

MEASUREMENT AND RESEARCH SUPPORT TO EDUCATION STRATEGY GOAL I TOOLKIT FOR THE LOCAL EDUCATION MONITORING APPROACH (LEMA)



MEASUREMENT AND RESEARCH SUPPORT TO EDUCATION STRATEGY GOAL I

TOOLKIT FOR THE LOCAL EDUCATION MONITORING APPROACH (LEMA)

Prepared for

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Cover photo: Chris Cummiskey, RTI International. During a pilot application of LEMA conducted in Ethiopia in April 2016, a pupil comes to the blackboard to complete an example during the Group Administered Literacy Assessment.

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Glossary

Term	Definition
Aggregated Data	Data from multiple sources that have been gathered or combined in order to be viewed or analyzed together
Alpha Error	The chance of misclassifying a school or district that is meeting the minimum performance standards as one that is not meeting them.
Assent	Oral or written expression of willingness or agreement to participate in a research study after it has been described and explained by an assessor to a child who is too young to give legal consent.
Assessor	A trained individual who is responsible for administering evaluation instrument(s) to students, teachers, and/or head teachers. The assessor accurately records responses or other data collected through interviews and observations.
Assessor Tool	Document containing guidelines, protocols, and instructions for correctly administering the Group Administered Literacy Assessment (GALA).
Beta Error	The chance of misclassifying a school or district that is not meeting the minimum performance standards as a school that is meeting them.
Binary Results	Results that are classified into one of two groups and are often expressed as 0 ("no" or not present) or 1 ("yes" or present).
Census	In a census, all the members of a population are included in a study (that is, no sampling is conducted). ¹
Classification Tool	Tool used to measure the existence or non-existence of a particular item—that is, whether something is present or not.
Classroom Observation	Observation of a reading lesson and assessment of teacher practices.

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¹ Some definitions provided in this list were taken verbatim or adapted from the *Early Grade Reading Assessment (EGRA) Toolkit, Second Edition* (RTI International, 2016).

Term	Definition
Consent	An adult respondent's written expression of willingness or agreement to participate in a research study after it has been described and explained by an assessor.
District-Level Decision Rule	The minimum number of schools that must be performing acceptably in order for a district to be classified as meeting the minimum performance standard on the whole.
EGRA	The Early Grade Reading Assessment (EGRA) is an oral student assessment designed to measure the most basic foundational skills for literacy acquisition in the early grades.
Evaluation Instruments	Assessment tools used to collect data in schools; includes the School Instrument and the Group Administered Literacy Assessment
Group Administered Literacy Assessment (GALA)	The GALA, administered to a group of primary school pupils, is designed to determine proficiency across a range of basic to more advanced literacy skills.
Indicator	A simple and reliable measure of change, whether at the project, activity, or system level.
LEMA Decision-Rule Table	A table that provides the minimum number of schools or students needed to meet minimum performance standards to classify a school or district.
LEMA	Local Education Monitoring Approach; a monitoring approach used to classify districts as meeting minimum education performance standards or not. The approach is based on the LQAS methodology and data collection instruments that allow for measurement of binary indicators.
LQAS	Lot Quality Assurance Sampling; is a classification tool which relies on small random samples and binary indicators (yes/no questions) to provide statistically valid quality assurance testing.
Minimum Performance Standard	The minimum value set for a given indicator to determine which schools or districts are most in need of support.
Nonrandom Sample	Items are selected from a population purposefully, without the requirement of equal probability of selection for all units.
Pupil Exercise Book Inventory	Table used to record availability and use of pupil exercise books.

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Term	Definition
Pupil Performance	For individual pupil literacy performance, pupils are said to have mastered a particular skill if they are able to correctly answer a set number of questions for a specific section of the pupil assessment. The standards for individual pupil mastery are set universally; that is, they do not change by country, region, language, or current average performance levels.
Pupil Sample	19 randomly selected pupils per school who are tested to classify a <u>school</u> as meeting or not meeting minimum performance standards.
Random Number / Sample Table	Table of numbers used for random selection of students and schools. Total sample size is displayed in the first row; total population size is displayed in the first column.
Random Sample	Items selected from a population such that at the time of selection, each item has an equal chance of being chosen for the sample.
Reliability	The overall consistency with which a measurement tool functions as intended over time or across groups of students.
Sampling Frame	The list of all the members of a population that can be assessed for inclusion in a sample. The sample is drawn from the sampling frame.
School Instrument	Document containing guidelines, protocols, and instructions for properly monitoring and evaluating a sampled classroom or teacher during a school visit (including consent, teacher selection, classroom observation, and pupil exercise book inventory).
School-Level Decision Rule	The minimum number of pupils that must be performing acceptably in order for the school to be classified as meeting the minimum performance standard.
School Sample	19 randomly selected schools where data will be collected and used to classify a district as meeting or not meeting a minimum performance standard.
Summary Sheet	Document used for recording all student and school performance—and determining whether or not schools or districts are meeting minimum performance standards.

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Term	Definition
Tabulation	Recording the information collected during the school visit in a form that allows the data to be analyzed.
Target Population	The theoretical group of subjects (individuals or units) to which a study's results can be generalized. The <i>sample</i> and the target population share similar characteristics, as the sample is a subset of the <i>target population</i> .
Validity	The correctness of measures and ultimately the appropriateness of inferences or decisions based on the test results.

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1 About the Approach

The approach described in this manual—and along with it the guidance for trainers, the materials for assessor trainees, and the instruments used in pilot administrations—has evolved in such a way that some preliminary clarifications of terminology and concepts may be helpful.

The Local Education Monitoring Approach (LEMA) as it is presented in this toolkit was previously referred to by the name of Lot Quality Assurance Sampling (LQAS). Original pilot applications of this approach, along with training exercises, reports, and papers, were conducted or produced under the name LQAS. Lot Quality Assurance Sampling, the name itself, represents only a specific random sampling methodology and small-sample analysis approach. The sampling technique was adapted and refined through multiple pilot applications within the education sector. At the same time, evaluation tools (described later in this manual) were designed to accompany the technique.

As LQAS—as applied in the education sector—transformed from a sampling method into an approach encompassing specific indicators and survey instruments, the name Local Education Monitoring Approach (LEMA) was created. LEMA, as a name, is more appropriate for presenting the approach as a whole, and is more intuitive across cultural contexts. In some instances, for referring to the specific sampling method and the analysis model that LEMA uses, Lot Quality Assurance Sampling is still applicable and used in this manual. It should be noted that when applying LQAS as a sample methodology, it is possible use other types of evaluation tools than those presented in this manual as part of the Local Education Monitoring Approach.

Additionally, what is now referred to in this manual as the Group Administered Literacy Assessment (GALA) was called the Group Administered Reading Assessment (GARA) in previous applications. Again, as the instrument was adapted and refined to accompany this approach, some subtasks were added or removed. The instrument is currently designed to measure more than reading performance, and therefore, the name GALA is more suitable.

One further change is that the sample sizes presented in this manual are stated as 19 pupils per school and 19 schools per district. In some previous applications and reports, the sample sizes of 16 pupils per school and 19 schools per district were used. The modification to the pupil sample size was made in order to simplify the process by using consistent samples across schools and pupils. The increase from 16 to 19 pupils also allows the users of this approach to reduce the chance of alpha and beta error rates (explained later in the manual) at the school level.

In terms of system requirements, there are no prerequisites for using LEMA per se, but it is ultimately easier and more sustainable if the education system has an existing inspectorate and

school monitoring system. Accordingly, it is recommended to build on existing systems to the greatest extent possible, in order to maximize ministry involvement, reduce redundancies, take advantage of previously trained school inspectors, and provide an approach that can be sustainable once a project has ended. Capacity building therefore depends on the strength of the existing monitoring system (including inspector training, school accessibility, school monitoring instruments, etc.). Strong monitoring systems will require less capacity building; weak or nonexistent monitoring systems will require extensive capacity building.

2 About the Manual

2.1 What Is Its Purpose?

This manual was created at the request of the United States Agency for International Development (USAID). It is a tool to guide individuals who are implementing a pilot application of a quality monitoring technique called the **Local Education Monitoring Approach**, or LEMA, in locations that have not previously tested it. The assumption is that they will be gauging the appropriateness and effectiveness of using the method within that context as a routine monitoring tool.

2.2 Who Will Use It?

The audience for the manual is anyone who has an interest in routinely monitoring the quality of schools and education at a local, decentralized level, through routine data collection and reporting. These individuals, who will use this manual—and who from this point forward are referred to as "trainers"—may range from international consultants to government education officers from national or subnational jurisdictions (e.g., region or district). They may have varying levels of experience with routine monitoring approaches, data collection procedures, and/or school inspections and supervision. The manual is set up to guide individuals who have little to no experience with the Local Education Monitoring Approach to effectively conduct a pilot application of LEMA: training assessors, ² collecting data, and tabulating and analyzing results.

2.3 What Will the Manual Help Me to Accomplish?

The manual will help you to

- understand the Local Education Monitoring Approach,
- lead an effort to pilot the LEMA and lay the groundwork for its subsequent use,

² Throughout this manual, the trainees are referred to as "assessors." These assessors may range from school supervisors and inspectors to privately contracted data collectors.

- adapt the training materials and data collection instruments for the context in which you are conducting the pilot, and
- train groups of education stakeholders to appropriately administer the instruments, tally data, and analyze it for effective decision making.

The manual begins (Section 3) by explaining **what the Local Education Monitoring Approach is** and how local monitoring is useful in education. This background is important for you, as a trainer, to understand (and to teach).

After the description of what LEMA is and scenarios in which it is appropriate to apply the approach within the education sector, the remainder of this manual is designed to help you plan for and execute a pilot application of LEMA. A typical LEMA pilot is carried out over the course of two weeks and includes aspects of training, field data collection, and data tabulation.

Before the pilot begins, you will complete several **recommended preliminary activities** to help prepare and plan. Section 4 discusses the steps of **meeting with key local stakeholders** to gauge and promote buy-in for the approach, **adapting the instruments** to the fit purposes and resources of the pilot, and **sampling schools** in the districts where the pilot will take place.

Section 5 provides **presentation materials and step-by-step instructions** to use as you are implementing the two-week LEMA pilot application.

3 Introduction to LEMA

3.1 What is the Local Education Monitoring Approach (LEMA)?³

LEMA is an adaptation of a monitoring approach known as Lot Quality Assurance Sampling. (LQAS). LQAS uses small sample sizes and binary indicators to classify local areas as meeting or not meeting minimum performance standards. This approach was first developed in the 1920s as a way to monitor the quality of manufacturing production. A small sample of items would be randomly selected from a production lot and examined for any imperfections. If the number of defective items within the lot was greater than a pre-set threshold level, then the entire lot was rejected (Robertson et al., 1997, p. 199). Rejected lots were then "examined more closely and either repaired or discarded" (MEASURE *Evaluation* Project 1998, p. 5).

This classification method has since spread beyond manufacturing into other domains. For example, the sampling methodology has been gaining popularity as a way to efficiently monitor health programs over time. More recently, the methodology has been adapted for use in the education sector and paired with specific evaluation instruments to become the Local Education Monitoring Approach.

3.2 Why Should Local Monitoring Be Applied to Education?

Monitoring systems are designed to produce information needed to improve education program fidelity and effectiveness. However, project-level evaluations often turn out to be cumbersome, take too long to produce actionable results, do not disaggregate data at local levels, and frequently are not locally sustainable past the life of the project. Ministry-run inspectorate systems also face challenges. For example, Ministry inspectors may be unable to visit schools with sufficient frequency due to financial and other resource constraints. These same constraints, combined with a lack of supervision, result in inspectors tending to focus their monitoring on centrally located schools while more rural and remote schools are rarely inspected. Inspectors also tend to focus on school inputs rather than on school quality indicators. Finally, school inspectors may not all use the same principles for assessment, or have standardized assessment checklists, such that data are not comparable across schools or districts.

³ Portions of the introductory and background material in this toolkit were adapted from recent summaries prepared for USAID, including a concept note (RTI International, 2012) prepared during early discussions about a case study application of LEMA (referred to at that time as LQAS) under the Education Data for Decision Making (EdData II) project, and a brief requested by USAID on rationales for the use of the LQAS methodology in education programs (Mulcahy-Dunn, Jukes, and Stern, 2016). An initial pilot study that took place in Ghana in February–March 2013 is described in Mulcahy-Dunn, Valadez, Cummiskey, and Hartwell (2013).

The argument for using the LEMA to monitor education systems and programs may be explained quite simply. Improving educational practices in ways that can lead to improved student performance outcomes requires frequent feedback. To achieve this, data must be collected using relatively low-cost methods and should be manageable at the local level. LEMA can do all this. LEMA is particularly appealing for governments striving to decentralize responsibilities, as it gives district-level managers a way to monitor the programs or communities in their district and determine which ones are "meeting particular targets and goals" (Robertson et al., 1997, p. 199.

A few key characteristics associated with this approach should be noted. First, LEMA divides populations into small, "administratively meaningful units (lots)" (Mabirizi, Orobaton, David, and Nsabagasani 2004, p. 5) for which a local supervisor can influence or ensure quality of effective school management and instruction. Lots must be small enough to be homogeneous, and have similar socioeconomic characteristics (Mabirizi et al. 2004, p. 5). In the case of education (and this manual), lots are typically defined as districts.⁴

Second, as a classification tool, LEMA identifies which districts are meeting performance expectations and which are not. Framing the analysis in this binary way means that only a relatively small sample size is needed (Robertson et al. 1997, p. 199).⁵ The sampling methodology LEMA uses, which combines small random sample sizes with binary questions, yields data that can be tabulated relatively quickly and analyzed easily. District-level results are locally available in only days as they can easily be tabulated with pen and paper (Robertson et al. 1997, p. 207).

Finally, although the data collected are designed to estimate binary results at the district level, data can be aggregated to estimate regional or national averages (Espeut 2000, p. 4). For example, while at the district level this approach allows us to classify districts as meeting or not meeting minimum student performance standards, by aggregating district data up to the regional level, the approach can estimate average student performance for the region. Another example could be identifying which districts meet the minimum standards for student attendance rates. The district data could be combined to calculate average student attendance rates in the region.

⁴ The sample methodology used by LEMA can be applied to units other than districts, determined based upon the specific country's administrative structure.

⁵ Lot Quality Assurance Sampling uses "one-sided hypothesis testing for analysis" of resulting data (Robertson et al. 1997, p. 199). The null hypothesis used with this sampling methodology is that the number of defective items in the lot exceeds the allowable pre-set limit, and the lot has to be rejected. In the social sector, "rejection" is not an option. Thus, rather than setting a limit as the number of defective items, the hypothesis requires setting the limit as the number of individuals or institutions that are performing above targeted expectations.

3.3 How Is LEMA Applied?

A practical application of LEMA looks something like the following.

First, identify a small number of key indicators of effective instruction and pupil performance that you want to monitor. These indicators could be based on curricular standards or program design and should reflect expected school and teacher behavior and management. To help ensure the data you collect will be impactful, make sure that the indicators you select will result in actionable data.

Examples of indicators could include

- students' ability to read with comprehension,
- sufficient length of teachers' reading lessons,
- minimum proportion of teachers in attendance at the start of school day,
- whether teachers are having students read silently,
- sufficient availability of textbooks in the classroom.

In cases where use of the approach is linked to a program design, these indicators can provide insights into overall program implementation. Although many instruments can collect similar information, the characteristics of the sampling methodology used with this approach distinguish how these data are both collected and used for routine monitoring and rapid analysis.

Once the indicators are chosen, current school practices and student performance levels are used to set minimum performance standards.

A small sample of schools is then randomly chosen and formally observed on those indicators.

Districts whose schools are unable to meet these performance standards can then be targeted for additional support right away. At the system level, support for the districts could take the form of

- additional training for teachers and head teachers,
- · more routine monitoring and coaching of teachers, and/or
- provision of needed pedagogical materials.

At the program level, corrective steps could be taken to address identified weaknesses in either the design or the implementation of an education intervention program. Examples of corrective steps might include

- making adjustments in curricular content,
- making changes in teacher-training approaches,
- reviewing resource allocation decisions, or
- sending out district-wide communication regarding proper program applications.

3.3.1 Using LEMA as a Routine Monitoring System

The examples of program-level applications of LEMA mentioned above highlight the important role that LEMA can play as the basis for a locally sustainable routine monitoring system. In contexts where governments are struggling to establish a rigorous school monitoring system, this approach can be easily adapted and implemented. Requiring inspectors to visit just a sample of schools in the district means that costs associated with a LEMA administration are lower than would be required for census-based inspections. Implementation costs can be further reduced by having subdistrict-level staff administer a LEMA. In Ghana, for example, subdistrict staff (known as Circuit Supervisors) are responsible for collecting data from schools within their circuits⁶. Given the number of circuits in a district, Circuit Supervisors are asked to visit a maximum of one or two schools in a two-week span as part of a LEMA data collection. As schools are randomly selected for the survey, there is no risk of only centrally located schools being selected. The use of standardized data collection tools and protocols ensures that data are comparable and can be aggregated. A locally sustainable, systematic monitoring approach provides the information needed to help government programs continue to evolve and improve when project funding has ended.

As noted earlier, the presence of a pre-existing system is not mandatory for using LEMA; however, using subdistrict-level staff and taking advantage of existing resources is recommended. The simplicity of the approach is conducive for training local staff who may already have some experience with school monitoring instruments and are knowledgeable about schools' accessibility. LEMA is inherently designed to be implemented and managed locally, which makes leveraging existing resources (e.g., vehicles or transportation systems, training venues, routing plans) easy to facilitate. Building upon resources that already exist helps ensure the approach can be maintained after it is piloted.

⁶ Referred to in Ghana as the District Quality Monitoring System for Education (DQMS-E).

3.3.2 Using LEMA in Implementation Programs Where Other Data Are Already Being Collected

Given the abundance of data often collected under implementation programs, it is important to evaluate the appropriateness of when and for what reason data should be collected using LEMA as well. What benefit would result from incorporating LEMA into a program design?

Below we describe some scenarios where an application of LEMA could improve program fidelity, effectiveness, and sustainability.

Programs that collect nationally representative outcome data, but no monitoring data:

With intervention programs that collect sample-based, nationally (or even regionally) representative outcome data at baseline, midline, and endline, but do not routinely collect such data, LEMA could regularly collect district-level monitoring data. Additionally, LEMA could help establish a sustainable monitoring system for use by a ministry or department of education.

Programs that collect nationally representative outcome data, with coaches who collect "fidelity of implementation" data from all program schools:

When instructional coaches visit all the schools to which they are assigned to collect "fidelity of implementation" data, it may seem that collecting data using LEMA is not necessary. However, in some cases LEMA can be useful:

- To collect information that is not part of the coach's data collection process, for example by adding student achievement tests;
- To provide a quality check on coaches and the data being collected;
- To indicate which districts are meeting minimum performance standards; and
- To set up a more sustainable monitoring system that extends beyond the life of the program. (as noted above in Section 3.3.1).

3.4 Limitations

There are some limitations of LEMA that you should be aware of if you are planning to pilot this approach or use it long term.

First, the approach measures whether something is present or absent; it does not differentiate levels in between. Similarly, as a classification tool, the district-level information will only identify simply whether the district is meeting or not meeting minimum performance standards—no information is provided about average performance levels or percentage increases that would be necessary to meet these standards. Additionally, school-level information is given only for

sampled schools. Actionable data at the district level are in terms of district-wide performance as opposed to targeted school-level indicators.

Finally, although the specific sampling methodology (LQAS) has been applied extensively in the health sector and it is inherently structured as a sustainable monitoring technique, applications of this approach in the education sector have been limited to date. At the time this manual was written, pilot applications of the approach had been conducted in Ethiopia, Ghana, Jordan, Tanzania, and Uganda. The Greater Accra region in Ghana had started to implement the approach as a way to monitor school quality given the success of the original pilot within the country. Additionally, Jordan applied the approach on a national scale to monitor student performance at a local level. In the case of Jordan, the student assessment data is used to supplement existing coaching data to help guide decisions regarding program implementation.

4 Preparing for a LEMA Pilot

This section discusses the activities that you should take into account and execute before a LEMA pilot. Steps required to properly implement the two-week pilot training and data collection include meeting with key stakeholders to introduce the Local Education Monitoring Approach, choosing the jurisdictions to be involved, developing and adapting data collection instruments, and sampling schools (see **ANNEX A:** *Example Agenda for 2-week LEMA Pilot*).

4.1 Meeting with Key Local Stakeholders

Especially in cases of external assistance, the first critical step in the planning process is meeting with key stakeholders in the country where a LEMA pilot will take place. This will allow for introductory discussions with government and ministry officials regarding the background, purpose, and the sampling methodology this approach uses. Completing this step early in the process helps to ensure that the data being collected reflect the local school system's priority issues. Overall, it can help establish support for the pilot activity while gaining commitment from local counterparts for help with other preparatory tasks (e.g., defining indicators, adapting the instruments, identifying school supervisors/inspectors for training and data collection).

In cases where this manual is being used directly by central government officials within a given country, key stakeholders may include regional, district, or subdistrict staff whose support would be critical for piloting LEMA.

In both instances—i.e., external and locally driven initiatives—these meetings and discussions can also begin to establish buy-in needed for continued support of the monitoring approach past

the piloting phase. **ANNEX B**⁷ provides presentation materials accompanied by step-by-step presenter instructions that can serve as your guide for discussing this approach with in-country stakeholders who will need to understand the approach, its relevance to education, and its benefits.

4.2 Developing and Adapting the Evaluation Instruments

The evaluation instruments that are presented in this manual and that are used with this approach collect information on key indicators quickly, easily, and reliably; also the instruments produce data that are ideal for routine monitoring because they are easy to interpret and use.

To date, two instruments have been used in the pilots in Ghana, Jordan, Ethiopia, and Tanzania. These instruments are a School Instrument and the GALA.⁸ The School Instrument collects information on key school instructional and management practice indicators that are identified through research and experience as being critical to effective early grade learning, while the GALA measures student performance. Both the School Instrument and the GALA were designed to classify schools as meeting or not meeting minimum performance standards. It should be noted that though the instruments described in this manual were specifically designed to accompany this approach, the sampling methodology prescribed by Lot Quality Assurance Sampling can be utilized with other instruments. These instruments are merely examples of tools that have been piloted with this approach.⁹

4.2.1 Adapting the School Instrument

The standard School Instrument is designed to measure indicators that both research and experience have shown are key factors that contribute to early grade learning. An example of a School Instrument from the Tanzania pilot¹⁰ is provided in **Annex C.** The questions in the instrument are strong predictors of early grade outcomes, and the answers to the questions can be observed and recorded with relative ease. In particular, they have a high reliability in a binary judgment (condition exists, condition does not exist). Lastly, the questions relay data whose meaning is transparent to stakeholders. The domains in the School Instrument are:

⁷ Annex B contains technical details which explain the sampling methodology—Lot Quality Assurance Sampling—employed by LEMA. The user of this manual may find the information useful and relevant for pilot trainees as well, and as such, Annex B can be used in conjunction with or in addition to the materials provided in Module 1: Session 2.

⁸ As previously noted, in earlier applications the Group Administered Literacy Assessment (GALA) was referred to as the Group Administered Reading Assessment (GARA). As the instrument was refined and subtasks were added, the name was adapted to be more appropriate for what the instrument is designed to measure.

⁹ Any instrument that allows for binary indicators to be calculated can be used with this approach.

¹⁰ For more information on the Tanzania pilot, see Batchelder, Betts, Mulcahy-Dunn, and Stern (2015).

- Pupil engagement
- Pupil attendance
- Pupils' involvement in learning tasks linked to the acquisition of reading competencies
- Availability and use of teaching and learning materials
- Teacher characteristics
 - Attendance
 - Lesson planning
 - Time on task
 - Feedback to students
 - (Occasionally) Content knowledge

The content of the questionnaire should be adapted to reflect country- or program-specific characteristics or issues. However, a majority of the questions in the School Instrument are so fundamental to early grade learning (i.e., student attendance) that they can remain the same regardless of context. Context-specific language and terminology must be reviewed and adapted to reflect the location in which the instrument is being administered. For example, teacher lesson plans, lesson guides, and syllabi are not used or identified by the same name in all contexts. Discussions with key stakeholders before the pilot will establish whether indicators, and hence questions, should be added or removed per the specific context.

4.2.2 Common Instrument Components for the Group Administered Literacy Assessment

The GALA discussed throughout this manual and used in conjunction with LEMA was designed to assess early grade literacy skills. Skills generally tested include letter/sound recognition, phonemic awareness, familiar words, reading comprehension, and dictation. As with the Early Grade Reading Assessment (EGRA), the selection and content of the subtasks that are included in a GALA should be based on curricular standards and adapted for the linguistic and cultural contexts of the particular location to which it is being applied. This group assessment was designed to be effectively and reliably administered by a single assessor during a school observation visit. Minimal training is required to ensure effective test administration.

¹¹ These skills are similar to those measured by the Early Grade Reading Assessment (EGRA). For background and descriptions of the EGRA, see Gove & Wetterberg (2011) and Dubeck & Gove (2015).

Local language and early literacy experts should be engaged to construct the subtask items for the GALA and to translate the instructions. Once the assessment is designed, it should be pretested for reliability, validity, and when possible, concurrent validity (with an existing EGRA or other pre-existing, validated reading assessment).

To illustrate the content of the GALA, **ANNEX D** is a template for the protocol that assessors use to administer the instrument. **ANNEX E** is an example Pupil Response Sheet from an Amharic GALA administered as part of a LEMA pilot in Ethiopia in 2016.¹²

Not every GALA will contain the same subtasks; however, six core subtasks commonly appear in the instrument.

- Letter sounds or letter names
- 2. Familiar words
- 3. Invented words
- 4. Reading comprehension
- 5. Dictation
- 6. Maze

In some contexts, other subtasks have been piloted. For example, in LEMA pilots conducted both Ghana and Tanzania, a "picture-phrase match" subtask was used. This subtask is often problematic, however, as it is difficult to develop high-quality and relevant pictures. A "word separation" subtask was also piloted in Tanzania, but has since been dropped from list of commonly used subtasks as it was difficult for students to complete and did not yield high-quality data.

The subsections below provide item-level development guidelines for each of the six core subtasks. You should engage language and early literacy experts, and present the guidelines to these individuals to serve as instructions as they develop the items that will make up each of the subtasks.

¹² The pilot application of this approach in Ethiopia was conducted under USAID EdData II Task Order No. AID-OAA-12-BC-00003, "Measurement and Research Support to Education Strategy Goal 1" (RTI International Task 20, Activity 5). For more information about the Ethiopia pilot, see Batchelder, Betts, Mulcahy-Dunn, and Stern (2016).

4.2.3 Letter Names and/or Letter Sounds

- Develop a list of 11 "target" letters that are appropriate for the grade level being assessed.
 Ten of the letters will be used on the student assessment, while the remaining one will be used for an example to be given to the students prior to the start of this subtask.
- 2. Select a combination of uppercase and lowercase letters, if relevant.
- 3. Select letters of varying levels of difficulty. The selection of letters should also be based on their frequency within grade-level text. Note that the example letter should be a relatively easy letter.
- 4. Select a grade-appropriate word to represent each letter name/sound. This word should begin with the chosen letter. For example, in English if the letter were "p," you might choose the word "pencil."
- 5. Fill in the student response sheet table with the target letters and four distractors for each letter.
 - a. The target letter should appear in different positions throughout the page (i.e., the target letter should not always be in the first available space).
 - b. Distractors should represent a combination of letters that look and/or sound like the target letter. For example, if the target letter in a Latin alphabet is "t," example distractors could be "b," "c," "d," "f," "g," "i," "i," "j," or "v."

In the example below, the assessor would ask pupils to tick the letter that makes the sound /t/ as in "table."

_		_	_	_	_
1 1	l †	i	l d		l f
I	,	•	l a	· •	'

4.2.4 Familiar Words

1. Use a list of frequent words¹³ to select 11 "target" words that are appropriate for the grade-level being assessed (i.e., if you are creating a grade 2 exam, you should use a grade 2 frequent-word list). Ten of these familiar "target" words will be used on the student assessment, while the remaining one will be used for an example to be given to the students before they start this subtask.

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¹³ A list of frequent words can be generated by using national reading textbooks from the grade level being assessed and conducting word-frequency analyses to select common, familiar, and simple words representing different parts of speech.

- 2. Select words of varying levels of difficulty (based on their frequency in the grade-level text). Note that the example word should be relatively easy and common in the grade-level text.
- 3. Create appropriate distractors for each of the target words. The distractors should be similar in look and sound to the target word. For example, if the target word in English is "bed," then appropriate distractors may be "bad," "beg," "dad," or "had." Avoid using proper nouns for the target word or distractor words.
- 4. Fill in the student response sheet table with the target words and the distractors, ensuring that the target word appears in different positions throughout the item list (i.e. the target word should not always be in the first available space).

In the example below, the assessor would ask pupils to tick the word "like."

1. lick hike like bike line

4.2.5 Invented Words

- Use a list of frequent words to select 11 words of varying levels of difficulty. Note that the 11 selected words for this subtask should be different from the words selected for the familiar words subtask.
- 2. Convert the selected words to create invented "target" words, by replacing minimal letters in such a way that the new item becomes a "nonword" in both written and spoken form (i.e., it does not have any meaning in the language being assessed). In English, "kat" would not be an appropriate an invented because it is a homophone of "cat."
- 3. When changing letters in the selected familiar words to create invented words, ensure that the new items follow the orthographic rules of the language.
- 4. Use a range of letters to create the invented words (e.g., do not use any consonant disproportionally to others).
- 5. Make sure that the example word is a relatively easy one from the grade-level text.
- 6. Create appropriate distractors for each of the target invented words. Note that all of the distractors should also be invented words and not real or familiar words.
- 7. Fill in the student response sheet table with the target words and the distractors, ensuring that the target word appears in different positions throughout the item list (i.e., the target word should not always be in the first available space).

In the example below, the assessor would ask pupils to tick the word "leb."

1. lus lew del leb

4.2.6 Reading Comprehension

- 1. Write a story in the language in which the pupils are to be assessed that is approximately 60 words long (following the guidelines below).
- 2. Write corresponding questions:
 - a. Create five comprehension questions total.
 - b. Four of the comprehension questions should align directly with the story.
 - c. One question should be an inferential question.
- 3. Create distractors for comprehension questions:
 - a. Distractors should be made up of reasonable answers and/or other words contained in the story. Other words from the story should be used whenever possible, to limit the ability of a student to recognize a word from the story and automatically select it as the correct answer.
- 4. Create a student response sheet with the passage, questions, answers, and distractors. Ensure that the correct answer appears in different positions throughout the five questions (i.e., the correct answer should not always be in the first available space).

Use the following guidelines to create your <u>reading passage</u>:

- Keep the passages relatively short: approximately 50–60 words.
- Use simple present tense (simple past tense is also acceptable if it makes sense for the language which the test is being administered).
- Use words from the grade-level frequent-word list—these words will have been taken from students' reading books so they are familiar with them.
- Use common characters (family, friends, animals, etc.) and do not use more than two names of people or other proper nouns in the story.

- Make sure that the story is age appropriate. Remember: We are writing for young pupils. Avoid violence or topics that are too mature for children.
- Use short sentences with short words so that it is easy to ask a question about something in each sentence (or every other sentence).
- Have a Beginning→Middle→End.

In the English example below, students would read the story silently. They would then be asked to turn to the questions and read the questions and answer choices to themselves.

Example Story: Manu likes birds very much. One day her father brought home a parrot from the fair. The parrot started calling Manu every morning. Manu gave food to the parrot and took good care of it. One day, Manu was playing with her friends. She noticed a flock of parrots singing and flying away. Manu returned home and released the parrot from the cage.

Example Questions:

- 1. What does Manu like? (answer: birds)
- 2. Who brought the parrot home? (answer: father)
- 3. What did the parrot do in the morning? (answer: called Manu)
- 4. Who was Manu playing with? (answer: friends)
- 5. Why did Manu release the parrot from the cage? (answer: to be free)

Example Distractors:

Who brought the parrot home?

Manu	Parrot	Her father	Her friends	Her mother

4.2.7 Dictation

- 1. Create three short sentences based on grade-relevant text, using approximately five short words per sentence.
- 2. Use simple present tense (simple past tense is also acceptable if it makes sense in the language in which the test is being administered).
- 3. Use words from the grade-level frequent-word list that has been developed—these words will have been taken from students' reading books so they are familiar with them.

- 4. Do not use any names or proper nouns in the sentences.
- 5. Make sure that the sentences are is age appropriate—avoid violence or topics that are too mature for children.

4.2.8 Maze

This subtask is often less formally referred to as "sentence completion"; however, the sentences in this subtask should be connected to form a short passage. The guidelines below are the recommended instructions for constructing the subtask items.

- 1. For each passage, create a total of nine sentences.
- 2. The first and last sentence passage are to be complete.
- 3. The remaining seven sentences each are missing only one word.
- 4. In a couple of the sentences, a short phrase could be missing.
- 5. The missing item should not be the first word or phrase in the sentence, and there should be only one missing word or phrase per sentence.
- 6. There are three options for each missing word/phrase.
- 7. The options in the response set might be plausible, but they should not be responses that would actually be possible; therefore, there really is only one true answer in the response set.
- 8. The response options are listed in parentheses¹⁴ within the sentence.
- 9. Create an example sentence (where one word is missing and three options are provided) which can be used by assessors prior to beginning this subtask.

Below is an English example of a maze passage that would be read silently by pupils:

On Saturday Yambile went to the lake to fish.

The lake was big and he saw the fish (swimming/receiving/digging).

Yambile caught five small fish with a (stick/fish hook/hoe).

¹⁴ In some contexts, the layout of this subtask and the way in which the response options are listed may vary. The local linguist developing the test items should consult grade-level textbooks to find similar tasks and mimic the layout whenever possible, such that the pupils taking being assessed may better understand the instructions of the subtask.

He sat near the lake so that he could (light/pick up/eat) fire.

He looked into his pocket where he had put (fish hook/purse/matchbox) for lighting the fire.

Yambile could not find it so he stood up in order to (beat/go/cook) home.

Big birds came when he stood up and wanted to (read/take/cut) the fish.

Quickly he gathered the fish and hid them in a (rope/chair/bag).

Yambile ran home with the bag of fish.

4.3 Sampling Schools

The sample of schools is identified before the LEMA pilot begins. The sampling is most commonly carried out by the trainers with support from district-level supervisors who oversee the school inspectors or assessors who will carry out the data collection process. This section outlines the steps to properly identify schools within a district where data collection will occur.

4.3.1 Review the Population of Interest

As mentioned in Section 4.1, any external implementing organization piloting this approach should discuss the focus of the study early on with key stakeholders such as government or ministry counterparts. If instead the pilot is to be administered directly by a decentralized government, these discussions will take place between the various jurisdictions involved (e.g., central-level officials and district officials). The parties involved with the pilot should determine the grade (or class, or standard), type of school, and language of instruction before the training starts. The focus of the study will determine the content of the instruments and the schools to be included in the sampling frame from which schools will be randomly selected.

Given that discussions already will have occurred with government or ministry staff, this step should be a review of the intended purpose of the data collection to ensure everyone involved clearly understands of the grade(s), type(s) of school(s), and language(s) that are of interest and related directly to implementation of this survey. This information will very clearly identify the schools from which the sample is drawn and to which sample data/findings can be generalized.

4.3.2 Identify the Target Population from the Census List

In this step, you will use a complete census list of schools to identify the target population from which the random sample is drawn. The target population list serves as the sampling frame as it contains only the schools from which the random sample will be selected.

First, identify any schools that do not meet the criteria of the target population and draw a line through these schools. These schools will be removed from the list. For example, the *School Census List* below in **Figure 1** crosses out schools that use English as the medium of instruction from the school list, because in this example, we are interested only in schools that instruct in Kiswahili (stated another way, schools that instruct in English are not in our population of interest).

Next, it is helpful to rewrite the list with only the schools meeting all the criteria for the target population. This new list is the target population list that you will use to draw the random sample.

Figure 1. School census list

	Type of	Medium of		Grade 2		Grade 3			
Name of school	school	instruction	Boys	Girls	Total	Boys	Girls	Total	
Vingung	Govt.	Kiswahili	150	157	307	163	186	349	
Miembe	Govt.	Kiswahili	214	164	378	195	192	387	
Komibo	Govt.	Kiswahili	245	254	499	252	233	485	
Makuja	Govt.	Kiswahili	221	195	416	228	184	412	
Kisutun	Govt.	Kiswahili	47	65	112	35	55	90	
Mtendenik	Govt.	Kiswahili	42	39	81	36	33	69	
Tabat	Govt.	Kiswahili	108	110	218	134	129	263	
Mtambani Jica	Govt.	Kiswahili	86	94	180	94	98	192	
Tabata Ji	Govt.	Kiswahili	80	80	160	85	85	170	
Kinyerezi Ta	Govt.	Kiswahili	119	133	252	225	238	463	
Kibaga Kom	Govt.	Kiswahili	108	114	222	64	90	154	
Kifuri	Govt.	Kiswahili	126	87	213	90	98	188	
Zimbilu	Govt.	Kiswahili	70	68	138	58	62	120	
Bonyokwag	Govt.	Kiswahili	66	74	140	54	76	130	
Airwin	Govt.	Kiswahili	106	104	210	94	92	186	
Minazimirefi	Govt.	Kiswahili	190	215	405	203	200	403	
Mogi	Govt.	Kiswahili	90	88	178	75	71	146	
Karakat	Govt.	Kiswahili	99	90	189	101	98	199	
Majani Chai	Govt.	Kiswahili	173	175	348	165	113	278	
Muhimbi	Govt.	Kiswahili	44	55	99	52	68	120	
Mataifa Um	Govt.	Kiswahili	46	46	92	50	42	92	
Diamond Di	Govt.	English	163	182	335	175	178	353	
Olympioki	Govt.	English	163	172	335	171	188	359	
Zanaku	Govt.	Kiswahili	86	101	187	79	77	156	
Upangi	Govt.	Kiswahili	73	72	145	56	83	139	
Maktabi	Govt.	Kiswahili	78	84	162	65	93	158	

	Type of	Medium of	(Grade 2		Grade 3			
Name of school	school	instruction	Boys	Girls	Total	Boys	Girls	Total	
Bugurun	Govt.	Kiswahili	117	122	239	120	124	244	
Bug Kiswahi	Govt.	Kiswahili	96	92	188	99	90	189	

4.3.3 Randomly Sampling the Schools from the Target Population

ANNEX F contains the **School Sampling Worksheet** that should be used for completing this step in the school sampling process.

First, fill in the "Region," "District," "Date," and "# of schools in target population" fields at the top of the worksheet, as shown in **Figure 2.**

Figure 2. School Sampling Worksheet

SCHOOL SAMPLING WORKSHEET

NOTE: Use this worksheet to select a random sample of schools.

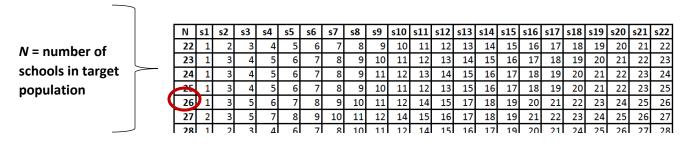
Region: Region X	District:	District K
Date: 01 / 12 / 2010 dd / mm / yyyy	Total number of schools	

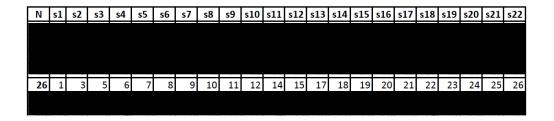
NOTE: Three alternate schools are indicated in the first column as Alt. 1, Alt. 2, and Alt 3.

	Sampling Reference Number	Sampled School Name
1		

Use a random number table—such as the table found in **ANNEX G**—while filling in the School Sampling Worksheet. Use the number of schools represented in the target population to find the appropriate row within the table. (**Note:** the N column corresponds to the total number schools in the target population.) Then, record the numbers corresponding to s1–s22 (from the selected row) onto the "Sampling Reference Number" column of the School Sampling Worksheet. **Figure 3** below shows an example of N = 26.

Figure 3. Example use of School Random Number Table (N = 26)





After identifying and recording the sample reference numbers, identify and record the schools' names from the list that corresponds to the reference number from the random sampling table. The example in **Figure 4** shows the process for recording the corresponding school names in the School Sampling Worksheet. Alternate schools have already been randomly selected and labeled on the School Sampling Worksheet. The schools, numbers 3, 14, and 19, will serve as alternate schools.

It is important to note that alternate schools should replace a sampled school ONLY if a serious event or reason prevents an assessor from visiting one of the randomly sampled schools.

Figure 4. Illustrated process for recording school names in the School Sampling Worksheet

S/N	NAME OF SCHOOL	TYPE OF SCHOOL		DIUM O			CLASS II		CLASS III		I	
				I		BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	
1	VINGUNG											
2	MIEMBE	NOTE: T		alternate	schoo	ls are in	idicated in th	ie first coli	umn as Ali	t. 1, Alt. 2, a	and Alt 3.	
3	KOMIBO		#			pling						
4	MAKUJA				Refer Nun	ence		Sample	d School	Name		
. 5	KISUTUN			1	1	I	VINGUNG					
6	MTENDENIK			2			KOMBO					
7	TABAT			Alt. 1 3		5	KISUTUN					
8	MTAMBANI JICA			4	(6	MTENDEN	(
9	TABATA JI			5	7		TABAT					
10	KINYEREZI TA			6			MTAMBANI					
11	KIBAGA KOM			7			TABATA JI					
12	KIFURI			8	1		KINYEREZI KIBAGA KO					
13	ZIMBILU			9		1	KIFURI	ZIVI				
14	BONYOKWAG			10			BONYCKW	4G				
15	AIRWIN			12	1	5	AIRWIN					
16	MINAZIMIREFI			13	1	7	MOGI					
17	MOGI			Alt. 2	1	8	KARAKAT					
18	KARAKAT			14	1	9	MAJANI CH	IAI				
19	MAJANI CHAI			16	2	0	MUHIMBI					
20	MUHIMBI			17	2	1	MATAIFA L	IM				
21	MATAIFA UM			18			ZANAKU					
22	ZANAKU			Alt. 3 19	2	3	UPANGI					
23	UPANGI			20	2	4	MAKTABI					
24	MAKTABI			21		- 1	BUGURUN					
25	BUGURUN			22	2	6	BUG KISWA	AHI				
26	BUG KISWAHI											

4.4 Logistical Planning for Data Collection

The final preparatory stage before the training and data collection is for you (the trainer) to work with local district-level supervisors to organize and map out a schedule for who will visit which school on a particular day. Within each district, assessors must complete data collection at the 19 schools which have been randomly sampled. Therefore, you and the district-level supervisors should divide the data collection responsibilities as evenly as possible among the assessors who will be visiting the schools. The ideal scenario would be to have three days for data collection and seven trained assessors to collect data from 19 schools in each district. This

would allow the assessors to visit one school per day for three days, leaving two as alternates to fill in where or when necessary.

Tips to keep in mind while you are finalizing the data collection agenda:

- 1. Identify existing resources available to the district to help carry out the assessment. This may include names of head teachers, hotels, local bus schedules, or places to have lunch.
- 2. Transportation considerations and getting to the schools in a timely and efficient manner will be important. Therefore, plan the school visits so that each day's route is convenient, cost effective, and time efficient.
- 3. Record the schedule to clearly outline which schools will be visited when and by whom.
- 4. Give copies of the agenda to each participant from within the district and to the supervisor who will be overseeing the school visits.
- 5. Create a contact list with names and telephone numbers for each participant from within the district as well as the names and numbers for supervisors.

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5 Step-by-Step Training Instructions and Materials

24 | Modules LEMA Toolkit

Module 1: What Is the Local Education Monitoring Approach (LEMA)?

Module 1/Ses	ssion 1: Introducing Participants and the Training										
PURPOSE	This is the opening session of the training. In this session you will introduce yourself and the participants will introduce each other. You will discuss the overall and daily schedules of training and any site or other logistics, including issues of meals, telephones, transportation, allowances, etc.										
OBJECTIVES	 By the end of this session, participants will have: Been introduced to the trainer(s). Become familiar with the other participants in the room. Have been exposed to the overall schedule for the two-week pilot. Asked any questions they have about logistics. 										
PREPARATION	 Before beginning this session, you will need to do the following: Request a list of all participant names and the name of each one's district before they arrive. Prepare/adapt and print hard copies of the agenda (see ANNEX A) for participants. Prepare/adapt the participant introduction slide, as necessary. Prepare/adapt the purpose and goals slides. Prepare for the opening formalities (introducing yourself and any guests or officials who are attending the training), as necessary. Prepare the logistics presentation, creating appropriate handouts. If someone else is the point person for logistics and gives this talk, it's a good idea for the lead trainer to review the presentation with the speaker ahead of time to make sure all the information is accurate and clearly organized. Important details such as details of transportation, per diem, meals, lodging, equipment, and supplies should be provided to participants on a written handout. 										
MATERIALS	 ✓ List of participants and their districts for attendance ✓ Flipchart and markers ✓ Full training agenda ✓ Handout of important details on training logistics, etc. 										
PRESENTATION SLIDES	Getting to Know Each Other Purpose: Why Are You Here? Participant Training Goals										

STEP 1—Introductions:

- A. Complete the trainer(s) introduction.
 - Remind participants to sign in on the attendance sheets.
 - Introduce yourself, explaining who you are and how you came to teach the participants about LEMA.
 - Introduce any speakers or guests you've invited to the session. These might include
 political or community leaders, donor officials, training sponsors, government officials,
 senior officials of your organization, or any other relevant people. These people will then
 make brief remarks.
- B. Complete the participant introductions by display the SLIDE: Getting to Know Each Other.
 - Ask participants to pair up, or separate them into pairs yourself. If there is an odd number
 of participants, you can pair up with the final participant. Give participant pairs a few
 minutes to talk with each other and discover any interesting information. Participants can
 ask questions of each other and record their answers on paper. Explain that each
 participant will introduce his or her partner to the class.
 - Have participants introduce each other pair by pair.

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STEP 2—Reviewing the Pilot Schedule and Week 1 of Training:

- A. Provide each participant with a hard copy of the agenda. Then, review the overall design and purpose of the pilot, using the following slides:
 - SLIDE: Purpose: Why Are You Here?
 - SLIDE: Participant Training Goals
- B. Go over the schedule for the entire two-week pilot. Discuss the training site and other logistics.
 - Explain to participants that on certain days within the first week of training, they will go
 out to schools—field locations—to carry out practice exercises. If the information is
 available at this time, tell the participants in detail how groups will be organized for the
 practice visits, which schools will be visited, and how they will get to the selected schools.

Note to Trainer:

At this point in time, you should focus participants' attention and provide the most details on the first week of training. However, it will be important to give participants the full picture of the two weeks of activities for which they will be involved.

Additionally, for the purpose of the practice visits which occur during week 1, the schools selected should be close to the training site. Make sure it is clear who will be responsible for contacting the local leaders to notify the schools of the upcoming visit.

Module 1/Ses	ssion 2: Introduction to LEMA									
PURPOSE	The purpose of this session is to show participants what they will gain by going through this training. While they may understand in general the importance of having reliable information about school or district performance or the impact and results of their programs, many participants will not understand why they have to sit through a workshop on the subject of surveys and data collection. The point of this session, then, is to first introduce this new approach to them. Then you will provide a brief background on where it came from and go on to explain how it can be used. Technical details explaining the sampling methodology—Lot Quality Assurance Sampling—employed by LEMA is provided in ANNEX B. Trainers may find the materials useful and relevant for pilot trainees, and as such, ANNEX B can be used in conjunction with or in addition to the information provided in this session.									
OBJECTIVES	By the end of this session, participants will have:									
	An understanding of LEMA is and its origin.									
	Knowledge of how local monitoring is helpful in education.									
	 An understanding of the difference between a census and a sampling approach for gathering information. 									
	Before beginning this session, you will need to do the following:									
PREPARATION	Before beginning this session, you will need to do the following:									
PREPARATION	Before beginning this session, you will need to do the following: 1. Adapt any of the slides you will be using, as necessary.									
PREPARATION										
MATERIALS	Adapt any of the slides you will be using, as necessary.									
MATERIALS PRESENTATION	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. 									
MATERIALS	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. ✓ School and Pupil Sample Sizes handout 									
MATERIALS PRESENTATION	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. ✓ School and Pupil Sample Sizes handout What Is LEMA? 									
MATERIALS PRESENTATION	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. ✓ School and Pupil Sample Sizes handout What Is LEMA? We Turn to Industry 									
MATERIALS PRESENTATION	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. ✓ School and Pupil Sample Sizes handout What Is LEMA? We Turn to Industry Use of Quality Monitoring in Industry 									
MATERIALS PRESENTATION	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. ✓ School and Pupil Sample Sizes handout What Is LEMA? We Turn to Industry Use of Quality Monitoring in Industry How is LEMA Applied? 									
MATERIALS PRESENTATION	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. ✓ School and Pupil Sample Sizes handout What Is LEMA? We Turn to Industry Use of Quality Monitoring in Industry How is LEMA Applied? Classifying Districts 									
MATERIALS PRESENTATION	 Adapt any of the slides you will be using, as necessary. Print hard copies of ANNEX H: School and Pupil Sample Sizes for each participant. ✓ School and Pupil Sample Sizes handout What Is LEMA? We Turn to Industry Use of Quality Monitoring in Industry How is LEMA Applied? Classifying Districts Using LEMA Results to Make Informed Decisions 									

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STEP 1—Understanding What LEMA Is:

- A. Begin by using the **SLIDE: What Is LEMA?** to introduce LEMA and explain to the participants what it is.
 - At this time, emphasize to participants that LEMA is a classification tool (yes/no) that can classify schools, districts, and/or regions as performing acceptably or not performing acceptably. In order to do so, we set minimum performance standards for all the indicators that are being measured through the survey instruments.
 - Be sure to explain how LEMA, as a classification tool, is different from other approaches, as indicated on the slide.

What Is LEMA?

The Local Education Monitoring Approach (LEMA) is:

A classification approach and evaluation instruments: used locally – to *routinely* monitor and classify schools, districts, or regions as performing or not performing acceptably based on minimum performance standards.

- Classification requires a smaller sample size.
- Classification helps local managers target their assistance to those schools/districts most in need of it.
- District-level data can be aggregated to the regional or national level to calculate weighted averages.

Note to Trainer:

"Minimum performance standards" will be explained to participants in more detail in a later session. However, it may be helpful to provide a simple example now as you begin to explain the LEMA.

Use the following example: <u>80%</u> <u>teacher attendance</u>

In every instance, a minimum performance standard will be tied to an indicator. For this example, the indicator is "teacher attendance." The minimum performance standard is 80%, which is to say that at least 80% of teachers must be in attendance.

Then, pose this question to participants:

"If you are inspecting a school that employs 10 teachers, but only 7 teachers were present when you arrived, did the school meet the minimum performance standard?"

This question will force participants to classify the school using YES (the school met the standard) or **NO** (the school did not meet the standard).

STEP 2—Explaining Where LEMA Came From:

A. Provide background on the origin of the sampling methodology LEMA uses. Using **SLIDE:** We Turn to Industry and **SLIDE:** Use of Quality Monitoring in Industry, you will state the explanation provided below in Quotation A, which was drawn from the Introduction to this manual. The purpose of these slides is to give the participants a better understanding of the original application of this sampling method (called LQAS) and how it has been adapted for use in the health and education sectors.

Use of Quality Monitoring in Industry

It was too costly and time-consuming for manufacturers to inspect the quality of every single product they produced.

Therefore:

- They randomly chose a small and set number of items from within each lot
 of production to determine whether this lot met their minimum quality
 standard.
- If enough of the items chosen met the quality standard, then the producers were satisfied that the whole lot met the quality standard.
- If an insufficient number of items met the minimum quality standard, then the entire lot of production was rejected.

Quotation A

The sampling methodology that LEMA uses was first developed in industry in the 1920s. It was used as a way to monitor the quality of production on assembly lines. Controlling the quality of every single item produced was time consuming and costly. The sampling method allowed a small number of items from each production lot (or group) to be randomly sampled. A minimum quality standard was set, and if insufficient numbers of the items sampled in the lot met the minimum quality standard, then the entire lot was rejected. The lots were given a pass or a fail mark. In the 1980s, the health sector began adopting the method as a way to monitor vaccination prevalence rates, use of oral rehydration solution, quality of health clinics, etc.

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STEP 3—Gauging Participants' Understanding:

- A. Take a few moments to allow participants to ask questions. This will help you to gauge their understanding of the explanations of LEMA that you have provided this far.
 - Participants may be confused about some of the terms you have just used—such as "minimum performance standards" or "classification tool"—so you should be prepared to reiterate the points you have previously explained.

Note to Trainer:

While you are explaining the concept of LEMA as a classification tool, remember that it will measure only whether something is present or not (whether a school or district IS or IS NOT meeting the minimum standard performance). It won't provide levels or say to what degree District A is performing better than District B (for example). Therefore, you should reiterate the concept of "classification tool" using examples such as black/white, yes/no, etc.

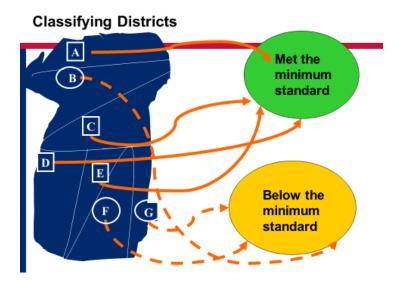
STEP 4—Discussing How Local Monitoring is Useful for Education:

- A. Display the SLIDE: How is LEMA Applied? to discuss how the sample methodology can be applied to education.
 - Review the bullet points provided on the slide.
 - Emphasize that with this tool, we are classifying schools and districts, meaning we are getting local-level data.

How is LEMA Applied?

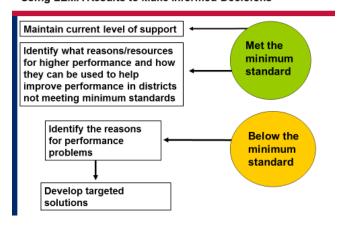
- Local Education Monitoring Approach (LEMA) allows districts and regions to assess the quality of teaching and learning using small samples and specific evaluation instruments.
- · Remember: LEMA is a classification tool.
- District officials can <u>classify schools</u> as "meeting" or "not meeting" minimum performance standards.
- Similarly, regional officials can <u>classify districts</u> as "meeting" or "not meeting" minimum performance standards.

B. Then, display the **SLIDE**: *Classifying Districts* to demonstrate how districts can be classified as meeting or not meeting the minimum performance standard.



- C. Further explain how LEMA, as a classification tool, will help local leaders make informed decisions. Display the SLIDE: Using LEMA Results to Make Informed Decisions to describe how the data that will be collected using this methodology will be helpful.
 - Note that for schools/districts that are meeting minimum standards, we can examine what reasons or particular resources are causing higher performance. These resources or reasons can then serve as models to be used in the lower-performing schools/districts.
 - Note that for schools/districts that are not meeting minimum standards, we can identify the reasons for lower performance and work to develop a targeted solution.

Using LEMA Results to Make Informed Decisions



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D. Explain the bullet points on the SLIDE: Advantages for Local Management.

Advantages for Local Management

- Can be used at a local level with modest amounts of supervision (sustainability)
- Identifies where the successes and challenges are located
- Produces information that can quickly be available for interpretation and use by local managers
- Simple tabulation can be done with paper/pencil and doesn't require computer analyses for local results
- Data can be used for national reporting as well as for local management
- Emphasize that the LEMA can be used at a local level and be used to identify where the successes and challenges occur within the system that is being monitored.
- Take a moment to explain that this approach is different because the information is available quickly due to a simple tabulation that can be done with paper and pencil. Local analyses do not require a computer.

STEP 5—Explaining Sampling:

A. Explain to participants why sampling is preferable to a complete census and introduce the LEMA sampling numbers (19 schools, 19 pupils per school). Begin a discussion on how sampling can be used effectively to learn about school or district performance without testing the whole population. Read **Quotation B** and engage participants to join the discussion by asking why sampling might be preferable to using a census.

Quotation B

Samples are much more efficient than a census as we don't have to go to all the schools in a district and we don't have to test all the pupils in every school to get a clear sense of how the district or school is performing. Let me give you an example of how sampling works. If you were cooking a big pot of soup and you wanted to see if it was salty enough, would you have to eat the whole pot to test it? No, you would stir the pot and take a sip from your spoon. The same is true when we sample schools and pupils. We need just a few pupils to get a sense of how the schools are performing (and a few schools to see how the district is performing).

Note to Trainer:

You will need to explain to participants that there is more than one way to collect the information. As you may know, we can assess all the schools and pupils in a district to see if the district is meeting the minimum performance standards, or we can take what is called a random sample, assessing fewer pupils and schools and using the results to determine if a district is meeting the minimum performance standards. Obviously, assessing every pupil or every school in the district would be time-consuming and costly and would not be practical in many situations. Random sampling, however, makes it possible to get useful and reliable data more quickly and with less effort and cost. Random sampling allows us to choose the smallest possible sample size that can enable us to determine if a district is performing acceptably or needs special support to improve.

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- B. Ensure each participant has a printed copy of **ANNEX H**, which summarizes the LEMA school and pupil sample sizes. Participants will reference this handout throughout the remainder of this session.
- C. Discuss the LEMA school sample size of 19 schools using the SLIDE: LEMA School Sample.
 - Be sure that participants understand that in order to classify a district as meeting minimum performance standards, we will need to collect data from 19 schools.
- D. Next, explain that before we classify a whole district, we will first classify each of the 19 sampled schools. Display the SLIDE: LEMA Pupil Sample to state the LEMA pupil sample size of 19 pupils per school.
 - Part of classifying a school is determining how well the pupils within that school are performing on basic literacy skills. Therefore, we will test 19 pupils per school.

Module 2: What Happens When I Arrive at a School, and What Questions Do I Ask?

Module 2/Ses Guidelines	ssion 1: Data Collection Instruments and Administration
PURPOSE	In this session, participants—starting with this module, sometimes referred to as "assessors" as they move toward the fieldwork—prepare for data collection by reviewing the data collection instruments and administration guidelines they will be using at the schools.
OBJECTIVES	 By the end of this session, participants will have: Been introduced to the two types of LEMA evaluation instruments. Reviewed the School Instrument and Group Administered Literacy Assessment (GALA) instrument. Learned the basic guidelines for administering the instruments during the survey. Posed questions to clear up any confusion about the evaluation instruments.
PREPARATION	 Before you begin this session, you will need to do the following: Ensure that the instruments have been adapted and pre-piloted before this training session; see Sections 4.2 and 4.3 of the Introduction. As previously mentioned, other evaluation instruments may be used alongside the LQAS methodology, and the instruments presented in this module are tools that have been used in previous LEMA pilots. Review the previous module (Module 1) to prepare for any questions from participants. Prepare and adapt the necessary PowerPoint slides for this module. Print copies of ANNEX I: School Instrument Administration Guidelines for each participant.
MATERIALS	 ✓ Printed copies of the School Instrument and GALA (or other evaluation instruments you will use to collect data) ✓ Printed copies of School Instrument Administration Guidelines handout ✓ Flipchart and markers
PRESENTATION SLIDES	Data Collection Instruments Used with LEMA Head Teacher Interview Classroom Observation (3 slides) GALA (2 slides) Pupil Exercise Book Inspection Instrument Administration Guidelines How to Navigate the Instruments

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STEP 1—Introduction of the Data Collection Instruments used with LEMA:

- A. Introduce the evaluation instruments that will be used to collect data at the schools. Use **SLIDE**:

 Data Collection Instruments Used with LEMA to provide a
 general overview of the instruments the participants will use.
- B. Direct participants' attention to the Head Teacher Interview in the School Instrument and show the **SLIDE**: **Head Teacher Interview**.
 - Provide a few examples of the types of questions that respondents will answer during the Head Teacher Interview, as shown on the slide. Allow the participants to review this portion of the School Instrument.
- C. Direct participants' attention to the Classroom Observation section in the School Instrument and display the SLIDES: Classroom Observation.
 - Provide a few examples of the types of questions that will be answered during the Classroom Observation as shown on the slides, and allow the participants to review the section in the School Instrument.
- D. Direct participants' attention to the Pupil Exercise Book Inspection section in the School Instrument and display the SLIDE: Pupil Exercise Book Inspection.
- E. Direct participants' attention to the GALA Assessor Protocol.
 - Provide a few examples of the types of questions that will be answered during the Group Administered Literacy Assessment (as shown on the SLIDES: GALA) and allow the participants to review their copy of the instrument.

Note to Trainer:

As you are going through the administration guidelines with the participants, emphasize that it is important that they follow the order in which the questionnaires are written, as the order provides step-by-step instruction for assessors.

You may also want to reiterate these points to make sure participants understand the directions clearly.

- Don't leave any question blank unless a "skip" instruction tells you to do so.
- Read each question and the consent language exactly as they are written in the questionnaire. For reasons of standardization and consistent data, assessors may NOT improvise or change the wording in any way.
- 3. If you notice a wording problem with a question during the practice test, please note this on the form and share it during the trainer(s).

STEP 2—Reviewing Administration Rules:

- A. Ensure each participant has a printed copy of the School Instrument Administration Guidelines, which summarizes the information covered in this step. They will keep this handout as a reference sheet.
- B. Explain to participants the general setup of these instruments and how they should be used. The **SLIDE**: *Instrument Administration Guidelines* provides the information participants need.
 - The instruments are set up as manuals as well as questionnaires.
 - Discuss the rules from the slide with the participants as these are guidelines that must be followed at all times. You can write the rules on the flipchart.
- C. Discuss the SLIDE: How to Navigate the Instruments with the participants. As you review the symbols and their meanings, have participants point to and identify the symbols in their printed copy of the School Instrument. The slide makes the following points that you should review:
 - Italic font indicates instructions to the assessor.
 - symbol is used to indicate the assessor should read the text to the person being observed or assessed.
 - symbol indicates an instruction about marking or scoring the assessment.
 - symbol indicates a "skip" instruction.
- D. Explain the purpose of a "skip pattern" using the text on the slide.
 - In some cases, questions contained within the questionnaire will become irrelevant. Based on how a respondent answers a question, the subsequent questions may become irrelevant, and therefore, some questions will be skipped.

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	ssion 2: Arriving at the School, Selecting a Teacher, and the School Instrument
PURPOSE	The participants by now will have a general understanding of the instruments that they will use to collect information while they are at schools. However, they need to better understand the exact data they are collecting, and from whom. This section explains what will happen when an assessor arrives at a school, first obtaining head teacher consent, then obtaining teacher consent, and filling out the School Instrument.
OBJECTIVES	 By the end of this session, participants will have: Received an overview of what to expect when they arrive at a school. Reviewed the head teacher and teacher introduction and consent procedures. Practiced selecting a teacher at random to begin data collection. Reviewed the questions contained in the School Instrument.
PREPARATION	 Before beginning this session, you will need to do the following: Adapt the Head Teacher Introduction and Consent form and print it out for participants to review and practice with later in the session (see ANNEX C). Adapt the Teacher Introduction and Consent form and print it out for participants to review and practice with later in the session (see ANNEX C). Print copies of ANNEX J: What Happens When I Arrive at a School? for each participant.
MATERIALS	 ✓ Printed version of the School Instrument ✓ Printed copies of What Happens When I Arrive at a School? handout ✓ Flipchart and markers
PRESENTATION SLIDES	LEMA at the School – What Happens When I Arrive? Selecting a Teacher to Observe and Interview Random Number Boxes for Teacher Selection Teacher Selection Protocols Lesson Observation

STEP 1—Arriving at a School:

A. Provide participants with an overview of what they can expect when they arrive at a school. Begin by reading the text in Quotation A and ensuring participants have copies of What Happens When I Arrive at a School? This handout summarizes the information contained within this session; participants will keep the printed version as a reference

sheet.

Note to Trainer:

Remember to inform participants that ideally their introductory visits with the head teachers will take place just before school starts for the day; they should plan to arrive early at the school they are assessing.

Quotation A

Since we have already identified 19 schools that you will visit, let's assume that you have now gone to the first location. The first task is to get consent to collect data and then select a teacher at random, and this session will teach you how to do that.

- B. As you display the SLIDE: LEMA at the School What Happens When I Arrive?, describe to the participants the steps they can expect to follow, listed below. You will cover each of these in more detail later. The assessor will:
 - 1. First meet the head teacher to obtain permission to conduct the assessment.
 - 2. Obtain the number of teachers employed for the grade being assessed, including the absent teachers.
 - 3. Randomly select a teacher from the grade of interest, and observe the teacher giving a reading lesson.
 - 4. Randomly select students to participate in the Group Administered Literacy Assessment.
 - 5. Conduct the group assessment with the randomly sampled students.
 - 6. Conduct the Pupil Exercise Book Inventory.

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STEP 2—The School Instrument—Head Teacher Introduction and Consent:

A. Begin with the Head Teacher Introduction and Consent section of the School Instrument. You or a participant can read this section aloud. Use the text in **Quotation B** below to describe to participants the purpose of this introduction and consent.

Quotation B

This introduction and consent allows for you, as the assessor, to identify yourself and explain the assessment and data collection you will be conducting at the school.

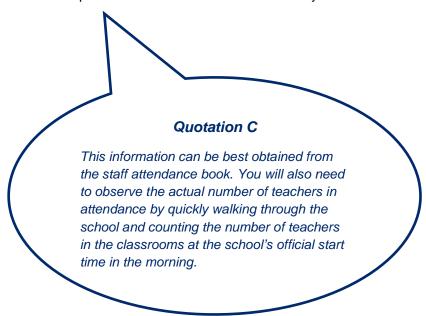
- B. Explain that when they arrive early at a sampled school, participants will meet first with the head teacher.
 - Be sure to review the importance of this meeting with the participants and what they should accomplish.
 - The participants, as assessors, should assure the head teacher that the assessment is not intended to judge the teachers or students, and no names or identifying information will be collected.
 - The head teacher must clearly consent to have the school participate in the assessment.
 - **Figure 5** below provides the text from the School Instrument which the participants will use to obtain consent from the head teacher.
- C. Explain to your participants that if the head teacher does NOT agree or consent to participate, then the assessor must mark "NO" on the questionnaire and proceed to another school.

Figure 5. Consent text from the School Instrument

- 1. "I will not write any names on the questionnaires because the survey is not meant to check up on individual teachers or pupils."
- 2. "Do you agree to participate in the survey and allow for your teachers and pupils to participate as well?"

STEP 3—The School Instrument—Gathering Teacher Attendance:

A. Explain to participants that the next step will be to determine the number of teachers employed at the school. Read the text in **Quotation C** below to give participants a tip for gathering teacher attendance. Point out that teachers who arrive late, after the teacher head count, are not marked in the School Instrument as present at the start of school for that day.



B. Ask participants to locate the text (shown below in **Figure 6**) in their copy of the School Instrument. You or a participant can read the text aloud. It is important to have the participants recognize the symbol, which means they will be responsible for reading these instructions to the head teacher during the visit.

Figure 6. Script for requesting for permission to observe teacher attendance

"I will need to walk around your school to observe how many teachers are in their classrooms this morning. I will then need to compare this with the number of teachers in your attendance book. May I please see your attendance book?"

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STEP 4—Selecting a Teacher to Observe and Interview:

A. Display the **SLIDE**: **Selecting a Teacher to Observe and Interview.** Read the bullet points included on the slide to participants.

Selecting a Teacher to Observe and Interview

- Identify the total number of teachers from the targeted grade who are listed in the attendance book.
- If there is more than one teacher in that grade, then you must randomly select the teacher to interview.
- Select the random number box that corresponds to the number of teachers from the targeted grade on the duty roster or staff list.
- B. Next display the **SLIDE**: **Random Number Boxes for Teacher Selection**. Ask the participants to find the Random Number Boxes for Teacher Selection section in the School Instrument.
- C. Lead participants through a practice selection using the number boxes. Begin by reading Quotation D below to set up an example scenario for the participants to practice using the number boxes.
 - Instruct participants to use the random number box for 4 teachers to randomly select a teacher on the list by dropping the pencil on the page to see what number it lands on.

Quotation D You have just asked the head teacher for the teacher roster. You notice there are four Grade 3 teachers employed at this school.

- D. Explain that the number the pencil lands on will be the number of the teacher on the roster list who is selected for the observation and interview, as indicated on the **SLIDE**: **Random Number Boxes for Teacher Selection**.
- E. Finish explaining the teacher selection protocols to the participants by reading the points on the **SLIDE**: *Teacher Selection Protocols*.

Random Number Boxes for Teacher Selection

on the duty roster or staff list.

Without looking, hold your pencil over the appropriate random number box and pick the teacher whose number your pencil lands on.

For example, if your pencil lands on a 2, then pick the second teacher

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STEP 5—The School Instrument—Lesson Observation Instructions:

- A. Explain to participants the purpose of the obtaining informed consent from the teacher who will be observed. Ask them to locate this section in the School Instrument and read **Quotation E.**
- B. Using the **SLIDE**: Lesson Observation, explain the instructions that the participants should follow to conduct the observation of the teacher's lessons. Read through each bullet point on the slide.

Quotation E

Once you have finished randomly selecting the teacher to observe and interview, you will first need to obtain oral consent from the teacher before proceeding with the observation and interview. It is important that you read the text exactly as it is shown in the instrument when you are obtaining consent from the teacher.

Lesson Observation

During your observation of the reading lesson, remember to:

- · Keep guiet.
- · Sit at the back of the room.
- · Do not ask questions.
- Do not speak with the pupils or the teacher during the lesson
- Do not suggest activities for the teacher to carry out during her lesson.

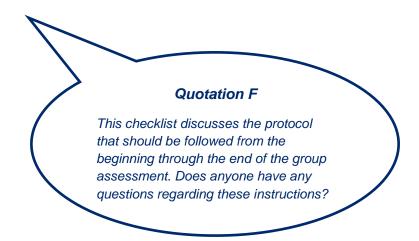
Your goal is to observe the teacher's normal reading lesson in its entirety.

Module 2/Session 3: How to Administer the GALA								
PURPOSE	The purpose of this session is to describe the various subtasks' design and provide guidelines for administering each of the subtasks contained within the GALA.							
OBJECTIVES	By the end of this session, participants will have: 1. Knowledge of the GALA subtasks and an understanding of how to administer the assessment.							
PREPARATION	 Before beginning this session, you will need to do the following: Adapt the PowerPoint slides you will use, especially to reflect the subtasks you have included. Print out copies of ANNEX K: GALA Checklist, one for each participant. 							
MATERIALS	 ✓ GALA Assessor Protocol ✓ Student Response Sheets ✓ Printed copies of the GALA Checklist ✓ Flipchart and markers 							
PRESENTATION SLIDES	GALA Checklist (1 of 2) GALA Checklist (2 of 2) Letter Sounds Subtask Familiar Words Subtask Invented Words Subtask Reading Comprehension Subtask Maze Subtask Dictation Subtask Pupil Exercise Book Inspection							

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STEP 1—Reviewing the Checklist:

- A. Ensure participants have printed copies of the GALA Checklist. You can also display the SLIDE: GALA Checklist (1 of 2) and SLIDE: GALA Checklist (2 of 2). These slides illustrate the points of the checklist.
- B. You or a participant can read aloud through the checklist, which gives the step-by-step instructions in how to administer this type of test.
- C. Using Quotation F below, ask participants if they have any questions regarding the checklist.



STEP 2—Obtaining Written Assent:

- A. Have participants locate the assent box in the GALA Assessor Protocol. Remind participants that
 - they will read this box to the 19 selected pupils once they are performing an assessment in the field. For the purposes of this training, select one participant to read the box aloud while others follow along silently.
- B. Explain the step of how to draw a small box on the board and write the word "Yes" next to it. During fieldwork, the assessors should place a tick mark in the box as an example for the pupils.
- C. Further remind the participants it will be their responsibility to go around the classroom to ensure that all the pupils have ticked "Yes." Read **Quotation G** to help explain what a participant should do if a pupil has not ticked the "Yes" box.

Quotation G

If a pupil has not ticked the "yes" box, ask if he or she would not like to participate. If a pupil indicates he or she would not like to participate, the assessor will replace that pupil with an alternate.

STEP 3—Explaining the Subtasks and the Subtasks' Administration Instructions:

- A. Using the **SLIDE**: Letter Sounds Subtask, explain the Letter Sounds subtask by using **Quotation H** below.
 - Demonstrate (or ask a participant to come to the front to do so) the example in the Assessor Tool section of the GALA for the participants.
- B. Draw the example on flipchart paper at the front of the room.
- C. Read the instructions from the Assessor Tool to the participants, exactly as the assessor should read them to pupils during the actual group assessment.
- D. Tick the letter on the flipchart that matches the letter read aloud.
 - Give participants a few minutes to review the rest of the subtask by asking them to silently read the page for Letter Sounds.

Note to Trainer:

The subtasks, explanations, and administration instructions included here in Step 3 (and in the PowerPoint) are based on an example GALA only. The subtasks and subtask items used in this section should be adapted prior to the training, and that will likely result in adapting this section of the other training materials so that the subtasks and subtask items you are discussing match what is included in the assessor protocol and pupil response sheets.

Quotation H

This subtask has 10 items that you will read aloud. You will notice that the pupil response is set up with multiple choices for each item. You will read the correct item aloud to the pupils and ask them to tick the correct letter as you give the sound.

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- E. Using the **SLIDE**: **Familiar Words Subtask**, explain the Familiar Words subtask by reading **Quotation I** below.
 - You or a participant will demonstrate the example in the Assessor Tool for the participants.
- F. Draw the example on flipchart paper at the front of the room.
- G. Read the instructions from the Assessor Tool to the participants, exactly as the assessor should read them to pupils during the actual group test.
- H. Tick the word on the flipchart that matches the word in the example.
 - Give participants a few minutes to review the rest of the subtask by asking them to silently read the page for Familiar Words.

Quotation I This subtask has 10 items that are multiple choice. You will read them aloud to the pupils and ask them to tick the word as you read the word aloud.

- Using the SLIDE: Invented Words Subtask, explain the Invented subtask by reading Quotation J.
 - You or a participant will demonstrate the example in the Assessor Tool for the participants.
- Draw the example on flipchart paper at the front of the room.
- K. Read the instructions from the Assessor Tool to the participants, as they should be read to pupils during the actual group test.
- L. Tick the word on the flipchart that matches the word in the example.

Quotation J

This subtask has 10 items that are multiple choice. You will read them aloud to the pupils and ask them to tick the word as you read the word aloud.

- Give participants a few minutes to review the rest of the subtask by asking them to silently read the page for Invented Words.
- M. Using the **SLIDE**: *Reading Comprehension Subtask*, explain the Reading Comprehension subtask by reading **Quotation K** below.

Quotation K This subtask has five multiple-choice items. The pupils will read the story and the questions silently to themselves. Let's review the example from the Assessor Tool.

- You or a participant will demonstrate the example in the Assessor Tool for the participants.
- N. Draw the example on flipchart paper at the front of the room.
- O. Read the instructions from the Assessor Tool to the participants, exactly as the assessor should read them to pupils during the actual group test.
- P. Tick the correct answer from the multiple-choice answers on the flipchart.
 - Give participants a few minutes to review the rest of the subtask by asking them to silently read the page that has the Reading Comprehension subtask in the pupil answer sheet.
- Q. Using the SLIDE: Maze Subtask, explain the content of the Maze subtask by reading Quotation L.
 - You or a participant will demonstrate the example in the Assessor Tool for the participants.
- R. Draw the example on flipchart paper at the front of the room.

Quotation L

This subtask has seven multiplechoice items. The pupils will read the sentences silently to themselves and underline the word that completes the sentence. Let's review the example from the Assessor Tool.

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- S. Read the instructions from the Assessor Tool to the participants, exactly as the assessor should read them to pupils during the actual group test.
- T. Underline the word that completes the sentence on the flipchart.
 - Point out to participants the additional instructions for this subtask in the Assessor Tool, which indicate this subtask will be timed, and pupils will be expected to complete the task in 3 minutes.
 - Give participants a few minutes to review the rest of the subtask by asking them to silently read the page that has the Maze subtask in the pupil answer sheet.
- U. Using the SLIDE: Dictation Subtask, explain the Dictation subtask by reading Quotation M below.

Quotation M

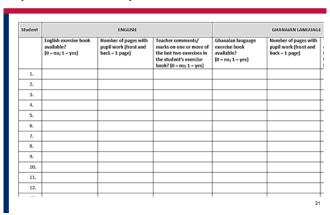
This subtask has three short sentences. You will read each sentence aloud and ask the pupils to write the sentence on his or her answer sheet. Let's review the example from the Assessor Tool.

- Demonstrate the example in the Assessor Tool for the participants.
- Ask a participant to volunteer to be the "pupil" and come to the front of the training room to write on the flipchart.
- Read the instructions from the Assessor Tool to the participants, exactly as the assessor should read them to pupils during the actual group test.
- Give the participant acting as the pupil a few seconds to write the sentence from the example.
- Give all the participants a few minutes to review the rest of the subtask by asking them to silently read the Dictation page in the Assessor Tool.

STEP 4—Pupil Exercise Book Inventory:

A. Ask participants to find the Pupil Exercise Book Inventory section at the end of the School Instrument and display the example of an inventory by showing the **SLIDE**: **Pupil Exercise Book Inspection**.





- B. Review the headings in each column with the participants.
- C. Ask one of the participants to read the first heading out loud. Next, instruct all the participants in how they are expected to mark row 1. For example: They will write a 0 if the answer is no; a 1 if the answer is yes.
- D. You can ask a new participant to read the second heading in the second column out loud. Afterward, instruct all the participants on how to appropriately fill in the rows for the second column. Continue in the same manner until you have discussed all of the column headings and rows.

Note to Trainer:

Remind the participants that as the assessor, they will complete the Pupil Exercise Book Inventory immediately following the administration of the GALA.

They will call the sampled pupils to the front of the classroom and ask them to bring their exercise books.

Then, they will conduct a review of the exercise books by answering the questions on the inventory sheet and recording responses of the questions for all 19 sampled pupils.

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Module 3: How Do I Improve My Skills as an Assessor?

Module 3/Session 1: School Instrument and GALA Administration Practice									
PURPOSE	In Module 2, participants were introduced to the <i>School Instrument</i> and the <i>GALA</i> . Specifically, they reviewed the questions within the School Instrument, the subtasks within the GALA, and the administration procedures of both instruments. Now it is time for them to practice administering the instruments in order to improve their skills and become experts at following the protocols.								
OBJECTIVES	 By the end of this session, participants will have: Practiced administering the School Instrument and Teacher Observation in small groups Completed role-play exercise to practice administering the GALA. 								
MATERIALS	✓ GALA Assessor Protocol ✓ School Instrument								

STEP 1—The School Instrument—Small Group Practice:

- A. Instruct the participants that they will be working in groups of three. Have your participants divide themselves up into groups of three to role play. Or to mix the groups more randomly, if you have 18 participants, for example, and will need six groups, have all participants "count off" aloud to assign themselves a number from 1 to 6, then have the participants with the same number join together.
- B. One participant is assigned to act as the teacher.
- C. A second participant is assigned to act as the assessor and will use the School Instrument to practice reading the scripts and questions.
- D. A third participant should watch the role play and take notes to give feedback to help the assessor improve on his or her assessment skills.
- E. Give participants time to get into groups of three and to complete the activity.
- F. Following the small-group practice, allow time to debrief with participants and answer any questions that they may have. You can write their questions on the flipchart.

STEP 2—Participant Role Play and Practice with GALA:

- A. Instruct the participants to work in groups of three to role play. The participants will practice administering the group test in the following manner:
 - 1. One participant is assigned to act as the pupil.
 - 2. A second participant is assigned to act as the assessor and will use the Assessor Tool to practice reading the scripts and questions.
 - 3. A third participant should watch the role play and take notes to give feedback to help the assessor improve on his/her assessment skills.
- B. Give participants time to get into groups of three and complete the role-play activity.
- C. Following the small-group practice, allow time to debrief with participants and answer any questions that they may have.

Note to Trainer:

Instruct participants that it is not necessary to act out or role play the reading lesson observation portion. The participants will practice this during school visits, which are covered later in the training.

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Module 3/Session 2: Selecting Pupils for the Group Assessment										
PURPOSE	Participants will now have an understanding of the instruments that will be used to collect information. Remind participants that the steps described in this session come after the ssessor has arrived at the assessment location and received head teacher and teacher onsent. As the assessor, the participant also will have randomly selected the teacher who will be interviewed and observed. Now they need to select students to participate in the GALA.									
OBJECTIVES	By the end of this session, participants will have: 1. Learned the steps for selecting 19 students to participate in the GALA, with 2 alternate									
	Learned the steps for selecting 19 students to participate in the GALA, with 2 alternate students.									
	Practiced the pupil sampling.									
PREPARATION	Before beginning this session, you will need to do the following:									
	 Print copy of ANNEX L: Pupil Sampling Instructions and ANNEX M: Pupil Sampling Worksheet to provide as handouts. 									
	Copy and laminate the ANNEX N : Pupil Random Number Table to provide as a handout									
	Make sure you have enough copies of the handouts for all participants.									
MATERIALS	✓ Pupil Sampling Instructions									
	✓ Pupil Sampling Worksheet									
	✓ Pupil Random Number Table									

STEP 1—Counting the Pupils:

- A. Ensure participants have printed copies of Pupil Sampling Instructions, Pupil Sampling Worksheet, and Pupil Random Number Table. These annexes will be useful handouts for participants to complete the subsequent steps in this session.
- B. Begin by asking participants to locate the Pupil Sampling Instructions and give them a few moments to review the information.
- C. Explain to the participants that they are expected to count the number of pupils present in the selected teacher's classroom on the day of the assessment.
- D. Have the participants find the wording below in **Figure 7** within their copy of the Pupil Sampling Instructions handout.

Figure 7. Text from the Pupil Sampling Instructions Handout

"I will randomly pick 21 of you to play a literacy game today."

"Please form a line so I count how many pupils there are."

STEP 2—Randomly Selecting Pupils:

- A. You will demonstrate the instructions from the handout. Explain to the participants that you will be the "assessor" and they will be the "pupils" in a mock sampling scenario.
 - 1. Acting as the assessor, read the two statements in **Figure 7**.
 - 2. Allow time for the participants to get out of their chairs and form a line as instructed. Have participants bring their printed versions of Pupil Random Number Table (Figure 8) and Pupil Sampling Worksheet (Figure 9) with them as they line up so they can follow along during the exercise.
 - Acting as the assessor, you should go down the line and count all the participants. Using
 Pupil Sampling Worksheet, write down the total number of participants in the line as shown in
 Figure 9. Make sure to show the participants where they will write this number when they are
 the assessor in the school.

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Figure 8. Annex N: Pupil Random Number Table

N	p1	p2	рЗ	p4	p5	p6	р7	p8	р9	p10	p11	p12	p13	p14	p15	p16	p17	p18	p19	p20	p21
21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
22	1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
23	1	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17	18	19	20	21	23
24	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	23	24
25	1	2	3	4	5	6	7	8	9	10	11	13	15	16	17	19	21	22	23	24	25
26	2	3	4	5	6	7	9	10	12	13	14	15	16	17	18	20	21	22	24	25	26
27	1	2	3	4	5	6	10	12	14	15	16	17	18	19	20	21	22	23	25	26	27
28	1	2	3	4	7	8	9	12	13	15	16	17	18	19	20	22	23	24	25	27	28
29	1	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	20	23	24	26	28
30	5	7	10	11	12	13	14	15	16	17	19	21	22	23	24	25	26	27	28	29	30
31	1	2	3	6	7	8	9	11	12	14	15	17	18	19	20	22	23	24	27	28	29
32	1	2	5	8	10	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	31
33	1	2	4	5	6	8	10	11	13	16	17	18	20	23	24	25	26	27	29	31	33
34	5	6	7	8	10	12	13	14	18	21	22	23	24	25	26	27	28	30	31	32	34
35	3	4	5	6	7	9	10	11	14	16	17	19	21	23	25	26	27	28	29	31	33
36	3	4	5	7	8	11	12	13	14	16	18	19	20	21	22	23	27	28	30	34	35
37	1	2	4	5	6	8	11	13	15	19	21	22	23	24	25	30	32	33	34	35	37
38	1	3	6	7	12	13	14	16	17	20	21	22	25	27	28	30	31	33	35	36	37
39	1	2	4	5	6	7	8	13	17	20	23	24	25	29	30	31	33	34	35	37	38
40	1	3	6	8	11	14	15	16	19	20	21	23	26	27	28	30	31	35	38	39	40
41	2	3	4	6	7	8	10	12	13	14	16	17	19	20	21	25	32	33	34	38	41
42	1	7	9	10	11	15	18	20	21	25	26	27	30	31	32	33	34	36	38	41	42
43	2	4	5	11	12	13	14	16	20	22	23	27	30	34	36	38	39	40	41	42	43
44	1	2	3	9	10	12	13	14	17	18	21	24	26	30	31	32	36	39	42	43	44
45	2	3	5	14	15	17	19	23	24	25	26	29	32	33	35	36	37	39	41	43	44
46	1	2	3	11	12	13	14	16	17	19	20	21	22	25	26	27	30	32	37	38	40
47	1	2	3	5	6	8	11	12	14	15	18	22	24	25	34	35	36	39	40	41	46
48	1	2	5	6	7	12	14	17	18	21	27	29	30	31	34	37	40	41	42	44	45
49	1	2	3	5	7	8	11	12	15	17	18	19	24	29	37	41	43	45	46	48	49

Figure 9. Demonstrated use of Pupil Sampling Worksheet

4. Tell participants that if there are exactly 21 pupils, then the 20th and 21st pupils in line would automatically be used as replacement or alternate pupils should any of the previous pupils be unwilling or unable to be assessed. If there are 19 or fewer pupils, participants will still continue with the assessment.

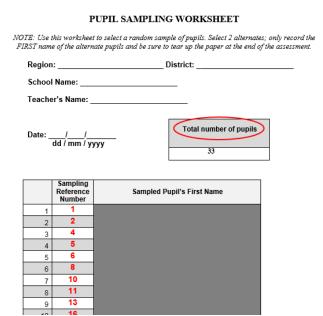
5. Demonstrate to the participants how they will use the Random Sampling Table (as shown in **Figure 10**) to find the row where the first column is equal to the total number of participants counted and recorded. This is the *N*-value.

Figure 10. Demonstrated use of the Random Sampling Table



6. Using the specific row that matches the *N*-value in your current example, demonstrate the process of recording the numbers found in the columns labeled p1 to p19 into the Sampling Reference Number column of the Pupil Sampling Worksheet. An illustrative example is provided in **Figure 11** with *N* = 33. Remember to change the *N*-value to match the number of participants currently in the training.

Figure 11. Demonstrated use of Pupil Sampling Worksheet



Note to Trainer:

Allow the participants to practice filling in their own Pupil Sampling Worksheet with N = number of participants in the room. Also, remind participants to use the Random Sampling Table to help them complete this exercise.

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- 7. Go down the row of participants, counting them again and pointing out the participants whose number is indicated by the sampling reference number you previously recorded. These are the participants you will select for your assessment. As you come to one of the sampled participants, ask the participant to take two steps out of the line. For the participants numbered 20 and 21, ask for their first name, and write it down in the appropriate spot on the Worksheet.
- 8. You can now ask the participants to return to their seats.

STEP 3—Participants Practice Randomly Selecting Pupils:

- A. Follow the steps below to allow the participants to continue practicing the pupil sampling exercise:
 - 1. Select a participant to be the assessor for a second practice round.
 - 2. Have the participants form a line to allow the new assessor to practice the sampling that was demonstrated a moment ago.
 - 3. The remainder of the participants will be the pupils in the example and form a straight line.
 - 4. Instruct the participant acting as the assessor to begin counting the other participants in the line.
 - 5. Remind the participant acting as the assessor that once the sampling reference numbers are recorded on the Sampling Reference Sheet, he or she should ask participants who are part of the sample to take two steps out of the line and then record the participants' names where appropriate.
- B. Have participants rearrange themselves in the line. Pick a new participant to act as the assessor, and continue the exercise until the participants are confident in their abilities to randomly sample pupils.

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Module 3/Ses Visits	ssion 3: Preparing For and Carrying Out Practice School
PURPOSE	The purpose of this session is to have the participants review the protocols and procedures that were introduced in the previous modules in preparation for their school field visits. Participants will visit schools to practice in a school setting what they have learned in the training.
OBJECTIVES	By the end of this session, participants will have: 1. Reviewed the protocols and procedures for a school visit. 2. Visited a school and practiced using the evaluation instruments.
PREPARATION	 Before beginning this session, you will need to do the following: Assemble the materials listed in ANNEX O: School Visit Materials and Packing Checklist. Depending on how many schools or classrooms are available for practice visits by your participants, you can organize the participants into groups of 2 to 3 per classroom. Each group, not individual, will need one set of materials on the checklist for everyone to share. You can gather sets of materials into folders, one per group of participants. You may want to tape or glue a copy of ANNEX P: Daily Tasks Checklist to the cover of each folder, as well as a list of the essential contact numbers for group members or training leaders. Adapt the ANNEX Q: Example of Assessor Observation Checklist as necessary to match the structure of the instruments the participants will practice with. Print copies of the checklist to give to school supervisors or other staff who will be conducting the observations of participants during Step 3. Assign supervisors or co-trainers to observe specific participants in Step 3. Make sure there is a supervisor or trainer to observe each of the participants and provide feedback in a later session. The supervisor or trainer will complete the Assessor Observation Checklist (one per participant) during the observations.
MATERIALS	 ✓ School Visit Materials and Packing Checklist handout ✓ Printed copies of Assessor Observation Checklist (for supervisors and trainers only) ✓ Daily Tasks Checklist handout ✓ Flipchart and markers
PRESENTATION SLIDES	Conduct at Schools What Happens When I Arrive at a School? School Visit Materials and Packing Checklist Daily Tasks Checklist (1 of 2) Daily Tasks Checklist (2 of 2) Post-Survey Checklist: Before You Leave the School!

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STEP 1—Reviewing Assessor Procedures and Protocols:

A. Introduce the practice school visit. Use Quotation A to help introduce the purpose of this activity to the participants.

Quotation A

This session will give you actual practice administering the school instrument and the group assessment. We will visit a nearby school where you will get a chance to practice with the instruments. First, let's review what we have learned in this training.

Note to Trainer:

For the practice school visit, you should work with local counterparts or school supervisors to arrange visits to nearby schools to practice the instruments. Ideally, you will want to arrange for no more than 2 to 3 participants to be in one classroom at a time, practicing with the various instruments. Make the arrangements ahead of time, dividing your participants into groups for the practice school visit. The day before the visit, verify that the school is expecting you.

B. Start a group discussion by asking the participants the question on the **SLIDE**: *Conduct at Schools*. Allow participants to offer different answers about how they should conduct themselves when visiting a school and why their conduct it is important.

Answers:

- Good programming decisions depend on valid and high-quality data.
- Valid and high-quality data depend on good, local information.
- Good, local information depends on the assessor having effective interactions with pupils, teachers, and head teachers who are being assessed. Also, the tools and methods used for administering the approach should be routine and standardized.
- C. Continue with the group discussion, displaying the SLIDE: What Happens When I Arrive at a School? Ask participants to find their printed copies of ANNEX J that were previously distributed as part of Module 2.
 - Read the first step on the slide, indicated in black, about what the participants will do
 when they arrive at the school. (Meet the head teacher to obtain permission to carry out
 the assessment.)

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- 2. Next, ask participants the follow-up question indicated in red on the slide. (What is the protocol for this?)
- Allow participants to offer answers to the question. Make sure all of the procedures for the step are reviewed either by participants or by you before you move on to the next step.
 Again, you can use the flipchart to record answers.
- 4. Continue reading the slide by bullet point and follow-up question. Ask participants to share their answers, and write answers down for the class on the flipchart.

Note to Trainer:

Participants will conduct the practice visit at a nearby school. The visit will take several hours. Make sure all the participants have transportation and the necessary materials for the practice visit.

As the trainer, you should accompany the participants on the visit. Be prepared to take notes during the visit of what you observe the trainers doing. You will share your observations with the participants in the next session (debrief).

Arrange for supervisors or other trainers to conduct an observation of each participant and fill out the Assessor Observation Checklist. Each participant should be observed for some period of time at the school.

If you have access to a smartphone, tablet, or camera, you may take pictures or short video clips of the participants to share with the group during the debrief session.

To protect pupil and teacher privacy, be sure to destroy photos and videos after the training is concluded.

STEP 2—Preparing for Field Practice in Schools:

- A. Ask participants to sit in the groups that you prearranged for the school practice visit. The groups will include 2 or 3 assessors who will be in one classroom together for the practicing exercises.
- B. Take a moment to distribute printed copies of the Materials Packing Checklist.
- C. Display the SLIDE: School Visit Materials and Packing Checklist.

Note to Trainer:

Step 2 provides several opportunities for you to engage the participants. Before presenting the slides that discuss the daily schedule, take a moment to let the participants brainstorm and come up with ideas of what needs to be done before, during, and after a school visit.

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- D. Allow time for participants (within their groups) to review the checklist to ensure they have all of the materials indicated on the list before heading out for the school practice visit.
- E. Distribute printed copies of Daily Tasks Checklist. Then, review the **SLIDES**: *Daily Tasks*Checklist (1 of 2) and *Daily Tasks Checklist* (2 of 2) with the participants using **Quotation B**.

 You or a participant should read through the list out loud.

Quotation B

We will now review the daily schedule that your group will follow during the practice visit. This is the same schedule of tasks you will follow when you are visiting schools to collect data. Some of these tasks must be done now, before we go for the visit; others will be done during your visit, and there are tasks to be completed at the end of the school visit.

- As noted in the preparations list above, it is helpful for the trainer to have taped or glued a copy of the tasks on the outside of each folder beforehand.
- Discuss the list of tasks with participants.
- Be sure to point out that the "before" tasks have been completed for them already for the purposes of the practice visit.
- Participants will start with the "beginning" tasks when they arrive at the school for practice. They should check off each item on the list as they complete it.
- F. Display the **SLIDE**: **Post-Survey Checklist**: **Before You Leave the School!** and remind participants of what they will want to check for before they leave the school. Read through the points on the slide.

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STEP 3—Participants Carry Out the Practice School Visit:

- A. Make sure the school supervisors or other trainers are prepared to observe the participants and assess them according to the Assessor Observation Checklist.
- B. Accompany your participants to the practice school, according to whatever arrangements you have made in advance.
- C. Make sure the participants, in their assigned groups, go to the correct classrooms and begin their practice on schedule.
- D. Collect the completed school instruments and student assessments from the participants when they are finished. Make notes of any errors you find or issues you notice. You will need to review these before your debriefing session.
- E. Be certain to thank the school and school officials at the end of the practice visit.

Note to Trainer:

Tell the participants before the school visits that you and the other supervisors will be capturing pictures and videos that may be used—for training purposes only—during the debrief. It is highly recommended, however, before showing a video clip to the whole group, that you talk to the individual separately to get assent.

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Module 3/Ses	ssion 4: Debrief of School Practice Visits
PURPOSE	This session is used to gather feedback from the participants about school practice visits. Have them report on what went well and what did not go well. Discuss solutions for problems that arose during the visit. Have participants identify any points at which teachers or students did not understand the instruments or the point of the survey, and make a note of any other issues that they noticed.
OBJECTIVES	By the end of this session, participants will have: Reflected on what went well and what did not go well when they were using the evaluation instruments during the visit. Received feedback on interviewing and group assessment techniques. Reviewed good and bad techniques that they noticed during the practice school visits.
PREPARATION	 Before beginning this session, you will need to do the following: Have participants submit completed assessment instruments with the assessor's name written on them. Review each completed instrument (school instrument and group assessment) to make notes about common mistakes you notice in the completed instruments. Gathering the instruments immediately following the school visit will also help to ensure participants complete them at the school and do not fill them in after the visit is over. You can check to make sure the participants correctly used the checklist on the front of the folder to ensure they completed all the necessary items during the visit. If you have access to a smartphone, tablet, or camera, you may want to take pictures of a few pages containing errors you notice when reviewing the sheets and insert these into PowerPoint slides to be shown during the training as examples. Summarize all of the findings you gathered from your review of the materials to share with the participants during this session.
PRESENTATION SLIDES	School Visit Debrief

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STEP 1—Debrief and Group Discussion:

A. Display the **SLIDE**: *School Visit Debrief* to begin a group discussion with the participants about their individual experiences from the previous session at the school. Using the questions on the slide, allow each participant to describe his or her experience at the school.

School Visit Debrief

Reflect on your experience during the school practice visit:

- What did you like about the visit and using the Local Education Monitoring Approach?
- · What did you find challenging about the visit?
- · What will you do differently at your next school visit?

Note to Trainer:

Ask follow-up questions and make notes regarding any difficulties participants encountered with the wording of the instruments. You can have any necessary changes made in the final version of the instruments before real data collection begins.

STEP 2—Provide Feedback to the Participants:

- A. After the visit, meet briefly with the other trainers or supervisors to collect, assemble, and compare impressions and observations.
- B. Using the feedback or comments you and the other supervisors recorded during the visits, share with participants common errors you noticed. You do not want to name any particular individual. Instead, try to generalize and summarize common errors you noticed for the whole group to learn from.
- C. Display any slides you may have added to the PowerPoint presentation discussing best practices.
- D. If you were able to take pictures of the completed instruments from the practice visit, display the examples. Ask participants if they can identify what might be right or wrong about the picture.
- E. Provide a summary of the best practices and worst practices you observed during the practice school visit to help the participants improve their skills prior to fieldwork.

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Module 4: How Will I Know Which Districts Are in Most Need of Support?

	ssion 1: Using Minimum Performance Standards to ecision Rules
PURPOSE	The purpose of this session is to help participants understand how data they are collecting will be used. In Module 1, participants became familiar with LEMA sample sizes for pupils and schools. This session goes a step further to explain how LEMA sample sizes are used to identify the districts that are in most need of support. This is done by setting minimum performance standards for the indicators for which data will be collected. Once participants understand what minimum performance standards are, they will practice using them in combination with the LEMA Decision-Rule Table to determine decision rules.
OBJECTIVES	By the end of this session, participants will have: 1. Learned the difference between pupil performance and minimum performance standards. 2. Practiced using the LEMA Decision-Rule Table to determine decision rules.
PREPARATION	Before you begin this session, you will need to do the following: 1. Prepare hard copies of ANNEX R: LEMA Decision-Rule Table 2. Print copies of ANNEX S: School and District Decision Rules
MATERIALS	 ✓ LEMA Decision-Rule Table ✓ School and District Decision Rules Handout
PRESENTATION SLIDES	School-Level Decision Rule District-Level Decision Rule Decision Rules for Sample Sizes for Minimum Performance Standards 10% to 95% (4 slides)

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Step 1—Setting the Minimum Performance Standard:

A. Explain how minimum performance standards are set, using the information in Quotation A below.

Quotation A

Minimum performance standards are set based on the current situation found in the schools where you are conducting your survey. For each indicator that is being measured, a minimum performance standard is set. For example, let's discuss the indicator "access to pupil textbooks." Although we would like for all pupils in all schools to have access to textbooks, we know that frequently they do not. Depending on the average availability of textbooks in schools where the survey is being conducted, we may need to set the minimum performance standard of pupils with books quite low in order to identify the neediest districts and schools. For example, using existing data on availability of books in schools, your minimum performance standard may be set at 70% initially rather than the ideal 100%.

- B. Next, review and summarize the text presented in Figure 12 and Figure 13 to emphasize the difference between pupil performance and minimum performance standards. Alternatively, you may choose to read the text directly to the participants.
 - Be sure to indicate that pupil performance also has standards, but these are set based on
 international research. These differ from minimum performance standards, which are set
 based on the current situation of the limited context in which the survey is taking place.

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Figure 12. Explanation of pupil performance on literacy skills

For individual pupil reading performance, pupils are said to have mastered a particular literacy skill if they are able to correctly answer a set number of questions for a specific subtask in the GALA. For example, for reading comprehension questions, a pupil is said to read with comprehension if he or she is able to correctly answer 4 of the 5 questions. The pupil-level performance standards were developed by reading experts and are based on international reading standards. These performance standards do not change per country, language, region, or current average performance levels.

Figure 13. Explanation of school and district performance on indicators

Schools and districts must meet minimum performance standards on indicators included in the survey. These indicators can range from pupils' performance on literacy-skills items to the availability of teachers' materials to pupils' engagement during a reading lesson.

First, a school will first be classified as *meeting* or *not meeting* a minimum performance standard for a given indicator. An example of a school level minimum performance standard might be 80% for the indicator of *teacher attendance*. Each school visited as part of the LEMA pilot will be classified as meeting or not meeting this minimum performance standard for teacher attendance.

Similarly, minimum performance standards are set at the district level. This means that a minimum number of schools in the district must pass the minimum performance standard set at the school level in order to say the district as a whole is meeting the minimum performance standard. The minimum performance standards at the school and district levels should be updated regularly to reflect overall improvements in the system. A minimum performance standard of 40% one year might be increased to 60% in subsequent years as performance in the education system improves.

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- C. Ensure participants have a printed copy of the School and District Decision Rules handout. Use the SLIDE: School-Level Decision Rule to reemphasize that a certain number of pupils within a sample has to perform acceptably to classify the school as meeting the minimum performance standards.
- D. Then, use the SLIDE: District-Level Decision Rule to reemphasize that a certain number of schools within the sample must perform acceptably in order to classify the <u>district</u> as meeting the minimum performance standard.

School-Level Decision Rule

The decision rule for a school is:

the <u>minimum number of pupils</u> who must be performing acceptably in order for the whole school to be classified as meeting the minimum performance standard.

District-Level Decision Rule

The decision rule for a district is:

the <u>minimum number of schools</u> that must be performing acceptably in order for a whole district to be classified as meeting the minimum performance standard

Note to Trainer:

As a reminder, LEMA is a classification tool. In the education setting, we establish indicators for pupils, teachers, and schools based on what the literature and research tell us are minimum requirements to ensure the acquisition of reading skills. For example, pupils and teachers must be in attendance, reading lessons must take place and last an acceptable length of time, teachers must be prepared for their lessons, reading material must be available to pupils and teachers, and pupils must engage in reading activities linked to the acquisition of reading.

While the ideal scenario would be 100% compliance with all of these requirements, that is not always possible. In addition, LEMA is used as a way to target resources to those districts or schools that are struggling the most and, therefore, in greatest need of assistance. We therefore set *minimum* (rather than ideal) performance standards.

Those schools or districts unable to meet the minimum performance standards are then flagged for additional support. We should note that meeting the minimum performance standard does not imply that these districts or schools should become complacent about their performance. Meeting the minimum standard merely indicates that they are not the weakest schools or districts. These schools and districts should continue to strive to improve their performance until all of their pupils are reading fluently and with comprehension. The indicators examined in the LEMA visits should help schools focus on where improvements are most needed.

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Step 2—Converting a Minimum Performance Standard into a Decision Rule:

- A. Ensure that participants have a hard copies of the LEMA Decision-Rule Table (see **Figure 14** and **Annex R**).
- B. Explain how the LEMA Decision-Rule Table allows us to convert our minimum performance standard into a decision rule. Use **SLIDES**: *Decision Rules for Sample Sizes for Minimum Performance Standards of 10% to 95%* and read the text provided in **Quotation B**.

Quotation B

Let me explain how this table works. The first column (far left) is the size of your sample. Samples 12 to 30 are displayed. The percentages across the top of the page represent the percent meeting the performance standard. Based on the sample and the minimum performance standard set for your indicator, you can find your decision rule, which is the minimum number of pupils or schools needed to be classified as meeting the performance standard.

Figure 14. LEMA Decision-Rule Table

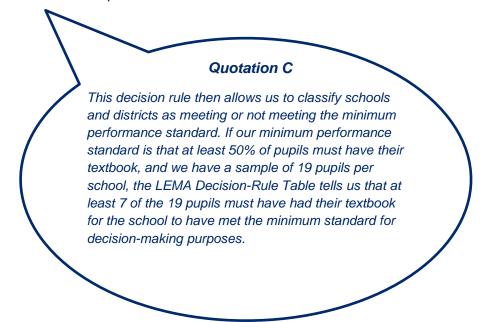
												Standa						
Sample												e Stan						
Size*	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
12	N/A	N/A	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11
13	N/A	N/A	1	1	2	3	3	4	5	6	6	7	8	8	9	10	11	11
14	N/A	N/A	1	1	2	3	4	4	5	6	7	8	8	9	10	11	11	12
15	N/A	N/A	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13
16	N/A	N/A	1	2	2	3	4	5	6	7	8	9	9	10	11	12	13	14
17	N/A	N/A	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15
18	N/A	N/A	1	2	2	3	5	6	7	8	9	10	11	11	12	13	14	16
19	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	N/A	N/A	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
21	N/A	N/A	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18
22	N/A	N/A	1	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19
23	N/A	N/A	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20
24	N/A	N/A	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21
25	N/A	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21
26	N/A	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22
27	N/A	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23
28	N/A	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24
29	N/A	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25
30	N/A	1	2	3	4	5	7	9	11	12	14	16	17	19	20	22	24	26

N/A: Not Applicable, meaning the method cannot be used in this assessment because the minimum performance standard is either too low or too high to assess a district. This table assumes the lower threshold is 30 percentage points below the upper threshold.

Clear cells indicate that alpha and beta errors are less than 10%. Light-shaded cells indicate where alpha or beta errors are greater than or equal to 10%. Dark-shaded cells indicate where alpha or beta errors are greater than 15%.

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C. Read **Quotation C** to give participants a practical example of how the table provides a decision rule based on the minimum performance standard.



- D. Remind participants the goal of LEMA is to set priorities and to differentiate districts and schools that meet minimum performance standards from those that do not.
- E. Allow participants to find the decision rule for another example. Use a school sample size of 19 and a minimum performance standard of 80% for the indicator of "teacher attendance." (Participants should provide 13 as the answer; see Figure 15.)

Figure 15. LEMA Decision-Rule Table: Two examples

Decision Rules for Sample Sizes for Minimum Performance Standards

10% to 95% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60% N/A N/A N/A N/A N/A 4 N/A N/A N/A 19 N/A N/A N/A N/A 10 11 12 22 13 14 10 N/A 10 11 12 13 16 N/A 9 10 11 13 14 15 16 18 19 10 | 12 | 13 | 14 | 16 18 11 12 14 15 16 11 13 14 15 17 18 19 21 20 21 a district. This table assumes the lower threshold is 30 percentage points below the upper threshold pha and Beta Errors are > 10% Alpha and Beta Errors are > 15%

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Module 4/Se	ssion 2: Introduction to Tabulating Results
PURPOSE	The main goal of conducting this survey is to determine which schools in the districts or which districts in the region are meeting or not meeting the minimum performance standards. Now that the participants have practiced collecting data at schools, the next step will be to tabulate the results from the evaluation instruments.
OBJECTIVES	By the end of this session, participants will have: Described why it's important to tabulate. Worked in teams to tabulate the results from the completed evaluation instruments used in the practice school visits.
	3. Checked the summary sheets for errors.
PREPARATION	 Before beginning this session, you will need to do the following: Prepare a blank tabulation table for each type of evaluation instrument used in the data collection. For example tabulation tables see: ANNEX T: Example of School and Teacher Results Table and ANNEX U: Example of Pupil Results Table. You will need a copy of the blank tabulation tables for each participant.
	 Adapt PowerPoint slides to match the sections of your blank tabulation tables for the demonstration. Scan examples of the completed instruments and insert them into the presentation for practice tabulation.
MATERIALS	 ✓ Printed tabulation tables: pupil results and teacher and school results ✓ A set of 19 completed Pupil Response Sheets for each group of 3 trainees (depending on how many schools the participants reached during the practice visit, you may have to make copies so that each group is able to have 1 complete set of 19 Pupil Response Sheets)
PRESENTATION SLIDES	School and Teacher Results Table Example: Completed School Instrument Example of Tabulating School and Teacher Results Pupil Results Table Example: Completed Pupil Exercise Book Inventory Example of Tabulating Pupil Results Example: Completed Maze Passage Example of Tabulating Pupil Results for Maze (2 slides) During Tabulation

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STEP 1—Explaining Tabulation:

- A. Explain what tabulation is, using Quotation D.
- B. Discuss why it's important to tabulate the results.
- C. Ask participants why they think tabulation is important, and allow them to answer.
 - Possible answers: to make program decisions, to identify priorities by district, to better assign resources.

Quotation D

Tabulation brings together the information collected during the survey in a form that allows you to analyze it. We want to see which schools and districts are meeting the minimum performance standards.

STEP 2—Reviewing the Tabulation Tables:

- A. Provide each participant with printed copies of the tabulation tables.
- B. Ask participants to put away their completed instruments (Pupil Response Sheets and School Instruments) from the practice visit. They will have an opportunity to practice filling in the tabulation tables using these instruments in **Step 6**.
- C. Introduce the tabulation tables to the participants, one at a time, reading the title of each table and ensuring that the participants are able to differentiate among the three tables.

Note to Trainer:

The indicators and code for correct/appropriate responses indicated in the presentation slides are only examples. You may change the examples to match your tabulation table so you don't confuse participants.

The purpose of **Step 2** is to show participants how the tabulation tables are set up and how to code the results. This exercise is only meant to be an example, and no participant should fill in his or her tabulation table at this time.

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STEP 3—Example and Practice Using Teacher and School Results Table:

- A. Begin with the **SLIDE**: **School and Teacher Results Table** and instruct participants to find their copies of the printed table.
- B. Explain the different rows and columns in the table. Be sure to point out the column headings: Number, Indicator, Code for Correct/Appropriate Response or Observation, and Score.
- C. Direct participants' attention to the Score Key and explain how they will mark Correct, Not Correct, and Missing responses:

D. Read the example Indicator and the Code for Correct/Appropriate Response or Observation as shown in **Figure 16**, and ask participants to locate it on their printout of the table.

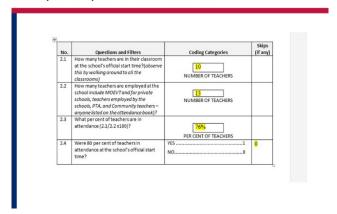
Figure 16. Indicator and corresponding code for correct/appropriate response or observation

Indicator	Code for Correct/Appropriate Response or Observation
% of teachers employed by the school who are present on the day of the survey. $(2.1/2.2) \times 100$ =%	80% or more of teachers must be observed present at start of the school day = 1

- E. Display the example of a completed instrument as shown on **SLIDE**: **Example**: **Completed School Instrument**.
- F. Ask a participant to volunteer to read the text on the slide starting with No. 2.1 Questions and Filters, as well as Coding Categories. Choose another participant to read No. 2.2, and proceed in this way until all of the questions and codes have been read.
- G. Ensure participants understand how the final code "0" or "No" was reached based on the previous codes provided in 2.1, 2.2, and 2.3.

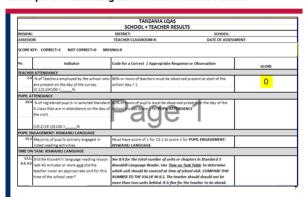
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Example: Completed School Instrument



H. Display the completed instrument as shown on **SLIDE**: **Example of Tabulating School and Teacher Results**.

Example of Tabulating School and Teacher Results



I. Emphasize that the "0" score from No. 2.4 on the School Instrument is transferred to the School and Teacher Tabulation Table under the "Score" column for row No. 2.4.

STEP 4—Example and Practice Pupil Results Table:

A. Display the **SLIDE**: *Pupil Results Table* and ask each participant to find his or her printout of the tabulation table. Read the first indicator presented on the slide and also shown below in **Figure 17** (extracted from the slide and enlarged for clarity).

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Figure 17. Example indicator on Pupil Results Table

	ETHIOPIA SCHOOL MONITORING (LQAS)																				
							Р	UPI	L F	RES	UL	TS									
ZONE:	WOREDA: SCHOOL:																				
ASSESSOR:			TE	ACHE	R O	R CL	ASSR	001	VI #:								D.	ATE OF A	SSESSMENT:		
CORE KEY:	CORRECT=1 NOT	COR	RECT	=0	SKI	PPED	=S	М	ISSI	NG=	X										
	Indicator PUPIL NUMBER													TOTAL	PERCENT MEETING MINIMUM STANDARD	DECISION RULE	DECISION RUL MET? (met=1 not met=0)				
		1	2	3 4	5	6	7 8	9	10	11	12	13	14	15	16 1	7 1	8 19				
TIGRINYA P	FIL MATERIALS									J						1					
Exercise Book nv.	Pupil has his/her Tigrinya exercise book)				C					E					I			50%	7	
Exercise	ng inva exercise book has sufficient																				
	work for time																				

B. Then display the **SLIDE**: *Example*: *Completed Pupil Exercise Book Inventory*. The completed table from the presentation slide is also provided below in **Figure 18**.

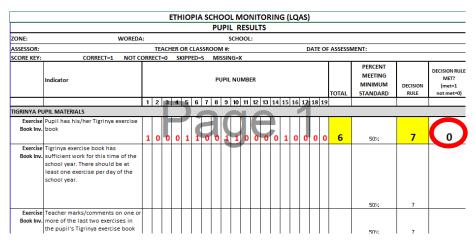
Figure 18. Table column from presentation slide: Example: Completed Pupil Exercise Book Inventory

ete in	mediately after	group
iarks last upil's	Kiswahili exercise book available? [0 = no; 1 = yes]	Numbe with pu [page = sheet]
	1	
	1	
	1	
	0	
	1	
	1	
	1	
	1	
	1	
	0	
	0	
	1	
	1	
	0	
	1	
	0	

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- C. Continue to use the **SLIDE**: *Example of Tabulating Pupil Results* to show how the numbers from the example in **Figure 18** (also on the slide) are transferred into the Pupil Results Table.
- D. Continue with the slide to show how the 19 scores will be transferred to the Pupil Results Table.
- E. The total score will be added and then compared to the decision rule based on the minimum performance standard.
- F. The comparison of the total to the decision rule will determine the overall score of 1 (met) or 0 (not met), as shown below in **Figure 19** (extracted from the slide).

Figure 19. Comparing the "Total" Column with "Decision Rule" Column



- G. Provide a second example of how to fill the Pupil Results Table.
- H. This example will require using the Pupil Response Sheet rather than the School Instrument.
- I. Display the **SLIDE**: **Example**: **Completed Maze Passage**. This example is also shown in **Figure 20**.

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Figure 20. Completed maze example from presentation slide

Kukamilisha sentensi - 1

Siku moja wazazi wa Monji walifanya sherehe nyumbani.

Monji na ndugu zake wanapenda (wageni / <u>karibu</u> / wao). X

Mama yao alipika pilau (chungu / kali / <u>tamu</u>) wakala pamoja na vinywaji.

Monji alikula pilau nyingi kwa vile (<u>alikimbia</u> / hakufurahia / aliipenda) na tumbo likajaa sana. X

Monji hakusikia vizuri akaenda (<u>kulala</u> / kusikiliza / kukimbiza) chumbani.

Wageni walikuja wakala pilau na (kusema / <u>kutembea</u> / kufurahia) chakula hicho. X

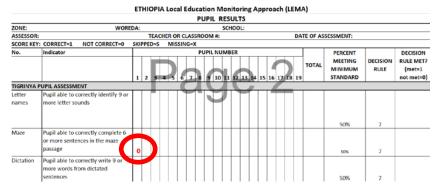
Wageni, wazazi na ndugu zake Monji (walifaulu / walicheza / <u>walikohoa</u>) ngoma.

Monji (hakupotea / <u>hakuokota</u> / hakuwaona) wageni na kucheza. X

Siyo vizuri kula sana kama Monji kwani alilala badala ya kufurahi na wageni.

- J. You will use this example to demonstrate how the participants should fill in the response for Pupil Number 1 for the indicator "Pupil able to correctly complete 5 or more sentences in the maze passage."
- K. Using **Figure 20** and as presented on the slide to the participants, ask a participant to indicate how many questions were answered correctly in the example. (Answer: 2)
- L. Then display **SLIDE**: *Example of Tabulating Pupil Results Table for Maze* and ask a participant to read the information in the indicator column for "Maze."
- M. Ask a participant to indicate what score should be marked on the table for Pupil Number 1 based on the example show on the previous slide.
- N. **Figure 21** shows the table with the appropriate score, which also appears on the **SLIDES**: *Example of Tabulating Pupil Results for Maze*.
 - The volunteer should indicate that Pupil Number 1 score is "0" as shown in Figure 21.
 - Remind participants that each of them will record responses for each of the 19 pupils assessed within the school for this indicator.

Figure 21. Completed table from presentation slide with score for Pupil Number 1



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STEP 5—Tabulation Instructions:

- A. Using the **SLIDE**: **During Tabulation**, explain to participants that they will work in groups of three to complete the tabulation process.
 - 1. The first person reads the correct answer on the tabulation sheet.
 - 2. The second person looks at the answer on the questionnaire, and determines if the answer is a "1" for correct or a "0" for incorrect.
 - 3. The first person records the answer on the tabulation sheet.
 - 4. The third person confirms that the second person correctly determined if the answer should be coded "1" or "0," and that the first person recorded it properly.

STEP 6—Practice Tabulating Results:

- A. Instruct participants to divide into groups of three.
- B. They should take their materials with them to complete the tabulation process.
- C. Each <u>participant</u> should have the following materials to practice tabulation:
 - School and Teacher Results Table
 - Pupil Results Table
 - Completed School Instrument from the practice school visit
- D. Each group should have the following materials to practice tabulation:
 - 19 completed Pupil Response Sheets from the practice school visit
- E. Allow time for participants to work through the tabulation process as indicated in the previous **SLIDE**: *During Tabulation*.
- F. You should walk around the room to oversee the participants and help them through the tabulation process, answering any questions that come up.

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Module 5: How Do I Prepare for Data Collection?

Module 5/Ses	ssion 1: Preparing for Data Collection in the Districts
PURPOSE	The purpose of this session is to prepare the participants to collect the data within their districts. Participants should spend this time organizing all the materials they will use for the school visits.
OBJECTIVES	By the end of this session, participants will have:
	Packed all necessary materials to complete the appropriate number of school visits.
PREPARATION	Before beginning this session, you will need to do the following:
	Make sure all the arrangements have been made to transport people to and within the districts for data collection at the sampled schools.
	 Adapt ANNEX O: School Visit Materials and Packing Checklist to account for all the materials and print a copy for each partipant.
	3. Print ANNEX P: Daily Tasks Checklist; one copy per school will be needed.
	4. Ensure that all the instruments (School Instrument and Group Administered Literacy Assessment or other data collection tools being used) plus the accompanying materials (for example, pupil response sheets) have been printed and delivered to the training venue.
	 Ensure all other necessary materials are available, such as pencils, erasers, random number tables, folders, bags (as listed in the School Visit Materials and Packing Checklist).
MATERIALS	✓ Appropriate number of printed copies of instruments and Daily Tasks Checklist
	✓ Appropriate number of stationery items needed for each participant according to the School Visit Materials and Packing Checklist
	✓ Bags for participants to pack and carry materials in during data collection

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STEP 1—Packing Materials for Data Collection:

- A. Ensure participants have printed copies of the School Visit Materials and Packing Checklist. This checklist was first introduced to participants in Module 3, Session 3, Step 2.
- B. Help participants determine the number of schools each will be responsible for visiting during the data collection days.
- C. Ask participants to use the School Visit Materials and Packing Checklist to calculate the total number of items they will need in order to collect data during their upcoming school visits.
- D. Remind participants of the order to follow when they are packing the materials into a folder and the method they should use to make sure that all the materials on the checklist are accounted for.
- E. Ask the participants to count out the materials as indicated on the checklist and to pack them into the folders to be organized for the school visits.
- F. Instruct the participants to tape or glue the Daily Tasks
 Checklist on the outside of each folder before putting the
 correct number of materials into the folder.
- G. Provide guidance and answer any questions that may arise as participants are packing the folders and bags with the materials they will need for the data collection within the districts.

Note to Trainer:

Within each district, data collection must be completed at 19 schools (assessing 19 pupils per school). You will want to divide data collection responsibilities as evenly as possible among the participants. (The ideal scenario would be to have 3 days for data collection and 7 trained participants to collect data from 19 schools in one district. This would allow participants, as assessors, to visit 1 school per day for 3 days, leaving 2 participants to be available to fill in where or when necessary.)

You will need to calculate (beforehand) the number of schools each participant will have to visit to complete the data collection in the allotted time.

Once each participant knows how many schools he or she will visit and assess, the participant can calculate the materials needed and pack accordingly.

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Module 6: What Do I Do with the Information I Collected at Schools?

Module 6/Ses	ssion 1: Fieldwork Debriefing
PURPOSE	The purpose of this session is to bring participants together to discuss their experiences with data collection. You can also find out whether there are missing data or any other problems that you may need to address.
OBJECTIVES	By the end of this session, participants will have: 1. Shared with each other important lessons learned during data collection. 2. Identified their needs for follow-up and planned to deal with outstanding issues.
PREPARATION	Before beginning this session, you will need to do the following: 1. Contact district supervisors to ensure data collection has concluded in each district and participants have returned to the training venue location. Some teams may be visiting districts and schools that are further away from the training venue, making travel time longer.
MATERIALS	 ✓ Boxes for storing completed instruments ✓ Flipchart and markers
PRESENTATION SLIDES	Fieldwork Debriefing – Small Group Discussion Fieldwork Debriefing – Plenary Group Discussion

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STEP 1—Debrief Discussions, in Small Groups:

- A. Ask participants to sit together with other participants from the same district.
- B. Display the **SLIDE**: *Fieldwork Debriefing Small Group Discussion* and direct the groups to discuss the information on the slide to get a sense of what information each person has brought back from the field.
 - A district supervisor from each district will review the data collected.
 - The district supervisor should collect the information from all the participants from his or her district.
 - If no supervisor is present, a selected assessor can collect and present the district's information.
 - Ask the supervisors to report to the plenary on the status of the data collection that occurred in each district.

STEP 2—Debrief Discussions, in Plenary Group:

- A. Ask the participants to offer comments and feedback about their experiences during data collection. Display the **SLIDE**: *Fieldwork Debriefing Plenary Group Discussion*.
- B. Discuss lessons learned from the data collection and record answers on a flipchart. Ask participants to discuss what went well and what was difficult. For each of the difficulties, discuss suggestions for overcoming or avoiding this problem in the future.

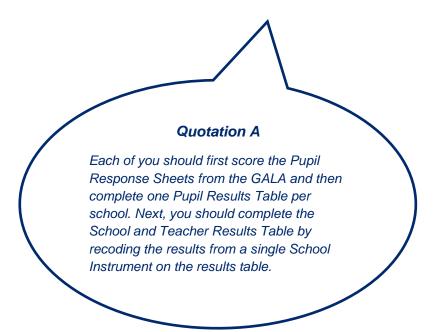
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Module 6/Ses	sion 2: Tabulating Results
PURPOSE	The main goal of conducting this survey is to determine which schools in the districts or which districts in the region are meeting or not meeting the minimum performance standards. Now that the participants have finished collecting data at the schools, the next step will be to tabulate the results from the evaluation instruments.
OBJECTIVES	 By the end of this session, participants will have: Reviewed the tabulation process, including the Tabulation Quality Checklist and the appropriate order of tabulating the data. Worked in teams to tabulate the results from the completed evaluation instruments used in the survey. Checked the summary sheets for errors. Transferred data from the Pupil Results Table and the School and Teacher Results Table into a single District-Level Summary Sheet.
PREPARATION	 Before beginning this session, you will need to do the following: Prepare/adapt a blank tabulation table for each type of evaluation instrument used in the data collection. For an example results table for schools and teachers see ANNEX T, for pupils see ANNEX U, and for a District-Level Summary Sheet see ANNEX V. You will need a copy of the blank tabulation tables for each participant. Scan examples of the completed instruments and insert them into the presentation for practice tabulation.
MATERIALS	✓ Printed tabulation tables: Pupil Assessment Results Table, School and Teacher Results Table, and District-Level Summary Sheet
PRESENTATION SLIDES	Tabulation Quality Checklist During Tabulation Order of Tabulation Record Results in District-Level Summary Sheet After Completing the District-Level Summary Sheet

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STEP 1—Review of the Tabulation Process:

- A. Ensure that each group has the appropriate number of printed tabulation tables, and review each table.
- B. Display the **SLIDE**: *Tabulation Quality Checklist* and ask the participants to confirm the order of the instruments and that they all have the correct number of pages before beginning the tabulation process. Give participants time to match the instruments with the tabulation tables and put the instruments in the correct order.
- C. Using the **SLIDE**: **During Tabulation**, review with participants how to work in groups of three to complete the tabulation process.
 - 1. The first person reads the correct answer on the tabulation sheet.
 - 2. The second person looks at the answer on the questionnaire and determines if the answer is a "1," correct; or a "0," incorrect.
 - 3. The first person records the answer on the tabulation sheet.
 - 4. The third person confirms that the second person correctly determined if the answer should be coded "1" or "0," and that the first person recorded it properly.
- D. Display the **SLIDE**: *Order of Tabulation*. Use **Quotation A** below to instruct participants of the order they will follow to complete the tabulation process.



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STEP 2—Completing Tabulation Tables and District-Level Summary Sheet:

- A. Ask participants if they have any questions before the tabulation process begins.
- B. Allow time for district teams to complete the School and Teacher Results Tables (see ANNEX T for an example) and the Pupil Results Tables (see ANNEX U for an example). Walk around the room as teams are working to conduct spot checks and answer any questions.
- C. Once teams have finished tabulating results from pupils, teachers, and schools (that is, they have completed both tabulation tables for all 19 schools within the district), explain the District-Level Summary Sheet (see ANNEX V for an example). Read the points on the SLIDE: Record Results in District-Level Summary Sheet to explain to participants how they are expected to record the results in the District-Level Summary Sheet.
 - Explain the purpose of this summary sheet and how it will be used to classify the district results.
 - Results from all 19 sampled schools in the district will be tabulated into this summary table.
- D. Display the **SLIDE**: *After Completing the District-Level Summary Sheet* and read the text from **Quotation B** to explain to participants how to check for error and finalize the summary sheet.

Quotation B

After transferring data from all 19 schools onto the District-Level Summary Sheet, then count the "total" number of schools in the district that met each indicator. This count is recorded in the "total" column for each indicator. Finally, compare the "total" with the district-level decision rule, and record whether the district met or did not meet the minimum performance standard.

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E. **Figure 22** shows how participants will compare the total number with the decision rule number to determine if the decision rule was met. If the total number was the same or higher than the decision rule number, the decision rule was met for that indicator, and they will mark a "1"; if the total number was lower, they will mark a "0."

Figure 22. Comparing "Total" with "Decision Rule" to Determine the "Decision Rule Met"

TEACHER ATTENDANCE				Т	Т												Т	Т	\neg	тот	STAN	ON	N RULE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			D-ARD		MET?
School met decision rule for teacher attendance on the day of the survey.	1	1	1	0	0	1	1	1		0	1	1	0	1	1	1	1	0		(1)	80%	13	1
PUPIL ATTENDANCE						П	П												Т				
19.4 School met decision rule for pupil attendance rate in selected Standard 3 class on the day of the visit.	1	. 0	1	0	0	1	0	0		0	1	1	0	1	1	0	1	0		1	80%	13.	0

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Module 7: How Do I Use the Data to Make Informed Decisions?

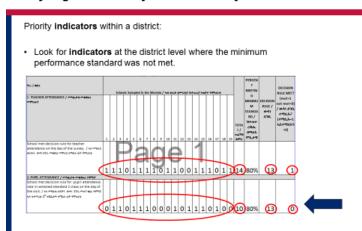
Module 7/Session 1: Analyzing Results	
PURPOSE	In this session, participants will practice simple analysis of data and become familiar with a useful format for reporting data to make informed decisions.
OBJECTIVES	 By the end of this session, participants will have: Used the summary table to identify schools and districts that are not meeting the minimum performance standard for each indicator. Identified priorities within the districts (schools and indicators) for each district, using the summary results. Created an action plan that has recommendations for addressing priority areas and further disseminating survey results. Presented district-level action plans and solicited feedback from other participants.
PREPARATION	Before beginning this session, you will need to do the following: 1. Complete tabulation of District-Level Summary Sheets. 2. Change/adapt the examples on PowerPoint slides to reflect the updated summary sheet.
MATERIALS	✓ Flipchart and markers
PRESENTATION SLIDES	Analyzing the Summary Sheet: Priority Indicators Analyzing the Summary Sheet: Priority Schools Decision-Making Exercise: Create an Action Plan Effective Decision-Making Reminders

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STEP 1—Identifying Priorities:

- A. Display the SLIDE: Analyzing the Summary Sheet: Priority Indicators to demonstrate how participants can identify within their districts the indicators that didn't meet the minimum performance standard.
- B. Ask the participants to circle these indicators.

Analyzing the Summary Sheets: Priority Indicators

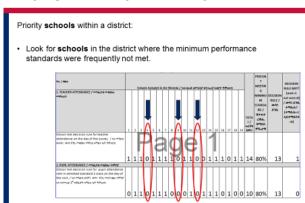


Note to Trainer:

You can take a moment to remind participants how the minimum performance standards for indicators were set (Module 4, Step 1), as well as how the minimum performance standards were converted into decision rules (Module 4, Step 2). In the example from the slide, the minimum performance standard was set to **80%** and the decision rule was **13**: therefore, the district did not meet the minimum performance standard for the indicator "School met decision rule for pupil attendance rate in the selected Standard 3 class on the day of the visit." You can advise participants to circle indicators where the minimum performance standard was not met in the district, as has been done in the examples on the slide.

- C. Display the SLIDE: Analyzing the Summary Sheet: Priority Schools to demonstrate how participants can identify (within their districts) the schools that were struggling the most by marking those that were frequently not meeting the minimum performance standards.
- D. Ask participants to circle these schools on their District-Level Summary Sheet.

Analyzing the Summary Sheet: Priority Schools



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E. Continuing to work in district groups, participants should discuss why the minimum standard may not have been met for the items that were circled on the District-Level Summary Sheet, as well as possible solutions for fixing or addressing the identified problems in the future.

STEP 2—Preparing a Presentation Based on District Results:

- A. Display the **SLIDE**: *Decision-Making Exercise*: *Create an Action Plan* to explain to the district groups that each group will be responsible for preparing a short presentation.
- B. Ensure that each group has enough flipchart paper and markers to complete the assignment.
- C. Read through each point listed on the slide (also included in **Figure 23** below) so that participants understand what the presentation should include.

Figure 23. Instructions from PowerPoint Slide for Decision-Making Exercise

- List the areas of priority for your district.
- Then, develop recommendations for each priority area.
- Within the recommendations, lay out the first steps that need to be taken (and by whom) in order to enact your recommendations.
- Finally, design a plan for how you would disseminate the information and results from this survey to help accomplish the recommendations you propose.
 - D. Then, discuss the important reminders on how to make effective decisions while displaying the SLIDE: *Effective Decision-Making Reminders*.
 - E. Be sure to ask participants if they have any questions or if any parts of the exercise instructions are not clear.
 - F. Allow sufficient time for groups to finish the exercise and record their action plans. As groups are working, you should walk around the room to answer questions and engage in the groups' discussions.
 - G. Once all the groups have finished creating their action plan and summarizing key points of the plan on the provided flipchart paper, each group should report out to the plenary. At the end of each presentation, allow participants to ask questions or offer feedback to the presenting group.

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Effective Decision-Making Reminders

- · First step is identifying root causes for priority areas.
- Recommendations being made based on district-level results must be actionable at the district level.
- With limited resources, it is important to select <u>one or</u> two priority areas that should be addressed first.
- Providing feedback to schools is useful but it is essential to determine the best way to disseminate findings.

Note to Trainer:

As you review these bullet points on how to make effective decisions and action plans, encourage participants to:

- Limit the number of priority areas they select for their presentation.
- Focus their recommendations and steps on items that are actionable at the local level and by local-level officials; this includes limiting the need for assistance (in terms of decision-making and/or funding) from central or external sources, which may delay the process.
- Continue the discussions they started in the previous step regarding why minimum performance standards might not have been met.
- Be creative with ways to engage other members of the community or other local stakeholders, such that they will want to take part in the action items or the next steps the group identifies.

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Annex A. Example Agenda for 2-Week LEMA Pilot

Reference Section 4, page 9; and Module 1, page 25

This example agenda provides the overall schedule for a two-week LEMA pilot. It contains the topics (broken down as sessions) that are covered throughout the course of the pilot.

Week 1 – Sunday								
5:00 p.m.	Participants arrive; each participant should arrange transportation and hotel accommodations.							
Week 1 – Monday								
9:00 a.m11:00 a.m.	Session 1: Local Education Monitoring Approach (LEMA): Introduction and Background							
11:00 a.m.–11:15 a.m.	Morning break / tea and snacks							
11:15 a.m.–12:15 p.m.	Session 2: Introduction to data collection instruments							
12:15 p.m.–1:15p.m.	Lunch							
1:15 p.m.–3:00 p.m.	Session 3: School Instrument							
3:00 p.m.–3:15 p.m.	Afternoon break / tea and snacks							
3:15 p.m.–5:00 p.m.	Session 4: Group Administered Literacy Assessment (GALA)							
	Week 1 – Tuesday							
9:00 a.m10:00 a.m.	Session 1: Opening remarks and review of Day 1 material							
10:00 a.m10:30 a.m.	Morning health break							
10:30 a.m1:00 p.m.	Session 2: Practice administration of School Instrument and GALA							
1:00 p.m.–2:00 p.m.	Lunch							
2:00 p.m.–3:15 p.m.	Session 3: Introduction and practice with pupil sampling							
3:15 p.m.–3:30 p.m.	Afternoon health break							
3:30 p.m.–5:00 p.m.	Session 4: Preparing for practice school visits; protocols at the schools							

Week 1 – Wednesday						
7:30 a.m.	Depart training venue					
9:00 a.m1:00 p.m.	Session 1: Practice visits at schools					
1:00 p.m.–1:30 p.m.	Travel back to training venue					
1:30 p.m.–2:30 p.m.	Lunch					
2:30 p.m.–3:30 p.m.	Session 2: Debrief from school visits					
3:30 p.m.–3:45 p.m.	Afternoon health break					
3:45 p.m.–4:30 p.m.	Session 3: Recap, questions, and comments					
	Week 1 – Thursday					
9:00 a.m.–10:30 p.m.	Session 1: Practice instrument administration					
10:00 a.m10:30 a.m.	Morning health break					
10:30 a.m12:00 p.m.	Session 2: Minimum performance standards and decision rules; Introduction to tabulation					
12:00 p.m.–1:00 p.m.	Lunch					
1:00 p.m3:30 p.m.	Session 2: Practice tabulation					
3:30 p.m.–3:45 p.m.	Afternoon health break					
3:45 p.m.–4:30 p.m.	Session 3: Recap, questions, and comments					
	Week 1 – Friday					
9:00 a.m11:00 a.m.	Session 1: Schedules and checklists for data collection					
11:00 a.m11:15 a.m.	Morning break / tea and snacks					
11:15 a.m.–12:45 p.m.	Session 2: Preparation of materials for data collection					
12:45 p.m.–1:45 p.m.	Lunch					
1:45 p.m.–3:15 p.m.	Session 3: Preparation of materials for data collection (continued)					
3:30 p.m.	Participants depart to districts					

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Week 2 – Monday through Wednesday							
7:00 a.m.–until data collection is complete	Assessors visit assigned schools to collect data. The routes and schools being visited should be decided before departure for schools at 7:00. Supervisors are assigned schools to supervise and monitor data collection each day.						
	Week 2 – Thursday						
9:00 a.m10:30 a.m.	Session 1: Debrief on data collection and school visits						
10:30 a.m10:45a.m.	Morning health break						
10:45 a.m12:30 p.m.	Session 2: Debriefing, continued						
12:30 p.m1:30 p.m.	Lunch						
1:30 p.m.–3:00 p.m.	Session 3: Tabulation						
3:00 p.m.–3:30 p.m.	Afternoon health break						
3:30 p.m.–5:00 p.m.	Session 4: Tabulation, continued						
	Week 2 – Friday						
9:00 a.m10:30 a.m.	Session 1: Analyzing results for decision making						
10:30 a.m10:45 a.m.	Morning health break						
10:45 a.m12:30p.m.	Session 2: District team action plans						
12:30 p.m.–1:30 p.m.	Lunch						
1:30 p.m.–3:00 p.m.	Session 3: District team presentations						
3:00 p.m3:30 p.m.	Afternoon health break						
3:30 p.m.–4:00 p.m.	Session 4: Closing remarks and presentation of certificates						

Annex B. Key Stakeholders Presentation

Reference Section 4.1, page 10 and Module 1: Session 2, page 28

Annex B contains presentation materials—accompanied by step-by-step presenter instructions—that can serve as a guide for discussing the Local Education Monitoring Approach with in-country stakeholders. This presentation is designed to provide government and ministry officials with information on the background, purpose, and sampling methodology of this approach. The content contained in this annex may be useful and relevant to pilot trainees as well, and as such, this annex may be used in conjunction with or in addition to the information contained in Module 1: Session 2.

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Session 5: Practice Using LEMA Data to Monitor Performance in Education	126

Key Stakeholders Presentation

Session 1: In (LEMA)	troduction to the Local Education Monitoring Approach
PURPOSE	The purpose of this presentation is to introduce the Local Education Monitoring Approach (LEMA) to key stakeholders. These individuals will need to understand the approach, the purpose of piloting the approach and instruments, and the potential benefits it can bring to their context. While they may understand in general the importance of having reliable information about school performance or the impact and results of their programs, many may not understand this particular sampling technique and classification tool, and the benefits it can have when used to monitor school performance. The point of this presentation, then, is to show them how LEMA can be used to generate useful data for effective decision making. Once these stakeholders see how helpful this data collection format can be, hopefully they will recognize the value of and agree to support piloting LEMA.
OBJECTIVES	By the end of this session, participants will:
	1. Understand why it is important to assess school and district performance.
	Be knowledgeable about how LEMA can provide routine monitoring that will help them target districts and/or indicators that are in most need of attention or resources.
PREPARATION	Before beginning this session, you will need to do the following:
	Adapt any of the slides you will be using, as necessary.
MATERIALS	✓ Blank paper for participants
PRESENTATION SLIDES	What Information Is Necessary to Identify Pockets of Risk? (2 slides)
SLIDES	What is LEMA?
	We Turn to Industry
	Use of Quality Monitoring in Industry
	Ghana (2012) Three Regions Assessed
	10 Districts in Northern Region: Ghana 2012
	5 Supervision Areas in Central Gonja District: Ghana 2012
	How is LEMA Applied? Classifying Districts
	Using LEMA Results to Make Informed Decisions
	Advantages for Local Management
	7.availagoo for Loodi Mariagorione

STEP 1—Understanding the Importance of Gathering Local Data:

A. Begin with a review of monitoring by asking participants what monitoring systems they currently use, what the advantages of the system(s) are, and what the limitations of the current system(s) might be. Make sure your participants understand the idea of local data. Be sure you or someone else correctly defines national-level data and local data. The information in the note below will

help you. You can call on participants to see if any know

the difference.

- B. Examine a hypothetical example of why local data are needed. Display the SLIDES: What Information Is Necessary to Identify Pockets of Risk? Discuss the information on this slide.
- C. Explain the importance of looking beyond the regional average to the performance for these individual districts. Continue using the SLIDES: What Information Is Necessary to Identify Pockets of Risk? to make the point. Be sure to read Quotation A below.

Note to Trainer:

National-level data are needed to see how the country's education system as a whole is performing. However, local managers need local data that describe more specifically what's happening in their area.

Quotation A

Let's assume that the national minimum performance standard says that 75% of schools must reach the Primary 3 or grade 3 reading target. We conduct a regional assessment and find that on average, 68.4% of schools meet this standard. Our logical reaction could be: Well, that's great. We're very close to meeting our standard and no additional effort is needed to achieve the 75% performance standard. I'll just increase spending or training a little bit for all the districts in this region. But there is a problem with national- or even regional-level data. Can anyone explain this problem?

(Answer: Means or national-level data can hide information.)

What information is necessary to identify pockets of risk?

Target = 75% of schools reach the grade 3 reading standard

Outcome = 68.4% of schools reach the target

Region X

What information is necessary to identify pockets of risk?

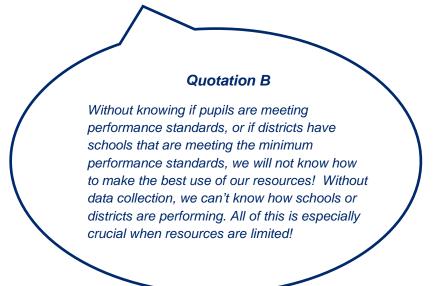
Target = 75% of schools reach the grade 3 reading standard									
Outcome = 68.4% of schools reach the target									
80% 90% 85% 80%	D I								
55% 85% 95% 55%									
90% 30% 30% 95%									
70% 45% 45% 65%									

Note to Trainer:

When survey data reveal LARGE differences in performance between districts or between schools within a district, they identify the areas that are not doing well and which, all other things being equal, should be the priority. Performance can vary a great deal from district to district, with some districts performing really well and others really struggling. This usually means that stakeholders should focus attention, resources, and especially time on the low-performing priority areas. To meet minimum performance standards, expenditures do not have to be increased for all districts and/or schools; instead, stakeholders can learn from those districts or schools that are performing well, and apply successful methodologies to the districts or schools that are struggling, using any extra resources.

When the data from a survey reveal LITTLE difference in performance across districts (or schools within districts), this means the districts or schools are having the same success (or lack of success) in all areas. This would normally mean that all areas can be treated the same. Naturally, if the data show that performance is uniformly low, this means, for example, that an intervention program may need to be redesigned to reach its goals. This may also mean that all areas need more resources. If data show that performance is uniformly high, then other education activities can be given priority.

D. Finish the discussion by reading the text in **Quotation B** below.



STEP 2—Understanding What LEMA Is:

- A. Begin by using the **SLIDE: What Is LEMA?** to introduce LEMA and explain to the participants what it is.
 - At this time, emphasize to participants that LEMA is a classification tool (yes/no) that can classify schools, districts, and/or regions as performing acceptably or not performing acceptably. In order to do so, we set minimum performance standards for all the indicators that are being measured through the survey instruments.

What Is LEMA?

The Local Education Monitoring Approach (LEMA) is:

A classification approach and evaluation instruments: used locally – to *routinely* monitor and classify schools, districts, or regions as performing or not performing acceptably based on minimum performance standards.

- Classification requires a smaller sample size.
- Classification helps local managers target their assistance to those schools/districts most in need of it.
- District-level data can be aggregated to the regional or national level to calculate weighted averages.
- Be sure to explain how LEMA, as a classification tool, is different from other approaches, as indicated on the slide.

B. Provide background on the origin of the sampling methodology LEMA uses. Using **SLIDE**: *We Turn to Industry* and **SLIDE**: *Use of Quality Monitoring in Industry*, you will state the explanation provided below in **Quotation C**, which was drawn from the Introduction to this manual. The purpose of these slides is to give the participants a better understanding of the original application of this sampling method (called LQAS) and how it has been adapted for use in the health and education sectors.

Use of Quality Monitoring in Industry

It was too costly and time-consuming for manufacturers to inspect the quality of every single product they produced.

Therefore:

- They randomly chose a small and set number of items from within each lot of production to determine whether this lot met their minimum quality standard.
- If enough of the items chosen met the quality standard, then the producers were satisfied that the whole lot met the quality standard.
- If an insufficient number of items met the minimum quality standard, then the entire lot of production was rejected.

Quotation C

The sampling methodology that LEMA uses was first developed in industry in the 1920s. It was used as a way to monitor the quality of production on assembly lines. Controlling the quality of every single item produced was time consuming and costly. The sampling method allowed a small number of items from each production lot (or group) to be randomly sampled. A minimum quality standard was set, and if insufficient numbers of the items sampled in the lot met the minimum quality standard, then the entire lot was rejected. The lots were given a pass or a fail mark. In the 1980s, the health sector began adopting the method as a way to monitor vaccination prevalence rates, use of oral rehydration solution, quality of health clinics, etc.

STEP 3—Examples of the Sampling Methodology Used in the Health Sector:

- A. Use examples of the sampling methodology from the health sector to help the participants better understand how it works and why it is an important method.
 - Display the SLIDE: Ghana (2012) Three Regions Assessed. This example from UNICEF shows how the sampling methodology generates data at regional, district, and sub-district levels.

Ghana (2012) Three Regions Assessed

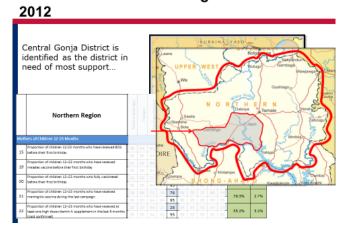


2. Using the text in **Quotation D**, explain that data yielded when using this sampling methodology can be used to "drill down" to provide information at local levels.

Quotation D

This is an example of health data that were collected by the Liverpool School of Tropical Medicine for UNICEF in 2012 using the same sample methodology that LEMA uses. This study examines vaccination and vitamin A prevalence rates in three regions in Ghana (Northern, Upper West, Upper East). Looking at the data in these columns, which region seems to have the lowest rates of children receiving vaccinations and vitamin A supplements? The Northern region seems to have the lowest rates. But as we saw previously, regional averages can mask quite a bit of information. Let's look a bit deeper to see what we can learn from the district-level data within the Northern region.

- Emphasize to participants that collected data guide local managers to target scarce resources most effectively to the areas of greatest needs.
- Tell participants to take a look at the district-level results for the Northern region in the next SLIDE: 10 Districts in Northern Region: Ghana 2012.
- Ask the participants to identify which district seems to have had the lowest prevalence on a number of different indicators such as

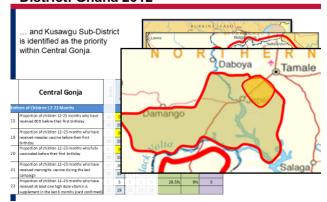


10 Districts in Northern Region: Ghana

vaccinations and access to vitamin A supplements. (Answer: Central Gonja)

- Now, have participants look even closer to see where the problem is most severe in Central Gonja. Display SLIDE: 5 Supervision Areas in Central Gonja District: Ghana 2012.
- Show participants that within Central Gonja, it is quite clear that Kusawgu Sub-district has the most severe problem, with zero-prevalence rates on a number of indicators. Kusawgu is the "worst of the worst," and if this district only has access to limited resources, it should be targeted to receive additional assistance over other subdistricts.

5 Supervision Areas in Central Gonja District: Ghana 2012



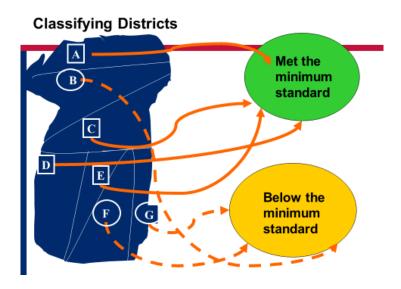
- Ask the participants if this example helps them to understand how the sample methodology LEMA uses can help target resources effectively.
- B. Allow participants to ask questions about this information. Make sure they understand the importance of monitoring and how local monitoring can be used improve program impact.

STEP 4—Discussing How Local Monitoring is Useful for Education:

- A. Display the **SLIDE**: **How is LEMA Applied?** to discuss how the sample methodology can be applied to education.
 - Review the bullet points provided on the slide.
 - Emphasize that with this tool, we are classifying schools and districts, meaning we are getting local-level data.

How is LEMA Applied?

- Local Education Monitoring Approach (LEMA) allows districts and regions to assess the quality of teaching and learning using small samples and specific evaluation instruments.
- · Remember: LEMA is a classification tool.
- District officials can <u>classify schools</u> as "meeting" or "not meeting" minimum performance standards.
- Similarly, regional officials can <u>classify districts</u> as "meeting" or "not meeting" minimum performance standards.
- B. Then, display the **SLIDE**: *Classifying Districts* to demonstrate how districts can be classified as meeting or not meeting the minimum performance standard.



C. Further explain how LEMA, as a classification tool, will help them, as local leaders, make informed decisions. Display the SLIDE: Using LEMA Results to Make Informed Decisions to describe how the data that will be collected using this methodology will be helpful.

- Note that for schools/districts that are meeting minimum standards, we can examine what reasons or particular resources are causing higher performance. These resources or reasons can then serve as models to be used in the lower-performing schools/districts.
- Note that for schools/districts that are not meeting minimum standards, we can identify the reasons for lower performance and work to develop a targeted solution.

Maintain current level of support Met the Identify what reasons/resources minimum for higher performance and how standard they can be used to help improve performance in districts not meeting minimum standards Identify the reasons Below the for performance minimum problems standard Develop targeted solutions

Using LEMA Results to Make Informed Decisions

D. Explain the bullet points on the SLIDE: Advantages for Local Management.

- Emphasize that LEMA can be used at a local level and be used to identify where the successes and challenges occur within the system that is being monitored.
- Take a moment to explain that this approach is different because the information is available quickly due to a simple tabulation that can be done with paper and pencil. Local analyses do not require a computer.

Advantages for Local Management

- Can be used at a local level with modest amounts of supervision (sustainability)
- · Identifies where the successes and challenges are located
- Produces information that can quickly be available for interpretation and use by local managers
- Simple tabulation can be done with paper/pencil and doesn't require computer analyses for local results
- · Data can be used for national reporting as well as for local management

Session 2: Us Rules	sing Minimum Performance Standards to Determine Decision
PURPOSE	The purpose of this session is to help participants understand how collected data can be used to make informed decisions based on how pupils, schools, and districts are performing. In the next session, participants will become more familiar with LEMA sample sizes for pupils and schools. However, it is first important to explain how LEMA can help identify the districts that are in most need of support. This is done by setting minimum performance standards for the indicators for which data will be collected. Once participants understand what minimum performance standards are, they will practice using them in combination with the LEMA Decision-Rule Table to determine decision rules.
OBJECTIVES	By the end of this session, participants will have: 1. Learned the difference between pupil performance and minimum performance standards. 2. Practiced using the LEMA Decision-Rule Table to determine decision rules.
PREPARATION	Before you begin this session, you will need to do the following: 1. Prepare hard copies of ANNEX R: LEMA Decision-Rule Table.
MATERIALS	✓ LEMA Decision-Rule Table
PRESENTATION SLIDES	School-Level Decision Rule District-Level Decision Rule Decision Rules for Sample Sizes for Minimum Performance Standards 10% to 95% (4 slides)

STEP 1—Setting the Minimum Performance Standard:

A. Explain how minimum performance standards are set, using the information in **Quotation E** below.

Quotation E

Minimum performance standards are set based on the current situation found in the schools where you are conducting your survey. For each indicator that is being measured, a minimum performance standard is set. For example, let's discuss the indicator "access to pupil textbooks." Although we would like for all pupils in all schools to have access to textbooks, we know that frequently they do not. Depending on the average availability of textbooks in schools where the survey is being conducted, we may need to set the minimum performance standard of pupils with books quite low in order to identify the needlest districts and schools. For example, using existing data on availability of books in schools, your minimum performance standard may be set at 70% initially rather than the ideal 100%.

- B. Next, review and summarize the text presented in **Figure 1** and **Figure 2** to emphasize the difference between pupil performance and minimum performance standards. Alternatively, you may choose to read the text directly to the participants.
 - Be sure to indicate that pupil performance also has standards, but these are set based on international research. These differ from minimum performance standards, which are set based on the current situation of the context in which the survey is taking place.

Figure 1. Explanation of pupil performance on literacy skills

For individual pupil reading performance, pupils are said to have mastered a particular literacy skill if they are able to correctly answer a set number of questions for a specific subtask in the GALA. For example, for reading comprehension questions, a pupil is said to read with comprehension if he or she is able to correctly answer 4 of the 5 questions. The pupil-level performance standards were developed by reading experts and are based on international reading standards. These performance standards do not change per country, language, region, or current average performance levels.

Figure 2. Explanation of school and district performance on indicators

Schools and districts must meet minimum performance standards on indicators included in the survey. These indicators can range from pupils' performance on literacy-skills items to the availability of teachers' materials to pupils' engagement during a reading lesson.

First, a school will first be classified as *meeting* or *not meeting* a minimum performance standard for a given indicator. An example of a school level minimum performance standard might be 80% for the indicator of *teacher attendance*. Each school visited as part of the LEMA pilot will be classified as meeting or not meeting this minimum performance standard for teacher attendance.

Similarly, minimum performance standards are set at the district level. This means that a minimum number of schools in the district must pass the minimum performance standard set at the school level in order to say the district as a whole is meeting the minimum performance standard. The minimum performance standards at the school and district levels should be updated regularly to reflect overall improvements in the system. A minimum performance standard of 40% one year might be increased to 60% in subsequent years as performance in the education system improves.

- C. Use the SLIDE: School-Level Decision Rule to reemphasize that a certain number of pupils within a sample has to perform acceptable to classify the <u>school</u> as meeting the minimum performance standards.
- D. Then, use the SLIDE: District-Level Decision Rule to reemphasize that a certain number of schools within the sample must perform acceptably in order to classify the <u>district</u> as meeting the minimum performance standard.

School-Level Decision Rule

The decision rule for a school is:

the <u>minimum number of pupils</u> who must be performing acceptably in order for the whole school to be classified as meeting the minimum performance standard.

District-Level Decision Rule

The decision rule for a district is:

the <u>minimum number of schools</u> that must be performing acceptably in order for a whole district to be classified as meeting the minimum performance standard

Note to Trainer:

As a reminder, LEMA is a classification tool. In the education setting, we establish indicators for pupils, teachers, and schools based on what the literature and research tell us are requirements to ensure the acquisition of reading skills. For example, pupils and teachers must be in attendance, reading lessons must take place and last an acceptable length of time, teachers must be prepared for their lessons, reading material must be available to pupils and teachers, and pupils must engage in reading activities linked to the acquisition of reading.

While the ideal scenario would be 100% compliance with all of these requirements, that is not always possible. In addition, LEMA is used as a way to target resources to those districts or schools that are struggling the most and, therefore, in greatest need of assistance. We therefore set *minimum* (rather than ideal) performance standards.

Those schools or districts unable to meet the minimum performance standards are then flagged for additional support. We should note that meeting the minimum performance standard does not imply that these districts or schools should become complacent about their performance. Meeting the minimum standard merely indicates that they are not the weakest schools or districts. These schools and districts should continue to strive to improve their performance until all of their pupils are reading fluently and with comprehension. The indicators examined in the LEMA visits should help schools focus on where improvements are most needed.

STEP 2—Converting a Minimum Performance Standard into a Decision Rule:

- A. Ensure that participants have a hard copies of the LEMA Decision-Rule Table (see **Figure 3** and **Annex R**).
- B. Explain how the LEMA Decision-Rule Table allows us to convert our minimum performance standard into a decision rule. Use **SLIDES**: *Decision Rules for Sample Sizes for Minimum Performance Standards of 10% to 95%* and read the text provided in **Quotation F**.

Quotation F Let me explain how this table works. The first column (far left) is the size of your sample. Samples 12 to 30 are displayed. The percentages across the top of the page represent the percent meeting the performance standard. Based on the sample and the minimum performance standard set for your indicator, you can find your decision rule, which is the minimum number of pupils or schools needed to be classified as meeting the performance standard.

Figure 3. LEMA Decision-Rule Table

	Decision Rules for Sample Sizes of 12-30 and Minimum Performance Standards/Average of 10%-95%																	
Sample		Average Performance (Baselines) / Annual Minimum Performance Standard (Monitoring and Evaluation)																
Size*	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
12	N/A	N/A	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11
13	N/A	N/A	1	1	2	3	3	4	5	6	6	7	8	8	9	10	11	11
14	N/A	N/A	1	1	2	3	4	4	5	6	7	8	8	9	10	11	11	12
15	N/A	N/A	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13
16	N/A	N/A	1	2	2	3	4	5	6	7	8	9	9	10	11	12	13	14
17	N/A	N/A	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15
18	N/A	N/A	1	2	2	3	5	6	7	8	9	10	11	11	12	13	14	16
19	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	N/A	N/A	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
21	N/A	N/A	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18
22	N/A	N/A	1	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19
23	N/A	N/A	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20
24	N/A	N/A	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21
25	N/A	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21
26	N/A	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22
27	N/A	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23
28	N/A	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24
29	N/A	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25
30	N/A	1	2	3	4	5	7	9	11	12	14	16	17	19	20	22	24	26

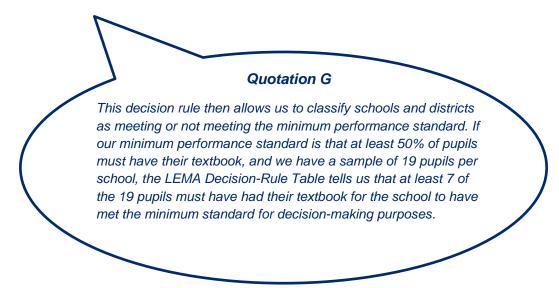
N/A: Not Applicable, meaning the method cannot be used in this assessment because the minimum performance standard is either too low or too high to assess a district. This table assumes the lower threshold is 30 percentage points below the upper threshold.

Clear cells indicate that alpha and beta errors are less than 10%.

Light-shaded cells indicate where alpha or beta errors are greater than or equal to 10%.

Dark-shaded cells indicate where alpha or beta errors are greater than15%.

- C. Read **Quotation G** to give participants a practical example of how the table provides a decision rule based on the minimum performance standard.
 - Remind participants the goal of LEMA is to set priorities and to differentiate districts and schools that meet minimum performance standards from those that do not.



D. Allow participants to find the decision rule for another example. Use a school sample size of 19 and a minimum performance standard of 80% for the indicator of "teacher attendance." (Participants should provide 13 as the answer; see **Figure 4.**)

Figure 4. LEMA Decision-Rule Table: Two examples

Decision Rules for Sample Sizes for Minimum Performance Standards 10% to 95%

Sample Sizes	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
12	N/A	N/A	1	1	2	2	3	4	Ŷ	5	6	7	7	8	В	9	10	11
13 -	N/A	N/A	1	1	2	3	3	4		6	6	7	8	8	Ð	10	11	11
14	N/A	N/A	1	1	2	3	4	4		6	7	8	8	9	10	11	11	12
15	N/A	N/A	1	2	2	3	4	5	46	6	7	8	9	10	10	11	12	13
16	N/A	N/A	1	2	2	3	4	5		7	8	9	9	10	1	12	13	14
17	N/A	N/A	1	2	2	3	4	5	-	7	8	9	10	11	12	13	14	15
18	N/A	N/A	1	2	2	3	5	6	₹(8	9	10	11	11	×	13	14	16
(19)	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	N/A	N/A	1	2	3	4	-5	6	7	8	9	11	12	13	14	15	16	17
21	N/A	N/A	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18
22	N/A	N/A	1	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19
23	N/A	N/A	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20
24	N/A	N/A	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21
25	N/A	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21
26	N/A	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22
27	N/A	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23
28	N/A	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24
29	N/A	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25
NA. Not Applicable, meaning the method cannot be used in this assessment because the minimum performance standard is either too low or too high to assess a district. This table assumes the lower threshold is 30 percentage points below the upper threshold. Alpha and Beta Errors are > 10% Alpha and Beta Errors are > 15%																		

Session 3: U	nderstanding Sampling and LEMA Sample Sizes
PURPOSE	The purpose of this session is to explain the value of random sampling surveys, showing how they are carried out and why they work. Throughout this session, you will help the participants understand the purpose of random sampling and emphasize the sample sizes associated with LEMA. As stakeholders, they could assess all the schools and pupils in a district to see if the district is meeting the minimum performance standards, or they could take what is called a random sample, assessing fewer pupils and schools and using the results to determine if a district is meeting the minimum performance standards. Obviously, assessing every pupil or every school in the district would be time-consuming and costly and would not be practical in many situations. Random sampling, however, makes it possible to get useful and reliable data more quickly and with less effort and cost. Random sampling, using LEMA, allows us to choose the smallest possible sample size that can enable us to determine if a district is performing acceptably or is in need of special support to improve.
OBJECTIVES	By the end of this session, participants will have: 1. Contrasted using a census versus a sampling approach for gathering information. 2. Described problems with nonrandom sampling. 3. Mastered basic LEMA sampling techniques.
PREPARATION	 Before you begin this session, you will need to do the following: Prepare bags of 100 marbles containing 50 black and 50 white (or any two colors) marbles. You will need one bag of 50/50 marbles for every three participants in the training. You may want to have a towel or clear container for the demonstration to place the marbles in so they don't roll away. Prepare a second set of bags of 100 marbles each, containing 80 black and 20 white (or whatever two colors you have chosen) marbles. You will need one 80/20 bag for every three participants in the training. (You may use an alternative to marbles, such as drafts/checkers or poker chips. However, the alternative item must come in two distinct colors and each piece must be the same size and shape as other pieces. This is so each piece is indistinguishable by touch from the other pieces.) Review the information in the Introduction on minimum performance standards. ✓ Bags of 100 marbles of two colors only, divided into 50/50 and 80/20 color-ratio bags, one bag of each proportion for every three participants in your training
PRESENTATION SLIDES	LEMA School Sample LEMA Pupil Sample Classification Errors

STEP 1—Introduction to Sampling:

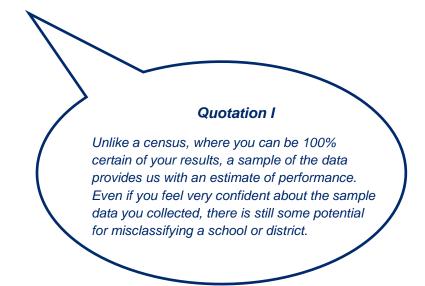
A. Explain to participants why sampling is preferable to a complete census and introduce the LEMA sampling numbers (19 schools, 19 pupils per school). Begin a discussion on how sampling can be used effectively to learn about school or district performance without testing the whole population. Read **Quotation H** and engage participants to join the discussion by asking why sampling might be preferable to using a census.

Quotation H Samples are much more efficient than a census as we don't have to go to all the schools in a district and we don't have to test all the pupils in every school to get a clear sense of how the district or school is performing. Let me give you an example of how sampling works. If you were cooking a big pot of soup and you wanted to see if it was salty enough, would you have to eat the whole pot to test it? No, you would stir the pot and take a sip from your spoon. The same is true when we sample schools and pupils. We need just a few pupils to get a sense of how the schools are performing (and a few schools to see how the district is performing).

- B. Discuss the LEMA school sample size of 19 schools using the SLIDE: LEMA School Sample.
 - Be sure that participants understand that in order to classify a district as meeting minimum performance standards, we will need to collect data from 19 schools.
- C. Next, explain that before we classify a whole district, we will first classify each of the 19 sampled schools. Display the SLIDE: LEMA Pupil Sample to state the LEMA pupil sample size of 19 pupils per school.
 - Part of classifying a school is determining how well the pupils within that school are performing on basic literacy skills. Therefore, we will test 19 pupils per school.

STEP 2—Understanding Misclassification Errors in Sampling:

A. Introduce the potential misclassification errors that can occur with LEMA. Discuss these errors with the participants so they will be able to better understand the sample sizes used in LEMA. Read **Quotation I** below to start the discussion.



- B. Explain that there are two types of misclassification while displaying the **SLIDE**: Classification Errors.
 - First describe an alpha error: a district that <u>is</u> performing acceptably can be classified as
 one that <u>is not</u> performing acceptably.
 - Second describe a beta error: a district that is <u>not</u> performing acceptably can be classified as one that is performing acceptably.
 - Then, ask the participants which type of error they think is worse. (Answer: The beta error
 is worse because it means that a district that needs additional support will not get it.)

Classification Errors

- Relying on a sample is more cost effective than relying on a census.
- BUT there is the potential to introduce misclassification errors:
 - misclassify a district that is meeting performance standards as one that is not meeting them (α error)
 - 2. misclassify a district that is **not** meeting performance standards as a school that **is** meeting them (β error)

STEP 3—Random Sampling:

- A. Demonstrate random sampling to help the participants better understand how the sample of 19 pupils can be used to estimate performance within a school or how 19 schools can be used to estimate performance within a district.
- B. Using the two-color bags of marbles, lead participants through a demonstration of how to take a sample. For the first sampling exercise, you will use the bags that have 50 marbles of each color, the District A bags. If the marbles are black and white:
 - BLACK = schools that meet the grade 3 performance standard for reading
 - WHITE = schools that do not meet the grade 3 performance standard for reading
- C. Divide the participants into pairs or groups of 3.

D. Give each group a District A bag (50/50) and a blank sheet of paper. Using flipchart paper, draw the table and write the labels shown in **Figure 5.** Instruct participants to replicate the table on the blank paper you provided.

Figure 5. Table for Random Sampling Exercise

DISTRICT A	DISTRICT B

E. Use the text in **Quotation J** to explain the bags of marbles.

Quotation J

We want to know how many schools in District A are meeting the minimum performance standard. One way to get the answer would be to count ALL the marbles in the District A bag, but let's assume we do not have the time or money to do this. Instead, we could select a SAMPLE of the schools from District A, or a sample of marbles from the District A bag.

F. Instruct groups to elect one member from each group to close his or her eyes, reach into the bag, and take out a few marbles at a time, putting them into a provided container, until he or she has 19 marbles out of the bag.

- Remind participants that black marbles stand for schools that meet the grade 3
 performance standard for reading and white marbles stand for schools that do not meet
 the standard.
- G. Instruct groups to select another member of the group to count all the black marbles removed from the bag and record the number on the paper under the heading "District A."
- H. Next, instruct the groups to put the marbles back into the bag, shake it up, and repeat the blinded sampling 4 more times, for a total of 5 random samplings of 19 marbles from the District A bag.
- I. Once all groups have completed their 5 rounds of sampling, ask each group to call out their 5 numbers. Write the numbers from each group on a flipchart page, as shown in **Figure 6.**
- J. Now ask the groups to count all the marbles in the bag and state the total number of black and white marbles. You may have to give groups a few minutes to remove all the marbles from the bag to count them.
- K. Explain that for District A, the minimum performance standard is to have 50% of schools meeting the minimum performance standard. Ask participants to use the LEMA Decision-Rule Table to determine the decision rule for the District A sample. Participants should determine that 7 schools (represented by 7 black marbles) must meet the minimum performance standard in order to classify the district as meeting the minimum performance standard.

Figure 6. Example of completed table from random sampling exercise

DISTRICT A (50/50) Sample Size= 19 Minimum Performance Standard= 50% Decision Rule= 7	DISTRICT B (80/20) Sample Size= 19 Minimum Performance Standard= 80% Decision Rule=13						
12 5 9 8 5 10 7 6 11 7 10 8							
11 13 9 10 12 11 9 12 11 10 8 11 8 10 11 12 7 13	14 15 16 16 12 13 18 15 17 14 15 17 17 17 14 16 15 13						
2/30 misclassified= 7 % error	15 17 13 1/30 misclassified= 7 % error						

- L. Then, ask the participants to repeat instructions F through H using the District B bags with a mix of 80 black marbles and 20 white marbles.
 - Remember to emphasize the minimum performance standard is set at 80% for District B.

- Allow participants to determine that according to the LEMA Decision-Rule Table, the decision rule for this performance standard is 13 schools.
- Again, once participants have completed 5 rounds of sampling with District B, record the groups' numbers on the flipchart paper under the District B column.
- M. Show participants how to calculate the error rate for each example (the District A bag and the District B bag) as shown in the example in **Figure 6.** Explain that to do this, they take the number of misclassifications—or the number of times the sample did not meet the decision rule—and use it as a numerator over the total samples from a single type of bag. This yields the error term. In **Figure 6**, the error for the District Bag A was 2/30 (2 samples crossed out, that did not meet the decision rule of 7, out of 30 total samples), or 7%; for District Bag B, it was 1/20, or 3%.

Note to Trainer:

Use the numbers you record from the participants on the flipchart paper to compare the two different samples. The LEMA Decision-Rule Table decision will lead participants to make the correct decision at least 90% of the time. In other words, for districts that have a minimum performance standard of 50%, such as District A, you will have 7 or more black marbles more than 90% of the time. Ask participants how many times in the exercise there were fewer than 7 black marbles. (This almost never happened—in the example above, it happened 2 out of 30 times.) Therefore, the LEMA Decision-Rule Table almost always identified districts that reached the minimum performance standard of 50%.

District B (the 80/20 bag), with a minimum performance standard of 80%, had only one occasion—in the example above—that fewer than 13 black marbles were sampled. Therefore, the LEMA Decision-Rule Table almost always identified districts that reached the minimum performance standard of 80%.

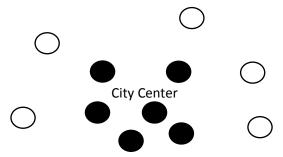
How many times in District A were there 13 or more black marbles? This almost never happened either. Almost all 50/50 District A bag samples should have fewer than 13. And, almost all 80/20 District B bag samples should have at least 13.

Therefore, areas that meet a performance standard only 50% of the time would almost never be confused with areas that meet the performance standard 80% of the time.

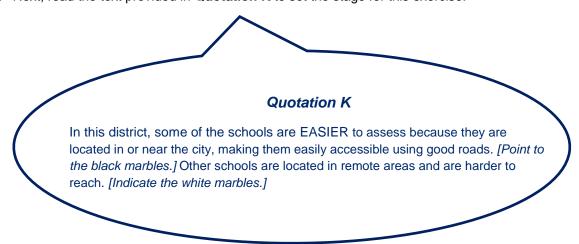
STEP 4—Nonrandom Sampling:

- A. Demonstrate nonrandom sampling to help participants understand why LEMA sampling must be random and why nonrandom sampling does not yield reliable information on which to base decisions.
- B. First, empty a 50/50 bag of marbles on the table where all participants can see the marbles.
- C. Disperse the marbles such that the black marbles are clustered together in the middle and the white marbles surround the cluster of black marbles, as shown in **Figure 7.**

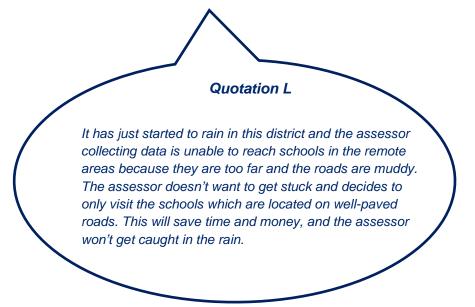
Figure 7. Nonrandom Sampling Marble Demonstration



- D. Tell participants that the marbles represent different schools in District C, with black marbles representing those schools whose pupils meet the performance standards and white marbles representing schools whose pupils do NOT meet the performance standards.
 - Be sure to indicate the "city center" as shown in the figure.
- E. Next, read the text provided in **Quotation K** to set the stage for this exercise.

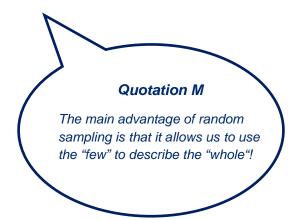


F. Continue the demonstration by reading **Quotation L** while picking up several of the black marbles.



- G. Announce to participants that District C survey findings show that all or most schools in District C are meeting the performance standard.
- H. Ask participants what they think of this conclusion. Prompt them to think about the scenario you are describing by asking the following questions:
 - How are the results different from the random sample taken from the same bag?
 - Why are they different?
 - Are conclusions and decisions based on this nonrandom sample going to be reliable?
- I. Reiterate the advantages of random sampling or ask participants to state the advantages of random sampling before you give the answer. You can write some responses on the flipchart.

J. Make the point in **Quotation M** to be certain participants understand.



Session 4: Overview of Data Collection Instruments					
PURPOSE	In this session, participants receive an overview of the two types of instruments that will be used to collect data during school visits. As stated in Section 4.2, the instruments presente in this toolkit were specifically designed to accompany the Local Education Monitoring Approach. These evaluation instruments have been used in previous LEMA pilots; however other instruments which allow for binary indicators to be calculated can be used with the LQAS methodology. You may decide to use this time to discuss the viability of the two instruments presented in this session and explore alternative data collection tools.				
OBJECTIVES	By the end of this session, participants will have: 1. Been introduced to the two types of LEMA evaluation instruments. 2. Posed questions to clear up any confusion about the evaluation instruments.				
PREPARATION	 Prepare and adapt the necessary PowerPoint slides for this module. Printed copies of ANNEX C: Example of School Instrument from Tanzania LEMA Pilot, ANNEX D: GALA Assessor Template, and ANNEX E: Example of Pupil Response Sheet, to share examples of adapted instruments with participants (you may not need one per participant, but rather a few copies for participants to share and review). If the instrument adaptation process has been completed, you can replace the annexes with the relevant instruments to share with the participants. 				
MATERIALS	✓ Printed copies of the GALA Assessor Template, the Example of Pupil Response Sheet, and the Example of a School Instrument from the Tanzania LEMA Pilot				
PRESENTATION SLIDES	Data Collection Instruments Used with LEMA Head Teacher Interview Classroom Observation (3 slides) Pupil Exercise Book Inspection GALA (2 slides)				

STEP 1—Introduction of the Data Collection Instruments Used with LEMA:

- A. Introduce the evaluation instruments that will be used to collect data at the schools. Use **SLIDE**:

 Data Collection Instruments Used with LEMA to provide a general overview of the instruments the participants will use.
- B. Explain to participants that the instruments shown in the slides are only examples. The instruments will be updated and adapted to fit their particular context. These examples are from previous pilots to give them a sense of the indicators and types of data LEMA can collect.
 - Let participants know that hard copies of example instruments are available should anyone be interested in reviewing them (see **Annex C**, **Annex D**, **Annex E**).
 - If the instrument adaptation process has been completed, share copies of the relevant instruments with the participants instead of the examples provided in the annexes.
- C. Show the SLIDE: Head Teacher Interview.
 - Provide a few examples of the types of questions that respondents will answer during the Head Teacher Interview, as shown on the slide.
- D. Display the SLIDES: Classroom Observation.
 - Provide a few examples of the types of questions that will be answered during the Classroom Observation as shown on the slides.
- E. Display the SLIDE: Pupil Exercise Book Inspection.
- F. Provide a few examples of the types of questions that will be answered during the Group Administered Literacy Assessment (as shown on the **SLIDES**: *GALA*) and allow the participants to review the examples presented on the slides.

Session 5: Practice Using LEMA Data to Monitor Performance in Education				
PURPOSE	LEMA can be used for various purposes. Earlier sessions proved the basic soundness of the approach and showed that 19 schools is a large enough sample size for most surveys. In this session, you will show participants how to apply LEMA to decide three things: (1) whether a district is meeting the performance standards for a particular indicator; (2) which indicators a district is performing well on and which ones they are not; and (3) how districts within a program area compare with one another—three of the principal purposes of a baseline and performance monitoring survey.			
OBJECTIVES	 By the end of this session, participants will have: Compared indicators across districts. Compared indicators within a district. Used performance data to help them identify priorities and make program decisions. 			
PREPARATION	Before you begin this session, you will need to do the following: 1. Review the material to make sure you understand everything you will go over.			
MATERIALS	LS ✓ LEMA Decision-Rule Table			
PRESENTATION SLIDES	Five Districts and One Indicator: Example 1 (2 slides) Five Districts and One Indicator: Example 2 (2 slides) District A and Five Indicators (2 slides) Comparing Districts A, B, C, D, and E (6 slides)			

STEP 1—Reviewing the Decision Rule:

- A. Remind participants that a decision rule gives the number that corresponds to a specific minimum performance standard:
 - It is the minimum number of pupils in a school or schools in a district, out of a particular LEMA sample size, that must meet the minimum performance standard on an indicator, in order to determine that the school or the district as a whole is meeting the minimum performance standard.
 - If the decision rule is not met, we can assume that the performance standard has not been met in the school or district.
- B. Then, show participants the **SLIDE**: *Five Districts and One Indicator*: *Example 1*. The table from this slide is also presented below in *Figure 8*. Read *Quotation N* below to explain it. Note that the performance standard is 80% in this case.

Quotation N

This slide contains performance data for an indicator for five districts. Let's determine if each district is meeting the minimum performance standard for the indicator "percentage of schools with grade 3 pupils who have satisfactory reading competency."

Figure 8. Completed table from the slide Five Districts and One Indicator: Example 1

District: A, B, C, D or E					
Indicator: Percentage of schools with Grade 3 students who have a satisfactory reading competency	Number performing acceptably	Minimum Performance	Is the Decision Rule reached? Yes or No		
District A	12	Standard = 80%	No		
District B	9		No		
District C	16	Decision Rule =	Yes		
District D	7	13	No		
District E	14	10	Yes		

- C. Have participants use their LEMA Decision-Rule Table to find the decision rule based on the example standard provided in the table. They should determine that the decision rule in this case is 13.
- D. Have one of the participants show how to use the LEMA Decision-Rule Table to arrive at the number 13. Give participants time to determine if the decision rule was met in all the districts.
- E. Allow participants to answer aloud if the decision rule was met by the 5 districts. Then ask participants to answer the questions presented at the bottom of the slide (also shown in **Figure 9**).

Figure 9. Questions for participants from the slide Five Districts and One Indicator: Example 1

- 1. Is the decision rule met in all the districts? For which districts is it met?
- 2. Can you identify the district or districts that should be the priority districts for this region?
- 3. How is the region doing as a whole?

F. Have participants complete the second example provided on the **SLIDE**: *Five Districts and One Indicator: Example 2*. This example uses a minimum performance standard of 70%, meaning the decision rule is now 11.

STEP 2—Using LEMA to Assess Indicators within One District:

A. Display the slide of **SLIDE**: **District A and Five Indicators** and work through it with participants. **Figure 10** provides the table presented on the slide.

Figure 10. Completed table from the slide District A and Five Indicators

Indicators		Number Meeting Performance Standard	Minimum Performance Standard	Decision Rule	Is the Decision Rule reached? Yes or No
1	Percentage of schools with Grade 3 students who have a satisfactory reading competency	7	45%	6	Yes
2	Percentage of schools with 80% of teachers in attendance on day of survey	4	45%	6	No
3	Percentage of schools with teachers who are up-to-date in their lesson plans	4	75%	12	No
4	Percentage of schools with sufficient number of student textbooks	13	65%	10	Yes
5	Percentage of schools with students who have reading competency in local language per the national guidelines	6	50%	7	No

- B. Point out that this slide deals with District A only.
- C. Explain that for indicator 1, for which the minimum performance standard is 45%, at least 6 schools must be classified as meeting the performance standard. Data collected show that 7 schools met the standard, which is more than the decision rule of 6. Therefore, in District A, the minimum number of schools were performing well enough to classify the district as meeting the minimum performance standard for indicator 1. (Participants should say "yes" as the appropriate answer for the last column.)

- D. Continue with the other indicators, asking a new participant to state the decision rule and whether or not it was met for each indicator.
- E. Finish the discussion by asking participants to identify which indicators should be highest priority for District A. (Indicators 2, 3, and 5).

STEP 3—Using LEMA Results to Compare the Conditions of All Districts within a Region:

A. Display the **SLIDE**: Comparing Districts A, B, C, D, and E about comparing districts. The table from this slide is presented below in **Figure 11**. Explain that by bringing together results from previous exercises, we can now take a look at our entire region and see which of the five districts we looked at in the earlier slide are doing well overall and which need support. This slide combines the information gathered in in the earlier **Five Districts** and **District A** slides.

Figure 11. Table from the slide Comparing Districts A, B, C, D, and E

		District				
Indicators		Α	В	С	D	E
1	Percentage of schools with Grade 3 students who have a satisfactory reading competency	Y	Ν	N	Y	Y
2	Percentage of schools with 80% of teachers in attendance on day of survey	Y	Y	Y	N	Y
3	Percentage of schools with teachers who are up-to- date in their lesson plans	N	N	Y	N	Y
4	Percentage of schools with sufficient number of student textbooks	Y	Y	N	N	Y
5	Percentage of schools with students who have reading competency in local language per the national guidelines	Y	Y	Y	N	Y

- B. Now that the chart is complete, have participants answer the five questions that follow it. You may instruct participants to pair up or form small groups to answer the questions at the bottom of the slide if time permits.
- C. Review the answers with participants.

- D. Discuss which district(s) appear to be performing the best for all 5 indicators. The participants should have identified Districts A and E.
- E. Discuss which district(s) appear to need the most support for their overall program. The participants should have identified District D as the worst performing district.
- F. Discuss which indicator(s) need improvement across most of the districts. The participants should have identified indicator 3 as an indicator of problems across most districts. Note to participants that this can identify a chronic problem in a region, one for which all or most districts have problems.
- G. Discuss which indicator(s) need improvement in only a few districts. The participants should have identified indicators 2 and 5 as the indicators of the least problems. Ask participants an additional discussion question: What is it about District D that gives it a problem with an indicator for which other districts seem to have success?
- H. Discuss which district(s) need special attention (District D) and which district(s) you would visit to learn possible ways to improve performance on other indicators in weaker districts (District E).
 This slide reinforces for participants that the classifications can help identify districts (like District E) that can help other districts (like District D).

Annex C. Example of School Instrument from Tanzania LEMA Pilot

Reference Section 4.2.1, page 10; and Module 2: Session 2, page 39

Annex C is an example of a School Instrument that was adapted for a pilot application of this approach conducted in Tanzania. All the questions in the instrument are presented in English and Kiswahili. This annex illustrates the types of questions, guidelines, and protocols that assessors can use to monitor and evaluate a sampled classroom or teacher during a school visit. The format of the instrument and the questions it includes can be adapted for use in other contexts.

LQAS School Instrument / LQAS Kifaa cha shule

Tanzania LQAS 2015

School code: / Shule idadi:
School LQAS number out of 19:
/ Namba ya shule ya LQAS kati ya 19:
District / Wilaya
Wards / Kata
School Name / Jina la shule
District School Inspectors / Wakaguzi wa shule wa Wilaya
Date of Visit / Tarehe ya kutembelea shule / / dd / mm / yyyy / Siku/mwezi/mwaka
Arrival time at the school (HH:MM) / Muda wa kufika shuleni (Saa:Dakika)
: (Use 24 hour time) / (Tumia saa 24)
Departure time at the school (HH:MM) / Muda wa kuondoka shuleni (Saa:Dakika): (Use 24 hour time) / (Tumia saa 24)
This questionnaire was reviewed by: / Dodoso hili limehakikiwa na:
(Head of Supervision name and signature) / (Jina na saini ya Kiongozi msimamizi)

<u>Section 1: Head Teacher Introduction and Consent / Sehemu ya 1:</u> <u>Utambulisho wa Mwalimu Mkuu na ridhaa</u>

⊈ Good mo	orning. My name is	and I work with the Ministry of
Education a	nd Vocational Training We are condu	cting a pilot study to evaluate a new way to
monitor sch	ools in order to identify schools that	are in the greatest need of additional support.
This exercise	e is not meant to penalize schools. / I	labari ya asubuhi. Jina langu
ni	na ninafanya kazi pamoja na \	Vizara ya Elimu na Mafunzo ya Ufundi.
Tunaendesh	na utafiti wa majaribio ili kutathmini r	jia mpya ya kufuatilia shule ili kubaini shule
zinazohitaji	msaada zaidi. Zoezi hili halikusudii ku	wa adhabu kwa shule.

In today's visit, we are particularly interested in examining language and literacy practice in STANDARD 3 classrooms. For this reason, we would like to observe one of your STANDARD 3 teachers teaching their typical reading lessons. We will ask to see the teacher's lesson plan and the teacher's guide. / Katika ziara ya leo, tunapenda kuchunguza lugha inavyofundishwa na kuona mnavyojifunza kusoma na kuandika katika DARASA la 3. Kwa sababu hii, tutapenda kuona mwalimu akifundisha kusoma DARASA la 3 moja. Tutapenda pia kuona daftari la maandalio la mwalimu na kiongozi kwa mwalimu.

Once we are done with the observation and assessment of your STANDARD 3 teacher, we would like to sample 18 of your STANDARD 3 pupils. 16 of these pupils will participate in a simple group Kiswahili reading assessment. The remaining 2 selected pupils will be asked to participate in the group test if any of the selected pupils is unable or unwilling to participate. The pupil assessment includes questions about letters, words, simple sentences, and a short passage. The pupil assessment should take about 45 minutes to an hour. We will also examine the pupil's literacy exercise books. We will try to be as fast as we can so as to minimize the disruption to your school. / Tutakapomaliza kumchunguza na kupima ubora wa mwalimu wa DARASA la 3, tutachagua sampuli kielelezo wanafunzi 18 wa DARASA la 3. Wanafunzi hawa 16 watashiriki katika uchunguzi wa kusoma Kiswahili katika kikundi. Wanafunzi 2 waliobaki katika wale waliochaguliwa watashiriki katika jaribio la kikundi kama kati ya wale waliochaguliwa hawataweza kushiriki au watakataa kushiriki. Upimaji wa ubora wa wanafunzi utahusu kuuliza maswali ya herufi, maneno, sentensi rahisi, na kusoma kifungu kifupi cha habari. Kazi ya upimaji wa ubora wa mwanafunzi utachukua muda wa dakika kama 45 hadi saa moja. Tutachunguza pia daftari za wanafunzi za mwandiko. Tutajitahidi kufanya haraka kadri tuwezavyo ili tusisababishe usumbufu shuleni.

I will not write any names on the questionnaires because the survey is not meant to check up on individual teachers or pupils. / Hatutaandika jina lolote katika dodoso hili kwa sababu nia ya utafiti huu si kumkagua mwalimu au mwanafunzi.

The pupil reading assessment is a written test and will need to be administered in the pupils' classroom. The non-selected pupils will have to leave the classroom while the test is being conducted. We would like to assess 16 randomly selected pupils from the chosen STANDARD 3 class. In order to ensure quiet during this assessment, we would like to conduct this assessment

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when the school is not on break. Could you please suggest a time when it would be most convenient to conduct this test? / Tutachagua wanafunzi 16 kwa njia ya uchaguzi usiofuata utaratibu maalum kwa DARASA LA 3 lililochaguliwa. Ilikupata utulivu wakati wa kupima ubora wa wanafunzi, tutapenda zoezi hili la upimaji lifanyike wakati ambao si wa mapumziko. Je mnaweza kuchagua muda muafaka ambao unafaa kufanya hili jaribio?

Finally, we are also interested in documenting the percentage of teachers who arrived on time at your school today. / Mwisho, tutapenda kuandika asilimia ya walimu waliowahi kufika shuleni leo.

Participation in this pilot study is voluntary however, we hope that you will participate so that we can learn from this assessment and improve this new monitoring tool to support schools. Do you have any questions you would like to ask me? Do you agree to participate in this survey and allow your teachers and pupils to participate? / Kushiriki katika utafiti huu wa majaribio si lazima, lakini tuna matumaini kuwa utashiriki ili tuweze kujifunza kutoka upimaji huu wa kuboresha kifaa hiki kipya cha kufuatilia na kuisaidia shule. Je, una swali ambalo ungependa kuniuliza? Je, unakubali kushiriki utafiti huu pamoja na kuwaruhusu walimu na wanafunzi wa shule yako kushiriki?

YES	J NO ∐
Ndiyo	Hapana

If no, mark this head teacher as a refusal. Then proceed to another school. Reuse this same introduction and questionnaire. / Kama hapana, onyesha kuwa mwalimu mkuu amekataa. Nenda shule nyingine, Tumia utangulizi huu na dodoso hili.

THANK YOU / ASANTE

Section 2: Teacher Attendance / Sehemu 2: Mahudhurio ya Mwalimu

Fill in this section as soon as you have met the head teacher and they have agreed to the monitoring visit. Ideally, your introductory visit with the head teacher will take place just before school starts. Please note the number of teachers employed at the school (this should include teachers that are employed by the MOEVT or teachers directly employed by the School.). This information is best obtained from the staff attendance book. Observe the actual number of teachers in attendance by quickly walking through the school and counting the number of teachers in their classrooms at the school's official start time in the morning. If you have time before the school's official start time, go ahead and complete the other sections while you wait for the school's start time. / Jaza sehemu hii mara unapokutana na mwalimu mkuu na anapokubali kufanyika kwa ufuatiliaji wa uchunguzi huu. Utangulizi wako na mwalimu mkuu ufanyike kabla ya ratiba ya masomo kuanza. Tafadhali andika idadi ya walimu walioajiriwa na shule). Taarifa inayofuata ichukuliwe kwenye kitabu cha mahudhurio. Kagua idadi halisi ya walimu waliopo shuleni kwa kutembea shuleni na kuhesabu idadi ya walimu waliopo darasani wakati wa kuanza vipindi asubuhi. Kama utakuwa na muda kabla ratiba ya masomo haijaanza, malizia vipengele vingine unaposubiri muda wa masomo kuanza.

I will need to walk around your school to observe how many teachers are in their classrooms this morning. I will then need to compare this with the number of teachers on your attendance book. May I please see your attendance book? Thank you. / Nitahitaji kutembea kuzunguka shule yako ili kuona idadi ya walimu waliopo darasani asubuhi ya leo. Pia nitahitaji kulinganisha na idadi ya walimu waliojiorodhesha kwenye daftari la mahudhurio. Je naweza kuona daftari la mahudhurio? Asante.

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizoruk wa (kama zipo)
2.1	How many teachers are in their classroom at the school's official start time? (observe this by walking around to all the classrooms) / Wapo walimu wangapi darasani wakati wa kuanza masomo? (chunguza hili kwa kupita kwenye madarasa yote)	NUMBER OF TEACHERS / IDADI YA WALIMU	

			Skips (if any) / Sehemu zilizoruk wa
	Questions and Filters / Maswali na	Coding Categories / Kupanga	(kama
No.	kuchuja	kanuni kwenye makundi	zipo)
2.2	How many teachers are employed at the school include MOEVT and for private schools, teachers employed by the schools, PTA, and Community teachers – anyone listed on the attendance book)? / Wapo walimu wangapi walioajiriwa shuleni wakiwepo walioajiriwa na TAMISEMI, na kwa shule za binafsi, onyesha walioajiriwa na shule, Chama cha Wazazi Tanzania, na walimu wa Jumuia- andika wote waliopo kwenye daftari la mahudhurio)?	NUMBER OF TEACHERS / IDADI YA WALIMU	
2.3	What per cent of teachers are in attendance (2.1/2.2 x100)? / Je ni asilimia ngapi ya walimu wamehudhuria? (2.1/2.2 x100)?	PER CENT OF TEACHERS / ASILIMIA YA WALIMU	
2.4	Were 80 per cent of teachers in attendance at the school's official start time? / Je asilimia 80 ya walimu walikuwepo shuleni wakati wa kuanza masomo?	YES / NDIYO	

Section 3. STANDARD 3 Teacher Selection for the Language and Literacy Lesson Observation and Teacher Reading Assessment / Sehemu 3. Uchaguzi wa Walimu wa Lugha na upimaji wa ubora wa Kusoma na kuandika kwa DARASA LA 3.

If the school has more than one STANDARD 3 teacher, explain to the Head Teacher the need to randomly select just one STANDARD 3 teacher. If there is only one STANDARD 3 teacher, then observe that teacher. Kama shule ina MADARASA ya 3 zaidi ya moja, mweleze Mwalimu Mkuu umuhimu wa kuchagua bila kufuata utaratibu maalum ili kumpata mwalimu mmoja tu wa DARASA LA 3. Kama shule ina DARASA moja tu la 3, basi mpime mwalimu huyo.

I will need to randomly select a STANDARD 3 teacher to observe teaching a language and literacy lesson. In order to pick a teacher, I'll need to see your teacher attendance book. / Nitahitaji kuchagua mwalimu wa DARASA LA 3 bila kufuata utaratibu maalum ili kuchunguza ufundishaji wake katika lugha, kusoma na kuandika. Ili kumpata mwalimu huyo, nitaangalia daftari la mahudhurio.

Identify the total number of STANDARD 3 teachers that are listed in attendance book. Select the random number box below that corresponds to the number of teachers on the duty roster or staff list. / Tambua idadi ya walimu wa DARASA LA 3 waliopo kwenye daftri la mahudhurio. Chagua bila kufuata utaratibu maalum namba kwenye kisanduku kinachokubaliana na idadi ya walimu waliopo kwenye daftari lao la mahudhurio.

Without looking, hold your pencil over the appropriate random number box and pick the STANDARD 3 teacher whose number your pencil lands on. If your pencil lands on a 2, then pick the second teacher on the duty roster or staff list. / Bila kuangalia, shika kalamu yako juu ya namba ya kisanduku ambacho utachagua bila kufuata utaratibu maalum na kuteua namba ya mwalimu wa DARASA LA 3 ambapo kalamu yako itagusa. Kama penseli yako itagusa namba 2, basi teua mwalimu wa pili kwenye daftari la mahudhurio au orodha ya walimu.

Random number boxes for selection of teacher / Visanduku vya namba za Uchaguzi usiofuata utaratibu maalum wa mwalimu

RAN	DOM I	NUMBE	R TA	BLE	
	TO SELECT ONE				
STA	ANDAR	D 3	TEACI	HER	
	FRC	MA M	ONG		
3 TE	EACHE	RS /	JEDV	VALI	
	LA I	NAMBA	A ZA		
UCH	IAGUZ	I US	IOFU	ATA	
UT	ARAT:	IBU	MAAL	UM	
	ILI	KUCH.	AGUA		
MV	VALIM	U MM	OJA V	ΝA	
DAF	RASA	LA 3	KUTO	OKA	
MIO	NGON]	I MW	A WAL	JMU	
3					
3	2	1	2	2	
3	2	1	1	3	
2	1	1	1	3	
1	3	3	3	3	
2	2	3	1	1	
1	1	3	2	2	
2	2	2	2	3	
3	2	1	3	2	
2	1	1	3	1	
	_				
3	2	3	3	1	

RAN	DOM I	NUMBE	R TA	BLE		
ı	TO SI	ELECT	ONE			
STA	ANDAR	D 3 '	TEACI	HER		
	FRO	MA M	ONG			
2 77	'ACUE	RS /	TEDI	λ7. Τ. Τ		
		NAMBA		VALL		
				A A		
		I US				
UT.	ARAT:	IBU	MAAL	UM		
	ILI	KUCH.	AGUA			
MV	VALIM	U MM	OJA V	ΝA		
DAF	RASA	LA 3	KUT	OKA		
MIOI	NGON]	MW I	A WAI	JMU		
	2					
2 2 1 2 1						
1	2	2	2	1		
2	2	1	1	2		
1	1	1	2	2		
2	2	2	2	1		
2	2	1	1	1		
2	2	1	2	2		
1	1	2	1	2		
1	1	2	1	1		
1	1	2	1	2		

Ask the head teacher to confirm that the selected STANDARD 3 teacher is in attendance today, and record the teacher's name at the top of the sampling worksheet. If the selected teacher is not in attendance today, then repeat the process. If you are working in a school that only has two teachers in their registry and one of the teachers is absent, then observe the only STANDARD 3 teacher that is in attendance. / Mwulize mwalimu mkuu kama mwalimu aliyechaguliwa wa DARASA LA 3 amehudhuria leo, na kisha rekodi jina la mwalimu juu katika karatasi ya mazoezi ya sampuli. Kama mwalimu hajahudhuria leo, rudia mchakato. Kama unafanya kazi katika shule iliyo na walimu wawili waliondikishwa na mmoja wa walimu hao hayupo, basi mchunguze mwalimu huyo aliyepo wa DARASA LA 3.

			Skips (if any) / Sehemu zilizoruk wa
No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	(kama zipo)
3.1	Is the teacher that I've selected in attendance today? / Je mwalimu niliyemchagua yupo shuleni leo?	YES / NDIYO	If 'no' repeat the teacher selection process. / Kama 'hapana' rudia mchakat o wa uchaguzi.
3. 2	Does the teacher I have selected normally teach the Kiswahili lesson? / Je mwalimu niliyemchagua anafundisha somo la Kiswahili?	YES / NDIYO	
3.3	If not, is there a different teacher in your school who normally teaches the Kiswahili lesson for this teacher? / Kama hafundishi, kuna mwalimu mwingine shuleni kwako ambaye anafundisha somo la Kiswahili la mwalimu huyu?	YES / NDIYO	

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No.	Questions and Filters /	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizoruk wa (kama zipo)
3.4	Maswali na kuchuja Do you have the current 2005 version of the Kiswahili syllabus? / Je mnao muhtasari wa sasa wa somo la Kiswahili wa mwaka 2005?	YES / NDIYO1 NO / HAPANA0	zipo)

Section 4. STANDARD 3 Teacher Introduction and Consent / Sehemu ya 4. Mwalimu wa DARASA LA 3 Utambulisho na ridhaa

Informed Consent for the STANDARD 3 Teacher Who Will Be Observed / Kupata ridhaa ya Mwalimu wa DARASA LA 3 Ambaye Atachunguzwa

Good morning. My name is ______ and I work with the Ministry of Education and Vocational Training. In our visit today, we are particularly interested in examining reading practice in STANDARD 3 classrooms. Your classroom was randomly selected to participate in this monitoring visit. We would like to ask you about some of the teaching and pupil materials that you have and use in your routine teaching. We would also like to quietly observe your reading lesson or lessons. / Habari ya asubuhi. Jina langu ni-----na ninafanya kazi pamoja na Wizara ya Elimu na Mafunzo ya Ufundi. Katika ziara yetu leo, tuna nia ya kuchunguza zoezi la usomaji kwa DARASA LA 3.

Darasa lenu limechaguliwa kwa njia ya uchaguzi usiofuata utaratibu maalumu ili kushiriki katika ziara hii ya ufuatiliaji. Tutapenda kukuuliza maswali juu ya ufundishaji na vifaa vya wanafunzi ulivyonavyo na jinsi unavyovitumia katika ufundishaji. Tutapenda pia kuchunguza somo au masomo ya kusoma yakifundishwa.

Once we have observed your reading lesson, we would like to randomly select 18 children in your classroom. 16 of these 18 children will take part in a group Kiswahili reading and comprehension assessment. The remaining 2 pupils will be called on to participate in case any of the original 16 students is unable or unwilling to participate. / Mara tutakapomaliza kuchunguza somo la kusoma, tutapenda kuchagua wanafunzi 18 kwa njia ya uchaguzi usio na utaratibu maalum darasani kwako. Wanafunzi hawa 16 watashiriki katika uchunguzi wa kusoma Kiswahili katika kikundi. Wanafunzi 2 waliobaki katika wale waliochaguliwa watashiriki katika jaribio la kikundi kama kati ya wale waliochaguliwa hawataweza kushiriki au watakataa kushiriki. Hawa wanafunzi watashiriki Kusoma na kujibu maswali ya ufahamu kwenye somo la Kiswahili katika upimaji wa ubora wa kikundi.

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We will not record names on any questionnaires because the survey is not meant to check up on individual teachers or pupils. Rather, it is meant to help the District Education Officer plan how to best support schools and teachers. The pupil assessment includes questions about letters, words, simple sentences and a reading passage and it should take about 45 minutes to one hour. We will also examine the pupil's literacy exercise books. We will try to be as fast as we can so as to minimize the disturbance to your class. / Hatutaweka rekodi ya majina yenu kwenye dodoso tutakalouliza kwa sababu utafiti huu hauna nia ya kupata habari ya mwalimu au mwanafunzi kama mtu binafsi. Uchunguzi huu una nia ya kumsaidia Afisaelimu wa Wilaya kupanga vizuri jinsi ya kusaidia shule na walimu. Upimaji wa ubora kwa wanafunzi utahusu herufi, maneno, sentensi rahisi na kusoma habari na zoezi hili litachukua dakika 45 hadi saa moja. Tutaangalia pia daftari za wanafunzi za kusoma na kuandika. Tutafanya hii kazi kwa haraka iwezekanavyo ili tusisumbue darasa lenu.

Participation in this pilot study is voluntary, however, we hope that you will participate so that we can learn from this assessment and improve this new monitoring tool. Do you have any questions you would like to ask me? Do you agree to participate in this survey and allow your pupils to participate? / Kushiriki kwenye utafiti huu wa majaribio ni wa hiari, hatahivyo, tunategemea utashiriki ili tuweze kujifunza kutoka katika huu upimaji huu ili kukiendeleza kifaa hiki kipya cha ufuatiliaji. Je una swali lolote la kuniuliza? Unakubali kushiriki katika huu utafiti na kuwaruhusu wanafunzi wako kushiriki?

YES	NO
NDIYO	HAPANA

If "no," mark this teacher as a refusal in the table on the cover page. Then proceed to another teacher or school. Reuse these same instructions and questionnaire. / Kama "hapana", weka alama kuonyesha kuwa amekataa kwenye orodha iliyopo ukurasa wa mbele. Sasa endelea kwa mwalimu mwingine au shule. Tumia tena maelekezo haya na hojaji.

THANK YOU / ASANTE

Thank you very much. Now, could you please show me your STANDARD 3 Teacher's Guide and your lesson plan for today? / Asante sana. Sasa, naomba unionyeshe Kiongozi cha Mwalimu kwa DARASA la 3 na maandalio yako ya somo la leo.

In your notebook, note what content and activities are planned for today's Reading lesson. After the lesson observation, you will need to note whether teacher has or hasn't followed their lesson plan for the day. Please remember that you should not keep the lesson plan during the observation so that the teacher can consult this plan if needed. / Katika daftari lako, andika maudhui na matendo yaliyopangwa kwa ajili ya somo la Kusoma la leo. Baada ya uchunguzi wa somo, andika kama mwalimu amefuata au hakufuata maandalio yake ya somo. Tafadhali kumbuka kutokaa na daftari lake la maandalio ya mwalimu wakati wa uchunguzi wa somo ili mwalimu aweze kuyatumia kama atataka.

<u>Section 5: Availability of Teacher Materials / Sehemu ya 5: Upatikanaji wa Zana za Walimu</u>

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizoruk wa (kama zipo)
5.1	Does the teacher have the STANDARD 3 Teacher's Guide in his/her classroom that you can see? / Je mwalimu anacho Kiongozi cha Mwalimu hapo darasani kwa DARASA LA 3 ambacho unakiona?	YES / NDIYO	
5.2	Does the teacher have the Kiswahili scheme of work? / Je mwalimu analo azimio la kazi la Kiswahili?	YES / NDIYO 1 NO / HAPANA 0	

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizoruk wa (kama zipo)
5. 3	Does the teacher have a lesson plan for the day in the lesson notebook? / Je mwalimu analo andalio la somo la leo kwenye	YES / NDIYO 1 NO / HAPANA 0	
5.4	daftari? Does the teacher have lesson notes for the day in the lesson notebook? / Je mwalimu ameandaa muhtasari wa somo kwenye daftari la maandalio?	YES / NDIYO	
5.5	Does the lesson plan refer to the teachers guide, syllabus or scheme of work? / Je maandalio ya somo yanarejea kwenye kiongozi cha mwalimu, muhtasari wa somo au azimio la kazi?	YES / NDIYO 1 NO / HAPANA 0	
5.6	Note below what the main focus activities are planned. Refer to yo lesson. Return the lesson plan to taken your notes so that they car Andika hapa chini lengo kuu la so zilizopangwa. Rejea kumbukumbunachunguza somo. Rudisha and unapomaliza kuandika kumbukur kulitumia kwenye ufundishaji.	the teacher once you have use them while teaching. / who la leo na kuona shughuli u zako wakati ulipokuwa alio la somo kwa mwalimu mara	

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizoruk wa (kama zipo)

Ask the STANDARD 3 teacher to show you the Readers and ask what unit they are currently working on in the Readers. / Mwombe mwalimu wa DARASA LA 3 akuonyeshe kitabu cha Kusoma na mwombe akueleze ni sura ipi wanayosoma sasa.

Could you please show me your Kiswahili readers? I would like to count how many you have. Also, could you please tell me what unit or chapter you are currently working on in the Readers? / Je mnaweza kunionyesha Vitabu vya Kiswahili? Naomba nihesabu vipo vingapi.Pia, mnaweza kuniambia sasa hivi mnasoma sura ipi ya kitabu cha Kusoma?

Section 6: Availability of Pupil Materials: Kiswahili / Sehemu ya 6: Upatikanaji wa zana za Kufundishia Wanafunzi Kiswahili

No. 6. 1	Questions and Filters / Maswali na kuchuja How many STANDARD 3 Kiswahili readers are there in the class? / Kuna vitabu	Coding Categories / Kupanga kanuni kwenye makundi NUMBER OF BOOKS / IDADI YA	Skips (if any) / Sehemu zilizoru kwa (kama zipo) If 0, → 7.1 / Kama 0,
	vingapi darasani vya kusoma DARASA LA 3 kwenye somo la Kiswahili?	VITABU	→ 7.1
6. 2	What is the title of the Kiswahili Reader? / Kitabu cha kiada cha kusoma cha Kiswahili kinaitwaje?		
6.3	How many units or chapters are there in this STANDARD 3 Kiswahili reader? / Kitabu hiki cha kusoma cha Kiswahili cha DARASA LA 3 kina sura ngapi?	TOTAL NUMBER OF UNITS / JUMLA YA SURA	
6.4	What unit in the Kiswahili reader is the teacher working on during this lesson? / Ni sura ipi kwenye somo la Kiswahili mwalimu anafundisha sasa?	UNIT / SURA	

Let the STANDARD 3 teacher know that you would like to observe a normal reading lesson and assess 16 pupils in her class. Let her know that you would like to assess the pupils when it's not

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a break time and ask which time would be more convenient for this. Depending on the teacher's response, move to either the pupil assessment (See the pupil assessment booklet) or the classroom observation (starting on section 7 below). / Mweleze mwalimu wa DARASA LA 3 kuwa utapenda kuchunguza ufundishaji darasani wa somo la kusoma kwa wanafunzi 16. Mweleze kuwa utapenda kuchunguza ubora wa wanafunzi wakati ambao si wa mapumziko hivyo akuambie muda upi ni muafaka kwake. Kutegemea mwalimu atakuambiaje, endelea ama kupima ubora wa wanafunzi (ona kijitabu cha kupima ubora wa wanafunzi) au kuchunguza darasa (inaanza kipengele cha 7 hapa chini)

CLASSROOM OBSERVATION / UCHUNGUZI DARASANI

For the classroom observation, if the teacher normally teaches English and Kiswahili, then you must say that you would like to observe Kiswahili. Do not try to influence the content of the lessons nor the duration of the lessons. Be a quiet observer of the entire lesson. / Kwa uchunguzi darasani, kama mwalimu anafundisha English na Kiswahili, basi lazima umwaambie kuwa utachunguza somo la Kiswahili. Usijaribu kuathiri mada ya somo kwa namna yoyote au muda wa somo. Chunguza somo kwa utulivu muda wote.

As part of this visit, I would like to observe you teaching the reading lesson you had planned for today. If you normally teach an English lesson or Kiswahili lesson then I would like to observe Kiswahili. Which language or languages do you normally teach? / Kama sehemu ya ziara hii, nitapenda kukuchunguza ukifundisha somo la kusoma kama ulivyoliandalia leo. Kama kwa kawaida unafundisha somo la English au Kiswahili nitapenda kuchunguza somo la Kiswahili. Kwa kawaida unafundisha lugha ipi au zipi?

Section 7: Time on Task: KISWAHILI / Sehemu ya 7: Muda wa kufanya kazi: KISWAHILI

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizorukw a (kama zipo)
7. 1	Did the selected STANDARD 3 teacher teach a Kiswahili reading lesson? / Je mwalimu aliyechaguliwa wa DARASA LA 3 amefundisha somo la kusoma la Kiswahili?	YES / NDIYO	If 2 → Instruction s after 10.2 / Kama ni 2 Maelekezo baada ya 10.2

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No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizorukw a (kama zipo)
7.2	At what time did the Kiswahili reading lesson begin? / Je ni muda gani somo la kusoma la Kiswahili lilianza?	:	
7.3	At what time did the Kiswahili reading lesson end? / Je ni muda gani somo la Kiswahili lilikwisha?	:	
7. 4	How long did the Kiswahili reading lesson last? / Je somo la kusoma la Kiswahili limechukua muda gani?	::	
7. 5	Did the Kiswahili reading lesson last at least 40 minutes? / Je somo la Kiswahili la kusoma limedumu angalau dakika 40?	YES / NDIYO1 NO / HAPANA0	

Section 8: Reading Practice: KISWAHILI / Sehemu ya 8: Zoezi la Kusoma: KISWAHILI

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizorukwa (kama zipo)
8. 1	Did the teacher ask pupils to read aloud individually or in pairs during the Kiswahili reading lesson? / Je mwalimu aliwaambia wanafunzi kusoma kwa sauti mmojammoja au kwa jozi wakati wa somo la kusoma Kiswahili?	YES / NDIYO0	
8. 2	Did the teacher ask the class to read silently during the Kiswahili reading lesson? / Je mwalimu aliwaambia wanafunzi wasome kimya wakati wa somo la Kiswahil la kusoma?	YES / NDIYO	
8.3	Did the teacher ask the whole class to read a passage together during the Kiswahili reading lesson? / Je mwalimu aliwaambia wanafunzi wote wasome kifungu cha habari wakati wa somo la kusoma la Kiswahili?	YES / NDIYO	
8.4	Did the teacher ask pupils to give the sounds of letters, and/or phonemes during the lesson? / Je mwalimu aliwaambia wanafunzi wasome sauti za herufi, na/au fonimu wakati wa somo?	YES / NDIYO	

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	Questions and Filters /	Coding Categories / Kupanga kanuni kwenye	Skips (if any) / Sehemu zilizorukwa
No.	Maswali na kuchuja	makundi	(kama zipo)
8. 5	Did the teacher ask pupils	YES / NDIYO1	
	comprehension questions	NO / HAPANA0	
	based on what was read? / Je		
	mwalimu aliuliza maswali ya		
	ufahamu yanayotokana na		
	habari aliyosoma?		

Section 9: Pupil Engagement: KISWAHILI / Sehemu ya 9: Ushiriki wa Wanafunzi: KISWAHILI

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizorukw a (kama zipo)
9.1	Did the majority of pupils (more than half) practice any of the following activities for at least half of the Kiswahili reading lesson: individual reading, pair or group reading, raising their hands, coming up to the front of the class to read or write, or writing at their desks? / Je wanafunzi walio wengi (zaidi ya nusu) wanashiriki mojawapo ya shughuli zifuatazo kwa angalau nusu ya muda wa somo la kusoma la Kiswahili: kusoma mmojammoja, kusoma katika jozi au vikundi, kunyoosha mikono, kufika mbele ya darasa na kusoma au kuandika, au kuandika wakiwa kwenye madawati yao?	YES / NDIYO	

Section 10: Teacher Material Use and Preparedness: KISWAHILI / Sehemu ya 10: Utumiaji wa zana za kufundishia na maandalizi: KISWAHILI

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizoruk wa (kama zipo)
10. 1	Did the teacher use or consult the Teacher's Guide, the lesson plan, or the pupil textbook during the Kiswahili reading lesson? / Je mwalimu alitumia au kurejea Kiongozi cha Mwalimu, maandalio ya somo, au kitabu cha kiada cha mwanafunzi wakati akifundisha somo la kusoma la Kiswahili?	YES / NDIYO	•
10.2	Did the teacher follow the lesson plan during the observed Kiswahili reading lesson? (Please consult your notes on the lesson plan when answering this question. If the teacher did not have a lesson plan, select "Not Applicable") / Je wakati wa uchunguzi, mwalimu alionekana akifuata maandalio yake ya somo wakati akifundisha somo la Kiswahili? (Tafadhali rejea nukuu zako kwenye maandalio ya somo unapojibu swali hili.Kama mwalimu hakuwa na andalio la somo, chagua "Haihusiki")	YES / NDIYO	

After you have observed the reading lesson, let the teacher know that you would like to see the class register (be sure to use the most recent/up to date register) to record the number of pupils that are enrolled in this STANDARD 3 class. Also, let the teacher know that you would like to line up the pupils (pupils need not be in any particular order) so that you can count the pupils that are currently in attendance and conduct your sampling exercise being careful to complete the sampling sheet as you do so. / Baada ya kuchunguza somo, mwambie mwalimu utapenda kuona daftari la mahudhurio (hakikisha unaona daftari la hivi karibuni) ili kuandika idadi ya wanafunzi walioandikishwa wa DARASA hili LA 3. Pia mwambie mwalimu kuwa utapenda kuwapanga wanafunzi katika mstari (sio lazima wawe katika mpangilio maaum) ili uweze kuwahesabu wale waliopo na kuwachagua ili kupata sampuli na kukamilisha kuandika kwenye karatasi ya sampuli.

Thank you for allowing me to observe your reading lesson/s today. It was very interesting. As the next phase of our visit today, I would like to see your class register to see how many pupils are enrolled in your class. I would also like to line the pupils up to count the number that are here today and then conduct an exercise to randomly select 18 pupils. We will work with 16 of these selected pupils, the remaining 2 pupils will be identified in case any of the originally selected 16 students is unable or unwilling to participate. At a time that is convenient for you and your class, we would like to assess 16 of the selected pupils in your class using a simple written test. I will also ask the selected 16pupils to bring with them their Kiswahili exercise book. I will look through these once the pupils have completed their assessment. In order to ensure quiet, we would like to conduct this assessment when the school is not on break. Could you please let me know when it would be convenient to conduct this pupil assessment? Could we do this now? / Asante kwa kuniruhusu kuchunguza somo/masomo yako ya kusoma leo. Nimependezwa na somo lako. Katika ziara hii pia nitapenda kuona daftari la mahudhurio ya wanafunzi walioandikishwa darasani mwako. Naomba wanafunzi wajipange ili niwahesabu waliopo bila kutumia utaratibu maalum ili kupata wanafunzi 18. Tutafanyakazi na wanafunzi 16 waliochaguliwa, wanafunzi 2 waliobaki watachaguliwa ili kama katika wale wa kwanza waliochaguliwa 16 kuna atakayeshindwa kushiriki au hatataka kushiriki, wachukuliwe. Muda ambao utakufaa wewe na wanafunzi, tutapenda kupima ubora wa wanafunzi 16 katika wale waliochaguliwa tukitumia jaribio rahisi la kuandika. Nitawaomba pia wanafunzi 16 waliochaguliwa waje na daftari zao za Kiswahili. Nitaziangalia mara baada ya wanafunzi kukamilisha kupima ubora wa kazi zao. Ili tuwe na

utulivu, naomba tufanye upimaji huu wakati usio wa mapumziko. Je ni muda upi muafaka wa kuweza kupima ubora wa hawa wanafunzi? Tunaweza kufanya sasa?

<u>Section 11: Pupil attendance / Sehemu ya 11: Mahudhurio ya wanafunzi</u>

No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	Skips (if any) / Sehemu zilizoruk wa (kama zipo)
11.1	How many STANDARD 3 pupils are <u>registered</u> in the selected classroom? / Je ni wanafunzi wangapi waliopo	NUMBER OF PUPILS / IDADI YA WANAFUNZI	
	kwenye rejesta ya DARASA LA 3 ambao darasa lao limechaguliwa?	IDADI TA WANAFONZI	
	The most accurate register may be with the classroom teacher or with the Head Teacher. / Rejesta sahihi inaweza ikawa ni ile ya mwalimu wa darasa au/na Mwalimu Mkuu.		

			Skips (if any) / Sehemu zilizoruk
No.	Questions and Filters / Maswali na kuchuja	Coding Categories / Kupanga kanuni kwenye makundi	wa (kama zipo)
11.2	How many STANDARD 3 pupils are <u>present</u> in the selected classroom? / Je kuna wanafunzi wangapi <u>waliohudhuria</u> wa DARASA LA 3 lililochaguliwa?	NUMBER OF PUPILS/ IDADI YA WANAFUNZI	
	Record the total number of pupils counted during the pupil sampling exercise below. / Andika hapa chini jumla ya wanafunzi waliohesabiwa wakati wa zoezi la kupata sampuli.		
11.3	What per cent of pupils are in attendance (11.1/11.2 x100)? / Ni asilimia ngapi ya wanafunzi wamehudhuria (11.2/11.1x 100)?	PER CENT OF PUPILS / ASILIMIA YA WANAFUNZI	
11.4	Are 80 percent or more of the registered pupils in attendance? / Je asilimia 80 au zaidi ya wanafunzi walioandikwa wamehudhuria?	YES / NDIYO 1 NO / HAPANA 0	

Pupil Exercise Book Inventory (complete immediately after group assessment) / Orodha Hakiki ya Daftari za wanafunzi (kamilisha mara moja baada ya upimaji wa ubora wa kikundi)

Pupil # / Mwanafunzi #	KISWAHILI		
	Kiswahili exercise book available? / Daftari la Kiswahili lipo? [0 = no / hapana; 1 = yes / ndiyo]	Number of pages with pupil work / Idadi ya kurasa zenye mazoezi ya wanafunzi [page = 1 side of sheet]	Teacher comments/marks on one or more of the last two exercises in the pupil's exercise book? / Maoni ya Mwalimu/alama ipo kwenye moja au zaidi ya mazoezi mawili kwenye daftari za wanafunzi inayoashiria mwalimu anapitia daftari? [0 = no / hapana; 1 = yes / ndiyo]
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			

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Pupil # / Mwanafunzi #	KISWAHILI		
	Kiswahili exercise book available? / Daftari la Kiswahili lipo? [0 = no / hapana; 1 = yes / ndiyo]	Number of pages with pupil work / Idadi ya kurasa zenye mazoezi ya wanafunzi [page = 1 side of sheet]	Teacher comments/marks on one or more of the last two exercises in the pupil's exercise book? / Maoni ya Mwalimu/alama ipo kwenye moja au zaidi ya mazoezi mawili kwenye daftari za wanafunzi inayoashiria mwalimu anapitia daftari? [0 = no / hapana; 1 = yes / ndiyo]
15.			
16.			

Note the time the visit at the school ends: / Andika muda wa ziara kuisha:

THANK YOU - THE END / ASANTE- MWISHO

COMMENTS / MAONI

LQAS PUPIL SAMPLING WORKSHEET / SAMPULI YA KARATASI YA LQAS KWA WANAFUNZI

NOTE: This worksheet is to be used to assist you in your sample selection. Please **discard** this sheet prior to leaving the school. Do not record the pupil or the teacher names on the questionnaires. / KUMBUKA: Karatasi hii itatumika ili kukusaidia wakati wa kufanya sampuli. Tafadhali **itupe** hii karatasi kabla ya kuondoka shuleni. Usiandike majina ya wanafunzi au walimu kwenye dodoso.

Region: / Mkoa:	
District: / Wilaya:	
School Name: / Jina la Shule:	

Date: / Tarehe:
___/__/
dd / mm / yyyy /
Siku/mwezi/mwaka

Total number of STANDARD 3 pupils in the selected STANDARD 3 classroom on day of sampling / Jumla ya wanafunzi wa DARASA LA 3 katika darasa lililochaguliwa siku ya kutafuta sampuli

NOTE: Select 2 pupils as alternates. Remember to record the names of the two alternates before you dismiss them. Also, please remember to have the selected pupils go into the classroom to get their Exercise books (Kiswahili) and bring the books with them to the group assessment location. If a pupil doesn't have an exercise book, mark that they do not have the book – DO NOT DISMISS pupils that are missing a book. / Kumbuka: Chagua wanafunzi wawili wa ziada. Kumbuka kuandika majina ya hao wanafunzi wawili wa ziada kabla ya kuwaruhusu kuondoka. Pia kumbuka kuwaambia wanafunzi waliochaguliwa waende darasani kuchukua daftari zao (Kiswahili) na waende na daftari hizo pale ambapo watafanyia upimaji wa ubora wa kikundi. Kama mwanafunzi hana daftari, andika kwamba hana kitabu-USIWAFUKUZE WASIO na vitabu.

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	Sampling Reference Number / Namba ya Rejea ya Sampuli	
1	•	
2		
3		
4		
5		
6		
7		STANDARD 3 Alternate Pupil's Name / Jina la
8		Mwanafunzi wa ziada wa DARASA LA 3
9		
10		
11		
12		
13		
14		
15		
16		
17. Alt. / Ziada 1		
18. Alt. / Ziada 2		

Annex D. GALA Assessor Template

Reference Section 4.2.2, page 12

Annex D is a template that illustrates the content and format of the protocol that assessors use to administer the Group Administered Literacy Assessment. This template can be adapted to other languages and updated to include test items that reflect the context in which the test is being administered.

COUNTRY

Group Administered Literacy Assessment (GALA)

English Assessor Tool

TEMPLATE

GALA CHECKLIST

- 1. Prior to selecting pupils, ensure that there are at least XX desks/tables and chairs in the classroom.
- 2. Follow the sampling protocol to randomly select XX pupils to participate in the group assessment.
- 3. Instruct pupils to sit as spread out across the classroom as possible, ensuring (at a minimum) that each pupil is sitting at his/her own desk. Make sure, however, that all pupils will be able to clearly hear your instructions from the front of the classroom.
- 4. Ask pupils to clear their desks.
- 5. Ensure that the board is clean and that chalk/markers are available.
- 6. Write the examples for each section of the assessment (from the assessor tool) on the board, prior to beginning the assessment. Ensure that the examples are spread out enough in order to keep the pupils from getting confused when explaining the examples for each section.
- 7. Write examples low enough on the board for students to mark them.
- 8. Distribute pencils and erasers to each of the XX pupils.
- 9. Distribute pupil assessment sheets, alternating Form A and Form B so that pupils sitting next to one another have different forms.
- 10. Use the instrument script to explain the activity and obtain pupil consent.
- 11. Put pupils at ease by explaining the activity as a reading game.
- 12. Administer all six sections of the group assessment.
- 13. Gather all completed and blank pupil assessment sheets and place them in a clearly labeled envelope.
- 14. Thank the pupils for participating.

REMINDER

Signifies instructions that should be read aloud to the class.

INSTRUCTIONS: Signifies assessor instructions that are to be read silently.

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INSTRUCTIONS: Written Assent. Clearly read the text in the box to the children. [NECESSARY FOR RESEARCH STUDIES]

Good morning. My name is _	and I work with	We are visiting
schools and trying to underst	and how children learn to read.	

We would like your help in this.

We are going to do a reading activity together. As part of that activity, I am going to ask you to read letters, words and a short story.

This is NOT a test and it will not affect your grade at school.

I will NOT write down your name so no one will know that these are your answers.

You do not have to participate if you do not wish to.

Do you have any questions?

INSTRUCTIONS: Write the word "Yes" and a small box on the board and draw a tick in the box as an example.

• If you understand and would like to stay and play the reading game, please make a tick in the box next to the word "Yes" at the top of your paper. If you would rather not stay, please raise your hand.

INSTRUCTIONS: Check to ensure that pupils have marked their papers with a tick. If they have not, ask them if they would not like to participate. If any student declines to participate, find one of the chosen alternates to take his/her place.

Excellent. Are you ready to get started?

INSTRUCTIONS: Write the word "Age" and a small line next to it on the board. Also write the words "Boy" and "Girl" with small boxes next to them, as they appear on the cover of the student sheet. You will now have the students complete these items before moving to the first page of the activity.

• On the cover of your booklet, you should see the word "Age" like I've written on the board. Does everyone see this? On the line next to the word "Age" I want you to write your age in numbers.

INSTRUCTIONS: Check to ensure that everyone wrote their age on the line next to the word "Age".

• You will also see the words "Boy" and "Girl" on the cover page. Does everyone see them? If you are a boy, I want you to tick the box next to the word "Boy." If you are a girl, I want you to tick the box next to the word "Girl." Does everyone understand?

INSTRUCTIONS: Check to ensure that everyone correctly marked their gender on the cover.

● Good work. Now put your pencil down on your desk and turn to the next page.

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Letter Identification Sounds – Page

INSTRUCTIONS: Before beginning the game, draw the following box with the letters on the chalkboard.

|--|

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. We are now going to do an example before we start. Please keep your pencils on your desk and look at me. Do not mark any answers on your sheet until I tell you to do so.
- On the first page you'll see some boxes like the ones I've drawn on the board. I'm going to ask you to tick the letter that makes a particular sound. Please look at my mouth as I make the sound. So, if I say tick the letter that makes the sound /t/, as in "table," I would want you to tick letter "t," like this:

INSTRUCTIONS: Tick the letter "t" on the board. .

● Is that clear? Does somebody want to try another example? Who can come up and tick the letter that makes the sound /s/ as in "soap"?

INSTRUCTIONS: If anyone raises their hand, clean the tick from the letter "t" and let him/her come up to the chalkboard to tick the letter "s." When he/she ticks the letter "s," ask the class if he/she did this correctly. Thank the student and have him/her go sit down.

- Does everyone understand? I am now going to read the questions for you to mark on your papers. You can now pick up your pencils. Let's begin.
- 2. Put your finger on box number 2. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 3. Put your finger on box number 3. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX."

- 5. Put your finger on box number 5. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX"..../X/.
- 6. Put your finger on box number 6. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX"..../X/.
- 7. Put your finger on box number 7. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX"..../X/.
- 8. Put your finger on box number 8. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 9. Put your finger on box number 9. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 10. **●** Put your finger on box number 10. Look at my mouth. Tick the letter that makes the sound /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- **●** Good work. Now put your pencil on your desk and turn to the next page of the booklet.

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Letter Identification Names – Page

INSTRUCTIONS: Before beginning the game, draw the following box with the letters on the chalkboard.

g d b v c

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. We are now going to do an example before we start. Please keep your pencils on your desk and look at me. Do not mark any answers on your sheet until I tell you to do so.
- On the first page you'll see some boxes like the ones I've drawn on the board. I'm going to say the name of a letter and ask you to tick the letter that I name. Please look at my mouth as I name the letter. So, if I say tick the letter "B," as in "boy," I would want you to tick letter "B," like this:

INSTRUCTIONS: Tick the letter "b" on the board.

● Is that clear? Does somebody want to try another example? Who can come up and tick the letter "C" as in "color"?

INSTRUCTIONS: If anyone raises their hand, clean the tick from the letter "b" and let him/her come up to the chalkboard to tick the letter "c." When he/she ticks the letter "c," ask the class if he/she did this correctly. Thank the student and have him/her go sit down.

- Does everyone understand? I am now going to read the questions for you to mark on your papers. You can now pick up your pencils. Let's begin.
- 1. Put your finger on box number 1. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."

- 3. **●** Put your finger on box number 3. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 4. Put your finger on box number 4. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 5. Put your finger on box number 5. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 6. Put your finger on box number 6. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 7. Put your finger on box number 7. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 8. Put your finger on box number 8. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 9. **●** Put your finger on box number 9. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- 10. **●** Put your finger on box number 10. Look at my mouth. Tick the letter /X/, as in "XXXXX"..../X/, as in "XXXXXX."
- **●** Good work. Now put your pencil on your desk and turn to the next page of the booklet.

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Word Reading Familiar Words – Page

INSTRUCTIONS: Before beginning this section, draw the following box with the words on the chalkboard.

dig dot dog bog big

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. We are now going to do another example. Please keep your pencils on your desk and look at me. Do not mark any answers on your sheet until I tell you to do so.
- On this page you'll see some boxes like the ones I've drawn on the board. For this task, I'm going to ask you to tick one of the words in the box. So, if I say "tick the word "dot," I would want you to draw a tick on the word "dot," like this:

INSTRUCTIONS: Tick the word "dot" on the board.

● Is that clear? Does somebody want to try another example? Who can come up and tick the word "big"?

INSTRUCTIONS: If anyone raises their hand, clean the tick from the word "dot" and let him/her come up to the chalkboard to tick the word "big." When he/she ticks the word "big," ask the class if he/she did this correctly. Thank the student and have him/her go sit down.

- Does everyone understand? I am now going to read the questions for you to mark on your papers. You can now pick up your pencils. Let's begin.
- 1. **●** Put your finger on box number 1. Look at my mouth. Tick the word "XXX" "XXX."
- 2. Put your finger on box number 2. Look at my mouth. Tick the word "XXX".... "XXX."
- 3. **●** Put your finger on box number 3. Look at my mouth. Tick the word "XXX".... "XXX."
- 4. **●** Put your finger on box number 4. Look at my mouth. Tick the word "XXX".... "XXX."

- 5. **●** Put your finger on box number 5. Look at my mouth. Tick the word "XXX".... "XXX."
- 6. **●** Put your finger on box number 6. Look at my mouth. Tick the word "XXX" "XXX."
- 7. **●** Put your finger on box number 7. Look at my mouth. Tick the word "XXX".... "XXX."
- 8. **●** Put your finger on box number 8. Look at my mouth. Tick the word "XXX".... "XXX."
- 9. **●** Put your finger on box number 9. Look at my mouth. Tick the word "XXX".... "XXX."
- 10. **●** Put your finger on box number 10. Look at my mouth. Tick the word "XXX".... "XXX."
- Good work. Now put your pencil on your desk and please turn to the next page of the booklet.

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Word Reading Invented Words – Page

INSTRUCTIONS: Before beginning this section, draw the following box with the words on the chalkboard.

nem	ner	ren	mel	lem

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. We are now going to do another example. Please keep your pencils on your desk and look at me. Do not mark any answers on your sheet until I tell you to do so.
- On this page you'll see some boxes like the ones I've drawn on the board. For this task, I'm going to ask you to tick one of the words in the box. So, if I say "tick the word 'ren,'" I would want you to draw a tick on the word "ren," like this:

INSTRUCTIONS: Tick the word "ren" on the board.

● Is that clear? Does somebody want to try another example? Who can come up and tick the word "lem"?

INSTRUCTIONS: If anyone raises their hand, clean the tick from the word "ren" and let him/her come up to the chalkboard to tick the word "lem." When he/she ticks the word "lem," ask the class if he/she did this correctly. Thank the student and have him/her go sit down.

- Does everyone understand? I am now going to read the questions for you to mark on your papers. You can now pick up your pencils. Let's begin.
- 1. ♣ Put your finger on box number 1. Look at my mouth. Tick the word "XXX".... "XXX."
- 2. **●** Put your finger on box number 2. Look at my mouth. Tick the word "XXX" "XXX."
- 3. ♣ Put your finger on box number 3. Look at my mouth. Tick the word "XXX".... "XXX."
- 4. **●** Put your finger on box number 4. Look at my mouth. Tick the word "XXX".... "XXX."
- 5. **♦** Put your finger on box number 5. Look at my mouth. Tick the word "XXX".... "XXX."

- 6. **●** Put your finger on box number 6. Look at my mouth. Tick the word "XXX" "XXX."
- 7. **●** Put your finger on box number 7. Look at my mouth. Tick the word "XXX".... "XXX."
- 8. **●** Put your finger on box number 8. Look at my mouth. Tick the word "XXX".... "XXX."
- 9. **●** Put your finger on box number 9. Look at my mouth. Tick the word "XXX" "XXX."
- 10. **●** Put your finger on box number 10. Look at my mouth. Tick the word "XXX".... "XXX."
- **●** Good work. Now put your pencil on your desk and please turn to the next page of the booklet.

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Word Meaning

Sentence-Picture Match – Page

INSTRUCTIONS: Before beginning this section, draw the following example on the board. Write three sentences (in a column): "The boy is standing," "The boy is sitting," and "The boy is lying." To the right of these sentences, draw three pictures (each above the other): (1) someone sitting; (2) someone lying down; (3) someone standing.

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. We are now going to do another example. Please keep your pencils on your desk and look at me. Do not mark any answers on your sheet until I tell you to do so.
- On this page you will see six sentences on the left and six pictures on the right. After we finish the example, you are going to read each sentence and then make a line from the sentence to the picture that means what you just read. For example, if the sentence says "The boy is standing," you should look for a picture of a standing boy and make a line from the sentence to that picture, like this:

INSTRUCTIONS: Draw a line on the chalkboard from the sentence about the standing boy to the picture of the standing boy.

● Do you understand? Does someone want to come up and try another example?

INSTRUCTIONS: If anyone raises their hand, have them come up to the chalkboard. DO NOT erase the line that you have drawn. Ask them to make a line from the sentence "The boy is sitting" to the picture of the sitting boy. Ask the class if the student did this correctly. Thank the student and have him/her go sit down.

Now it's your turn. Is everyone ready? You will have two minutes to finish matching all 6 sentences and pictures on your sheet. I will not tell you to move from one sentence to the next. You will do them all by yourself. You do not need a ruler for this task. After 2 minutes I will say "Time is up." Put your finger on the first sentence. Begin.

INSTRUCTIONS: Start your timer and prepare to stop after 2 minutes. When 2 minutes have passed or when all the pupils have finished, say the following:

● Time is up. Good work. Now put your pencil on your desk and please turn to the next page of the booklet.

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Reading Comprehension – Pages # and

INSTRUCTIONS: Before beginning this section, write the following example story, the example question and the example list of answers on the board.

EXAMPLE STORY: Chanda is at school. Chanda has found her pencil. Chanda is happy.

EXAMPLE QUESTION: What has Chanda found?

Α	В	С	D
Shoes	Pencil	School	Book

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. We are now going to do another example. Please keep your pencils on your desk and look at me. Do not mark any answers on your sheet until I tell you to do so.
- ♣ In this section, you will read a short story silently for 2 minutes. After 2 minutes, you will read 5 questions about the story. You will then tick the correct answer to each question from a list of possible answers on your sheet. Let us begin with an example.
- Does anyone want to read the story on the board for the class?

INSTRUCTIONS: If a pupil raises his/her hand, have them read the story aloud.

Now does anyone want to read the question?

INSTRUCTIONS: If a pupil raises his/her hand, have them read the question aloud.

■ Who is prepared to come and tick the correct answer?

INSTRUCTIONS: When the pupil ticks the correct option ["Pencil"], thank them and have them sit down.

It is now time for you to read a story on your own. This time you will all read the story on your paper silently to yourself. Put your finger on the story on your paper. Are all of you ready? Good. If you finish the story, read it again to make sure that you understand it. Now begin to read.

INSTRUCTIONS: Start your timer. When 2 minutes have passed, say the following:

Time is up. Please stop reading. Now turn to the next page and prepare to answer the questions about the story. Everyone should now be on page #. On this page you will see five questions about the story you just read. Each question is on top of boxes with possible answers. Tick the correct answer for each question. Below the questions, you will see the story printed again. You do not have to read the story again but it is there in case you want to review it. You

will have four minutes to answer all five of these questions by ticking the word or words in one of the boxes that gives the correct answer to the question. Begin.

INSTRUCTIONS: Start your timer and prepare to stop after 4 minutes. When 4 minutes have passed or when all students are finished, say the following:

Time is up. Please stop writing. Good work. Now put your pencil down on your desk and turn to the next page.

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Maze – Page

INSTRUCTIONS: Before beginning this section, write the following sentence on the board.

EXAMPLE: I like to read (ball / dog / books).

- ♣ Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. We are now going to do another example. Please keep your pencils on your desk and look at me. Do not mark any answers on your sheet until I tell you to do so.
- ♣ In this section, you will read a short story silently. In the story, you will need to complete some of the sentences correctly with one of the list of words given. Underline the correct word or words that fit in the sentence. Sometimes the missing word/words will be at the end of the sentence and sometimes it will be in the middle.
- **●** Does anyone want to try with the example? Who can come up and underline the correct word that completes the sentence on the board?

INSTRUCTIONS: If anyone raises their hand, let him/her come up to the chalkboard. When he/she underlines the word "books," thank the student and have him/her sit down.

♣ The full sentence is "I like to read books." Does everyone understand? Now it is your turn to complete the sentences on your paper. You will do this task silently. I will not tell you to move from one sentence to the next. You will do them all by yourself. Put your finger on the first word of the story. Ok, begin.

INSTRUCTIONS: Start your timer and prepare to stop after 5 minutes. When 5 minutes have passed or all the pupils have finished, say the following:

Time is up. Good work. Now put your pencil down and turn to the next page of the booklet.

Word Dictation – Page

INSTRUCTIONS: You will read each word two times. The first time you will read it at regular speed. Then you will repeat the word a second time. Then wait about ten seconds before moving to the next word.

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. Now I am going to read you ten words. Please listen carefully. I will read each word two times. After I read the word the first time, you should write the word on your paper. We will do each word separately and you should write each word on a separate line. Does everyone understand? Good.
- I am now going to read the words for you to mark on your papers. You can now pick up your pencils. Let's begin.
- 1. ♣ Put your finger on line number 1. Write the word "XXX".... "XXX."

INSTRUCTIONS: Wait about 10 seconds and then say:

INSTRUCTIONS: Wait about 10 seconds and then say:

3. **●** Good. Now put your finger on line number 3. Write the word "XXX"…… "XXX."

INSTRUCTIONS: Wait about 10 seconds and then say:

INSTRUCTIONS: Wait about 10 seconds and then say:

5. **⊈** Good. Now put your finger on line number 5. Write the word "XXX".... "XXX."

INSTRUCTIONS: Wait about 10 seconds and then say:

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6. **●** Good. Now put your finger on line number 6. Write the word "XXX".... "XXX."

**INSTRUCTIONS: Wait about 10 seconds and then say:

- 7. Good. Now put your finger on line number 7. Write the word "XXX".... "XXX."

 **INSTRUCTIONS: Wait about 10 seconds and then say:
- 8. Good. Now put your finger on line number 8. Write the word "XXX".... "XXX." *INSTRUCTIONS:* Wait about 10 seconds and then say:
- 9. **●** Good. Now put your finger on line number 9. Write the word "XXX".... "XXX." *INSTRUCTIONS:* Wait about 10 seconds and then say:
- ♣ Time is up. Good work. Now put your pencil down and turn to the next page of the booklet.

Sentence Dictation – Page

INSTRUCTIONS: You will read each sentence three times. The first time you will read it at regular speed. Then you will repeat the sentence a second time at about one word per second. Then wait about five seconds and repeat the sentence a third time at regular speed. Finally, give the children about 15 seconds to finish writing the sentence.

- Everyone should be on the # page of the booklet. Do you all see the number # at the top of your page? Good. Now I am going to read you three short sentences. Please listen carefully. I will read each sentence three times. First I will read it at regular speed. Then I will read it slowly a second time so you can write what you hear. I will then read it again so that you can check your work. We will do each sentence separately. Do you understand?
- Put your pencil at the beginning of the first line on the paper and listen carefully to each sentence I read. Then write down the sentences on your answer sheet. You will write one sentence on each line. The first sentence is: "Xxxx xxxx xxxx." "Xxxxx...xxxx..."

INSTRUCTIONS: Wait about 10 seconds and then say:

\$ "Xxxx xxxx xxxx."

INSTRUCTIONS: Wait about 15 seconds and then say:

Good. Now put your pencil on line number two. The second sentence is "Xxxx xxxx xxxx." "Xxxxx...xxxx..."

INSTRUCTIONS: Wait about 10 seconds and then say:

♀ "Xxxx xxxx xxxx."

INSTRUCTIONS: Wait about 15 seconds and then say:

● Good. Now put your pencil on line number three. The third sentence is "Xxxx xxxx xxxx." "Xxxxx...xxxx."

INSTRUCTIONS: Wait about 10 seconds and then say:

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• "Xxxx xxxx xxxx."

INSTRUCTIONS: Wait about 15 seconds and then say:

Time is up. Put your pencil down. Good work. You have now completed this activity. Congratulations.

Annex E. Example of GALA Pupil Response Sheet

Reference Section 4.2.2, page 12

Annex E is an example Pupil Response Sheet from an Amharic GALA administered as part of a LEMA pilot in Ethiopia. This example illustrates the format and appropriate layout of response items for each subtask. Students are supplied with a Pupil Response Sheet during the administration of a GALA to record their responses to test questions. This Response Sheet must be updated and adapted to reflect the specific language and test items for the context in which the test is being administered.

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Group Administered Reading Assessment for LQAS

በቡድን የሚተገበር የጀማሪ (የዝቅተኛ) ክፍል ደረጃ ተማሪዎች የማንበብ ክሂል ምዘና-ወጥማጥን (የወረዳ-አቀፍ ጥራት ማረ*ጋገጫ* ጥናት ንምና)

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ወንድ (ልጅ) ሴት (ልጅ)

ፊደል (የፊደል ሥያሜ) መለየት

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9-10 → 1

 $0-8 \to 0$

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1.	ወናፍ	መዳፍ	<i>መጋ</i> ጥ	መራቅ	መፃፍ
2.	አልብሱ	አስምሩ	አንብቡ	አንጥፉ	አልቅሱ
3.	ድርሰት	ድርቀት	ድክመት	ድንነት	ድምቀት
4.	<i>መ</i> ጠንከር	መንንተር	መገኘፈል	መንንጠል	<i>መ</i> ደንገፕ
5.	ደባሞ	ደክሞ	ደባኖ	ደባፎ	ደምሮ
6.	ደሳሳ	ቆላማ	ኮሳሳ	ሞላላ	ቆሻሻ
7.	ውልቃት	መክዳት	ምክንያት	ድርሳናት	ምር,ቃት
8.	ብዙ	Ωн	ብሉ	ብቁ	ቤዛ
9.	ባላ	ቦታ	ቢጋ	ገታ	ጌታ
10.	መቃተት	መናደድ	መዛወር	<i>መ</i> ናገር	መፋቀር

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የተፈጠሩ ቃላት (ፍቺ-ወልባ ቃላት)

 $0-8 \to 0$

1.	ደረመት	<i></i> ሆረመት	መረመዳ	በረመት	መረሠት
2.	ርሦ	ሦር	ርሥ	СЯ	ωh
3.	ድማጊ	ምዳጊ	ምኃዲ	ગનન્દ્	નુકૃત્
4.	ቅይ	ልቀ	የቀ	ይቀ	ቀል
5.	ፍርፌራ	ርፍራሌ	ርፍርፌ	ርፍፋሬ	ርፍራር
6.	Н	H 干	ң,э	শ্য	7ቻ
7.	መቀሮ	በቀማ	በሮቀ	በቀሮ	ሮበቀ
8.	ሕር ት	እት ግ	ትርባ	ሕብር	ሕር <i>ባ</i>
9.	ፎመጥ	egar C	ጦፈም	ፎንጥ	ፕሬሞ
10.	С วิาย	ርብንሃ	ብርናሃ	ርብናህ	ንሃብር
0-8 →	0		l		9-10 → 1

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አበበና በቀለ የሚባሉ ሁለት ወንድማማቾች ነበሩ፡ አባታቸውና እናታቸው መምህራን ናቸው፡፡ እነሱም ልጆቻቸው ተምረው ጥሩ ሥራ እንዲይዙ ይመኛሉ፡፡ አበበ የወላጆቹን ምኞት ለማሳካት ሁሉጊዜ ይጥራል፡፡ በአንፃሩ በቀለ አብዛኛውን ጊዜ ጨዋታ ብቻ ይወዳል፡፡ ወንድሙ ብዙ ጊዜ ሳይታክት ይመክረው ነበር፡፡ የእሱ ጓደኞችም አዘውትረው ይመክሩትና ያበረታቱት

ነበር። ቀስበቀስም በቀለ ምክራቸውን ሰምቶ ጎበዝ ተጣሪ ሆነ።

 $0-8 \rightarrow 0$ 9-10 \rightarrow 1

አበበና በቀለ የሚባሉ ሁለት ወንድማማቾች ነበሩ፡ አባታቸውና እናታቸው መምህራን ናቸው፡፡ እነሱም ልጆቻቸው ተምረው ጥሩ ሥራ እንዲይዙ ይመኛሉ፡፡ አበበ የወላጆቹን ምኞት ለማሳካት ሁሉጊዜ ይጥራል፡፡ በአንፃሩ በቀለ አብዛኛውን ጊዜ ጨዋታ ብቻ ይወዳል፡፡ ወንድሙ ብዙ ጊዜ ሳይታክት ይመክረው ነበር፡፡ የእሱ ጓደኞችም አዘውትረው ይመክሩትና ያበረታቱት ነበር፡፡ ቀስበቀስም በቀለ ምክራቸውን ሰምቶ ነበዝ ተማሪ ሆነ፡፡

1. የአበበና የበቀለ ዝምድና ምንድን ነው?

 $0-3 \rightarrow 0$

እህተማማ ቸ ነት	ቤተሰብነት	ወንድማማችነት	<i>ጎ</i> ረቤ <i>ታ</i> ምነት	አብሮ አደግነት
2. የሁለቱ ልጆች ወ	ወላጆች <i>ሥራ ምንድን</i>	ነው?		
አርሶአደር	ነጋጹ	ቤተሰብ	አስተ <i>ማሪ</i>	ምክር
3. አበበ የቤተሰቦቹ	ን ምኞት ለማሳካት ሀ	ትልጊዜ ምን ያደር <i>ጋ</i> ል?		1
ጠንክሮ ያጠናል	አዘውትሮ ይጫወታል	በቀለን ይመክራል	ከቤተቡ <i>ጋር</i> ይሥራል	የእናቱን ምክር ይሰማል
4. በቀለ ብዙ ጊዜ	የሚወደው ምን ማድረ	ረባ ነው?		
ማጥናት	መማር	ማንበብ	ማጠብ	መጫወት
5. በቀለ በ <i>ም</i> ጨረኛ	ኘ ምን ሆነ?			
<i>ጎ</i> በዝ <i>መ</i> ምህር	ንበዝ ተማሪ	ጎበዝ ሥራተኛ	<u> </u>	<i>ጎ</i> በዝ አባት

ዓረፍተነገር ማሟላት (አመራጣሪ)

 $4-5 \rightarrow 1$

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ታደሰ የስድስት ዓመት ልጅ ነው፡፡

የፊደል (ዝግጅቱን፣ ትምህርቱን፣ ደረጃውን) በጣጠናቀቅ ላይ ነው፡፡

በ (አለፈው፣ መጪው፣ መስከረም) ዓመት አንደኛ ክፍል ይገባል።

የታደሰ እናት በጣም (ደሀ፣ ደሀነት፣ እናት) ናቸው።

ምንም ዓይነት (የወንድም፣ የሀብታም፣ የገቢ) ምንጭ የላቸውም።

ለታደሰና ለታላቅ ወንድሙ ምባብና ልብስ (የሚሸጡት፣ የሚ*ነ*ዙት፣ የሚ*ያመ*ጡት) ከጫካ እንጨት አምጥተው በመሸጥ ነው፡፡

የታደሰ (እናት፣ አባት፣ ወንድም) እንጨት የሚያመጡት ከእንጦጦ ጫካ ነው።

አንደ ቀን ታደሰ፣ "እባክሽ እማማ! አብሬሽ (ወደምናፈሻው፣ ወደጫካው፣ ወደሜዳው) ልሂድ?" ብሎ እናቱን ለምናቸው።

እናቱም፤ "ካልደከ*ሙህ* ምንቸገረኝ" ብለው ስለፈቀዱለት በጣም ደስ አለው፡፡

 $0-5 \rightarrow 0$

ቃል ጽሕፍት

1.

2.

3.

 $0-11 \rightarrow 0$

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Annex F. School Sampling Worksheet

Reference Section 4.3.3, page 20

The School Sampling Worksheet is a tool that can be used during the process of randomly selecting schools to participate in a LEMA pilot. The user records the "sampling reference numbers" from a random number table (see Annex G) and corresponding school names onto the worksheet.

SCHOOL SAMPLING WORKSHEET

NOTE: Use this worksheet to select a random sample of schools.

Region:	District:
Date:// dd / mm / yyyy	Total number of schools

NOTE: Three alternate schools are indicated in the first column as Alt. 1, Alt. 2, and Alt 3.

	Sampling Reference	
	Reference Number	Sampled School Name
1		
2		
Alt. 1		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
Alt. 2 14		
15		
16		
17		
18		
Alt. 3 19		
20		
21	_	
22		

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Annex G. School Random Number Table

Reference Section 4.3.3, page 20

This random number table includes "sample reference numbers" for schools 1 through 22 (S1–S22). It is designed for randomly sampling 22 schools, 19 of which will be visited as part of a LEMA pilot. "Sample reference numbers" are recorded on the School Sampling Worksheet (Annex F) and help the user to identify which schools from the school list are to be included in the random sample. "N" in the far left column corresponds to the total number of schools in the target population.

N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s 21	s22
22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
23	1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
24	1	3	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24
25	1	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	20	21	22	23	25
26	1	3	5	6	7	8	9	10	11	12	14	15	17	18	19	20	21	22	23	24	25	26
27	2	3	5	7	8	9	10	11	12	14	15	16	17	18	19	21	22	23	24	25	26	27
28	1	2	3	4	6	7	8	10	11	12	14	15	16	17	19	20	21	24	25	26	27	28
29	1	2	3	4	8	10	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	29
30	1	2	3	4	5	6	7	9	10	11	12	13	14	15	17	18	20	21	22	23	24	29
31	1	2	3	4	5	8	9	11	13	14	15	17	19	20	21	22	23	24	26	27	28	31
32	2	4	5	6	7	10	12	13	14	17	18	19	20	21	22	24	25	26	28	29	30	32
33	2	3	4	5	6	8	9	10	12	15	17	18	19	20	21	23	24	27	28	29	31	33
34	4	6	8	9	10	11	13	14	15	19	20	21	22	25	26	27	28	29	30	31	32	34
35	3	4	5	6	9	10	13	15	16	17	18	19	20	21	23	24	27	28	29	32	34	35
36	1	4	5	6	8	9	14	15	16	17	18	19	20	21	22	23	29	30	31	32	35	36
37	1	2	4	5	6	8	9	13	15	16	18	19	24	25	27	29	30	31	32	33	35	37
38	1	3	4	8	10	11	13	14	15	18	21	22	24	25	26	29	30	31	32	34	36	37
39	2	4	6	7	9	11	12	13	14	17	19	22	24	26	30	31	32	33	34	35	38	39
40	1	2	4	5	7	12	13	15	16	17	19	20	21	24	25	27	31	33	35	36	38	40
41	1	2	4	5	6	9	14	17	18	20	21	22	24	25	26	27	29	31	35	37	38	41
42	1	3	4	8	9	11	12	14	15	17	22	23	25	30	31	32	33	34	35	37	38	40
43	1	2	5	10	13	15	16	17	18	20	21	22	23	26	27	28	32	34	39	40	41	42
44	1	4	9	12	13	14	15	16	20	21	22	23	25	27	32	33	36	37	41	42	43	44
45	9	10	12	13	17	19	20	21	23	24	26	27	28	29	30	32	33	37	40	41	43	44
46	1	2	4	6	11	12	14	17	20	21	23	26	27	30	32	34	35	36	39	41	42	46
47	2	3	6	7	11	12	18	22	23	26	27	28	30	31	35	36	37	40	41	44	45	46
48	1	2	4	8	11	17	18	19	22	24	25	27	28	30	31	35	36	37	38	39	41	46
49	2	4	7	8	11	13	16	17	19	20	21	23	27	28	30	31	36	38	40	42	43	45
50	1	2	3	6	7	9	12	16	17	18	20	21	25	27	28	30	33	35	36	40	42	49

N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s 21	s22
51	2	3	7	10	14	23	26	27	28	30	32	34	35	36	37	41	44	45	48	49	50	51
52	1	2	4	5	10	11	12	14	15	18	21	28	31	33	35	36	41	42	44	46	50	52
53	1	4	5	7	9	10	11	16	17	19	22	23	32	35	37	39	40	44	48	49	50	51
54	3	8	9	10	11	15	16	17	18	19	21	25	32	33	35	36	39	42	45	47	51	52
55	3	5	6	9	17	18	22	25	26	28	31	32	33	35	37	41	44	45	48	50	51	52
56	2	6	10	11	14	18	20	21	23	25	26	28	29	34	35	37	41	43	44	47	50	54
57	1	3	7	8	10	11	12	13	27	28	29	30	32	36	41	47	48	49	50	52	53	54
58	1	3	5	6	9	10	11	15	23	25	26	29	36	38	40	42	44	48	50	51	54	57
59	2	6	7	9	13	18	21	24	25	29	31	32	34	37	38	39	41	46	48	49	53	55
60	5	7	8	9	11	15	19	21	23	24	30	31	32	36	37	41	46	47	48	49	50	53
61	8	14	16	20	22	23	26	30	31	32	33	35	44	45	46	48	51	53	54	55	57	60
62	2	3	10	11	12	15	16	18	23	27	33	38	40	43	45	46	48	49	52	53	55	62
63	6	10	15	18	19	23	25	29	31	34	35	39	43	48	49	50	53	54	57	58	59	61
64	5	6	7	9	11	13	15	17	19	26	29	30	34	38	40	41	44	46	48	53	54	57
65	3	4	8	13	14	17	19	22	23	25	29	34	35	36	39	40	43	45	46	55	63	65
66	5	7	13	15	16	17	19	25	26	28	34	37	39	42	46	48	53	55	56	57	58	62
67	4	6	7	10	12	18	19	22	24	35	38	41	43	45	47	48	49	51	55	57	59	61
68	1	5	6	24	26	29	32	35	36	38	41	47	50	51	52	54	55	56	58	64	67	68
69	1	4	9	10	11	14	15	17	22	31	33	34	37	38	41	45	46	51	54	61	62	68
70	3	6	8	11	12	16	22	27	28	35	38	42	45	46	49	54	55	56	61	65	68	70
71	1	4	6	8	9	23	26	27	31	34	35	37	39	42	43	45	47	49	52	53	64	69
72	5	6	7	13	15	17	18	19	23	27	30	33	34	36	41	44	46	49	51	55	60	63
73	1	2	7	9	13	24	26	29	30	32	46	49	51	53	54	58	60	62	65	67	70	71
74 75	8	12 8	14	15 12	16 15	18 16	19 17	20 26	30	28 31	29 32	34 43	36 47	37 48	40 50	42 57	48 61	51	57 70	68	69 73	73 75
76	2	4	10 7	11	16	19	21	22	28	29	30	34	47 37	39	48	53	57	67 62	63	71 69	72	74
77	2	3	6	8	9	10	15	20	23	25	29	38	40	42	45	51	52	57	60	62	67	74
78	4	16	18	22	23	24	32	34	35	38	41	42	43	49	50	56	57	58	60	62	75	78
79	3	5	9	10	12	18	23	29	34	37	42	48	59	60	61	63	65	69	71	74	77	79
80	2	4	9	12	13	17	21	25	27	28	39	44	46	47	51	58	61	63	64	69	79	80
81	4	7	19	21	25	28	29	35	39	40	44	48	55	58	60	62	65	66	74	75	76	79
82	2	6	8	9	10	11	13	14	26	29	36	38	39	43	47	50	55	57	59	63	64	74
83	1	3	5	11	12	14	16	19	21	24	27	33	41	43	45	46	55	61	70	71	79	83
84	2	5	15	16	18	24	25	30	35	37	38	45	48	53	56	58	59	62	65	80	81	82
85	3	20	22	23	25	26	28	38	40	44	46	50	51	54	61	62	66	68	72	75	76	79
86	13	16	20	28	29	33	35	38	41	50	53	58	62	67	68	69	73	74	75	76	85	86
87	1	2	12	16	18	20	21	24	25	26	28	29	31	38	46	50	59	63	68	69	78	81
88	6	10	12	16	18	19	22	28	29	32	34	43	45	48	62	68	70	71	72	78	84	85
89	4	5	7	11	13	15	17	21	22	26	28	35	37	44	46	56	59	62	65	70	81	85
90	1	12	15	16	24	25	28	34	35	37	44	46	50	53	59	67	68	72	78	82	87	90
91	1	6	13	16	26	28	29	30	38	47	52	53	55	56	57	64	71	76	80	82	84	90
92	5	7	13	14	15	20	21	22	28	33	34	37	40	43	49	60	64	65	69	71	75	89
93	7	10	17	23	29	38	39	46	48	52	54	57	62	64	67	73	74	75	79	81	82	83

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96 4 97 9 98 4 99 4 100 5	1 9 4 5 9 14 4 11 4 10	10 6 17 18	19 14 12 21 20	22 18 30	37 22	39	41	42	45	51	F 2		Г.С	C 2			70	70	70	C4	-
96 4 97 9 98 4 99 4 100 5 101 1	4 5 9 14 4 11 4 10 5 12	6 17 . 18	12	30		21			45	21	52	55	56	62	63	71	72	73	79	81	83
97 9 98 4 99 4 100 5 101 1	9 14 4 11 4 10 5 12	17	21			31	32	34	37	42	45	47	49	60	61	62	69	78	82	90	92
98 4 99 4 100 5 101 1	4 11 4 10 5 12	. 18			32	39	45	46	48	55	56	57	58	65	66	68	74	78	79	83	89
99 4 100 5 101 1	4 10 5 12	+	20	22	25	34	36	38	43	53	55	70	77	78	79	80	81	84	91	94	96
100 5 101 1	5 12	14	20	21	23	30	34	40	49	51	54	55	57	66	71	76	84	86	89	90	97
101 1	_		18	21	24	26	33	39	46	58	59	60	61	73	83	86	88	89	93	97	98
	1 2	13	21	27	43	45	50	53	54	55	56	59	61	62	66	69	72	79	82	92	96
102 12		5	6	11	14	16	19	31	33	34	41	44	50	54	62	68	76	86	87	96	101
102 12	2 19	20	22	23	24	29	30	31	37	47	48	49	54	60	67	69	74	79	87	94	101
103 5	5 9	15	20	25	35	37	43	44	45	47	56	64	72	82	84	93	95	96	99	100	101
104 7	7 21	. 29	33	40	42	47	48	49	51	57	64	68	70	72	76	78	80	90	92	101	103
105 1	1 5	7	12	16	24	25	26	42	43	56	62	63	69	70	73	76	84	86	92	101	103
106 7	7 15	16	24	26	31	33	39	45	46	58	62	63	66	70	74	78	79	80	92	94	102
107 8	8 9	11	18	23	27	29	31	33	38	39	51	56	58	60	68	72	74	91	95	102	107
108 1	1 9	11	20	24	26	27	28	53	54	66	69	70	74	75	76	80	83	93	96	105	107
109 4	4 16	18	19	21	22	26	32	33	39	42	46	60	62	70	73	80	82	84	92	96	98
110 3	3 7	11	14	22	25	31	51	60	67	70	71	72	76	80	87	91	95	96	103	105	107
111 4	_	-	20	22	25	32	38	41	44	61	63	66	69	76	79	85	86	88	96	104	107
112 2	2 12	18	20	22	23	32	34	37	41	43	44	48	53	56	59	74	79	83	86	92	94
113 5	5 6	19	28	39	48	49	52	56	57	59	63	64	71	72	73	75	85	96	98	100	107
	1 4	_	8	12	13	22	24	28	41	43	57	58	59	63	67	75	85	88	107	111	112
	2 3	-	17	20	28	31	32	34	40	48	49	51	67	79	82	83	86	99	101	110	112
	5 8	_	25	39	41	45	52	57	61	66	71	73	74	75	84	88	93	99	101	102	116
	6 7	-	24	26	32	36	37	39	53	61	64	68	70	74	79	85	87	98	99	112	113
118 8	-	-	18	25	29	38	45	47	60	62	65	75	78	81	83	85	86	88	97	99	112
	1 13		26	41	45	47	50	63	67	69	71	72	73	77	89	91	101	102	111	115	116
	1 5	+	17	20	29	45	49	56	68	84	86	90	91	92	98	102	103	104	113	115	116
121 16	+	+	22	28	40	42	43	67	69	71	72	73	82	83	87	88	96	99	110	112	115
	1 14		44	45	48	49	53	56	62	65	70	73	78	80	85	103	110	111	113	115	119
	5 9	_	20	22	23	25	33	53	55	56	60 57	61	62	71	77	88	90		105		
124 18			26	27	30	31	44 25	49	50	52		58	64	66	90	95	97		105 107		-
125 3 126 4	3 / 4 11	+	11 18	15 21	19 22	22 26	25 33	35 38	40 42	43 45	56 55	60 56	67 57	80 64	87 83	91 90	93 95			110 110	1
	1 4	+	16	17	21	32	38	47	54	59	61	73	77	80	89	90	99			122	-
	2 4	+	9	12	19	23	27	29	31	38	42	46	49	53	54	55			105		-
	4 23	_	38	41	43	47	56	57	63	64	79	83	84	85	88	96			119		-
130 9		+	18	32	43	45	47	53	56	62	64	65	80	87	94	99			104		
131 15		_	41	42	51	53	55	56	62	78	80	86	90	94	98				116		-
132 7	_	_	27	28	38	39	45	50	51	52	67	91	96	97	101				122		
	3 10		26	35	39	40	57	60	62	66	67	76	80	97		103		111		117	
	6 11	+	16	21	27	31	32	41	56	65	70	79	88	93		100	111		120		1
	1 7	_	11	31	42	44	57	64	65	78	79	87	88	89	92				116		_
	3 5		14	26	29	36	45	46	49	68	72	76	78				_	_	119		-

N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s 21	s22
137	1	2	6	23	24	31	39	43	46	50	53	61	68	69	84	100	111	116	123	129	130	133
138	1	8	12	14	18	20	33	55	64	69	77	90	94	95	97	110	118	120	122	125	132	133
139	2	8	21	24	25	28	32	49	53	66	67	71	77	80	90	98	102	103	108	111	119	137
140	9	11	14	16	27	29	31	44	49	54	58	70	73	75	80	84	100	110	118	121	122	131
141	5	20	23	32	43	51	54	56	70	72	74	76	81	85	88	92	93	98	101	121	127	139
142	10	14	18	34	37	40	52	68	82	83	87	89	90	92	98	100	105	110	112	115	121	127
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144	4	9	17	18	26	33	38	39	46	66	71	73	74	82	84	92	95	97	100	110	138	139
145	3	9	13	20	22	27	32	52	54	62	64	73	79	82	83	85	99	103	105	108	131	142
146	18	22	24	30	52	58	59	60	68	77	91	97	98	103	105	107	111	114	119	131	143	145
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156	10	23	27	30	32	35	51	59	63	69	73	91	96	97	100	112	124	127	146	151	154	156
157	9	14	16	18	20	22	25	30	60	66	67	73	79	82	83	84	104	105	107	128	150	157
158	18	34	40	42	49	61	74	75	76	97	105	106	107	109	110	112	129	136	145	148	156	158
159	28	30	33	39	47	52	65	70	71	79	87	90	92	108	121	124	130	132	135	152	157	159
160	1	12	14	21	27	30	35	42	54	59	71	86	91	92	96	97	117	119	126	130	144	146
161	9	17	23	27	31	35	36	39	44	46	58	75	87	93	95	106	123	132	137	139	145	151
162	7	14	21	27	38	39	41	48	56	63	76	90	93	96	110	111	113	130	147	148	155	162
163	5	12	14	36	37	41	47	52	90	91	103	110	115	119	129	136	142	143	144	147	154	156
164	3	22	24	25	27	29	32	37	40	48	53	61	62	70	80	82	95	105	111	112	127	156
165	5	8	17	23	34	35	43	66	75	83	94	101	122	128	130	133	137	139	146	150	151	165
166	7	23	24		49	51	69	75	82	85										153		-
167	1	4	10	12	22	42	45	55	56	58	61	67	74	81	83					123		_
168	6	9	16	21	52	57	58	91	92											148		_
169	8	10	11	30	31	34	37	47	55	64	70	86	92							153		_
170		21	24	27	29	31	34	35	40	46	51	58	71	77	88					131		
171	3	7	14	22	27	33	36 52	37	42	45	53	56		71						146		
172	6	16	30	33	45	50		59	62	66	71		112							154		_
173174	3 4	9 5	11 39	12 49	13 60	15 63	17 64	25 79	32 84	39 85	51 87	57	61	62	83					129 157		-
175	8	11	14	17	35	36	41	45	48	58	61	72	74	81	82		91			156		_
176	1	39	44	53	57	65	67	74	100		121		127							164		
	11	39 16		39	45				68	117	85									166		174
177	1	21	27 25	39	36	46 40	48	67 53	64	70	85	90 101	125							154		178
178	10	5		13	34		49 52			70 75	89	90										173
179	Т	5	6	13	34	44	52	66	72	/5	89	90	91	ΤΛΩ	110	119	125	129	132	14ŏ	TOT	1/3

200 | Annex G

N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s21	s22
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181	3	28	42	50	64	68	76	94	101	105	111	114	119	122	129	146	151	157	164	169	173	177
182	14	17	22	30	34	41	45	53	54	73	91	104	108	109	113	121	150	151	154	158	165	168
183	8	32	35	38	41	43	65	73	74	80	93	94	114	118	142	145	146	162	166	168	171	177
184	11	14	15	20	31	35	53	57	74	91	109	113	116	117	121	131	137	142	169	173	175	183
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186	3	12	21	25	28	35	37	41	44	46	61	71	92	119	127	128	132	136	150	175	176	178
187	17	23	29	30	41	44	47	49	54	63	83	85	101	103	110	120	134	135	152	155	176	184
188	18	28	35	37	48	53	75	77	95	98	99	104	110	113	124	129	141	161	162	165	175	188
189	12	26	29	31	41	46	60	70	89	92	93	106	115	119	132	158	165	169	170	185	186	188
190	1	23	26	55	75	79	80	114	115	117	122	139	144	146	150	151	159	173	177	181	186	188
191	12	30	34	37	38	48	53	72	80	84	85	105	107	110	111	125	129	131	135	139	154	158
192	1	16	31	44	61	66	70	74	76	87	88	93	106	120	144	147	152	159	167	173	178	181
193	7	19	22	27	32	37	55	61	65	67	79	94	96	103	117	121	141	151	165	177	180	190
194	13	25	28	33	36	53	59	60	64	77	80	84	95	96	118	145	148	149	175	176	189	191
195	27	29	41	67	80	93	95	100	109	110	112	115	132	143	153	154	160	165	168	171	175	193
196	1	8	12	16	33	43	44	48	73	90	102	104	106	109	113	115	153	157	163	166	187	190
197	9	19	39	74	77	90	94	108	114	124	133	135	140	143	170	171	175	184	185	187	188	190
198	6	9	14	22	48	58	65	88	109	112	128	137	143	146	152	163	164	171	182	186	192	195
199	1	9	22	29	33	34	36	37	40	44	74	108	143	149	155	165	170	172	173	184	189	190
200	8	15	27	35	41	57	59	78	90	101	105	106	119	121	122	127	148	151	158	162	197	198
201	1	14	28	37	39	55	61	64	70	84	90	94	116	135	154	155	162	167	169	170	173	192
202	16	23	25	32	36	50	65	72	76	79	80	84	87	88	101	106	126	138	180	182	195	200
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205	1	2	15	25	30	42	48	57	61	76	78	105	115	128	136	138	146	163	178	190	196	197
206	11	14	44	49	72	73	81	87	95	101	107	125	135	137	140	149	174	182	188	189	191	193
207	14	22	24	25	27	32	56	69	90	91	106	108	116	119	136	154	155	167	168	189	196	206
208	7	45	54	65	66	73	79	82	96	116	130	140	144	148	160	164		176	187		193	201
209	5	17	19	25	28		34	44	70											143		
210	7	9	26	34	46	53	62	90	92										158		168	
211	2	23	49	65	86	88	91	93												186		_
212	11 7	20	29	57	67	74	77	79 65	83											182		
213	13	12	29	39	40	48	64	65	66	74	76	78		84	86				172	179 190		
214	6	23 15	28	39	43	44	63	65	80	77												
215 216	5	20	31 21	36 34	40 47	43 64	48 71	50 87	57		80 117			85 126						138 179		
217	1	25	35	47	59	62	64	86												190		
218	\vdash	55	70	71	74	75	80	85												203		
219	8	24	36	42	49	54	74	77					140							197		-
220	1	4	11	18	22	25	31	36	37	43	56									201		-
221	-	46	48	61	74	85	91													196		
	-	37	48			59	73													203		
222	28	3/	48	50	53	59	/3	δb	TUU	117	113	TT/	171	133	154	122	Tρ\	Τ//	19/	203	206	220

N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s21	s22
223	21	23	27	32	41	43	50	56	59	72	84	88	132	144	147	165	191	195	207	214	215	221
224	7	10	39	45	65	66	71	86	93	102	112	115	121	133	145	154	158	179	189	196	197	203
225	8	21	29	31	50	56	81	84	102	109	110	117	131	148	150	156	180	196	200	209	219	223
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227	21	37	43	52	66	73	76	87	90	112	114	126	132	133	134	151	167	170	171	195	216	223
228	12	15	25	32	64	79	89	94	95	99	114	115	123	137	150	158	168	177	202	207	212	222
229	1	10	23	29	54	75	84	97	112	120	138	143	155	156	180	190	198	208	215	222	223	225
230	6	15	24	32	48	51	61	66	78	79	81	92	106	155	191	192	193	197	202	227	228	229
231	17	46	57	72	79	91	92	110	113	120	121	123	137	147	161	163	166	182	194	201	203	229
232	3	5	9	20	43	50	51	67	88	90	94	125	130	158	164	168	178	179	181	200	201	207
233	7	14	16	19	22	31	39	72	80	101	103	104	129	144	145	154	157	193	194	216	218	232
234	7	22	23	33	36	57	68	72	76	81	88	104	105	109	115	133	143	152	172	191	195	217
235	21	24	27	39	52	56	61	63	68	70	106	113	116	121	153	177	186	190	213	220	226	227
236	5	7	18	27	36	40	45	53	67	71	86	88	94	117	135	148	150	165	181	188	191	221
237	1	26	28	31	45	49	73	76	78	80	90	113	119	126	155	166	175	182	197	210	217	236
238	20	33	36	37	42	55	65	75	78	83	103	116	140	149	151	155	172	195	200	215	220	237
239	6	12	20	35	66	67	76	77	90	116	117	119	121	128	130	135	147	175	217	221	229	231
240	2	3	6	11	22	50	55	86	97	99	110	112	114	120	126	171	183	205	217	218	222	225
241	16	26	30	34	38	47	71	80	96	99	142	143	144	153	159	162	179	183	198	219	228	229
242	5	23	26	35	45	62	66	133	136	137	150	156	176	178	183	187	202	203	218	222	223	238
243	25	28	32	36	44	54	61	69	94	98	117	121	139	153	157	179	180	186	210	211	226	236
244	10	17	40	54	68	82	85	93	110	113	121	153	158	159	185	193	200	203	205	207	218	240
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246	15	27	34	57	67	90	91	97	104	119	126	140	142	147	150	162	164	190	194	198	236	238
247	10	25	30	46	57	61	62	86	103	105	117	118	125	127	130	155	167	179	192	211	217	225
248	2	14	19	55	77	103	112	120	127	136	144	160	171	172	176	179	191	207	214	221	232	244
249	11	19	30	32	34	39	56	64	72	82	88	91	128	142	159	172	175	178	179	183	187	196
250	13	16	18	27	38	55	92	129	130	136	140	154	168	178	182	184	187	188	194	201	238	244
251	3	20	32	34	61	66	78	116	120	121	123	125	138	144	149	164	169	180	196	215	221	249
252	_	37	41	59	63	_														228		-
253	43 5	48 7	57	60	68	73														232		-
254 255	2	11	9	24 29	52	75	76 77	92 84												214238		-
256	3	19	27 23	29	35 34	55 51	58	63	90 69	72										217		
257		19	26	37	63	67	89	96		_										244		
257	-	28	32	51	53	60	81	91												202		-
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260	8	15	17	22	40	50	70			_										223		_
261	8	12	36	39		139																-
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263		20	24	52	58	59	62													244		
264		16	18	90	98	-														251		
265	1	6	37	45	61																	255
203		U	57	-1 J	OΤ	/4	104	± 4 0	100	100	10/	1/3	TOT	100	200	210	<u> </u>	213	223	4 7	250	200

202 | Annex G

N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s 21	s22
266	11	50	53	63	65	81	93	116	117	123	135	164	186	197	198	203	204	210	217	219	237	243
267	17	37	43	47	78	134	136	143	180	183	195	196	201	204	212	222	230	243	251	255	259	260
268	51	67	69	105	115	116	124	133	143	146	165	171	196	214	229	232	239	243	251	254	256	267
269	19	55	56	76	84	86	109	114	145	152	154	156	163	172	173	205	210	222	228	231	235	251
270	5	6	25	38	52	77	83	94	95	113	121	133	137	159	163	194	201	208	220	225	256	266
271	6	9	11	46	53	56	58	68	69	71	78	86	88	114	126	144	154	159	236	238	258	270
272	6	22	33	45	47	62	69	72	87	88	100	129	171	211	213	223	225	234	235	245	269	271
273	3	18	41	44	47	58	63	68	75	77	80	92	97	113	114	120	147	149	155	157	182	261
274	10	12	26	30	44	65	79	83	85	93	101	107	120	136	143	170	180	196	205	218	233	265
275	3	9	14	17	26	40	43	56	69	85	113	154	166	175	183	212	228	239	252	259	269	273
276	16	24	52	81	90	122	124	132	136	140	142	150	152	165	170	172	199	209	225	230	232	253
277	14	27	47	48	55	60	71	86	110	113	122	124	132	156	172	204	230	259	268	271	273	276
278	15	34	56	76	81	88	97	113	117	119	151	170	183	226	233	236	254	255	257	262	276	278
279	5	8	10	25	37	40	49	65	76	109	139	141	159	166	192	200	207	211	222	247	251	259
280	2	16	20	21	26	29	66	74	96	123	145	150	156	165	166	174	178	192	205	243	256	261
281	55	64	85	96	102	110	120	124	125	147	157	160	162	164	179	218	230	243	260	269	279	280
282	3	16	19	40	56	101	104	113	114	123	162	185	195	212	225	249	251	259	263	267	272	273
283	3	19	23	39	50	51	58	65	95	100	102	104	109	111	127	168	179	209	220	228	265	274
284	1	16	19	22	39	72	92	95	97	108	138	144	164	196	197	204	216	254	259	271	277	284
285	2	3	22	25	74	111	116	132	138	139	147	150	161	163	177	222	223	233	246	261	266	273
286	1	21	27	35	37	49	56	67	80	100	117	134	140	160	168	175	202	203	207	264	270	282
287	1	56	73	85	93	104	106	121	144	154	187	190	194	212	229	235	236	247	251	253	255	270
288	5	7	51	53	65	74	88	107	112	113	115	143	153	171	186	196	212	225	242	249	261	269
289	15	19	24	32	37	63	65	90	109	139	147	158	159	161	174	225	239	242	244	261	269	271
290	12	16	20	29	37	41	51	55	66	67	87	114	130	151	172	190	199	210	217	230	238	266
291	11	14	30	36	48	63	81	97	101	125	134	142	160	163	187	190	191	198	216	268	274	277
292	17	21	34	59	88	97	106	117	135	169	171	175	183	190	191	214	233	247	248	255	270	273
293	11	18	23	32	41	64	102	114	120	142	144	149	173	188	196	217	221	226	254	275	283	290
294	18	20	24	29	31	35	61	68	80	90	114	124		158	184	202	206	207	225	235	247	292
295		29	33	50	63	72																275
296	51	56	63	87		113																280
297	8	10	37	60	62	_	110															
298	5	16	24	33	41	77	85						162								282	_
299	2	11	33	45	57	73							175									
300	13	47	57	110		151																
301	7	16	23	93		101																
302 303	11 2	27 3	61 26	62 51	52	114	74						210									
304	5	20	43	49	64	60	120															-
305	6	14	62	82	97	_	108															
306	25	31	42	55	57	65		100					189									
307	13	18	34	38		130																
308		11	29	43	54				74													305
208	1	ΤŢ	29	43	54	סכ	12	/3	/4	ספ	171	177	133	130	133	TAD	23/	238	239	202	2/0	303

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N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s21	s22
309	25	36	46	56	65	75	100	129	134	137	139	143	152	161	174	188	189	191	217	290	300	307
310	29	34	63	85	116	131	151	164	167	168	186	188	191	195	198	199	219	220	231	246	272	277
311	32	43	76	97	133	138	140	176	177	180	192	206	208	212	228	229	231	248	285	288	304	309
312	7	37	40	78	92	98	106	109	124	169	172	175	208	235	240	247	257	272	280	286	299	312
313	28	32	48	50	53	63	74	92	99	115	123	167	176	185	225	227	237	242	278	286	291	299
314	1	7	31	72	89	103	118	119	139	143	185	191	192	201	220	227	243	251	274	283	292	300
315	3	12	27	38	50	62	88	110	115	122	126	127	135	152	159	167	172	222	227	276	278	297
316	9	12	20	46	53	55	56	61	62	89	95	113	116	149	169	174	191	202	208	212	255	292
317	24	40	41	56	60	70	82	83	105	112	119	124	132	163	181	195	207	213	220	225	235	299
318	37	54	74	96	117	123	127	147	161	162	185	195	197	203	210	213	220	225	232	256	290	296
319	1	12	33	38	80	93	94	118	145	147	148	180	193	198	217	225	228	255	261	276	277	284
320	1	6	11	31	33	37	48	56	60	109	116	126	141	160	186	199	206	208	220	296	306	308
321	5	13	51	53	75	83	94	98	128	166	194	209	264	284	287	288	295	297	304	307	319	320
322	8	21	26	56	67	69	79	82	97	119	129	133	172	188	198	204	229	237	257	285	289	311
323	51	56	65	68	91	96	114	124	176	186	194	195	202	223	238	246	248	277	292	293	298	305
324	4	37	41	76	89	120	142	144	170	178	192	196	200	202	203	234	241	244	264	267	296	319
325	22	43	61	69	79	104	108	120	128	140	175	205	220	236	242	244	254	264	276	286	312	316
326	7	61	72	78	84	98	106	111	116	129	132	153	168	174	210	238	250	268	279	289	294	311
327	23	33	36	68	76	82	112	120	125	138	141	163	186	190	193	196	208	265	273	285	325	327
328	6	25	35	36	37	60	64	72	93	129	154	163	169	184	196	200	203	205	219	222	233	262
329	4	44	61	78	94	95	100	118	121	123	142	147	161	210	223	245	252	261	265	273	315	325
330	9	32	34	50	68	110	140	169	181	188	196	210	211	212	217	234	243	250	257	308	320	321
331	7	18	30	80	104	106	108	112	136	137	168	172	175	197	219	241	242	245	262	266	277	311
332	2	3	6	7	11	89	96	113	118	122	126	173	178	180	187	199	201	249	260	270	288	309
333	18	19	35	39	51	57	98	106	114	124	130	147	149	223	255	275	283	289	296	300	325	329
334	2	10	48	58	61	68	72	80	84	92	137	147	150	158	176	211	231	235	262	316	324	331
335	32	53	79	87	128	129	132	135	136	144	148	163	167	170	253	259	261	267	270	313	321	322
336	4	41	45	55	68	76	102	111	149	174	182	221	226	244	254	267	268	271	294	295	296	297
337	30	37	40	41	44	49	84	89	140	153	162	192	195	201	203	234	261	274	277	283	319	331
338	3	29	37		58															285		-
339	2	8	51	53	84															318		
340	1	5	16	40	52	57	73	84												325		_
341	-	40	50	53	54															270		_
342	3	20	23	29	63	66	70													303		
343	-	56	78			122																_
344	-	19	28			129																_
345	-	41	62			122														315		
346	5	23	28		43															290		
347	5	9	37	38	41	60														316		
348	2	6	36		124															302		
349	-	39	46	47	50		72													299		
350		24	25	47	53	90														253		-
351	16	54	70	86	92	111	135	141	144	148	151	172	209	224	248	279	285	287	295	308	344	349

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N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s21	s22
352	43	48	55	122	137	139	154	157	161	163	185	191	208	213	225	242	256	276	296	320	337	346
353	30	82	89	96	98	122	129	130	145	168	170	178	181	210	275	282	284	286	287	288	297	345
354	22	33	36	59	85	89	128	133	144	167	175	208	212	222	238	245	261	269	276	292	317	343
355	13	25	46	68	69	91	115	116	152	165	171	236	239	249	253	260	263	271	295	297	302	355
356	27	47	51	54	78	87	93	115	116	124	126	182	196	201	218	229	238	249	255	265	283	285
357	1	4	12	24	52	124	130	185	189	196	204	212	219	224	242	247	253	271	273	275	308	352
358	20	33	40	57	86	115	118	124	127	160	166	173	181	188	213	253	274	275	286	306	327	330
359	17	78	86	121	124	136	145	146	154	169	170	187	200	216	240	246	258	264	279	284	296	343
360	31	48	60	105	122	125	128	138	148	162	167	173	187	213	223	235	265	281	291	304	307	315
361	22	46	58	67	73	97	99	123	144	156	161	187	247	262	266	268	276	289	294	329	354	359
362	14	18	56	67	96	102	125	175	181	191	202	223	244	252	261	264	273	278	309	319	351	353
363	9	23	61	101	108	124	159	185	199	217	250	251	292	308	310	314	322	327	331	339	342	352
364	35	37	43	63	69	77	99	110	127	166	183	216	240	243	246	254	272	306	312	320	323	350
365	4	17	99	102	107	117	150	159	168	175	180	197	198	215	220	268	281	292	294	316	342	365
366	28	35	41	42	47	62	74	80	102	126	127	160	186	197	207	215	239	249	258	259	320	356
367	12	38	70	73	77	115	117	118	127	147	198	199	216	268	274	279	290	306	319	333	343	366
368	32	38	39	44	74	75	101	112	128	141	156	198	201	207	210	270	276	279	284	319	333	352
369	15	40	41	46	55	69	98	109	118	137	176	177	190	195	197	207	224	271	321	326	340	353
370	73	103	115	116	126	133	138	145	146	147	171	212	228	229	267	294	297	315	324	325	338	340
371	4	11	32	53	61	90	104	126	131	157	161	187	194	197	211	239	298	326	327	332	342	349
372	10	53	132	136	146	148	151	158	162	164	166	197	206	224	235	237	253	270	271	296	346	355
373	14	46	89	91	98	103	113	210	230	234	239	245	258	260	262	290	295	301	309	313	354	363
374	32	50	65	67	110	127	150	160	169	179	180	182	185	199	210	212	220	234	252	330	362	363
375	36	42	49	73	140	171	181	193	204	224	225	244	248	256	264	295	306	323	356	362	368	370
376	16	20	32	70	81	107	128	161	180	213	219	252	270	306	311	318	329	333	337	343	360	368
377	32	102	110	121	129	137	161	169	173	183	199	211	254	256	296	309	312	314	324	326	336	338
378	28	41	48	76	84	86	99	103	115	124	146	177	260	265	270		308	340	343	366	373	376
379	47	71	74	75	79	98	117	118	130	137	140	162	182	188	217	256	323	324	327	343	358	369
380 381	18	33 60	35 70	36	58	87 139	121	143	145	149	151	169	180	186	212	219	284	286	298	317	345	362
382	60	65	66	67	73											293						
383	2	11	36	49	59	67	71									231						
384	10	12	31	35	40	58	66	69	77	80						265						
385	27	41	66	71		113																
386		55	70	71	79		119									236						
387	10	80	87	100	122											283						_
388	17	27	41	45	59	62	68	84	85							265						
389	25	33	35	71	77	_	144															
390		22	61	65	68											256						-
391	34	51	55	72	73	87										283						369
392	37	45	62	63	73	77										278						364
393	19	21	37	49	58	79										187						
394	10	56	73	78	99	117	177	209	238	258	264	299	315	331	335	343	344	368	371	375	381	390

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s21 s22	s20 s2	s19	s18	s17	s16	s15			s12	s11	s10	s9	s8	s7	s6	s 5	s4	s3	s2	s1	N
867 389	358 36	345	336	334	294	283	s14 233	s13 211	198	176	169	107	105	84	76	48	31	29	17	9	395
81 386		362	292	284	249	242	241	216	166	124	109	102	96	77	66	53	48	38	32	23	396
73 392		355	317	307	302	287	240	232	211	191	176	174	146	132	112	90	63	60	24	12	397
350 360		342	327	316	315	286	224	221	212	199	183	173	161	157	140	134	84	62	59	30	398
84 386		368	366	257	252	242	237	220	173	165	140	132	129	119	104	91	77	25	6	4	399
374 380		333	306	297	241	214	209	175	168	153	127	110	108	103	96	81	72	62	11	9	400
352 369		281	275	271	258	249	241	240	237	192	174	163	128	103	81	67	49	47	46	23	401
328 379		276	228	224	222	206	204	194	180	133	126	121	120	101	95	87	61	48	45	27	402
82 385		347	344	337	320	316	315	280	230	229	223	208	172	147	114	55	53	34	33	24	403
63 366	-	336	332	299	246	239	155	138	119	98	95	92	84	77	54	51	43	18	3	2	404
77 403		291	282	281	254	244	234	230	227	210	200	174	141	132	124	48	39	22	19	8	405
87 399		364	350	334	322	257	234	227	188	162	123	120	104	75	64	47	36	26	18	13	406
71 400		299	297	251	244	242	234	228	195	194	187	162	127	122	111	90	81	59	52	43	407
356 358		255	254	243	221	214	213	208	202	201	186	166	87	68	62	60	53	48	21	5	408
03 406		360	358	354	330	266	255	228	204	174	134	132	77	76	73	66	53	31	14	9	409
02 406		337	318	314	313	309	290	264	227	221	209	203	197	164	160	115	93	89	57	38	410
347 392		335	316	303	301	294	292	276	275	256	207	192	186	174	151	133	101	91	82	55	411
370 385		365	343	305	298	280	269	263	259	246	239	210	208	185	178	150	58	49	31	28	412
345 382		318	312	303	291	234	226	186	165	151	132	116	106	88	70	68	52	41	7	6	413
94 397		385	368	362	340	338	328	321	268	203	196	143	139	138	135	126	123	118	100	46	414
69 407		333	303	289	265	214	168	163	162	160	135	108	83	79	73	70	47	37	27	5	415
99 406	-	369	353	328	323	300	299	270	268	230	227	190	176	160	123	109	62	38	31	30	416
80 407	-	360	357	339	326	289	277	267	230	225	220	219	171	170	117	104	94	85	14	13	417
376 385		345	342	309	287	265	245	211	204	175	173	157	132	127	126	111	80	71	22	9	418
88 418		371	353	327	321	291	287	281	273	266	264	261	246	213	166	150	126	103	33	13	419
03 410		347	319	286	276	275	247	234	224	220	204	186	123	88	62	52	44	26	24	9	420
81 393		335	332	313	279	198	166	162	158	151	130	104	82	80	78	71	70	61	57	52	421
61 399		306	300	269	260	249	248	232	211	204	175	157	131	124	116	101	83	43	21	1	422
66 416	331 36	317	289	286	272	239	231	230	176	157	135	133	124	100	96	83	26	18	3	1	423
373 423		316							243	240	206	191	168	141	122		112	87	78	58	424
03 415																		19		5	425
99 411																		89	66	25	426
312 363																		81	80	58	427
13 418																		98	47	32	428
90 422	380 39	357	352	345	338	335	322	321	316	273	232	145	143	137	120	84	83	75	67	33	429
96 416			_				_	_				_			_	_	108	88	84	15	430
93 422	392 39	368	367	337	315	269	263	226	208	160	148	133	123	99	78	69	65	40	13	10	431
04 419																	115	104	57	36	432
356 391																50	40	26	13	6	433
54 418																32	24	17		5	434
423													146	119	111	100	99	84	41	31	435
10 421																		90	58	57	436
90 421	375 39	367	353	329	323	287	280	264	258	237	227	190	164	128	97	90	86	43	37	34	437
3 4 3 3 4 4	289 103 380 381 392 387 329 353 108	270 399 357 376 368 376 327 319 319	261 369 352 347 367 369 301 296 314 380	254 350 345 329 337 297 286 294 307 379	238 344 338 279 315 279 276 290 296 334	234 335 335 233 269 272 248 234 291 317	219 321 322 231 263 239 235 216 286 306	198 310 321 222 226 227 222 194 236 297	194 296 316 207 208 224 190 150 223 274	183 277 273 184 160 190 179 141 197 271	173 265 232 165 148 180 165 140 174 254	158 202 145 150 133 177 79 77 168 249	142 186 143 133 123 167 65 49 146 220	134 178 137 132 99 164 60 38 119	123 170 120 130 78 133 59 34 111 159	121 161 84 109 69 120 50 32 100 158	117 99 83 108 65 115 40 24 99	81 98 75 88 40 104 26 17 84	80 47 67 84 13 57 13 7 41 58	58 32 33 15 10 36 6 5 31 57	427 428 429 430 431 432 433 434 435

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N	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s21	s22
438	3	20	36	44	109	124	138	140	177	189	195	209	224	231	261	282	287	302	339	341	359	421
439	12	24	69	88	91	122	131	151	172	183	202	214	219	236	240	255	341	367	368	375	391	403
440	8	19	35	37	69	72	103	110	124	192	211	268	270	328	347	356	371	375	393	416	431	437
441	31	42	58	79	148	162	166	168	181	208	216	225	236	248	254		331	345	347	377	393	406
442	54	64	90	110	111	130	133	135	163	204	216	257	258	312	322	326	329	338	339	383	423	435
443	9	42	54	66	82	92	112	126	134	135	152	198	261	288	292	348	358	372	376	393	421	422
444	31	33	43	46	48	67	73	80	107	135	180	202	215	222	233	257	274	336	362	368	395	409
445	9	10	27	36	118	119	121	130	148	149	159	161	162	181	228	260	263	296	315	319	343	369
446	4	5	23	45	49	51	77	89	128	225	246	248	257	266	275	280	291	300	317	327	405	428
447	23	61	70	77	80	83	89	165	177	186	194	201	232	265	278	281	296	298	381	404	424	426
448	27	30	48	101	116	150	171	172	229	244	245	261	266	278	341	355	361	394	427	431	438	442
449	12	44	50	54	101	114	126	137	138	192	267	272	293	312	322	354	358	412	421	423	429	447
450	6	7	44	45	47	56	86	94	119	191	192	209	212	243	282	286	309	343	357	437	444	445
451	9	35	66	115	127	137	144	157	199	231	233	248	271	312	318	333	345	346	371	374	381	436
452	15	22	24	30	69	72	96	98	122	147	184	195	220	238	258	273	301	358	367	375	380	440
453	3	10	17	40	92	95	142	166	185	192	217	228	237	296	311	331	358	359	360	374	392	430
454	12	37	40	84	117	135	141	152	163	172	184	255	256	271	282	322	337	345	353	357	367	379
455	12	13	46	95	102	105	110	140	176	189	252	278	284	344	356	360	363	406	420	421	433	436
456	6	14	16	114	121	129	130	164	184	190	204	226	243	273	276	282	332	336	354	391	397	408
457	29	56	65	74	76	103	108	131	152	171	178	179	197	269	272	276	307	344	358	377	434	436
458	10	36	75	87	104	123	133	140	144	163	187	227	278	285	302	352	358	363	396	402	439	458
459	6	8	25	28	40	56	88	89	90	116	123	157	166	199	233	252	293	296	307	335	347	392
460	4	26	80	84	88	105	130	136	148	193	207	214	242	253	295	360	364	380	388	414	445	456
461	33	42	53	54	60	67	100	131	172	180	181	182	246	254	260	343	345	351	355	377	388	454
462	10	11	70	94	100	101	157	191	198	205	239	248	255	317	334	341	361	370	433	436	454	459
463	18	38	95	128	152	161	189	202	205	220	266	275	294	306	318	363	384	391	396	402	448	455
464	34	39	53	88	130	150	182	184	201	205	218	255	267	271	379	380	386	406	426	431	432	447
465	40	61	75 45	78	97	121	145	152	163	166	171	186	197	280	297	316	320	361	365	376	416	432
466 467	3	24 76	45 92	50	88	96	99 152	109	142	152	163	166		201	237	272	335	369	420	454	457	463
468	5	13	18	22	26	69													370			
469	1	9	15				159															
470	3	42	74	92			137															_
471		52	97	106			198															
472	27	31	72	82			143															
473	1	10	22	24	37	82													350			_
474	15	23	27	119			238															
475	16	27	41	79	93		148															
476	\vdash	53	65	69	82	87										_			408			-
477	20	57	86	101																		
478	7	17	29	34	55	87													422			442
479	58	68	72	158	163	169	176															477
480	1	9	53	55	97	118	136	148	175	188	207	219	230	253	303	312	320	389	417	426	431	445

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N	s1	s2	s3	s4	s5	s6	s 7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s 21	s22
481	9	17	49	54	75	114	118	135	198	204	222	269	271	306	386	403	405	407	410	467	469	470
482	13	64	72	92	118	133	146	154	164	168	196	198	211	222	264	277	290	314	339	344	369	418
483	75	83	100	106	120	166	190	204	218	219	253	286	289	292	296	297	327	351	433	437	441	475
484	25	47	64	73	80	122	131	145	164	166	196	231	233	249	256	267	350	352	364	408	459	462
485	4	7	54	71	80	108	113	156	164	165	235	243	267	286	300	320	328	346	364	399	457	474
486	23	33	72	79	91	114	117	183	215	216	219	238	286	338	356	398	405	433	450	454	476	480
487	5	33	69	145	151	166	171	192	199	245	261	265	290	311	337	348	376	420	424	432	472	480
488	12	96	123	124	131	151	182	192	193	218	237	240	243	245	257	262	282	380	394	440	475	478
489	2	9	32	41	53	112	125	142	178	259	325	328	331	347	396	399	406	422	426	440	469	470
490	5	16	80	130	178	181	183	223	257	267	282	297	350	403	429	435	439	458	459	463	467	473
491	30	41	63	70	107	164	211	248	254	340	341	347	348	385	395	402	412	432	440	461	480	483
492	39	41	55	61	64	98	114	123	143	228	259	269	276	302	327	347	367	390	408	415	426	486
493	25	40	128	132	145	159	170	248	251	266	285	300	337	362	364	386	393	419	422	458	470	488
494	13	32	54	79	84	88	89	96	141	146	164	165	180	266	267	273	297	404	421	442	449	491
495	9	53	84	97	98	138	140	174	191	221	241	242	248	269	278	285	344	356	363	413	420	445
496	11	37	57	81	99	138	158	179	183	201	217	251	264	282	288	295	347	380	387	400	431	461
497	26	70	95	110	118	125	136	177	191	214	220	237	255	289	347	356	366	381	398	428	468	483
498	7	27	56	70	104	118	122	126	140	201	232	235	241	244	280	316	340	374	389	426	474	482
499	60	105	107	110	119	123	142	182	195	205	223	233	248	258	261	335	341	389	412	439	441	457
500	34	47	79	96	101	121	134	155	157	174	190	193	235	296	302	313	328	404	416	421	437	474

208 | Annex G

Annex H. School and Pupil Sample Sizes

Reference Module 1: Session 2, page 28 and page 35

This annex is intended as a printed handout that pilot trainees can use as a reference sheet. It explains school and pupil sample sizes associated with the Local Education Monitoring Approach.

LEMA Toolkit Annex H | 209

Local Education Monitoring Approach

- The Local Education Monitoring Approach (LEMA) uses a specific sample method and evaluation instruments which allow districts and regions to ensure quality control of teaching and learning.
- LEMA is a classification tool.
- School Supervisors/Inspectors can classify schools as "meeting" or "not meeting" minimum performance standards.
- Similarly, district officials can classify districts as "meeting" or "not meeting" minimum performance standards.

School Sample

Statisticians have determined that to classify a <u>district</u> as meeting or not meeting the minimum performance standards, data must be collected from

19

schools per district

With 19 randomly selected schools, we can be very confident that we are correctly classifying districts.

Pupil Sample

Similarly, statisticians have determined that to classify a <u>school</u> in a district as meeting or not meeting the minimum performance standard, we must test

19

pupils per school

With 19 randomly selected pupils, we can be very confident that we are correctly classifying schools.

210 | Annex H

Annex I. School Instrument Administration Guidelines

Reference Module 2: Session 1, page 36

This annex is intended to be a printed handout that pilot trainees can use as a reference sheet. The handout provides guidelines for administering the School Instrument.

LEMA Toolkit Annex | 211

School Instrument Administration Guidelines

- The School Instrument is set up as a manual as well as a questionnaire.
- You will need to follow the order in which the questionnaire is written, as this provides step-by-step instructions.
- Don't leave any question blank unless a skip instruction tells you to do so.
- You will also need to explain your observation visit to the teacher and head teacher, as you will need their assistance for the duration of your visit.
- Read each question and consent language exactly as it is written in the questionnaire. Do not improvise or change the wording in any way.

How to Navigate the School Instrument

- 1. Instructions to the assessors are always written in italics.
- 2. This symbol indicates you should read the text to the person you are observing or assessing.
- 3. This symbol indicates an instruction about marking or scoring the assessment.
- 4. → This symbol indicates a skip instruction.

Skip patterns are used to ensure the respondent is only asked relevant questions. For example, if the questionnaire contains a series of questions about the use of the teacher's guide but the teacher doesn't have a teacher's guide, the skip pattern will have you skip past the irrelevant questions.

During a Lesson Observation

- Sit quietly at the back of the room.
- Do not ask questions.
- Do not speak with the pupils or the teacher during the lesson.
- Do not suggest activities for the teacher to carry out during his or her lesson.
- The goal of the observation is to observe the teacher's normal reading lesson in its entirety.

212 | Annex I LEMA Toolkit

Annex J. What Happens When I Arrive at a School?

Reference Module 2: Session 2, page 39; and Module 3: Session 3, page 61

This annex is intended as a printed handout that pilot trainees can use as a reference sheet. It explains the steps and procedures the trainees (as assessors) will follow once they arrive at a sampled school to collect data.

LEMA Toolkit Annex J | 213

What Happens When I Arrive at a School?

- 1. First, meet the head teacher to obtain permission to conduct the assessment.
- 2. Obtain the number of teachers employed at the school, including the absent teachers.
- 3. Randomly select a teacher to observe following the instructions in the School Instrument.
- 4. Conduct the classroom observation and complete the **School Instrument**.
- 5. Following the classroom observation, randomly select students to participate in the **Group Administered Literacy Assessment (GALA)**.
- 6. Conduct the GALA with the randomly sampled students.
- 7. Conduct the **Pupil Exercise Book Inventory.**

Selecting a Teacher and Classroom to Observe

- Identify the total number of teachers (for the targeted grade) who are listed in attendance book.
- If there is more than one teacher (for the targeted grade), you must randomly select a teacher to interview.
- Select the random number box that corresponds to the number of teachers on the duty roster or staff list.
- Without looking, hold your pencil over the appropriate random number box and pick the teacher whose number your pencil lands on.
- If your pencil lands on a 2, pick the second teacher on the duty roster or staff list.

Teacher Selection Protocols

- Ask the head teacher to confirm that the selected teacher is in attendance, and record the teacher's name at the top of the sampling worksheet.
- If the selected teacher is not in attendance on the day of the school visit, repeat the process.
- If you are visiting a school that only has two teachers in the registry and one of the teachers is absent, then observe the only teacher who is in attendance.

214 | Annex J

Annex K. GALA Checklist

Reference Module 2: Session 3, page 46

This annex is intended as a printed handout that pilot trainees can use as a reference sheet. The checklist is a list of instructions and tips for assessors to follow before and during the administration of a Group Administered Literacy Assessment.

LEMA Toolkit Annex K | 215

GALA Checklist

- ✓ **DESKS/CHAIRS:** Ensure that there are at least 19 desks and chairs in the classroom.
- ✓ **SEATING:** Have the students sit as spread out across the classroom as possible, ensuring (at a minimum) that each student is sitting at his/her own desk. Ensure that all students can hear assessor instructions from the front of the room.
- ✓ **PUPILS ONLY:** Only the 19 selected students should be in the classroom for the assessment. The teacher and all other students should be asked to leave prior to the assessment.
- ✓ PENCILS/ERASERS: Hand out a sharpened pencil and an eraser to each student.
- ✓ **CLEAN DESKS:** Students should have nothing on their desks aside from the pencil and eraser.
- ✓ ASSESSOR NEEDS: Ensure that you have clean marker board/chalkboard space, as well as working markers/chalk for writing examples.
- ✓ **EXAMPLES:** Write examples on the board prior to beginning the assessment.
- ✓ **STUDENT SHEETS:** When passing out the pupil sheets, be sure to alternate Form A and Form B so that pupils sitting next to each other have different forms.
- ✓ QUIET CLASSROOM: Make sure that the room is quiet (to the greatest extent possible). This means ensuring that other pupils aren't hanging around the doorway and windows.
- ✓ COMFORT/LOW-STRESS: Make the pupils feel comfortable and relaxed. This is not meant to be a high-stress exam; it should be introduced as a reading game.

216 | Annex K

Annex L. Pupil Sampling Instructions

Reference Module 3: Session 2, page 55

This annex provides step-by-step instructions for randomly sampling 21 pupils, 19 of whom will be assessed using the GALA during a LEMA pilot. Annex L should be printed and supplied to participant trainees as they are trained on the procedures for randomly sampling pupils.

LEMA Toolkit Annex L | 217

PUPIL SAMPLING INSTRUCTIONS

This document explains how to randomly sample 21 pupils from randomly sampled teacher's class. You will assess 19 of these pupils and the remaining 2 will be replacement pupils should any of the first 19 not wish to participate. Note: You must complete the Pupil Sampling Worksheet document at every school visited.



Step	Instruction
1.	Make an announcement to the pupils:
	🗣 "I will randomly pick 21 of you to play a literacy game with us
	today."
2.	● "Please form a line so I count how many pupils there are."
3.	Go down the line counting all of the pupils.
4.	On the <i>Pupil Sampling Worksheet,</i> write down the total number of
	pupils lined up.



If there are 21 or fewer pupils in the line:

You will automatically select all pupils. Even if there are fewer than 21 pupils, still continue with the assessment.

Step	Instruction
Note	If there are 20 or 21 pupils:
	Use the 20th and 21st pupils as replacement
	pupils if one or two of the previous pupils are
	not willing or able to be assessed. Be sure to
	write down only their FIRST names on the
	Pupil Sampling Worksheet. You will destroy
	the worksheet at the end of the assessment.
5.	Have all the pupils sit back in their regular
	seats. Remind the selected pupils to please
	bring their language exercise books when
	they come to read with you. Call the first
	pupil on your sampling worksheet.

If there are 21 or more pupils: You will need to randomly sample 21 pupils.

Step	Instruction	Example
5.	Using the <i>Pupil Random Number Table</i> , find the row where the first column is equal to the total number of pupils in the class, or the <i>N</i> -value.	In the first column under "N," search for the number 35 .
6.	Using the specific row with the <i>N</i> -value, copy the numbers found in the columns labeled p1–p21 into the "Sampling Reference Number" column in the <i>Pupil Sampling Worksheet</i> .	According to the table, write out 3, 4, 5, 6, 7, 9, 10, 11, 14, 16, 17, 19, 21, 23, 25, 26, 27, 28, 29, 31, 33 into the <i>Pupil Sampling Worksheet</i> .
7.	Go down the row of pupils counting again and pointing out the children whose number is indicated by the sampling sheet. As you come to one of the sampled pupils, ask them to take two steps forward. Write down only the FIRST names of the 20 th and 21 st selected pupils.	Ask the 3 rd , 4 th , 5 th , 6 th , 7 th , 9 th , 10 th , 11 th , 14 th , 16 th , 17 th , 19 th , 21 st , 23 rd , 25 th , 26 th , 27 th , 28 th , 29 th , 31 st , 33 rd child to take two steps forward. Then you are finished with this phase!
8.	Have the first 19 selected pupils sit back in their regular seats. Remind the selected pupils to put their language exercise books on their desks/tables in front of them. Destroy the marked <i>Pupil Sampling Worksheet</i> .	

218 | Annex L

Annex M. Pupil Sampling Worksheet

Reference Module 3: Session 2, page 55

The Pupil Sampling Worksheet is a tool that can be used during the process of randomly selecting pupils to participate in the GALA. The user records the "sampling reference numbers" from a random number table (see Annex N) onto the worksheet. Next, after arranging a classroom of pupils to stand in a line, the assessor counts each pupil aloud and selects the ones who correspond to those numbers.

LEMA Toolkit Annex M | 219

PUPIL SAMPLING WORKSHEET

NOTE: Use this worksheet to select a random sample of pupils. Select two alternates; record only the FIRST name of the alternate pupils and be sure to tear up the paper at the end of the assessment.

Region:	District:
School Name:	
Teacher's Name:	
Date:// dd / mm / yyyy	Total number of pupils

	Sampling Reference Number	Sampled Pupil's First Name
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
Alt. 1 20		
Alt. 2 21		

220 | Annex M LEMA Toolkit

Annex N. Pupil Random Number Table

Reference Module 3: Session 2, page 55

This random number table includes "sample reference numbers" for pupils 1 through 21 (P1–P21). It is designed for randomly sampling 21 pupils, 19 of whom will participate in the group test. "Sample reference numbers" are documented on the Pupil Sampling Worksheet (Annex M) and help the user to identify which of the pupils who are standing in line should be selected for the group test. "N" in the far left column corresponds to the number of pupils in the line.

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N	p1	p2	рЗ	p4	р5	p6	р7	p8	р9	p10	p11	p12	p13	p14	p15	p16	p17	p18	p19	p20	p21
21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
22	1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
23	1	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17	18	19	20	21	23
24	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	23	24
25	1	2	3	4	5	6	7	8	9	10	11	13	15	16	17	19	21	22	23	24	25
26	2	3	4	5	6	7	9	10	12	13	14	15	16	17	18	20	21	22	24	25	26
27	1	2	3	4	5	6	10	12	14	15	16	17	18	19	20	21	22	23	25	26	27
28	1	2	3	4	7	8	9	12	13	15	16	17	18	19	20	22	23	24	25	27	28
29	1	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	20	23	24	26	28
30	5	7	10	11	12	13	14	15	16	17	19	21	22	23	24	25	26	27	28	29	30
31	1	2	3	6	7	8	9	11	12	14	15	17	18	19	20	22	23	24	27	28	29
32	1	2	5	8	10	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	31
33	1	2	4	5	6	8	10	11	13	16	17	18	20	23	24	25	26	27	29	31	33
34	5	6	7	8	10	12	13	14	18	21	22	23	24	25	26	27	28	30	31	32	34
35	3	4	5	6	7	9	10	11	14	16	17	19	21	23	25	26	27	28	29	31	33
36	3	4	5	7	8	11	12	13	14	16	18	19	20	21	22	23	27	28	30	34	35
37	1	2	4	5	6	8	11	13	15	19	21	22	23	24	25	30	32	33	34	35	37
38	1	3	6	7	12	13	14	16	17	20	21	22	25	27	28	30	31	33	35	36	37
39	1	2	4	5	6	7	8	13	17	20	23	24	25	29	30	31	33	34	35	37	38
40	1	3	6	8	11	14	15	16	19	20	21	23	26	27	28	30	31	35	38	39	40
41	2	3	4	6	7	8	10	12	13	14	16	17	19	20	21	25	32	33	34	38	41
42	1	7	9	10	11	15	18	20	21	25	26	27	30	31	32	33	34	36	38	41	42
43	2	4	5	11	12	13	14	16	20	22	23	27	30	34	36	38	39	40	41	42	43
44	1	2	3	9	10	12	13	14	17	18	21	24	26	30	31	32	36	39	42	43	44
45	2	3	5	14	15	17	19	23	24	25	26	29	32	33	35	36	37	39	41	43	44
46	1	2	3	11	12	13	14	16	17	19	20	21	22	25	26	27	30	32	37	38	40
47	1	2	3	5	6	8	11	12	14	15	18	22	24	25	34	35	36	39	40	41	46
48	1	2	5	6	7	12	14	17	18	21	27	29	30	31	34	37	40	41	42	44	45
49	1	2	3	5	7	8	11	12	15	17	18	19	24	29	37	41	43	45	46	48	49

222 | Annex N

N	p1	p2	рЗ	p4	р5	p6	р7	p8	р9	p10	p11	p12	p13	p14	p15	p16	p17	p18	p19	p20	p21
50	2	3	7	8	9	10	11	12	13	19	20	25	26	30	31	34	35	37	42	47	49
51	2	4	5	6	7	11	12	14	21	22	24	27	29	31	34	39	40	41	42	44	49
52	2	3	8	13	16	20	22	23	26	27	28	30	31	35	36	37	41	44	45	46	48
53	1	2	4	10	11	13	14	18	22	26	27	28	30	34	40	45	46	48	49	52	53
54	1	2	3	6	7	9	12	15	18	22	24	26	27	34	37	41	43	49	50	51	52
55	2	7	10	16	17	18	19	21	23	24	26	27	29	31	32	36	38	40	45	49	54
56	3	5	16	17	18	19	22	24	25	28	29	30	34	40	42	46	47	49	52	53	54
57	2	3	4	9	10	14	15	16	19	21	23	25	30	36	39	40	42	45	52	53	55
58	1	2	3	6	12	15	17	21	22	26	29	30	31	36	42	45	50	51	54	56	57
59	5	8	9	10	11	16	20	23	28	29	30	33	34	35	37	39	45	49	51	56	58
60	1	4	6	7	8	9	11	14	15	29	31	32	36	40	44	45	46	47	50	52	57
61	1	4	5	6	11	14	15	16	20	27	28	31	32	36	38	43	47	55	56	57	61
62	8	13	16	18	21	22	25	26	28	29	31	36	40	43	50	52	55	56	58	61	62
63	8	9	13	16	19	22	23	27	30	34	38	42	43	45	47	48	49	50	52	59	61
64	1	2	3	5	11	12	14	18	20	29	32	43	44	51	54	56	58	59	60	61	63
65	6	8	10	11	13	14	17	22	23	24	29	35	36	37	40	42	47	55	56	61	62
66	2	6	8	11	13	15	17	25	28	35	36	37	47	49	51	52	55	58	60	62	64
67	8	10	11	13	18	19	21	22	28	31	32	35	37	43	49	50	57	58	59	61	66
68	2	3	14	15	16	22	28	29	40	42	46	48	52	53	55	56	57	58	62	63	67
69	4	8	9	11	15	21	24	25	26	27	36	40	43	46	49	50	52	57	61	66	68
70	3	6	9	10	13	15	24	26	27	32	40	41	46	47	48	53	54	60	61	65	70
71	4	10	11	13	14	15	28	30	31	35	38	43	45	46	51	53	58	60	62	66	71
72	2	3	6	15	17	24	27	28	30	31	36	39	41	43	44	49	54	55	56	68	70
73	2	11	12	15	17	22	24	27	28	32	33	34	35	36	49	58	59	62	64	66	68
74	1	5	7	9	13	16	19	21	22	23	27	29	37	41	45	46	55	57	68	69	72
75	5	10	21	22	25	27	28	31	43	44	46	49	55	56	57	61	63	67	68	71	73
76	1	5	8	10	16	19	20	26	28	34	35	38	40	41	43	57	59	61	65	66	72
77	9	10	11	14	21	25	27	28	29	31	34	41	42	51	54	61	62	72	74	75	77
78	5	7	8	9	11	16	20	22	28	32	45	46	47	54	56	57	61	64	71	73	76

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N	р1	p2	рЗ	p4	р5	p6	р7	p8	р9	p10	p11	p12	p13	p14	p15	p16	p17	p18	p19	p20	p21
79	7	12	16	21	32	34	37	41	42	48	52	53	56	57	58	62	63	68	69	74	77
80	2	5	9	11	18	25	26	28	36	37	38	41	46	53	54	57	58	64	66	69	74
81	8	10	11	12	20	31	33	36	46	51	53	58	61	63	66	68	70	71	72	74	75
82	4	7	16	18	19	32	33	34	38	42	44	46	48	49	57	68	73	74	77	78	81
83	5	9	21	26	28	29	30	31	32	38	39	45	48	54	57	59	62	63	71	80	81
84	7	10	14	15	32	34	39	40	42	44	47	53	56	58	59	67	71	72	73	76	78
85	4	10	17	22	28	34	38	48	50	51	52	54	55	57	58	59	60	74	76	82	84
86	4	10	23	26	31	33	35	42	46	51	54	56	59	60	63	66	74	78	79	82	83
87	3	4	15	18	20	22	24	37	39	47	55	58	65	70	71	74	79	80	83	85	87
88	7	8	10	11	14	15	24	32	35	39	42	50	52	53	60	61	64	75	84	85	86
89	7	8	9	12	18	21	26	31	33	39	48	53	55	57	60	62	68	78	85	88	89
90	5	12	14	17	21	22	26	27	34	44	48	52	55	57	60	69	70	72	83	88	90
91	26	28	32	36	37	38	39	40	42	43	51	61	66	67	68	70	71	79	81	84	85
92	3	7	12	15	19	22	25	31	32	40	45	46	47	60	64	72	77	79	86	89	91
93	2	6	14	16	18	23	25	31	33	35	39	57	58	64	67	68	72	74	84	88	91
94	10	16	18	23	41	46	48	50	51	55	58	59	62	63	70	75	79	81	84	85	87
95	3	6	11	14	16	24	33	40	46	47	52	54	58	65	68	76	77	79	80	89	95
96	4	5	10	13	15	23	27	29	33	38	41	47	50	55	60	67	73	77	82	87	95
97	3	6	7	13	19	21	29	34	50	66	73	80	81	83	84	85	86	87	91	92	97
98	5	6	8	10	11	12	14	18	21	22	26	28	36	39	50	52	68	71	78	93	97
99	5	6	15	17	19	20	23	24	44	45	50	62	66	71	74	81	83	84	92	94	98
100	14	24	29	34	38	39	43	46	48	51	52	53	54	56	63	65	72	90	92	96	99
101	4	6	7	9	17	22	33	34	38	47	53	56	57	59	60	61	63	71	90	95	101
102	2	17	19	21	25	27	33	39	44	50	58	60	63	73	79	82	84	85	87	97	100
103	5	12	13	22	23	27	31	33	36	38	42	44	45	49	57	58	60	71	77	79	90
104	11	12	15	16	20	38	41	42	48	56	57	67	70	71	77	78	81	84	85	93	101
105	1	8	15	20	22	23	24	25	34	39	43	52	56	60	64	77	78	86	94	96	105
106	4	13	18	27	29	31	32	45	48	58	67	76	79	81	85	89	90	91	92	99	102
107	10	15	20	22	28	38	48	50	55	56	59	61	62	66	70	80	84	91	96	103	107

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N	p1	p2	р3	p4	р5	p6	р7	p8	р9	p10	p11	p12	p13	p14	p15	p16	p17	p18	p19	p20	p21
108	3	4	29	31	32	45	47	52	53	56	69	73	76	79	93	99	100	103	104	106	107
109	1	5	10	20	26	32	35	45	58	67	72	75	84	91	93	96	102	103	107	108	109
110	4	13	18	22	27	29	41	43	48	50	55	60	62	70	76	96	98	99	102	104	105
111	7	23	31	33	42	47	49	50	51	58	64	65	66	70	71	72	74	85	87	96	109
112	4	5	9	11	14	16	19	29	42	46	50	63	64	66	72	80	82	83	89	93	104
113	2	3	9	10	11	15	16	21	37	41	42	46	47	55	57	60	62	64	72	90	112
114	3	6	20	22	26	29	43	44	50	53	54	55	56	57	58	70	74	75	86	94	97
115	1	10	12	39	42	46	48	55	61	73	82	85	89	92	95	97	101	103	104	105	111
116	7	8	9	10	11	15	18	24	29	30	43	49	54	73	76	77	81	85	88	99	103
117	4	5	9	16	36	41	44	56	60	62	63	66	81	86	92	94	96	97	111	113	117
118	3	6	14	26	36	48	49	51	52	54	61	63	71	74	77	79	89	91	107	114	117
119	7	8	13	16	18	21	25	26	35	39	40	48	49	74	84	95	99	100	103	105	114
120	2	4	6	14	18	28	54	58	64	65	66	67	72	82	88	89	94	104	105	106	110
121	1	6	23	34	38	45	46	47	53	63	65	72	77	84	86	87	90	91	97	112	117
122	7	17	20	26	27	29	30	36	48	67	69	72	75	90	91	92	93	101	107	110	121
123	5	7	8	18	27	39	42	48	53	57	63	70	79	83	86	88	91	101	108	118	123
124	7	12	20	28	32	53	54	65	72	87	94	96	98	99	105	107	108	109	112	116	120
125	1	11	13	19	35	36	46	58	60	63	74	84	97	102	103	108	110	113	114	116	125
126	2	3	6	7	10	19	22	25	36	46	49	68	70	71	80	88	90	91	110	111	117
127	5	7	9	11	13	41	44	52	56	57	64	66	78	79	83	88	96	101	115	121	123
128	4	13	15	18	20	21	30	37	38	45	77	82	84	99	100	104	106	110	119	120	121
129	3	9	10	12	18	39	43	45	46	49	61	68	72	84	89	102	104	116	122	124	128
130	6	10	15	27	44	54	58	72	77	78	79	88	97	100	102	107	108	113	114	123	124
131	6	14	15	18	19	27	28	48	55	65	75	77	78	90	102	106	111	112	117	124	126
132	4	8	10	15	18	28	30	32	37	55	58	63	64	67	68	73	79	106	118	122	131
133	8	10	28	32	33	34	41	42	56	72	73	76	79	92	96	97	98	119	121	130	131
134	6	10	24	28	40	43	47	54	59	61	64	73	81	86	88	100	114	127	132	133	134
135	7	10	12	21	23	32	35	39	50	54	63	64	71	93	94	99	101	113	116	119	134
136	8	14	16	25	26	29	32	41	44	51	54	63	79	82	88	89	94	100	121	131	132

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N	p1	p2	р3	р4	р5	p6	р7	p8	р9	p10	p11	p12	p13	p14	p15	p16	p17	p18	p19	p20	p21
137	1	2	5	7	17	30	38	40	41	43	49	60	67	77	78	88	96	97	98	101	103
138	1	10	20	29	31	33	34	40	51	54	59	60	79	86	93	106	123	124	125	130	133
139	1	6	19	22	28	31	33	35	37	38	39	52	64	76	83	86	96	99	114	128	138
140	10	13	14	18	21	35	38	52	69	78	80	87	89	91	94	104	124	126	131	132	133
141	7	16	21	22	29	35	44	47	73	78	87	89	92	94	104	111	120	124	130	138	139
142	16	18	28	29	39	43	44	51	73	74	84	90	91	107	108	113	124	129	133	135	142
143	5	13	14	19	31	36	40	41	54	58	59	60	61	78	87	108	114	115	120	136	138
144	4	20	26	29	33	35	47	50	66	74	76	93	95	104	111	123	127	128	132	139	144
145	11	12	13	23	25	29	35	37	38	42	45	48	53	56	83	84	96	99	101	104	131
146	1	11	20	35	40	60	63	64	74	75	81	82	84	109	113	114	119	123	138	141	144
147	7	10	14	16	29	40	44	47	48	52	54	57	71	84	106	120	125	126	133	140	146
148	9	21	22	24	28	31	39	44	45	56	57	65	81	83	102	120	121	131	142	144	148
149	5	6	21	22	29	43	57	65	69	70	73	91	94	109	111	120	129	134	140	144	149
150	9	10	16	20	21	24	37	49	53	56	58	75	76	93	101	111	117	128	131	140	147

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Annex O. School Visit Materials and Packing Checklist

Reference Module 3: Session 3, page 60; and Module 5: Session 1, page 81

This checklist specifies the materials that assessors will need when they visit schools to collect data. Assessors will first calculate and record the number of items needed (for each item in the list) according to the number of schools being visited. Then, they will organize and pack the items before conducting the fieldwork.

LEMA Toolkit Annex O | 227

School Visit Materials and Packing Checklist

Materials Specific to Each School:	
1 School Instrument	
21 GALA Pupil Response Sheets	
(11 Form A; 10 Form B)	
Envelope for incomplete materials	
Envelope for completed materials	
21 pencils and erasers for pupils	
1 "Daily Tasks Checklist"	
Materials for Assessors to Keep and Reuse at All Schools:	
2 pencils for observations	
1 pencil sharpener	
Chalk and eraser	
Clipboard	
Group Administered Literacy Assessment Assessor Tool	
Watch with second hand or mobile phone with timer	
Laminated random number table	

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Annex P. Daily Tasks Checklist

Reference Module 3: Session 3, page 60; and Module 5: Session 1, page 81

This checklist contains tasks that assessors are expected to complete before, during, and at the end of each school visit.

LEMA Toolkit Annex P | 229

Daily Tasks Checklist

Name of School Visited:	Date:	
Task	Timeframe	Complete
Plan and organize your school visit	Before	
Pack all materials needed for the school	Before	
Make any transport arrangements needed to ensure arrival at each school before classes begin	Before	
Introduce yourself to the head teacher (HT) and explain the purpose of your visit	Beginning	
Go around the school and count the number of teachers in their classrooms right after you have met with the HT	Beginning	
Ask the head teacher for the teacher roster. Note the total number of teachers that teach at the school	Beginning	
Note the number of teachers in the targeted grade	During	
If there is more than one teacher for this grade, use random number table to select one teacher and class to observe	During	
Ask the HT to help identify a good assessment location	During	
Meet with selected teacher to obtain consent and explain the day's observation visit	During	
Ask to see the teacher's guide and lesson plan	During	
Observe the reading lesson(s)	During	
Select pupils for the group assessment (ensure they have their reading exercise books)	During	
Escort selected pupils to location for group assessment.	During	
Once group assessment is finished, thank the pupils and collect their pupil response sheets. Ensure that you have 19 completed sheets and 2 blank sheets.	During	
After collecting pupil exercise books, send students back to their teacher. Then inspect exercise books	During	
Thank the teacher and HT for their participation	End	
Make sure all your materials are completed and place them in the envelope before leaving the school	End	

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Annex Q. Example of Assessor Observation Checklist

Reference Module 3: Session 3, page 60

The Assessor Observation Checklist is intended for use by supervisors and trainers during a practice school visit. During practice visits, each trainee is evaluated, using the items on the checklist. Following the practice visit, trainers and supervisors provide feedback to the observed trainees based on their performance and completion of the items included on the checklist.

LEMA Toolkit Annex Q | 231

Assessor Observation Checklist

Trainer/Observer:	Assessor:	Date:	
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	Checklist Items		Observed?
Int	roduction, Consent, and Classroom Sampling	Section	√, × or n/a
1.	Assessor uses the instrument script to introduce/explain the activity to the head	Section 1	,,
	teacher.		
2.	Assessor works with the head teacher to determine the best time in day to conduct	Section 1	
	each activity.		
3.	Assessor correctly marks teacher attendance.	Section 2	
4.	Assessor follows instrument instructions to randomly select a classroom for the	Section 3	
	targeted grade.		
5.	Assessor uses the instrument script to explain the purpose of the observation	Section 4	
_	activity to the selected teacher and gain consent.		
	ading Lesson and Teacher Observation	T	T
6.	Assessor correctly marks availability of teaching materials.	Section 5	
7.	Assessor correctly marks availability of pupil materials.	Section 6	
8.	Assessor takes a seat at the back of the classroom before the lesson begins.		
9.	Assessor notes what time the lesson begins.	Section 7	
	Assessor correctly marks time on task.	Section 7	
	Assessor correctly marks reading practices.	Section 8	
	Assessor correctly marks pupil engagement.	Section 9	
	Assessor correctly marks teacher material use and preparedness.	Section 10	
14.	Assessor observes lesson quietly and does not interrupt or cause a disturbance.		
Gro	oup Administered Literacy Assessment (GALA)		
15.	Assessor ensures that there are at least 19 desks and chairs in the classroom.		
16.	Assessor follows sampling protocol to randomly select 19 pupils to participate in		
	group assessment.		
17.	Assessor instructs pupils to sit as spread out across the classroom as possible,		
	ensuring (at a minimum) that each pupil is sitting at his/her own desk.		
18.	Assessor distributes pencil and eraser to each of the 19 pupils, ensuring that		
40	nothing else is on the desk.	-	
	Assessor ensures that chalkboard is clean and chalk is available.		
20.	Assessor distributes pupil assessment sheets, alternating Form A and Form B so		
21	that pupils sitting next to one another have different forms.		
	Assessor uses the script to explain the activity and obtain pupil assent.		
	Assessor puts pupils at ease by explaining the activity as a reading game.		
	Assessor correctly administers Letter Names task.		
	Assessor correctly administers Familiar Words task.		
	Assessor correctly administers Invented Words task.		
	Assessor correctly administers Reading Comprehension task.		
27.	Assessor correctly administers Maze task.		
28.	Assessor correctly administers Dictation task.		
29.	Assessor gathers completed pupil assessment sheets.		
30.	Assessor thanks pupils and distributes pupil gifts.		
31.	Assessor counts pupil sheets and places them in correct envelope.		

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Annex R. LEMA Decision-Rule Table

Reference Module 4: Session 1, page 67

This table provides the minimum number of schools or students needed to meet minimum performance standards to classify a school or district. The first column (far left) contains sample sizes. Samples 12 to 30 are displayed. The percentages across the top of the page represent the percentage meeting the performance standard. Based on the sample and the minimum performance standard set for an indicator, users can find the decision rule, which is the minimum number of pupils or schools needed to be classified as meeting the performance standard.

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		Decis	ion Rul	es for S	Sample	Sizes o	of 12-30	and M	linimun	n Perfoi	mance	Standa	ards/Av	erage o	of 10%-	95%		
Sample		Avera	age Pe	rforma	nce (B	aseline	es) / An	nual N	linimur	n Perfo	ormano	e Stan	dard (I	Monito	ring an	d Eval	uation)	
Size*	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
12	N/A	N/A	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11
13	N/A	N/A	1	1	2	3	3	4	5	6	6	7	8	8	9	10	11	11
14	N/A	N/A	1	1	2	3	4	4	5	6	7	8	8	9	10	11	11	12
15	N/A	N/A	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13
16	N/A	N/A	1	2	2	3	4	5	6	7	8	9	9	10	11	12	13	14
17	N/A	N/A	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15
18	N/A	N/A	1	2	2	3	5	6	7	8	9	10	11	11	12	13	14	16
19	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	N/A	N/A	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
21	N/A	N/A	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18
22	N/A	N/A	1	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19
23	N/A	N/A	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20
24	N/A	N/A	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21
25	N/A	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21
26	N/A	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22
27	N/A	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23
28	N/A	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24
29	N/A	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25
30	N/A	1	2	3	4	5	7	9	11	12	14	16	17	19	20	22	24	26

N/A: *Not Applicable*, meaning the method cannot be used in this assessment because the minimum performance standard is either too low or too high to assess a district. This table assumes the lower threshold is 30 percentage points below the upper threshold.

: Clear cells indicate that alpha and beta errors are less than 10%.

: Light-shaded cells indicate where alpha or beta errors are greater than or equal to 10%.

: Dark-shaded cells indicate where alpha or beta errors are greater than 15%.

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Annex S. School and District Decision Rules

Reference Module 4: Session 1, page 67

This annex is intended to be a printed handout for pilot trainees and should be used as a reference sheet.

LEMA Toolkit Annex S | 235

What is a decision rule?

School-Level Decision Rule:

The decision rule for a school is: the *minimum number of pupils* that must meet the minimum performance standard (%) in order for the whole school to be classified as meeting the minimum performance standard.

District-Level Decision Rule:

The decision rule for a district is: the *minimum number of schools* that must meet the minimum performance standard (%) in order for a whole district to be classified as meeting the minimum performance standard.

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Annex T. Example of School and Teacher Results Table

Reference Module 4: Session 2, page 73; and Module 6: Session 2, page 85

Annex T is an example of a School and Teacher Results Table that was adapted and used in a pilot application of this approach conducted in Ethiopia. This annex provides sample indicators and corresponding codes for correct/appropriate responses. The format of the table and the indicators it includes can be adapted for use in other contexts.

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	ETHIO	PIA Local Education Monitoring Approach (LEMA)	
ZONE:	WOF	REDA: SCHOOL:	
ASSESSO	PR: TE	ACHER CLASSROOM #: DATE OF ASSESSMENT:	
SCORE K	EY: CORRECT=1 NOT CORRECT=0 MISSIN	IG=X	
No.	Indicator	Code for a Correct / Appropriate Response or Observation	SCORE
1. TEACH	IER ATTENDANCE		
2.4	% of Teachers employed by the school who are present on the day of the survey. (2.1/2.2)X100 =%	90% or more of teachers must be observed present at start of the school day = 1	
2. PUPIL	ATTENDANCE		
		80% or more of pupils must be observed present on the day of the school visit to score 1 for PUPIL ATTENDANCE	
	ENGAGEMENT: TIGRINYA		
9.1	Majority of pupils actively engaged in listed reading activities	Must have score of 1 on 9.1 to score 1 for PUPIL ENGAGEMENT: TIGRINYA	
4. TIME C	ON TASK: TIGRINYA		
7.5, 5.4	Did the TIGRINYA language lesson last 40 minutes or more AND did the lesson cover appropriate material from the syllabus?	Must have score of 1 on 7.5 <u>and</u> on 5.4 to score 1 overall on TIME ON TASK: TIGRINYA	

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ZONE:	WOF	REDA: SCHOOL:	
ASSESSO	PR: TE	ACHER CLASSROOM #: DATE OF ASSESSMENT:	
SCORE K	EY: CORRECT=1 NOT CORRECT=0 MISSIN	NG=X	
No.	Indicator	Code for a Correct / Appropriate Response or Observation	SCORE
5. TIGRIN	NYA READING PRACTICE		
8.6	Teacher carries out reading practice appropriately	Must have completed four of the five actitivies (i.e. scoring a 1 on question 8.6), to score 1 overall for TIGRINYA R EADING PRACTICE	
6. AVAIL	ABILITY OF TIGRINYA TEACHER MATERIALS		
3.4, 5.1	Teacher has current version of the syllabus and the teacher's guide?	Must have score of 1 for 3.4 and 1 for 5.1 to score 1 for AVAILABILITY OF TIGRINYA TEACHER MATERIALS	
7. AVAIL	ABILITY OF TIGRINYA PUPIL MATERIALS		
6.1, 11.1	School met decision rule for availability of Tigrinya pupil readers. (6.1/11.1)X100 =%	Must be sufficient Tigrinya readers for 50% or more of registered pupils to score 1 for AVAILABILITY OF TIGRINYA PUPIL MATERIALS	
8. TEACH	IER PREPAREDNESS: TIGRINYA		
5.4, 10.1	Teacher has a prepared lesson plan that refers to the teacher's guide, syllabus or annual plan and the teacher's lesson follows the prepared lesson plan.	Must have score of 1 for 6.4 and a score of 1 for 12.2 to score 1 for TEACHER PREPAREDNESS: TIGRINYA	

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Annex U. Example of Pupil Results Table

Reference Module 4: Session 2, page 73; and Module 6: Session 2, page 85

Annex U is an example of a Pupil Results Table that was adapted and used in a pilot application of this approach conducted in Ethiopia. This table was used by trainees to tabulate the performance of the 19 pupils (in all 19 schools) who participated in the group test. This annex provides sample indicators. The format of the table and the indicators it includes can be adapted for use in other contexts.

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					ET	HI	OPI	Α :	SCH	10	OL I	М	O١	ΙIΤ	OR	IN	G	(LC	ĮΑ	S)						
									P	UP	ΊL	RE	ESU	JL٦	ΓS											
ZONE:	WOREDA:								SCI	но	OL:															
ASSESSOR:			_				SSRC	_										DA	ΙTΕ	OF	ASS	ESS	MENT:			
SCORE KEY:	CORRECT=1 NOT CORF	REC	T=0	S	SKIP	PEC	:=S	N	<u>IISSI</u>		i=X PIL N	UN	ИВE	ER.									TOTAL	PERCENT MEETING MINIMUM STANDARD	DECISION RULE	DECISION RULE MET? (met=1 not met=0)
		1	2	3	4	5	6	7	8	9) 10)	11	12	13	14	1	5 1	.6	17	18	19				
	JPIL MATERIALS																						,		1	T
Exercise Book Inv.	Pupil has his/her Tigrinya exercise book																							50%	7	
Book Inv.	Tigrinya exercise book has sufficient work for this time of the school year. There should be at least one exercise per day of the school year.																							50%	7	
Book Inv.	Teacher marks/comments on one or more of the last two exercises in the pupil's Tigrinya exercise book																							50%	7	

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Annex V. Example of District-Level Summary Sheet

Reference Module 6: Session 2, page 85

Annex V is an example of a District-Level Summary Sheet that was adapted and used in a pilot application of this approach conducted in Ethiopia. This table was used by trainees to tabulate performance of the 19 schools that were sampled to participate in the LEMA pilot. This annex provides sample indicators. The format of the table and the indicators it includes can be adapted for use in other contexts.

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		ETHIOPIA Local Education Monitoring Approach (LEMA) DISTRICT-LEVEL SUMMARY OF 19 SCHOOLS															д Арр	roac	h (LE	MA)						
									DI	ISTR	ICT-	LEV	EL SI	UMI	MAR	Y O	F 19	SCF	100	LS						
	SCORE KEY:	CORRECT=1	NOT COR	RECT	=0	MIS	SING	- Y																		
	SCORE RET.	Schools Sampled in the District																Percent Meeting								
No.	Indicator			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	Minimum Standard	Decision Rule	Decision Rule Met?
	decision rule f	or teacher atte	ndance on																							
the day of t		or teacher atte	nuance on																							
2 DUDU AT	TENDANCE																							80%	13	
		or pupil attend	lance rate																							
		ss on the day of																								
																								80%	13	
	IGAGEMENT: T																									
School met	decision rule f	or pupil engage	ement																					80%	13	

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	ETHIOPIA Local Education Monitoring Approach (LEMA) DISTRICT-LEVEL SUMMARY OF 19 SCHOOLS																									
									DI	STR	ICT-	LEV	EL SI	UMI	ИAR	Y O	F 19	SCF	100	LS						
	SCORE KEY:	CORRECT=1	NOT CORI	RECT	=0	MIS	SING	=X																		
			Schools Sampled in the District																Percent Meeting							
No.	Indicator			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	Minimum Standard	Decision Rule	Decision Rule Met?
4. TIME ON	TASK: TIGRIN	YA																								
reading les	son lasted at le vered an appro	or time on task east 40 minutes priate unit for	and the																					80%	13	
5. READING	PRACTICE: TI	GRINYA																						3070	13	
School met		or Teachers wh	no carry out																							
																								80%	13	
6. AVAILAE	ILITY OF TIGRI	NYA TEACHER I	MATERIALS																							
School met teacher ma		or availability o	of Tigrinya																							
																								80%	13	

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											A Loc															
									וט	SIK	ICT-	LEV	EL S	UIVII	VIAI	KY O	F 19	SCF	100	LS						
	SCORE KEY:	CORRECT=1	NOT COR	RECT	ECT=0 MISSING=X																					
							Schools Sampled in the District														Percent Meeting					
																								Minimum	Decision	Decision
No.	Indicator			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	Standard	Rule	Rule Met?
7. AVAILABILITY OF TIGRINYA PUPIL MATERIALS																										
		or availability o	f Tigrinya																							
language p	upil readers																									
																								80%	13	
8. TEACHER	R PREPAREDNE	SS: TIGRINYA																								
School met	decision rule f	or use of Tigrin	ya teacher																							
materials																										
																								80%	13	
GO TO PUP	IL ASSESSMEN	T SHEETS												-										PERCENT		
TIGRINYA P	UPIL MATERIA	LS																						MEETINGMINIM	DECISION	DR Met?
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		UM STAND-ARD	RULE	
Exercise	School met d	ecision rule for	availability																							
Book Inv.	of Tigrinya ex		,																							
																								80%	13	
TIGRINYA T	EACHER FEEDE	BACK								_		_						_						80%	13	
Exercise		ecision rule for	Teacher																							
Book Inv.		ents in pupil's 1																								
	exercise bool		J ,																					000/	4.3	
				<u> </u>		<u> </u>			<u> </u>															80%	13	

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							ETH	IIOPI	A Lo	cal E	duca	ation I	Vioni	toring	g App	roac	h (LE	MA)						
							D	ISTR	RICT	-LEV	EL:	SUM	MAI	RY O	F 19	SCF	100	LS						
	SCORE KEY: CORRECT=1 NOT COR	RECT	RECT=0 MISSING=X																					
			Schools Sampled in the District																Percent Meeting					
No.	Indicator	1	2	3	4	5	6	7	8	9	10	0 11	12	13	14	15	16	17	18	19	Total	Minimum Standard	Decision Rule	Decision Rule Met?
TIGRINYA P	UPIL ASSESSMENT SUMMARY																							
Letter names	School met decision rule for pupil performance on letter names																					80%	13	
Familiar words	School met decision rule for pupil performance on familiar word recognition																					80%	13	
Invented words	School met decision rule for pupil performance on invented words																					80%	13	
Reading comprehe nsion	School met decision rule for pupil performance on reading comprehension																					80%	13	
Maze	School met decision rule for pupil performance on maze passage																					80%	13	
Dictation	School met decision rule for pupil performance on dictation section																					80%	13	

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