and of the school, it needs to be established what financial resources they have at their disposal and whether they can absorb the added burden of the cost of the intervention. Regardless of the benefits of any intervention, if the financial resources are not available to continue to train teachers and to produce the necessary materials for teachers and students, sustainability is compromised. Important data sources include relevant District personnel and school directors, especially the directors of the ZIP “head” schools charged with continuing the intervention in Year 2.

To collect this data we envision a focused instrument (such as an inventory) to be administered by IE supervisors in February 2013 during the baseline data collection period to record the Districts’ role in the schools, the resources that are available at the District level, what District staff are expected to do and actually do in order assist teachers to improve their performance. A similar instrument will be developed for school directors, with special emphasis on directors of “head” of ZIP schools, focusing the directors’ role in the instructional process, the resources available at the school level and how the school budget is administered.

During the second data collection round in September 2013, when the elements of the intervention have already been implemented, we will return to the same data sources to collect data on resources available *vis-a-vis* the specific activities that are part of the intervention. The question to be addressed is whether with the financial resources at their disposal, District and school directors could absorb the additional tasks once the resources of the project are no longer available. Summing up, the information collected will allow us to say that, given the financial resources available at the District and at “head” schools of the ZIPs, the interventions could or could not be institutionalized at the District and school levels.

The instrument will contain items that assess the technical capability existing at the District and at the ZIP schools that would allow the continuation of the intervention after the *Aprender a Ler* project ends. In both cases, through examining financial and managerial sustainability, the IE will address the question of capacity-building activities required to allow MINED to continue implementation of the various aspects of the interventions.

Sustainability is also related to factors such as motivation. Once the direct intervention ends in September 2013, how motivated will the “head” school of the ZIP be to continue the work? What is the incentive for taking on more work? We expect that the *Aprender a Ler* Monitoring and Evaluation system will provide answers to questions such as this by collecting data on specific and measurable indicators that capture the difference between activities implemented at the “head” school of the ZIP school during direct intervention and during the second year when there will be no direct intervention at that particular ZIP or school. We also expect that such results will be provided to the IE team in electronic format.

2. EVALUATION DESIGN

The general specifications of the IE model will be based on the evaluation objective of assessing to what extent USAID/*Aprender a Ler* interventions have improved early grade reading outcomes, as specified in the RFTOP. Thus, the model treats early grade reading outcomes as a function of the “Medium” or “Full” interventions as well as other determinants the evaluation team will finalize with USAID. The model will be tested with direct comparisons and regression analysis under three scenarios: with the “Medium” treatment sample, with the “Full” treatment sample and with the “Control,” or no treatment sample.

The Randomized Control Trial (RCT) approach to the impact evaluation (IE) implies that participating entities will be randomly assigned to either a treatment (intervention) group or to a control group. In the specific case of the *Aprender a Ler* project, it is desired to evaluate the impact of one of two treatments on the reading performance of students in second and third grade, relative to that of students in Control schools.

The evaluation design is based upon establishing a baseline (at the beginning of the 2013 school year) in all RCT groups, prior to the initiation of any project interventions in any of the schools. Data on reading outcomes and other variables will be collected at the end of the school years 2013 and 2014 at all schools from all groups initially selected for the baseline. The *Aprender a Ler* project is to provide training, coaching and other instructional support (the “Medium” treatment) to 30 schools in Nampula Province and 30 schools in Zambézia Province during the 2013 school year and training, coaching, other instructional support PLUS a school management improvement intervention consisting of training, coaching and other support to school directors (the “Full” treatment) in the same number of schools in each Province. An additional 30 schools in each Province will receive none of the interventions mentioned (the “Control” schools) during either the 2013 or 2014 school years.

Ideally, the sample sizes in an impact evaluation are based upon power calculations, which allow us to specify what magnitude of changes can be expected to be detectable with a particular degree of precision. In this IE, the sample sizes are both predetermined (60 schools per each of the three RCT groups across the two Provinces) and limited by the number of intervention schools the *Aprender a Ler* project will initiate activities in during 2013 (60 for each of the two treatments across the two Provinces). While this is not an ideal situation, the EGRA toolkit concludes that 50-60 schools per comparison group has generally been found to be sufficient to estimate effects of different interventions.

As far as training goes, the *Aprender a Ler* project will work with stakeholders at school, ZIP, district, provincial (ISDEJTs, and DPECs) and national levels of MINED (DNFP, DIPLAC, DNQ, INDE) as well as with local institutions to improve the quality of reading instruction in 2nd and 3rd grade classrooms in Nampula and Zambézia. The project will work with six teacher training institutes (Instituto de Formação de Professores, or IFPs) to ensure that, over the course of the first two years of project implementation, the targeted IFPs have developed the capacity to adequately respond to in-service training needs to improve reading instruction.³

At the province level, *Aprender a Ler* will train a cohort of Lead Trainers (two per school cluster). This initial training will be facilitated in the first year by *Aprender a Ler* staff alongside IFPs to ensure that training will be gradually transitioned to independent facilitation by IFPs over

³ WEI Revised Technical Proposal, May 2012.

the course of the project. Lead Trainers will learn how to train teachers on strategies to improve teaching practices related to early grade literacy. *Aprender a Ler* will bring multiple ZIPs together to train Pedagogical Directors (PDs) in every school to serve as teacher coaches. At the ZIP level, *Aprender a Ler* will train all 2nd and 3rd grade teachers and PDs in the use of the Teacher’s Guide, while developing the skills of PDs from each school as coaches. These trainings will be facilitated by *Aprender a Ler* staff alongside IFPs in the first year. PDs will meet with the Lead Trainers during 15-18 Saturday sessions over the course of the school year.

In addition to training, *Aprender a Ler* will develop instructional materials for teachers and students, promote better school management and implement a number of other initiatives to improve early grade literacy and consequently student reading performance—as measured by the EGRA—the main objective of the Impact Evaluation. A treatment’s effect will thus consist of a combination of both direct and indirect application of the intervention

“Head” schools of a ZIP tend to be larger, more established, and generally recognized to be better organized and better run, relative to the other schools of the ZIP. “Head” schools will also differ from the other schools in the ZIP by spearheading the training of teachers from those surrounding schools. Furthermore, “head” schools are usually more tightly linked to the District Service for Education, Youth and Technology (SDEJT) of MINED.

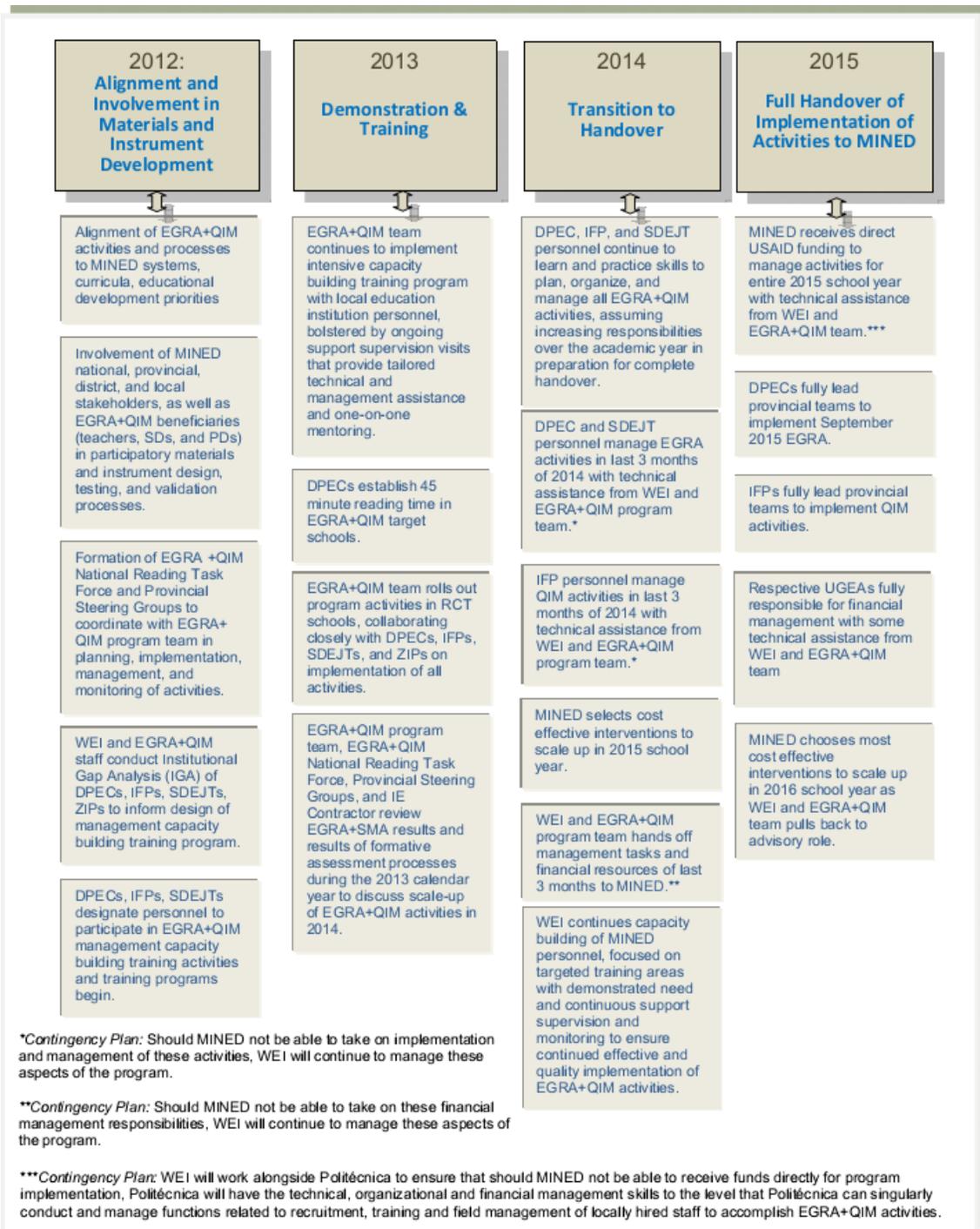
The training of personnel from the “head” schools by the *Aprender a Ler* project must be carefully conducted so as not to contaminate Medium treatment ZIPs (and their respective schools) from training and other support materials and activities to be included in the Full treatment ZIPs and schools. While this will have some logistical implications, the IE design requires that the *Aprender a Ler* project make every effort to independently apply the treatments to each group. Furthermore, the Control schools must not receive any of the interventions from either treatment group at any time during the 2013 and 2014 academic years. We recognize that these constraints are more difficult and rigorous than is commonly found in intervention projects such as *Aprender a Ler*, but the entire IE depends upon their being respected for the two year period within the 180 schools included in the IE sample.

The 2014 end-of-school-year assessment will measure reading outcomes one year after the *Aprender a Ler* project has finished its direct interventions in the two treatment groups, as compared to the Control group of schools. It is of interest to the IE to determine whether any effects of the intervention on reading outcomes in the two school grades increase, decrease or remain the same as at the conclusion of the 2013 direct interventions. These types of comparisons will help to better understand the sustainability of impacts observed, as well as contextualize the benefits of the *Aprender a Ler* project and therefore impact cost-effectiveness estimations.

The following page is WEI’s depiction of the USAID/*Aprender a Ler* components and logic, implemented in partnership with MINED.⁴

⁴ WEI Revised Technical Proposal, May 2012.

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As discussed below, there are data sources available to help us define the ZIPs and the schools that will comprise the universe of schools where the two treatments could potentially be conducted during the 2013 school year. This is a very important consideration for the design of the IE sampling procedures to be employed. The *Aprender a Ler* project intends to intervene in only 120 schools during the 2013 start-up year with the “Medium” and “Full” treatments; yet the IE must observe reading outcomes and other variables in 180 schools at the 2013 baseline, 2013 end-of-school-year and the 2014 end-of-school-year data collection points. While this fits the requirements of observing 60 schools in each of the treatment groups, in order for the IE to randomly assign ZIPs and school to each of the RCT groups (including the Control group), the *Aprender a Ler* project must indicate, *a priori*, a minimum of 180 schools where conditions are such that project interventions could be undertaken in 2013 (as if the intention was to intervene in 180 schools in 2013, rather than the 120 schools currently contemplated).

By nature, ZIPs represent geographical clustering within Mozambique. The limited number of ZIPs in the sample *per District* naturally limits the possibility of cross-treatment contamination: we expect such treatment effects to be shared within a ZIP, but not between ZIPs.

Our concern is that the “Full” and “Medium” treatments could become “confused” during the training events, which is away in which contamination could take place: how can field training events effectively be separated? The answer is, “carefully,” and by the project itself – people from schools with different levels of treatment should certainly not be invited to take part in the same training events, and trainers should be reminded there are different expectations for teachers from “Full” and “Medium” treatment schools. The IE will, additionally, obtain “marker” data from school directors and teachers regarding their exposure to the *Aprender a Ler* interventions and include these in the analysis of impact.

As the Inception Report indicates, a ZIP is not in any way a standard organizational unit of the MINED—not only does the number of schools per ZIP vary, there are large differences in terms of student enrollment and classrooms, especially in second and third grade. As a result, we must take these factors into consideration when selecting the final sample, and how the schools (and, thus, clearly, the ZIPs) are chosen in order to create a reasonable equivalent universe from which to assign the treatments, while addressing the question of selection bias. At this point, we would expect to do this through a process of first eliminating outliers (excessively small or large ZIPs) and subsequently assigning each treatment or control selection to ZIPs of approximately similar size and characteristics. In this way, we would expect to obtain the target 60 schools per treatment group. Randomization fundamentally would therefore consist of the assignment of ZIPs of similar size to each treatment group.

The IE expects to produce, based upon the detailed, school and grade level data we have just acquired from the MINED (see below in the Data Sources section), listings of all ZIPs and the schools that comprise them in order for the *Aprender a Ler* project, in consultation with MINED Provincial and District officials, which ZIPs and schools should be included in the potential 2013 pool of intervention sites. These listings will include identification information, school characteristics, second and third grade enrollments and other pertinent data. Because of the requirement that schools be accessible, identifying information about the schools’ location (*Cidade, Vila* or *Aldeia*, or City, Village or Settlement) will be important both for “counting” schools that can be realistically expected to receive treatments by the project (a minimum of 120 in 2013), as well as the IE school count of 180 where student reading outcomes can be assessed and related data obtained. Unless otherwise indicated by the MINED authorities, we suspect that

it would be prudent to exclude from either count schools identified as being located in a Settlement.⁵ This restriction causes us to recommend that the project and the MINED propose more than just sufficient ZIPs that provide the minimum of 180 schools. It should be noted that the *Aprender a Ler* project can include additional ZIPs in their intervention activities either in 2013 or later, as long as the random assignment to the three RCT groups from the 180 schools provided by the IE is respected during the 2013 and 2014 school years. ZIPs and schools not selected and assigned to RCT groups by the IE can also subsequently be selected for project intervention.

The process described above conserves the fundamental aspect of the RCT methodology: random assignment of the RCT groups (“Medium” or “Full” treatment or “Control”) to equivalent ZIPs and schools belonging to each ZIP. Thus determined, the IE will randomly assign ZIPs to the three RCT groups, establishing that the range of ZIP size (number of eligible schools) be represented in each of the groups, such that 60 schools are in each RCT group.

At the time of this Inception Report, the *Aprender a Ler* project had recently finalized their selection of the Districts in Nampula Province to include five:

- Murrupula
- Nacala Porto
- Monapo
- Nampula Rapale
- Nampula Cidade

The following table shows some basic demographic characteristics from the 2007 census for these five Districts or municipalities in Nampula where the *Aprender a Ler* project has indicated it will work during 2013. The percentage of the population aged five and over who speak Portuguese ranges from a low of 29.6% in Murrupula to a high of 83.1% in Nampula Cidade. The percentage of the same population that were reported as unable to read or write also ranges from a high of 72.4% in Murrupula to a low of 40.9% in Nampula Cidade. Total population ranges from a low of 140,311 in Murrupula to a high of 471,717 in Nampula Cidade. These differences between Districts could suggest that the distribution of ZIPs between Districts might need to take these data into account, or, when available, the actual number of ZIPs or schools in each District.

⁵ The basis for this suggestion is two-fold--first, that the “treatment” cannot be expected to reach inaccessible schools--and “Aldeia” or Settlement schools are much less likely to go to the ZIP “head” schools to receive it. Second, if the *Aprender a Ler* enumerators cannot reach inaccessible schools to apply the EGRA to students in second and third grade, then the IE will not have any outcome or other data to work with at these schools.

Thus, the IE will report on the relative results from the three RCT groups in schools where the *Aprender a Ler* project could operate during 2013. By definition, these schools cannot be considered to “represent” all schools in the Province. The project focus, as well, concentrates on the “economic corridors” of each Province and thus must the IE.

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Communication and User Engagement Plan

Nampula District/Municipality	Population	Population 5+ Years of Age	% Speak Portuguese	% Cannot Read or Write
Murrupula	140,311	109,927	29.6%	72.4%
Nacala Porto	206,449	168,669	55.2%	53.5%
Monapo	304,060	242,795	30.9%	71.0%
Nampula Rapale	203,733	163,238	38.1%	66.8%
Nampula Cidade	471,717	391,898	83.1%	40.9%
TOTAL	1,326,270	1,076,527	54.7%	54.3%

Source: 2007 Census, *Instituto Nacional de Estadística* (INE). Note: According to the INE, the Nampula Province illiteracy rate is 60.9%.

As of the writing of this Inception Report, target project Districts in Zambézia for 2013 had not yet been finalized, and thus the following table presents similar data for all the Districts:

Zambézia District/Municipality	Total Population	Population 5+ Years of Age	% Speak Portuguese	% Cannot Read or Write
Cidade de Quelimane	193,343	165,593	93.4%	2.8%
Alto Molocue	272,482	211,456	51.2%	58.3%
Chinde	119,898	95,258	47.3%	64.8%
Gile	169,285	133,954	41.0%	63.5%
Gurue	297,935	232,107	50.0%	61.5%
Ile	289,891	225,469	36.9%	73.0%
Inhassunge	91,196	74,459	49.6%	59.9%
Lugela	135,485	104,695	37.8%	75.8%
Maganja da Costa	276,881	218,596	33.3%	76.1%
Milange	498,635	380,747	19.9%	73.0%
Mocuba	300,628	236,524	61.5%	5.8%
Mopeia	115,291	89,081	40.9%	68.1%
Morrumbala	358,913	272,738	23.3%	76.6%
Namacurra	186,410	149,591	41.3%	65.9%
Namarroi	89,053	69,258	29.0%	75.7%
Nicoadala	231,850	188,088	59.8%	58.2%
Pebane	185,333	145,840	35.1%	67.4%
TOTAL	3,812,509	2,993,454	42.7%	59.9%

Source: 2007 Census, *Instituto Nacional de Estadística* (INE).

Note: According to the INE, the Zambézia Province illiteracy rate is 62.5%.

Selecting and randomly assigning of ZIPs to one of the three RCT groups is a relatively straightforward process. Given a ZIP selection, the schools participating in a given RCT group is already determined, subject to accessibility factors of the individual school. The next critical point is upon the arrival of the enumerators at each school within the ZIP. There are two issues to address: in which second and third grade classrooms should the EGRA instrument be applied, and to which students in those classrooms?

A simple, unbiased method for selection of classrooms (*turmas* in Portuguese) will be made by listing, for each grade and in alphabetical order of the teacher name, of the classrooms at the school that are functioning on the day of the visit and have at least 15 students enrolled. Many schools have only a single classroom (or section) of a given grade; some will have more. The classroom to be assessed will depend on the day of the month of the visit, as follows:

- If only one classroom of the grade, that one will be assessed.
- If two classrooms:
 - Day of the month is 01-15, select the first from the list.
 - Day of the month is 16-31, select the second.
- If three classrooms:
 - Day of the month is 01-10, select the first from the list.
 - Day of the month is 11-20, select the second.
 - Day of the month is 21-31, select the third.
- If four or more classrooms:
 - Day of the month is 01-07, select the first from the list.
 - Day of the month is 08-14, select the second.
 - Day of the month is 15-21, select the third.
 - Day of the month is 22-31, select the fourth.

This procedure will effectively eliminate any bias in selection of the classroom to be assessed that is based on a director's or teacher's knowledge of classroom performance or teacher characteristics.

The next step requiring randomization is the selection of students within the selected classroom who will be administered the EGRA assessment instrument. The objective of a procedure to be applied in the field is to eliminate teacher or enumerator bias in student selection. Time constraints in terms of the length of the school day, the time limitations of the enumerator in the classroom and the time it takes to administer the EGRA assessment suggest that ten students per classroom selected (per grade) be assessed. Again, we plan to use a random selection procedure that can be applied in the field that will eliminate teacher or enumerator bias, as follows:

- First, a numbered list is made of all students in attendance in the selected classroom on the day of the visit. The list can be made in any order, as simple random sampling will be employed.
- If the list contains ten or fewer students present, all will be assessed.
- If the list contains more than ten students, the following list shall be employed by first selecting the row in the table corresponding to the total number of students in attendance, and then selecting for assessment the students from the numbered list whose number is in the ten numbers to the right. If a selected student cannot or will not participate in the assessment, the enumerator may choose one before or one after in the list that has not already been chosen. The table and methodology are included in Annex 1.

3. DESCRIPTION OF PROPOSED DATA SOURCES

A variety of data sources will be used to provide the IE with information to refine the evaluation plan itself, develop appropriate sampling techniques, create the sampling universe and conduct the randomized assignment of schools and ZIPs to the two treatment groups and the Control group, provide the key dependent and additional independent variables, and complement the IE through the provision of contextual and other explanatory information.

Depending on the data source and purpose of the data, this information will be obtained at the student, classroom, teacher, director and school levels. Where possible, the data will be triangulated from multiple sources and/or different levels of data collection. Initial demographic information at the Province and District level has been obtained from INE, the *Instituto Nacional de Estadística* (National Statistics Institute) website, which permits drill-down views of a range of data from the 2007 national census.

Under the supervision of IE trained personnel, the enumerators hired by the *Aprender a Ler* project will apply an objective, valid and reliable instrument for determining individual student reading achievement of ten second and ten third grade students in each of the 180 schools (30 per Province per treatment or Control group). It is anticipated that this Early Grade Reading Assessment (EGRA) instrument will consist of a number of sub-sections assessing different aspects of reading skills. For example the widely used World Bank/USAID EGRA instrument developed by RTI under the EdData II project provides sub-scores on:

- Oral vocabulary
- Concept about print (CAP)
- Letter recognition
- Reading speed and comprehension of text

The USAID EQUIP2 project and the Aga Khan Foundation (Mozambique) adapted this EGRA instrument to Mozambique and applied it to 631 third grade students in 49 schools from six Districts in the Cabo Delgado Province in May 2010. Although the IE does not specify which reading assessment should be applied by the *Aprender a Ler* project, we encourage them to examine relevant parts of the EQUIP2/Aga Kahn Foundation instruments, as these are readily available, adapted to Portuguese and the Mozambique setting, and, in the case of the EGRA, derived from an instrument and methodology that has been successfully employed to measure reading achievement in the target grades in a number of languages worldwide, and is considered a practical, rapid and relatively simple instrument to apply in the field.

Student-level data on assessed students will also be collected at the same time as the reading assessment, covering gender, age, repetition status, linguistic situation at home, possession of Portuguese and local (L1) language textbooks, attendance during a sample period (such as the prior calendar month) for both end-of-year assessments, OVC status (if the student can and/or is willing to provide the information regarding the family situation) and other relevant variables.

Teacher-level data for the classrooms selected for reading assessment will include teacher gender, age, years of experience, pedagogical formation, reading-specific training received, possession of teaching guides for Portuguese and local (L1) language instruction, and other relevant variables. We also propose to obtain data on the number of days classes were offered for the same period as obtained for student attendance.

A simple classroom inventory will describe the environment in terms of class enrollment, students present on the day of the assessment, basic facilities, textbooks and other reading materials available.

School-level data extracted from the MINED's information system as of the early March data collection period and the end-of-school-year achievement reporting will provide valuable information, by gender and grade, regarding enrollments, enrollment by age, promotion, repetition and drop-out as well as the linguistic composition of the school population and use of L1 in instruction by grade level, orphan status of the student population, and a number of other variables. For the end-of-year application, data are also available by grade on the distribution of final grades in Portuguese language instruction (0-9, 10-13, 14-20).

On September 26, the MINED's *Direcção Nacional de Planificação e Cooperação* (National Directorate for Planning and Cooperation) provided the IE with a set of "pivot tables" that allow for consulting the data from the initial and end-of-school-year data collection rounds, including drill-down capabilities to the school and grade level. To facilitate the IE's assembling of both the sampling frame and as inputs to the IE analysis process, the Directorate also provided the actual detailed Access databases containing all data for all schools in the two Provinces. This provides both the *Aprender a Ler* project and especially the IE with extraordinary tools to support projected and future needs. The IE has actively supporting the use of school-level data for project planning and evaluation purposes at the MINED, in addition to the extensive published aggregated tabulations for which the Planning and Cooperation Directorate has long been known. One of the IE's deliverables, the Survey of School Demographic Data, will largely be based upon analysis of the information contained in the databases, and will inform the sampling process.

MINED data is timely and has excellent coverage in the public sector because it is both a contractual obligation with school directors and a basis for budgetary distributions to the school level. While preliminary examination of the databases shows that certain items are not always reported, the fundamentals of the educational statistics are. The use of a relational database system has enhanced the reliability of information country-wide and the MINED is to be commended for establishing such a systematic approach to school based information collection. We propose to use this information resource to go beyond the basic tabulation of data at the Provincial and District level to associate project impacts with inputs in a way that are understandable to MINED officials, while also using these data to understand how to target interventions in a more effective way.

4. QUALITATIVE DATA AND INSTRUMENTS

The quantitative data that we will collect (MINED and results of the EGRA administration) will answer questions such as who (second and third grade students), what (reading scores obtained), where (180 schools), and how much (gain in scores). This will be complemented with qualitative data in order to answer "why" and "how" questions. Collecting and analyzing qualitative data usually involves talking to or observing people and focusing on meanings, patterns of relationships, and perceptions.

It is important to note that the IE will not collect project implementation data but rather utilize data collected by *Aprender a Ler* in order to enrich the impact evaluation. Thus, data related to the delivery and quality of training, the quality of the instructional materials, teachers' perception

of the helpfulness of coaching, classroom observations, and other data relevant to the RCT will be collected by *Aprender a Ler* M&E system and results will be made available to the IE.⁶

However, the IE will collect some qualitative data needed in order to establish comparisons between the situation at the time of the Baseline Study and at midterm and endline. For example, we will develop (i) an instrument to assess teachers' skills and attitude towards early literacy and the challenges and obstacles they face and (ii) a checklist with information that will allow the drawing of a profile of the schools receiving treatment (instructional materials available, classroom furniture, number of students in class, etc.). Even though the USAID/*Aprender a Ler* project is not designed to address the infrastructure situation at schools, the school profile could help the IE to explain the intensity of findings.

The first step in qualitative data collection is to define the indicators that we propose to address. Since there is more than one way to collect data on any indicator, we will need to make a decision about which instruments will work best for the Impact Evaluation—this will be based on the experience of the team and effectiveness and cost of collecting and analyzing the data. For each indicator and data source we will consider which instrument and methods of data collection will give us the best answer to our questions and what makes most sense in the local context. Instruments and data sources will flow from the indicators.

Different data sources will vary according to: (i) accuracy of the information (validity); (ii) stability of the measures (reliability); and (iii) ease (and therefore cost) of collecting the data. In selecting our data sources we will take these issues in consideration. Assuming that the instruments to be used for data collection produces data that is valid and reliable, the accuracy of information is related to whether the source was in possession of the information needed. For example, asking Provincial directors about resources available at the District or asking school directors about the technical capability of the District staff may result in answers that do not represent reality and that, therefore, are not valid. We can control the stability of the data by testing responses that are so different from all other responses that they can be considered specific cases, or outliers. Alternatively, to avoid trimming the data to fit an intended outcome, an approach is to first test if the response should be kept or not. The IE team will address this in January 2013 as part of the planning for the baseline survey and analysis in February/March 2013. The ease of collecting data is related to the fact that the IE supervisors will already be at the Districts and at the ZIPs accompanying the *Aprender a Ler* enumerators to ensure the quality of the EGRA measure.

The IE supervisors will be responsible for the collection of the qualitative data—interviews with teachers and principals, skills inventory, school inventory and other data deemed necessary for the evaluation. These individuals will be under the direct supervision of the GSC Data Specialist who will be quick to identify and correct any problems related to data quality. Previous experience and the training provided to the supervisors coupled with the guidance and supervision provided by the GSC data analyst will ensure the quality of the data collected. (Please see Annex 3 for their profile and responsibilities).

A second instrument related to sustainability and cost-effectiveness of the intervention will be developed to collect data on second and third grade teachers in the treatment school. We envision developing a twenty- to twenty-five item instrument combining an *attitude towards early reading* scale with a checklist to record what the teacher has or does not have (such as books, materials,

⁶ Please see *Aprender a Ler* revised proposal, p. 25

training, etc.) at their disposal and the challenges he or she faces when teaching reading to young children.

Each method for data collection has its pros and cons and is more useful under some circumstances and less in others. We will select the method that will be relevant and appropriate in the local setting and help us obtain the most accurate and complete data possible without introducing unnecessary biases. With this in mind, we will develop a pre-coded interview protocol to document (1) roles and responsibilities of our interviewees versus what they actually do; (2) their technical capability and how it relates to the work they are tasked with; and, (3) the financial and non-financial resources at their disposal. We will control the introduction of unnecessary bias by using individuals associated with GSC Research, experienced in data collection and by providing them with training on the administration of the Impact Evaluation instruments.

Table 1 displays the indicator, the data sources and the instruments and methods of data collection that will allow us to answer one of the four evaluation questions—the likelihood that financial and technical resources, as in place in February 2013, are adequate to ensure the sustainability of the intervention once the project resources are no longer available.

Table 1: Tentative summary of qualitative data to be collected ⁷

<i>Question 1: To what extent does the “reading instruction support” treatment intervention cause early grade reading outcomes to improve for students in grades two and three in target schools whose teachers have received training, coaching and support?</i>		
Indicator	Data source	Instrument/Method of data collection
Change of teachers’ skills and attitudes towards early literacy	Teachers in the treatment schools and in the control schools	Skills/attitude Checklist administered by IE supervisors ⁸ Comparison between Baseline and Endline
School environment conducive to early literacy	Teachers in the treatment schools and in the control schools	Profile of schools. Checklist filled out by IE supervisors. Comparison between Baseline and Endline
<i>Question 2: To what extent does the treatment intervention of additional “school management” training, coaching and support to school directors cause a significant and additional improvement in early grade reading outcomes when coupled with “reading instruction support” in target schools?⁹</i>		
Indicator	Data source	Instrument/Method of data collection
Change of teachers’ skills and attitudes towards early literacy Change of school directors’ management skills and attitudes towards early literacy	Teachers in the treatment schools and in the control schools School directors in the treatment schools and in the control schools	Skills/attitude Checklist administered by IE supervisors ¹⁰ Comparison between Baseline and Endline

⁷ The IE will not collect implementation data. Those data will be provided by *Aprender a Ler*. The IE will only fill in information gaps.

⁸ The IE will utilize the results of classroom observations conducted by *Aprender a Ler*

⁹ The IE will utilize data provided by *Aprender a Ler* (results of SMA and coaching)

¹⁰ The IE will utilize the results of classroom observations conducted by *Aprender a Ler*

School environment conducive to early literacy	Teachers in the treatment schools and in the control schools	Profile of schools. Checklist filled out by IE supervisors. Comparison between Baseline and Endline
<i>Question 3: Cost-effectiveness - To what extent are the “Medium” and “Full” treatment interventions cost-effective? Specifically, what are the most significant reading outcome effects and unit costs per student, per teacher, per school director, per school of the key treatment interventions?</i>		
Indicator	Data source	Instrument/Method of data collection
Level of effort needed to implement “Medium” and “Full” treatments	District and provincial authorities and MINED officials	Interviews conducted by IE/GSC supervisors (PDs and district) and key personnel (Provincial and MINED)
<i>Question 4: Management & Sustainability: Of the most-cost effective interventions, which fall within the existing technical and financial management capacity of local education institutional personnel? What capacity-building activities would be required to ensure sufficient MINED technical and financial management capacity to implement the interventions?</i>		
Indicator	Data source	Instrument/Method of data collection
Level of financial/technical resources at District level	Relevant District staff in the selected Districts where the 120 treatment schools are located	In-depth interview in February 2013, September 2013 and September 2014
Level of financial/technical resources at “head” school of ZIPs and at treatment school levels	School directors at the “head” school of the ZIPs and treatment schools levels	In-depth interview in February 2013, September 2013 and September 2014

Collecting qualitative data usually involve fewer data sources (e.g. people or documents) than quantitative methods but present the challenge of organizing the thoughts and beliefs of participants into themes or typologies. Since our instruments will be developed to address specific indicators they will be easier to analyze. Qualitative data will be categorized and converted into numerical indicators.

The interview protocol, together with other qualitative instruments for data collection, will be developed, revised, refined and field tested during the months of October and November 2012. They will be included in the packet of data collection instruments, a deliverable due on December 31, 2012. Additional revisions or field-testing deemed necessary will be conducted in January 2013. By January 31, 2013 all instruments will have been finalized, duplicated, packaged and in the hands of our trained supervisors responsible for overseeing the collection of these data.

5. PROPOSED METHODS FOR DATA COLLECTION AND ANALYSIS

Training plan for field personnel

Training will be conducted to ensure that the *Aprender a Ler* enumerators and IE supervisors understand the requirements of the project and have full domain of the tools, techniques and the procedures for instrument administration in the field.

The supervisors will be chosen from a very select group that have participated in several training events conducted by GSC and have often led data collection teams. Annex 3 contains details on the profile and responsibilities of the IE supervisors.

IBTCI will conduct two training sessions. The first will target IE supervisors and include the

field-testing of quantitative and qualitative instruments and procedures for data collection. The second training session will include *Aprender a Ler* enumerators, as agreed with WEI, and will focus on the administration of the EGRA. Both training sessions will be held in Nampula Cidade for supervisors and enumerators assigned to both Nampula and Zambézia Provinces to ensure that knowledge, skills, procedures and instrument administration techniques are standardized in both Provinces. Training is a means for achieving the objectives of the Impact Evaluation related to data quality and should be seen as a continuous process whereby supervisors and *Aprender a Ler* enumerators will be retrained prior to the second and the third data collection occasions. The training plan summarized below presents a general guide regarding the skills supervisors and enumerators should possess.

The purpose of the IE supervisors is to ensure that the data collected by the enumerators are of acceptable standards. We foresee that IE supervisors will be “making the rounds” of schools where the enumerators will be collecting data. Since the IE supervisors, as indicated will have their own transportation and each enumerator team will be spending one day per school in order to administer the EGRA, the IE supervisor will be able to assess the quality of data by conducting frequent observation of the teams. Any issues with data collection procedures will be immediately reported to the Data Specialist.

IBTCI/GSC training plan can be briefly described as follows:

- *Purpose of training* – To share expectations related to the work and clarify the purpose of the training session: to ensure that good quality data and proper collection procedures are followed. The training process has been developed by GSC over a number of years so that all surveys provide quality results and these reflect honest and real opinions of respondents.
- *Pedagogical training* – At the end of the training, IE supervisors should demonstrate a full understanding of all field procedures and instruments. They should be able to supervise the EGRA administration, detect and correct flaws in the EGRA administration process, as well as in the application of other IE data collection instruments. They must understand how to approach respondents in non-threatening ways, be proactive and professionally responsible and perform with an attitude and ethical behavior framework such as to not influence the answers of the respondent.
- *Training methods and activities* – Active and interactive training methods will be employed to promote and ensure the acquisition of the skills described above as well as an awareness of issues and possible field implementation constraints. Training will focus on activities to be undertaken by the supervisors to reach the desired results. The training combines two components; a theoretical-practical (25%) and hands-on module (75%) that allows supervisors to face real-life conditions. The theoretical component includes training in basic statistics, monitoring and supervision matters, explanation of the objectives, process and procedures of the IE, the detailed study of the tools (quantitative and qualitative), ethics and human subject training, operational techniques of sampling and collection and compilation of information.

Logistics for the deployment of IE supervisors

Two dedicated supervisors per Province will visit every District and every “head” school of all ZIPs included in the IE sample, collecting qualitative data and tracking the data collection effort overall. They will also observe and monitor all *Aprender a Ler* enumeration teams. Further field

data quality supervision will be carried out by key IE consultants: the Deputy Chief of Party and the Data Specialist.

The Deputy COP in Maputo and the Data Specialist in Nampula and in the field will be in direct contact with the IE/GSC supervisors monitoring both the logistic arrangements and the supervisory functions of these individuals. The complete IE team will be in Mozambique at the most critical moments related to the field work: (1) the last week in January when joint training (IE supervisors and *Aprender a Ler* enumerators) for data collection takes place and (2) the first and second weeks in February, when data quality needs to be quickly assessed and corrections, if necessary, need to be made. In January, before data collection starts, the IE team will be able to set up the data bases. At the end of the first week of data collection (February), the IE team will conduct preliminary data analysis. In March 2013 the IE team will present the preliminary findings to USAID and to other stakeholders at USAID's discretion. The IE team will also be in Mozambique for part of the month of March conducting data analysis and for the initial preparation of the Baseline report due on March 31, 2013. It is possible that STTA specialist in impact evaluation, Dr. Reuben Hermosa, will be present as well.

The field deployment in two Provinces for simultaneous data collection requires that the IBTCI/GSC IE team ensure that all appropriate conditions and logistical arrangements for the success of the IE are present in order to get the desired results and products of recognized quality in a timely fashion. Although it is anticipated that some difficulties may arise during the field phase of the IE, we are confident that the experience and knowledge of the terrain of the IE supervisors and GSC monitoring staff will combine to make the data collection effort successful, identifying challenges and presenting practical solutions to field problems encountered so that data coverage and quality are ensured.

The following stages are envisioned:

- *Planning* – At this initial step, all detailed plans for subsequent implementation, control and monitoring of the progress of the IE and of the teams will be specified. The overall quality of the process will be ensured through the creation of conditions for proper supervision via the deployment of sufficient resources to achieve the results.
- *Implementation* — Each supervisor will have appropriate driving qualifications to drive GSC vehicles under arduous circumstances. This will allow them to be present during each day of implementation and the flexibility to engage in direct supervision and quality control where *Aprender a Ler* data collection teams are. As explained on page 14, GSC supervisors will observe the *Aprender a Ler* enumerator teams as they administer the EGRA tool, guide them if there are procedural doubts, and clarify issues related to EGRA administration. If a team is working as expected, the supervisor may leave to visit another school in the same ZIP and later return to the previous school for appropriate follow-up. It is important to note that the IE/GSC supervisors are GSC staff experienced in the leading of data collection teams in various provinces of Mozambique.

If *Aprender a Ler* enumerators – individuals or teams—are not working as specified during training, the IE supervisor will provide on the spot guidance and, in extreme cases, take over the EGRA administration task. These extreme cases will be immediately reported to the GSC Data Analyst and a replacement of the individual or team will be recommended to *Aprender a Ler*. As recommended by the IE, *Aprender a Ler* will be training more enumerators than the number strictly necessary in case an enumerator or a team needs or wishes to be replaced. We are confident that the supervisors' previous experience leading data collection teams, the specific EGRA training received, and the supervision of the GSC Data Analyst will combine to ensure good quality data for the IE.

- Filled-out instruments will be transported by the IE supervisors from the Districts where the school visits take place to the respective Provincial capitals (Nampula and Quelimane) and transferred from there to GSC headquarters in Maputo, where data will be processed and safely archived.
- *Control* – Daily monitoring of the data collection effort will be conducted to ensure the data collection coverage, schedule and quality of results.
- *Communication technologies and the technology platform* coupled with the software installed will make management and other logistical aspects more effective; and
- *Security* – Security awareness and policies will always be present and constant at each operational stage of the field data collection and supervision effort. A permanent record of risks and risk assessment will be maintained by each IE supervisor.

Data quality procedures in the field and during the data entry process

Data quality will be guaranteed by a multi-layered process that includes several steps: (i) quality assessment at the pre-test stage; (ii) data quality control while in the field will be conducted by the supervisors; (iii) quality control during data entry; and (iv) after data are entered, consistency checks will be performed at the database level and data will be cleaned.

The instruments will be field-tested during the training stage with the objective of establishing the validity and the reliability of the data instruments provide. “Validity” has to do with the ability of the instrument to gather the data we need. In other words: How valid is the inference we make based upon the data obtained? Or, does this particular instrument really collect the data that we need to base accurate inferences on? “Reliability” is related to ensuring that supervisors and enumerators ask the same questions in the same manner and record responses and answers in a way that facilitates reading of the filled out form or instrument. Field-testing will also provide information on the wording of questions, consistency of questions and the number of questions of the data collection tools (guides, questionnaires and other instruments). This time will also serve to assess the acceptance and understanding of the questions and the instructions and procedures to be followed by data collectors. All these issues will form part of the training.

Data quality assessment will be undertaken at all stages of the fieldwork by the supervisors in order to ensure that errors in the administration process are detected in a timely manner and that the results achieve high quality levels. Further details on what measures will be taken to ensure data quality are discussed throughout this section. As data are transmitted to GSC headquarters in Maputo, the IE team will spot check the data in order to detect errors and ensure quality as well as verify the data entry process. It is important to note that the full IE team will be in Mozambique at that time.

IBTCI supervisors will be responsible for the retrieval of the data collected by the *Aprender a Ler* enumerators. Arrangements will be made at the District level for the reception of filled-out instruments from the *Aprender a Ler* enumerator teams and sent by the IE supervisors to GSC’s headquarters on a weekly basis. Data entry will be carried out in parallel with data collection in the field, thus reducing the collection/entry delay to no more than one week.

A custom data entry system using CSPRO will be developed to ensure quality and consistency during the data transcription process. CSPRO allows facilitates the export of data files in a variety of formats for the data analysis phase (e.g., SPSS, STATA, SAS, etc.).

GSC possesses an experienced and high-trained staff of data coders and data entry clerks. GSC

retains experienced statisticians to oversee a permanent data quality process. All field instruments will be retained for consultation as data cleaning is undertaken, as well as for subsequent analytical use.

Quality assurance in the data entry process can be seen as a four-level approach:

- Data entry forms similar to the physical questionnaires, in order to avoid errors of transposition and transcription;
- Consistency in real-time as a result of the database programming/design. A data entry system will be created with error-prevention mechanisms that will alert the data clerk about inconsistent data and block the entry of any predictable abnormal data until the data controller can clarify the problem. Pre-coding of acceptable responses, where possible, will also minimize errors during the data entry process;
- Double-entry validation during data entry minimizes possible errors of data field transposition and response transcription. The double-entry process may seem to be more time-consuming and expensive, but it is an essential step for data quality assurance. This process involves the same questionnaire to be entered by two different operators and automatically compared. Any differences likely indicate a transcription error and can be immediately corrected; and
- Consistency after transcription. Post-verification applies data consistency rules that cannot be enforced in real time and help to validate the entire data collection and entry process. This form of verification detects both logical inconsistencies and inappropriate or questionable responses observed in the final set of data.

Further consistency checks will be performed after the database cleaning stage using SPSS in order to ensure full consistency of the information. Physical questionnaires will be examined when required to clarify doubts and undertake further checks.

Qualitative data will be recorded in pre-tested forms and pre-coding will be used as appropriate. Coding will be carried out according to a coding system to be developed by the Senior Data Specialist after examination of samples of qualitative responses. The original qualitative response text will be recorded for consultation and further analyses in the future.

Data analysis methods contemplated

Although it is preliminary to suggest exact data analysis methods at this point in time, the IE team has extensive experience in this area. Obviously, we must first understand the data when and as they become available. At this moment, we do not know what the distribution of actual data will look like, and the characteristics of data distribution make any given statistical technique valid or invalid. Thus, a full set of descriptive statistics will be developed as a first step. We anticipate that most if not all analyses will be carried out using the SPSS statistical package.

Following the baseline data collection, we will be very interested in determining whether the RCT randomization procedures provided the IE with reasonably comparable schools in each group prior to intervention by the *Aprender a Ler* project. If undertaken quickly after the baseline, any extreme imbalance in school numbers or characteristics among the groups could be addressed. If not possible, it means that the analysis team will need to keep in mind this issue in future analyses.

At the baseline, therefore, we envision descriptive statistics and comparative analyses. The comparative analyses certainly would address comparability of the three RCT groups, but might

also examine EGRA results (sub-scores) by a number of sub-groups (e. g., student and teacher gender, urban/rural nature of the school, language spoken at home, age of the student, etc.). Non-parametric methods such as chi-square are useful for evaluating relationships between categorical variables, Students t-test for examining differences in continuous variables between two groups, and analysis of variance (ANOVA) for continuous variables between more than two groups.

Regression models will be applied to examine, and better understand, the predictive power on reading outcomes of any number of independent variables collected. This knowledge will be useful for developing more complex models that will examine changes effected by the two intervention packages versus the control group, at the two end-of-school-year observation points in 2013 and 2014.

The “Medium” and “Full” interventions will be tested for their impact on improved early grade reading outcomes, while holding all other factors constant. An illustrative model can be specified in the following general form:

Early Grade Reading Outcome = f (Medium treatment, Full Treatment, X)

The general form states that improved early grade reading is a function of the medium or full treatment and a series of other determinants represented by X. Regression analysis can be applied to a more formal specification such as:

$$Y_i = \beta_1 + \beta_2 \text{ Medium} + \beta_3 \text{ Full} + \beta_4 X_i + u_i$$

where Y represents the early grade reading outcome of school i . An example of this measure would be the average EGRA score of the school and the evaluation team with work with USAID to identify the most appropriate measure. “Medium” and “Full” are dummy variables to identify if school i is receiving the medium or full treatment. Thus the coefficients β_2 and β_3 are estimators of the Medium and Full treatments, respectively. X is a vector of school characteristics that will be developed in consultation with USAID, the *Aprender a Ler* project and the MINED. An error term is represented by u_i .

Examples of such school, teacher and student characteristics could include: classroom facilities or equipment; pupil-teacher ratios disaggregated by gender of each; training level and years of experience for the teacher; whether a student is repeating the grade; student attendance patterns and similar variables. Where possible, such data will be derived from existing data sources and cannot be excessively burdensome to collect, to analyze, to report, and/or ultimately to use.

Although regression models become the obvious choice as the datasets grow more complex over time (and possible comparisons also increase in number), we also understand that what is powerful to measure and evaluate impacts is not always readily understandable by a more general audience. We will thus develop means of expressing impact gains in more commonly understood terms such as “words-per-minute reading improvement” and “increase in letter recognition scores.” This approach, combined with easy-to-understand graphical presentation of results will increase understanding of the policy implications of the impact of the *Aprender a Ler* project.

6. COORDINATION BETWEEN AND AMONG ORGANIZATIONS

The IBTCI/GSC Impact Evaluation team took the opportunity of the extended stay of IBTCI personnel in Mozambique—September 9 to October 5, 2012—to discuss and refine coordinating

mechanisms between the two organizations and among others players—USAID, MINED and the *Aprender a Ler* project. As of the writing of this Inception Report, the IE team is well-integrated and ready to start the implementation of the activities described in this document. Initiatives undertaken by the team are a result of this integration:

- The post-award presentation prepared and presented to USAID, MINED and *Aprender a Ler* personnel by the Chief of Party (IBTCI), the Deputy Chief of Party (GSC) and the Senior Data Specialist (IBTCI);
- The presence of the three key personnel at all meetings called by USAID;
- The obtaining from the MINED of the data to guide the sampling plan as a result of the collaboration established between the team and the Directorate of Planning and Cooperation;
- The collaborative effort by team members in the preparation of the Communication and User Engagement Plan and of the Inception Report, deliverables due on October 1, 2012;
- The harmonizing of the IE activities with the implementer's activities that required internal and external discussions of how the IE team could and would conduct its activities; and
- The rearrangement of resources on the subcontract budget to adjust to the needs and realities of the field and the context of Mozambique.

These initiatives are a reflection of long discussions and thoughtful consideration of the various tasks and challenges presented by the Impact Evaluation as well as by the *Aprender a Ler* design and implementation schedule. The fact that GSC has an established presence in Mozambique, fully-equipped and staffed offices in Maputo and in Nampula, is knowledgeable of the region and of the field where data are to be collected, has vehicles and personnel already trained to collect and enter data is an invaluable contribution to the smooth implementation of the IE activities.

The week of October 1st to 5th was used to refine roles and responsibilities of the IE team members. The work plan will be discussed again and every activity listed will be assigned to IE team member or members. We will define the tasks that GSC will advance during the period that the IBTCI consultants are not in-country; the tasks that IBTCI consultants will be responsible for; the management of the communications and virtual consultation needs and opportunities; and the future dates when the presence of key IBTCI personnel in Mozambique is most needed.

In addition to the integration of the IE team, the time spent in country when all key personnel were present was instrumental in initiating the collaboration with WEI and the *Aprender a Ler* project. Meetings facilitated under the guidance of the USAID Education Specialists resulted in a Coordinated Implementation Timeline for IE and for the *Aprender a Ler* project. Discussions with the USAID Education Specialists and other USAID/Mozambique specialists and Monitoring and Evaluation staff resulted in a clear view of the expectations of USAID/Mozambique as related to the Impact Evaluation. Especially important to the Impact Evaluation was the collaboration established with the MINED through its Directorate of Planning and Cooperation.

7. SUMMARY OF IE CONSTRAINTS AND LIMITATIONS

In various sections of the Inception Report the authors pointed out and discussed some constraints and limitations that may pose threats to the validity of the results of the Impact Evaluation. Elements of risk can be observed in project design, data collection procedures, sampling and access to data beyond EGRA results. Identifying these risks beforehand allows the IE team to

take measures to minimize them. In this section we summarize the constraints and limitations that may affect the study.

USAID/*Aprender a Ler* project design. Some of the threats to validity are a result of the project design itself. First, the *Aprender a Ler* project does not intend to directly intervene at all treatment schools. This means that some of the treatment schools (the “head” schools of the ZIP) will be directly exposed to *Aprender a Ler* interventions, while the remaining schools will be exposed to the interventions as implemented by personnel of the “head” school of the ZIP. Second, in Year 2 there will be no direct treatment and to continue “alive” the intervention will depend on the “head” schools of ZIPs. Finally, the intervention will only have been implemented for six months—from March to the end of August 2013—before the second round of data collection in September 2013.

Data collection procedures. The IE is responsible for ensuring the quality of the data collected by USAID/*Aprender a Ler* enumerators. To that effect, the IE will provide additional training specifically on EGRA administration to the supervisors selected to accompany the enumerators to the various schools. The supervisors are experienced data collectors with a track record with GSC Research, our local partner, and will have their own vehicle provided by GSC to move from school to school. The collaboration and coordination with the USAID/*Aprender a Ler* project has already started as several meetings were conducted in the months of September and early October between IE and *Aprender a Ler* personnel. During the meetings issues such as joint training, role of the IE supervisors and logistics were discussed. The IE subcontractor—due to its extensive experience in the logistics and difficulties of data collection in Mozambique—was able to provide some guidance to the *Aprender a Ler* COP as to the difficulties to expect. The IE team (especially the Data Analyst and the supervisors) will be attentive to the performance of the USAID/*Aprender a Ler* enumerators and communicate any problems that become obvious to the USAID/*Aprender a Ler* COP. Prior to that, during joint training, the enumerators will be observed in order to determine whether their profile and performance are aligned to the work to be conducted (Please see Annex 2 for a recommended profile for the enumerators).

Representativeness of the sample. The sample is representative of the schools where USAID/*Aprender a Ler* will intervene in 2013 and thus will indicate the power, or effectiveness, of the respective interventions in these target areas. The 120 treatment (60 per Province) schools shall all be located in the economic corridor of the two Provinces and that distinguishes them from schools in other areas of the Province.

Sample size. Even though Impact Evaluations need to calculate the appropriate sample size that will provide the necessary power to detect the impact of an intervention at a given level, in this particular case, the RFP determined the sample size *a priori*: 180 schools total of which 60 per treatment and 60 as control schools.

Provision of necessary data. The IE team will depend on the *Aprender a Ler* project to provide certain data in a timely fashion and in an adequate format. For example, the cost of ingredients of each intervention in order to determine cost-effectiveness of the interventions; results of the SMA (school management assessment) administered by USAID/*Aprender a Ler*; and monitoring data clarifying the inputs provided by the interventions. It is expected that a set of specific and measurable indicators will be selected by USAID/*Aprender a Ler* to report these data.

8. DETAILED FINAL EVALUATION WORK PLAN

WORK PLAN FOR THE IMPACT EVALUATION OF THE USAID/APRENDER A LER PROJECT

Timeframe	Tasks
<i>September 2012</i>	Mobilize IE team in Maputo
<i>September 4 – 30, 2012</i>	<ul style="list-style-type: none"> • Consult with USAID Mission, <i>Aprender a Ler</i> project staff and MINED • Consult with USAID/Mozambique regarding the Mission’s own plans to conduct data quality assessments during the IE period • PowerPoint presentation of IE design and methodology • Review the adequacy and availability of the MINED database • Coordinate with local partner and define roles and responsibilities • Define sampling frame • Identify relevant information needed and sources where data can be obtained • Finalize sampling plan • Prepare Inception Report and Communication and User Engagement Plan
<i>October 1 deliverables</i>	<p style="text-align: center;">Inception Report Communication and User Engagement Plan</p>
<i>October 2012</i>	<ul style="list-style-type: none"> • Conduct Survey to gather data on Districts and ZIPs selected by WEI (Selection of Districts completed by October 15, selection of ZIPs completed by October 31). • Based on the information gathered by the survey recommend ZIPs in each Province where WEI could implement the <i>Aprender a Ler</i> project in accordance with the RCT mode • Select, identify additional data sources at the District, Province and central levels • Draft IE instruments for the collection of data quantitative and qualitative: interview protocols for MINED officials at the District, Provincial and central levels and short surveys for teachers and directors • Recruit supervisors that will ensure data quality (EGRA administered by WEI enumerators) and collect IE data at the control and treatment schools
<i>October 30 deliverable</i>	Quarterly report on progress made between July 1 - September 30
<i>November 2012</i>	<ul style="list-style-type: none"> • Train supervisors on EGRA administration and on the administration of IE instruments • Finalize IE instruments for data collection at the schools
<i>November 15 deliverable</i>	Survey for sampling purposes
<i>December 2012</i>	<ul style="list-style-type: none"> • Train supervisors to ensure data quality of reading test results and to collect qualitative and quantitative data at the Province/District/school levels • Pilot logistic arrangements related to supervisors deployment and data collection • Coordinate training with <i>Aprender a Ler</i> project
<i>December 30 deliverable</i>	Finalized IE instruments (including description of piloting, administration procedures and target audiences)
<i>January 2013</i>	<ul style="list-style-type: none"> • Refine detailed plans/procedures to be followed for RCT Baseline Study • Retrain supervisors to ensure data quality of reading test results and to collect qualitative and quantitative data at the Province/District/school levels
<i>January 31 deliverable</i>	Quarterly report on progress made between October 1 - January 30

IBTCI Impact Evaluation for USAID/*Aprender a Ler* - Inception Report &
Communication and User Engagement Plan

<i>February 2013</i>	<ul style="list-style-type: none"> • Conduct RCT Baseline Study in 180 schools • Accompany <i>Aprender a Ler</i> enumerators to schools in order to ensure data quality • Collect qualitative data, enter and analyze data • Revise data sent electronically by WEI to integrate into the Baseline report
<i>March 2013</i>	<ul style="list-style-type: none"> • Enter and analyze data • Prepare Baseline report
<i>March 31 deliverable</i>	Baseline Report
<i>April 1st – August 30</i>	IBTCI team available for virtual consultation GSC team available for in-country consultation
<i>April 30 Deliverable</i>	Quarterly report on progress made between January 1 - March 31
<i>July 31 Deliverable</i>	Quarterly report on progress made between April 1 - June 30
<i>August 2013</i>	<ul style="list-style-type: none"> • Retrain supervisors • Prepare IE instruments for data collection • Review logistical arrangements for second round of RCT data collection
<i>September 2013</i>	<ul style="list-style-type: none"> • Conduct post-intervention RCT in 180 schools • Accompany <i>Aprender a Ler</i> enumerators to ensure data quality • Administer IE instruments • Enter and analyze data
<i>October 2013</i>	<ul style="list-style-type: none"> • Enter and analyze data • Prepare Final IE Year 1 report • Prepare PowerPoint presentation with preliminary findings, conclusions and recommendations
<i>October 31 deliverable</i>	Draft of final IE Year 1 report and PowerPoint Presentation with preliminary data including recommendations on most cost-effective intervention to bring to scale in subsequent academic years
<i>November 2013</i>	<ul style="list-style-type: none"> • Disseminate results to key stakeholders: USAID, MINED, local education institutions, civil society, cooperating partners, etc. • Finalize IE Year 1 report
<i>December 2 deliverable</i>	Final IE Year 1 Report
<i>August 2014</i>	<ul style="list-style-type: none"> • Retrain supervisors • Prepare IE instruments for data collection • Review logistical arrangements for second round of RCT data collection
<i>September 2014</i>	<ul style="list-style-type: none"> • Conduct post-intervention + 1 year RCT in 180 schools • Accompany <i>Aprender a Ler</i> enumerators to ensure data quality • Administer IE instruments • Enter and analyze data
<i>October 2014</i>	<ul style="list-style-type: none"> • Enter and analyze data • Prepare Final IE Year 2 report • Prepare PowerPoint presentation with preliminary findings, conclusions and recommendations
<i>October 31 deliverable</i>	Draft of final IE Year 2 report and PowerPoint Presentation with preliminary data including recommendations on most cost-effective intervention to bring to scale in subsequent academic years
<i>November 2014</i>	<ul style="list-style-type: none"> • Disseminate results to key stakeholders: USAID, MINED, local education institutions, civil society, cooperating partners, etc. • Finalize IE Year 1 report
<i>December 2 deliverable</i>	Final IE Year 2 Report – IE Close-out

ANNEX 1. STUDENT RANDOM SELECTION AT THE CLASSROOM LEVEL

Alunos Presentes	Números Correspondentes aos Dez Alunos Selecionados									
11	2	3	4	5	6	7	8	9	10	11
12	2	3	4	6	7	8	9	10	11	12
13	1	2	4	5	7	8	9	10	11	13
14	1	3	4	5	6	7	8	9	10	11
15	1	2	3	4	5	7	8	13	14	15
16	1	2	4	6	8	9	10	11	14	16
17	1	3	4	5	7	8	13	14	15	17
18	1	2	4	5	6	8	11	13	14	16
19	1	2	3	9	10	11	12	15	17	19
20	1	2	3	4	5	6	7	10	14	19
21	2	5	6	10	11	12	14	17	19	20
22	2	4	5	6	7	9	10	16	20	21
23	1	6	7	9	10	11	14	16	18	20
24	1	2	3	5	10	12	14	20	21	23
25	1	7	10	11	12	13	15	18	19	24
26	3	4	6	7	8	13	15	19	20	25
27	1	8	10	14	18	20	21	23	24	26
28	5	6	7	8	12	16	17	18	23	27
29	5	6	7	11	14	17	18	20	28	29
30	3	4	5	9	13	19	20	25	29	30
31	2	5	9	11	13	15	17	22	23	24
32	4	5	9	13	14	16	19	21	23	27
33	4	6	14	15	16	17	18	19	28	31
34	1	3	5	7	9	13	15	18	26	27
35	3	8	9	11	13	17	18	28	29	35
36	2	9	10	18	23	26	27	30	31	35
37	1	4	6	12	13	18	29	30	31	36
38	1	6	8	12	16	18	23	24	25	33
39	6	9	17	18	19	24	28	32	33	38
40	5	10	11	12	13	16	26	27	36	39
41	1	2	6	7	15	16	23	25	31	38
42	3	4	10	14	21	23	28	35	37	40
43	1	2	3	7	11	15	26	28	31	35
44	1	4	9	14	22	26	28	33	41	42
45	18	19	25	27	29	31	38	40	41	45
46	8	11	12	17	27	38	43	44	45	46
47	3	4	6	13	24	29	30	32	37	38
48	12	13	14	16	18	19	27	41	42	45
49	5	7	11	21	22	32	35	38	42	49
50	8	18	26	28	30	31	33	34	42	50
51	6	9	14	20	21	25	27	31	38	49
52	4	5	10	22	24	25	26	28	33	36
53	4	16	21	23	27	37	42	49	51	52
54	6	10	13	26	30	32	35	43	45	47
55	11	13	20	22	24	41	49	51	52	55
56	2	3	4	19	23	39	43	48	50	55
57	2	8	10	15	18	23	26	40	49	50
58	3	18	20	21	31	33	37	49	53	55

Alunos Presentes	Números Correspondentes aos Dez Alunos Seleccionados									
59	3	13	15	18	21	24	34	36	55	57
60	13	20	22	29	33	37	43	53	58	60
61	5	8	11	14	32	38	43	44	47	54
62	20	24	25	32	41	42	43	53	55	62
63	9	10	16	17	29	39	44	53	56	60
64	2	5	12	19	42	43	52	61	62	64
65	19	22	23	24	30	38	46	54	57	64
66	6	15	20	31	34	45	59	62	63	66
67	2	5	21	27	51	52	59	61	64	65
68	21	22	27	28	29	30	34	37	47	67
69	4	8	9	12	16	17	18	34	53	67
70	3	5	11	18	23	42	47	57	59	70
71	9	37	38	44	45	46	55	65	68	71
72	2	5	11	18	20	36	42	62	65	72
73	2	6	8	9	20	24	28	31	53	69
74	5	6	11	15	16	22	39	44	45	67
75	1	5	7	8	12	25	40	47	54	70

PROCEDIMENTO PARA A SELEÇÃO DE ALUNOS A AVALIAR

1. Ao chegar à sala de aula fazer uma lista numerada dos alunos PRESENTES.
2. Caso haja 10 alunos (ou menos) presentes, fazer a avaliação de leitura de TODOS presentes.
3. Caso haja mais de 10 alunos, consultar a fileira correspondente ao total de alumnos presentes. Utilizar os dez números indicados à direita para selecionar na lista os alunos a avaliar.
4. Caso seja impossível avaliar o aluno indicado, selecionar na lista dos presentes o aluno que precede ou segue o último selecionado.

PROCEDURE TO DEVELOP THE RANDOM STUDENT SELECTION TABLE

The purpose of this table is to provide the EGRA evaluators with a randomized, unbiased procedure for selecting students for assessment upon arrival at the classroom. All students present in the classroom will have an equal opportunity for selection. The order in which students are listed as present (such as by gender, seating position, etc.) has no bearing on their probability of being selected, as selection is purely random for each of the 10 numbers produced (rather than systematic).

1. Generate rows containing numbers 11 to 75 in the first column of the Excel spreadsheet.
2. In the cells to the right, use the RANDBETWEEN (bottom, top) function to generate 20 random integers between 1 and the number in the first column (the total number of students present at the start of the EGRA evaluation).
3. Examine the first 10 randomly generated numbers in each row for duplicates. As required, substitute the duplicate(s) with the first non-duplicate from the second set of 10 numbers to the right of the first 10. Repeat for any other duplicates among the first 10 columns of randomly selected numbers for each row.
4. For each row, sort the 10 selected numbers within row from lowest to highest. Re-examine for duplicates and obtain replacements as indicated in Step 3.

ANNEX 2. SUGGESTED PROFILE AND RESPONSIBILITIES OF *APRENDER A LER* ENUMERATORS

PROFILE

- Minimum 12th grade, if possible with a university level degree or enrolled in linguistics or social sciences (psychology, sociology, other).
- Good communication skills, including reading analysis and observational skills.
- Fluent in Portuguese and local languages (Nampula and Zambézia).
- Good physical conditions and not suffering from any chronic disease that may impede travel under challenging situations
- Desirable experience in fieldwork and in interviewing skills.

RESPONSIBILITIES

- Select students from second and third grade primary school classes as indicated in the Training & Administration Manual.
- Apply the EGRA tool (reading assessment) to randomly selected students from second and third grades.
- Collect quantitative and qualitative data at school level using the appropriate IE instruments when necessary.
- Deliver the complete and checked package with filled-out instruments to the supervisor as indicated in the Training & Administration Manual.

ANNEX 3. PROFILE AND RESPONSIBILITIES OF IE GSC SUPERVISORS

PROFILE

As explained in the Inception Report, the IE supervisors are GSC staff selected as supervisors based on their ability to lead teams of data collection individuals. At the moment, GSC does not foresee any turnover of the staff (specifically IE supervisors). Should this happen another qualified GSC staff would be selected to fill the vacancy.

- Minimum 12th grade degree, if possible with a university level degree or enrolled in linguistics or social sciences (psychology, sociology, other).
- Good communication skills, including reading analysis and observational skills.
- Fluent in Portuguese and local language (Nampula and Zambézia)
- Valid drivers license (Supervisors will need to drive the GSC vehicles to the various schools).
- Good physical conditions and not suffering of chronic disease that could impede work and travel to hard-to-reach locations.
- Experience in fieldwork and good interviewing skills.
- Experience in operational statistics, field supervising and project monitoring.

RESPONSIBILITIES

IE supervisors will have two key roles. The first is to ensure overall quality of the data collected in the field by *Aprender a Ler* enumerators, The second role is to collect data at the District and ZIP levels—qualitative data within the target groups through direct supervision of the application of EGRA assessment and other tools developed by the IE team.

- Task 1. To ensure the overall quality of the data collected in the field.

The IE/GSC supervisors will be under direct supervision of the GSC Data Specialist and will report to him if there is any issues with the enumerators and/or data collection

Task 2. (From directors, teachers) and any other quantitative data require the use of proper pre-tested tools (guides, forms, questionnaires or any other material).

- Supervision of application of the EGRA tool. The supervisors will have their own transportation—GSC vehicles. That allows them to visit schools, observe the EGRA application being conducted by *Aprender a Ler* enumerators, collect the data needed by the IE, and move to another school.
- Observe how the assessments are being conducted by the enumerators, if application procedures are being properly followed and whether children's responses are accurately recorded.
- Intervene when necessary to guarantee that reading assessment results and other data

collected accurately reflect the reality observed.

- Review every completed instrument to ensure consistency and completeness.
- Apply qualitative IE instruments to the target groups (District MINED authorities, ZIP “head” school directors and teachers) and collect any other quantitative data required at District and ZIP levels.

Part 2: Communication and User Engagement Plan

INTRODUCTION

In August 2012, International Business & Technical Consultants, Inc. (IBTCI) was awarded Task Order AID-656-TO-12-00002 to conduct an Impact Evaluation of the USAID/*Aprender a Ler* Project being implemented by *World Education, Inc.* (WEI) in Mozambique in the period July 2012—December 2014. The Impact Evaluation is not an evaluation of the USAID/*Aprender a Ler* Project, rather its objective is to test the development hypothesis, that reading outcomes will improve as a result of interventions that enhance the quality and quantity of reading instruction and expands directors' school management skills. The project was originally titled Early Grade Reading Assessment Plus Quality Instruction and Management (EGRA+QIM) in Mozambique.

A randomized control trial (RCT) methodology recommended by the new USAID evaluation policy is being used. This Impact Evaluation has the potential to raise awareness regarding the importance of outcome-focused studies and the utilization of valid and reliable results for decision-making. It is expected that an effective dissemination of findings will lead education leaders at the central, regional and local levels as well as civil society to a greater awareness regarding issues associated with early reading and the need and cost of instructional interventions focused on the improvement of reading skills.

This Communication and User Engagement Plan proposes outreach activities to be undertaken in order to disseminate Year 1 and Year 2 findings of the Impact Evaluation of the USAID/*Aprender a Ler* Project. At the same time, it discusses some risks related to dissemination of findings in Year 1 and examines possible alternatives. The dissemination plan highlights the important issue of the utilization of evaluation findings and how educators and other stakeholders can most benefit from evaluation results. More specifically, it calls attention to two important applications of results. The first centers on using results to design interventions aimed at enhancing the quality of the instructional process. The second maintains that is both possible and cost-effective for an educational system to use valid and reliable results of rigorous impact evaluations as catalysts for improving its efficiency, efficacy and equity.

Many significant educational policies are shaped as a consequence of decisions unrelated to the real issues faced by students, teachers and schools. Staff members of the Ministry of Education can and *do* play an important role in the nature of a country's educational operations. However, very frequently different departments seem to function in two separate worlds: data have been collected and the information is available but not often used to guide policy and instructional decisions. Education specialists are often intimidated and threatened by data or do not receive the information in an easy to use format. Evaluation, measurement and research specialists seem to focus more on data than on how results can be applied to improve the system, thus neglecting to present evaluation findings in a manner that leads to utilization. Furthermore, many citizens are not aware of how results of an evaluation are related to the education of their children. Civil society must not only become more knowledgeable regarding the portrait painted by the findings of an evaluation but also learn to use them to play an active role in helping to shape the type of education provided to their children.

Collaboration is a key notion that underlines this Communication and User Engagement Plan. The main obstacle to collaboration is limited knowledge. In response to this obstacle, the way to break down barriers between education and evaluation specialists, community members and the general public is to get them together to talk to each other in common terms. Ministry, provincial

and district staff must focus on results to make policy decisions. Teachers must look at assessment results as a lever for instructional improvement. Civil society must be made aware of how evaluation, measurement and research results are related to the education of their children so that they may advocate for better schools and have a more active voice in decision-making. Evaluation and research specialists should learn to communicate relevant findings in a manner that facilitates understanding and utilization. Evaluation findings should be used not only to show the *status quo* but also to point the way forward. With the adoption of a collaborative orientation, it is reasonable to expect plans to emerge from the joint effort of the various constituencies.

In addition to what was discussed above, the Communication and User Engagement Plan proposed in this document seeks to:

- Demonstrate to Mozambican audiences that the United States provides assistance for education in Mozambique through USAID;
- Position USAID as a key GOM ally at the central, regional and local levels;
- Report whether USAID/Mozambique is achieving results that have a positive impact on Mozambique's development; and,
- Document whether USAID/Mozambique is applying science, research and the use of host country partners to bring faster, more cost-effective and sustainable results in development.

1. DISSEMINATION STRATEGIES

There are many reasons for the dissemination of evaluation findings. In the case of the USAID/*Aprender a Ler* project, one important reason to share the results of the Impact Evaluation with stakeholders is to raise awareness regarding the importance of reading achievement and to advocate for additional attention and resources. A second reason, equally powerful, is to contribute to the global understanding of what works and what the cost-effectiveness is of specific early grade reading interventions. Impact evaluation findings may provide further insight on those contextual factors that affect the acquisition of reading skills, thus shaping future efforts in the area of early grade reading instruction.

Making the findings of the Impact Evaluation available to civil society will also emphasize the fact that one has to read in order to learn and that failure in later years of schooling is related to the inability to read. The dissemination efforts will help build positive perceptions regarding pre-reading activities that can be conducted at home and in reading programs conducted at school. Moreover, findings seen as valid and reliable often shape donor's decisions about resources in terms of how much to allocate to social and educational programs. Results can also be used to lobby for policy or legislative changes that relate to reading by pointing out unmet needs or barriers to success. By sharing results, we will ensure that others will learn from the project experience in terms of which strategies are having the intended impact, what works and what does not.

When it comes to the dissemination of results, the role of MINED and USAID cannot be overstated. MINED and USAID share ownership of the project and will play leading roles in the dissemination of results. The Communications and User Engagement Plan, as presented in this document, briefly outlines activities and issues related to dissemination of evaluation findings. The next step shall be to seek the input of MINED, USAID and WEI regarding their views on an effective dissemination plan that will improve the likelihood that evaluation findings are utilized. One of the objectives of disseminating evaluation findings is to make decisions regarding

education policies and their implementation less political and more evidence-based. Consultation among all parties about this plan will be a specific task of the IE team in the quarter beginning January 2013 when the full team is in Mozambique.

Prior to detailing the Communication and User Engagement Plan, a few questions need to be asked and answered.

- *What do we want to disseminate?* Of specific interest are the comparison pre-post intervention and the cost-effectiveness of each intervention. Using the baseline data as a basis for comparison allows us to say, with a degree of certainty, that improvement in reading scores observed between the two data points (pre- and post-intervention) results from the interventions implemented. The use of a control group provides an understanding of where reading scores would be without the intervention. Information on other quantitative and qualitative variables will be reported to explore those factors related to students, teachers, principals and schools that affect reading achievement.
- *Who are our stakeholders and what are we offering them?* Stakeholders include USAID, the education community (MINED at the central, regional and local levels, colleges and universities, researchers, etc.), donor agencies, national and international NGOs/FBOs, CBOs, local media, community leaders and other members of civil society. The information obtained by the Impact Evaluation will be disseminated to the different audiences in accordance with their specific interest. For example, a university professor may be interested in the details of the study to ascertain the validity and reliability of the results; MINED would be interested in valid and reliable information regarding cost-effectiveness of the interventions in order to facilitate policy decisions; parents would be interested in practical information on how the reading skills of their children can be improved. Information is power and the needs of each of the target audiences will be considered in order to provide information that will empower them to make decisions and advocate for more quality and more relevant education.
- *When do we disseminate?* For dissemination, *timely* is a magical word. Therefore, the decision has been made to organize dissemination events in November of 2013, after one year of project implementation, and in November 2014. This scheduling presents some risks to the Impact Evaluation as discussed in Section 5.
- *What are the most effective ways of disseminating?* We propose to disseminate the results of the Impact Evaluation through conferences and information-sharing meetings; fact sheets with graphic presentation; links to the evaluation results on relevant websites; press releases; media dossiers; and highlighting of key findings in the media.
- *Who might help us disseminate?* Under the leadership of MINED and USAID, we will identify people and organizations that could potentially be idea champions of early grade reading. The idea is to have a key public opinion maker as flagship of the project. As an example of potential options is a musician such as Stewart Sukuma, a well-known and recognized personality with a positive image across the population. Another example is the writer, Mia Couto, who could provide a direct relation to reading.

2. KEY STRATEGIC COMPONENTS

Reaching the target audiences involves a three-step process: (i) fresh and relevant information

presented in a timely manner; (ii) information packaged in user-friendly formats; and, (iii) information disseminated to the target audiences at the level of details that makes it actionable. We propose a multilayered dissemination process to engage key stakeholders in being message multipliers, so that an increasingly broad audience learns how the results Impact Evaluation can be used to guide educational policies and actions. The purpose is to encourage debate, problem solving and joint ownership of plans to address the opportunities and challenges identified by the Impact Evaluation. The dissemination events will be organized to facilitate the use of the results as a springboard for action.

Three conferences are planned in November 2013 and another three in November 2014: one each year in Maputo and one each year in the capital cities of the two participating provinces—Nampula and Zambézia. At the national level, the conferences conducted in Maputo will center on the findings of the Impact Evaluation and the implications for policy decisions. The intention is to use the event as a collaborative effort to develop an agenda for early reading improvement. Therefore, it is important to ensure that key stakeholders such as relevant MINED Directorates, institutes for teacher preparation, donor agencies, foundations, national and international NGOs, potential donors from the private sector, and local media are drawn to the event. The conferences will be organized for 30 people to allow debate and reflection as well as the emergence of plans to address the problems discussed. Materials prepared for the conference will be made available electronically to interested participants.

Under the leadership of MINED and USAID, and in collaboration with World Bank, UNDP and other donors, we will seek to engage influential journalists in roundtables focused on reading and on the findings of the Impact Evaluation. MINED has just launched a first edition of a journalism award to recognize the role and the contribution of journalists to the improvement of education quality in Mozambique. The award will consider work published between November 1st of 2011 and October 31st of 2012 in various media such as newspapers, television, radio and photojournalism and will be granted in the month of November of each year. If MINED concurs, we will draw from this pool of award winning journalists to assist us in the dissemination. As indicated above, press releases, media dossiers, fact sheets with graphics and other material to be defined will be developed to facilitate journalists' intervention and ensure that the dissemination conferences will receive significant visibility. To broaden the dissemination effect, approximately ten meetings will be conducted as a follow up to the conference in order to address the interests of specific groups.

At the provincial level the two conferences to be conducted will target MINED provincial authorities, regional education institutions, donor agencies, cooperating education partners, and regional NGOs/FBOs/CBOs. The objectives are to share information related to the pre-/post-intervention reading performance of students, to emphasize the importance of early grade reading, and to promote the implementation of actions to improve reading, especially in the early grades. We will attempt to disseminate findings and implications to Portuguese and local language media programs in the target provinces. Conferences will occur in the Provincial Capitals of Nampula and Quelimane with the same structure and targeted number of key stakeholders as done in Maputo. In order to get more visibility for the project, the provincial conferences will be held sequentially (first Maputo, then Nampula, and finally Quelimane), allowing more media airtime.

In 2013 dissemination will be conducted at Central and Provincial levels only.¹¹

¹¹ As recommended in Section 3; Risks, dissemination events in 2013 should not go beyond the provincial level

In Year 2 (2014) district level representatives will be invited to attend the conferences in order to ensure their engagement in the dissemination of the information and it is expected that smaller meetings will be organized and conducted by the provincial and district authorities as a follow up to the conferences. These small meetings, conducted at the district level, will target school and community members with the objective of emphasizing the importance of early grade reading, increasing school attendance and stimulating community-led reading improvement initiatives. The provincial conferences will include a “how-to session” to assist district authorities, local NGOs/CBOs, Education Committees, parents, teachers, directors, community members, and other interested members of civil society in the organization and conduct of school and community meetings. We will provide the necessary material to assist them to do so (fact sheets with results expressed in graphic format and a “menu” of activities to improve pre reading and reading skills).

The idea is that at the district meetings, these stakeholders will be brought together to reflect on the findings and plan concrete actions that could result in the improvement of reading skills. For example, if student, teacher or director absenteeism is found to be a problem, what could be done to reduce it? What pre-reading activities could be conducted at home? The target audience will also include members of Parent/Teacher Associations, community leaders and individuals involved in communications media.

If additional funding can be obtained for 2014 dissemination, small meetings in the provinces could include the participation of members of the IBTCI/GSC team in a one-day District format when key local players would be invited to the headquarters of the district for a local level meeting.

3. RISKS

In the context of the plans for the dissemination of the findings of the Impact Evaluation, it is necessary to address the risk of having dissemination become part of the intervention and, as a consequence, affecting the results to be obtained in Year 2. This could happen if district authorities, teachers, directors, parents, and community became so enthusiastic after attending a dissemination meeting and learning how scores have improved (baseline vs. post intervention/Year 1 measurement) that they embark on a series of reading-related or attendance-related improvement activities to seek better results in 2014. In the case of intervention schools, it means that the dissemination of results has the potential to increase reading-related activities that may raise outcomes to levels higher than expected as a result of the treatments.

If parents or teachers at the control schools were to learn of the merits of reading-related activities inculcated through *Aprender a Ler*, the integrity of the Impact Evaluation could become compromised. For example: results of Year 1 are disseminated at the local level where control schools are located. Aware of the bad results obtained on both occasions (baseline and end of 2013) on the EGRA, teachers, directors, parents and District or ZIP staff decide to intensify reading instruction on their own in order to do better in 2014. If that were to occur, data provided by the control schools would be different than if local dissemination had not occurred.

To avoid the risk of dissemination becoming part of the intervention, we recommend that dissemination activities in Year 1 be limited to the level of the provincial authorities. That means

not conducting activities labeled YEAR 2 ONLY in 2013. These activities would be postponed until November 2014. The table that follows summarizes the audiences and formats of the dissemination activities that will take place during the months of November 2013 and 2014.

Communication and User Engagement Plan SUMMARY

<p>Relevant MINED Directorates, institutes for teacher preparation, donor agencies, foundations, national and international NGOs/FBOs, potential donors from private sector, and local media</p>	<p>Format and means of dissemination National Conference to be organized and facilitated by IBTCI/GSC evaluation team</p>
<p>Dissemination strategies:</p> <ul style="list-style-type: none"> • Share with decision-makers results of the Impact Evaluation and provide information regarding early grade reading interventions. • Provide MINED with information to advocate for more resources for early grade reading on a national scale. • Present findings in a way that will assist MINED to refine its planning for reading improvement on a national scale. • Engage participants in the development of an agenda for reading improvement that includes learning approaches and interventions that prove successful. (textbooks, doable assessment in the classroom, teacher-to-teacher interactions, and school management). 	<ul style="list-style-type: none"> • PowerPoint presentation of findings and discussion of implications • Press releases, media dossiers/books, media events • In collaboration with the World Bank, UNDP and other donors engage influential journalists in organizing roundtables centered on the findings of the Impact Evaluation and on early reading. • Place reports, PowerPoint presentations and other materials in relevant websites, including DEC as appropriate. • Make all conference materials available to participants electronically.
<p>Provincial and district authorities, local education institutions, local and international NGOs/FBOs, education cooperating partners</p>	<p>Format and means of dissemination Provincial conferences to be organized and facilitated by IBTCI/GSC evaluation team</p>
<p>Dissemination strategies:</p> <ul style="list-style-type: none"> • Share information regarding current levels of reading outcomes in the early grades and its consequences. • Raise awareness related to the importance of acquiring reading skills in the early grades. • Spur provincial and district actions focused on the improvement of reading outcomes 	<ul style="list-style-type: none"> • Two-page report of findings presented in graphic format • Discussion in small groups of actions to be taken (in response to a specific question) to improve reading outcomes in the early grades • A menu of “what works” in early reading
<p>YEAR 2 ONLY</p>	
<p>Community leaders, teachers, school directors, ZIP staff, parents</p>	<p>Format and means of dissemination Meetings to be organized and facilitated by local education officials</p>
<p>Dissemination strategies:</p> <ul style="list-style-type: none"> • Present findings to raise awareness of the importance of early grade reading. • Link findings to school attendance. • Promote community-based reading initiatives. 	<ul style="list-style-type: none"> • Findings presented in simple colored graphic formats easily understood (fact sheet for local distribution and use) • Local languages used whenever necessary • Menu of activities to improve reading skills (for example, reading and school attendance contests, home activities that improve pre-reading ability, etc.).

IBTCI – USAID/Aprender a Ler Impact Evaluation Inception Report &
Communication and User Engagement Plan

