



EdData II

Student Performance in Reading and Mathematics, Pedagogic Practice, and School Management in Doukkala Abda, Morocco

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Student Performance in Reading and Mathematics, Pedagogic Practice, and School Management in Doukkala Abda, Morocco

EdData II
Task Order No. 7

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Abbreviations

ANOVA	analysis of variance
AREF	Académie Régionale pour l'Education et la Formation
clspm	correct letter sounds per minute
cwpm	correct words per minute
EFA	Education for All
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
MDG	Millennium Development Goal
MOE	Ministry of Education
PIRLS	Progress in International Reading Literacy Study (PIRLS)
PTA	parent-teacher association
RTI	RTI International (trade name of Research Triangle Institute)
SES	socioeconomic status
SSME	Snapshot of School Management Effectiveness
TIMSS	Trends in International Mathematics and Science Study
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USAID	United States Agency for International Development

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Executive Summary

Policy Background

Morocco has made great strides in increasing access to schooling through its launch of the National Charter for Education and Training in 2000. Primary net enrollment had reached 94% as of 2010,¹ and the ratio of females to males in primary school had reached 92% by 2008.² Similarly, the enrollment rate in rural areas had increased 55 percentage points to 91%.³ Despite these great achievements in increased access, however, some of the Charter's other goals, namely improvement in quality and performance, lagged behind. In light of this, Morocco created an emergency plan in 2009 to hasten the Charter's goals.⁴ The government has backed its efforts with increased education spending, and King Mohammed VI declared education a priority second only to Morocco's territorial integrity.⁵ A clearer understanding of how children are learning basic mathematics and reading skills in the early grades is an essential first step in improving student performance.

Purpose and Design of the Assessment

Assessments of student learning in the primary grades, such as the Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA), offer an opportunity to determine whether children are developing the fundamental skills upon which all other literacy and mathematical skills build, and, if not, where efforts might be best directed. This is vital information for countries that are working to improve the quality of education in their schools. Indeed, further evidence of growing international concern for learning outcomes, as opposed to attendance or completion rates, is the fact that EGRA and EGMA have been adapted and used around the world, including EGRA implementations in over 40 countries.

When measuring the quality or effectiveness of an education system, we can pose some basic questions: Are children learning to read? Are they learning basic math skills? Are they acquiring those skills early enough in primary school to secure the foundation for further learning? In addition to measuring student performance, it is essential to understand why some schools are better able to perform than others. The Snapshot of School Management Effectiveness (SSME) provides a multifaceted view of school conditions and practices that are historically linked to student performance. Through the SSME we are able to answer important questions such as: Do students and teachers have the materials they need? Do students and teachers spend enough time engaged in activities that support learning? What instructional practices are teachers using?

¹ World Bank country data.

² Ibid.

³ United Nations, *Morocco – National Millennium Development Goals Report 2009*, p. 22.

⁴ Ibid.

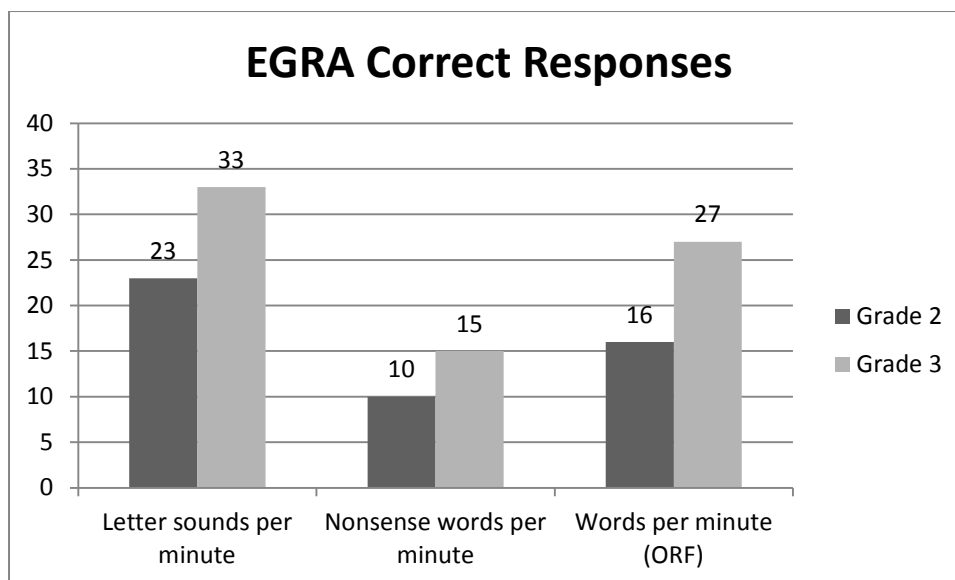
⁵ *National Education Emergency Programme*, Kingdom of Morocco, Appendix 1, p. 1.

To answer these questions about learning and the factors influencing it in Morocco, a study was carried out in a sample of schools in the Doukkala Abda region. The study investigated early grade reading and math skills and the learning environments that support them. It was completed as part of the Education Data for Decision Making (EdData II) project, funded by the U.S. Agency for International Development (USAID), in partnership with USAID/Morocco and with the national and regional (AREF Doukkala Abda) levels of Morocco's Ministry of Education (MOE). Student assessment and school survey protocols developed under the EdData II project were tailored to the Moroccan context during an adaptation workshop with national and regional MOE staff.

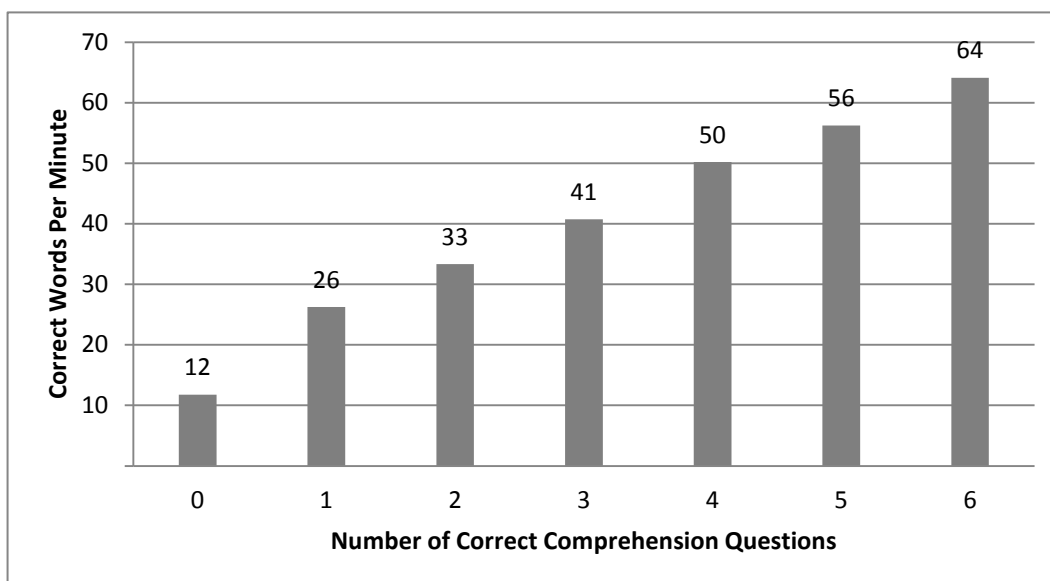
Reading and math assessments (EGRA/EGMA) were administered to a total of 773 grade 2 and grade 3 students randomly selected from within 40 schools. The 40 participating schools had been randomly selected from within the 1400 schools located in the Doukkala Abda region. In addition to student assessments, researchers interviewed Headteachers, teachers, students, and parents; conducted classroom and school inventories; and observed reading and math lessons. The fieldwork was carried out by MOE data collection teams under the supervision of RTI's partner ETM in May 2011.

How Well Are Students Learning to Read?

As was previously mentioned, the **Early Grade Reading Assessment (EGRA)** was applied to a sample of grade 2 and grade 3 students. The EGRA, which was administered orally in Modern Standard Arabic, consisted of five subtasks: letter sound knowledge, unfamiliar word reading fluency, connected text oral reading fluency, reading comprehension, and listening comprehension. Letter sound knowledge and the ability to read unfamiliar single-syllable words are foundational skills needed for fluent reading and comprehension. All subtasks except for reading comprehension and listening comprehension were timed to assess whether students had achieved a desired level of automaticity in these skill areas. Overall, there was clear progression in performance from grade 2 to grade 3 on all EGRA subtasks. In addition, the gender parity enjoyed in children's access to school extends to student performance in reading in the early grades. When student grade and wealth levels were taken into consideration, gender differences in both grades were found to be insignificant on all EGRA subtasks.



For the oral reading fluency task, students were asked to read a short narrative story as quickly and accurately as they could. Researchers used the results of this task to estimate reading fluency rates. On average, grade 2 students read 16 correct words per minute, while grade 3 students read 27 correct words per minute, indicating good progression in performance from one grade to the next. Research has shown that readers must read with a minimum reading speed in order to understand what they have read. The relationship between reading fluency and comprehension is clearly shown in the following graph, with students who were unable to answer a single comprehension question reading at a speed of 12 correct words per minute, and those able to answer all six questions correctly reading at a speed of 64 correct words per minute.



The *average* reading speeds recorded were well below this rate and below what could be considered fluency. As a result, student performance on the comprehension questions was not as strong as curricular guidelines would require. On average,

grade 2 students were able to answer fewer than one of the six comprehension questions correctly, while grade 3 students were able to correctly answer fewer than two of the six questions.

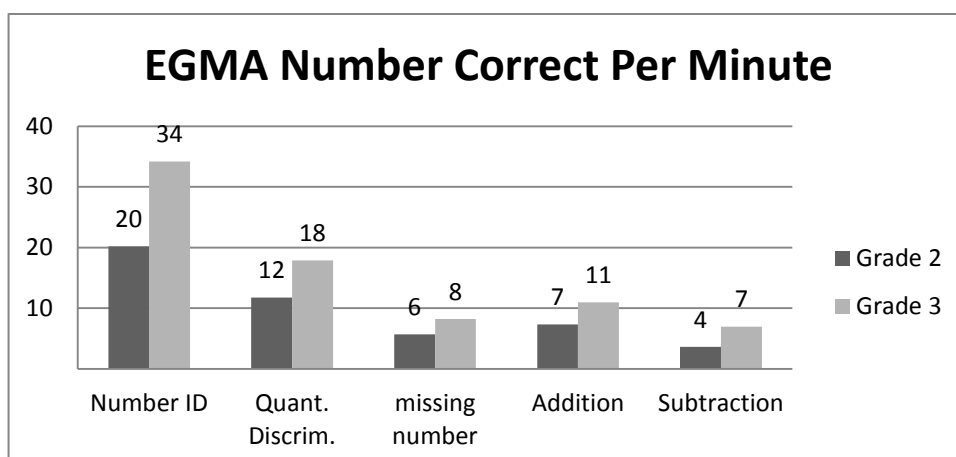
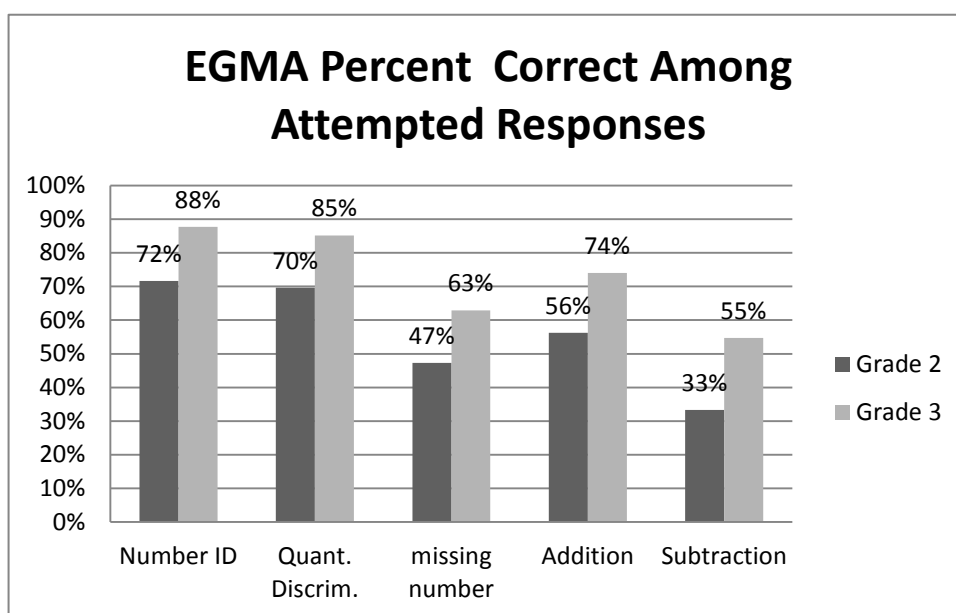
The reported reading speeds and comprehension scores are not surprising given student performance on the foundational reading skill subtests. On average, grade 2 students were able to correctly name the letter sounds for 23 letters per minute while grade 3 students were able to correctly name 33 letter sounds per minute. On the decoding task, grade 2 students were able to correctly read 10 invented words per minute and grade 3 students correctly read 15 invented words per minute. Strong facility with these foundational skills is essential for strong readers. As a case in point, students with strong comprehension skills were able to correctly name three times as many letters per minute than the average student (66 letters per minute). The strong relationship that exists between students' foundational reading skills and reading fluency indicates that students' knowledge of letter sounds and decoding skills should be strengthened in order to improve their oral reading fluency and comprehension.

To assess listening comprehension, the final task of the students' language skills, assessors read a short narrative story to the students, followed by six questions about that story. The listening comprehension task assessed a range of language skills, such as attention, vocabulary knowledge, comprehension of text, and generation of appropriate replies. On average, students in grade 2 were able to answer two of the six questions correctly, while grade 3 students answered three questions correctly.

How Well Are Students Learning to Do Basic Mathematics?

Students' understanding of foundational math skills was orally evaluated using the **Early Grade Mathematics Assessment (EGMA)**, which consisted of five subtasks: number identification, quantity discrimination, missing number (number patterns), addition, and subtraction. For each subtask, students were asked to complete as many items as they could in one minute. As with EGRA, by timing how quickly students perform these tasks, EGMA evaluates whether students have achieved a desired level of automaticity in these skill areas.

As with EGRA, all subtasks indicated progression in student performance from grade 2 to grade 3. The number identification subtask targeted students' knowledge and identification of one- and two-digit numbers (e.g., 12, 2, 17, 93, 9). Grade 2 students were able to correctly identify an average of 20 numbers in one minute, while grade 3 students were able to correctly identify 34 numbers in one minute. Students showed a fair amount of accuracy on this task, with grade 2 students correctly answering 72% of the time (percentage correct out of attempted) and grade 3 students, 88% of the time. Quantity discrimination measures students' ability to make judgments about differences by comparing quantities. Students were asked to compare single- and double-digit numbers, and to say which was the larger of the two numbers. For example, in comparing 15 and 20, the correct response was 20. On average, grade 2 students responded correctly 70% of the time and grade 3 students responded correctly 85% of the time. Students performed best on single-digit items.



The missing-number subtask assesses students' ability to discern and complete number patterns. Each item in this subtask consisted of three numbers in a number sequence and a placeholder (a blank line) for a next or missing number. The child was asked to name the missing number. Almost 18% of grade 2 students and 10% of grade 3 students were unable to answer a single missing number item correctly, including items that were simply counting by one (3, 4, 5, 6, __, 8). On average, students in grade 2 responded correctly to 47% of the items attempted, and grade 3 students responded correctly to 63% of the items attempted. Students had the most difficulty with items where the pattern was not a simple count-by-one pattern (such as counting by fives or tens). Mastering the ability to recognize and complete patterns is essential for the mastery of multiplication and other, more complex, problem solving later on.

The addition and subtraction subtasks assess students' procedural competency in basic operations. Students were presented with and asked to solve simple addition problems using numbers up to 20, with no regrouping. These two subtasks showed significant

growth across grades. In grade 2, 22% of students could not answer a single addition item correctly, while 44% could not correctly answer a single subtraction item. On average, grade 2 students correctly responded to 56% of addition problems attempted and 33% of subtraction problems attempted. The accuracy on attempted problems was much better among grade 3 students. On average, 74% of addition and 55% of subtraction problems attempted were answered correctly, yet 10% could not give the correct answer to any addition problems, and 20% could not do any subtraction problems. On average, grade 3 students could correctly answer 11 addition and 7 subtraction problems. The low speeds indicate that grade 2 students and, to a lesser extent, grade 3 students had not achieved automaticity in addition or subtraction. When students have not gained procedural fluency on simple addition and subtraction problems, they will be likely to use inefficient strategies and will have increasing difficulty as numbers get larger and operations get more complicated.

As is the case with reading, students' facility with the foundational mathematics skills such as number ID and quantity discrimination is essential for students' ability to successfully master more advanced mathematics. For example, among grade 2 students who were able to correctly name 10 or fewer numbers in a minute, 56% were unable to answer a single addition problem and fully 73% were unable to answer any subtraction problems. Conversely, among grade 2 students who were able to correctly name 50 or more numbers in a minute, there were no zero scores and the minimum number of correct answers was 14 and 9 for addition and subtraction, respectively. Ensuring that all students have a strong grounding in their foundational skills will help to ensure stronger performance in mathematics.

How Well Are Doukkala Abda Schools Being Managed?

What factors could help to explain why pupils are having difficulty mastering these foundational skills? In what follows, we briefly highlight some of the more salient and actionable factors as revealed by the **Snapshot for School Management Effectiveness (SSME)**.

First, lesson content, an important determinant of student learning, was evaluated during observations of grade 2 reading and mathematics lessons. Reading lessons focused primarily on students reading texts (54.4%) and reading comprehension activities (24.8%). Observed reading lessons did not focus on foundational skills such as sounds (0%) and only rarely focused on sound-letter correspondence (2.3%) and isolated word reading (4.3%). To ensure that more students are able to read fluently and with comprehension, current classroom activities should be complemented with other pedagogical practices designed to improve foundational skills, such as letter-sound knowledge. Similarly, mathematics lessons focused largely on addition with two or more digits and multiplication (24.6% of lesson time for each). Relatively little time was spent on foundational skills such as number identification (7.7%), counting (1.8%), comparing sets (4.9%), single-digit addition (7.9%), and subtraction (5.1%). Given that most students have not yet mastered addition and subtraction, more instructional time spent on foundational skills could help student mathematics performance.

Proper teaching methods are needed to ensure that teachers are able to effectively deliver lesson content. Training in reading and mathematics instruction is one way of ensuring effective delivery of content. The students whose teachers had received training in how to teach reading and math performed better than students whose teachers had not received this training.

Pedagogic materials are essential for both students and teachers. Teachers need textbooks and reference materials to help them properly follow the ministry curriculum. Teaching instruments such as blackboards, chalk, writing materials, and student registers are fundamental teaching tools. Similarly, students need to have access to textbooks, reading books, exercise books or slates, math manipulatives,⁶ and writing utensils.

The availability of resources for Moroccan students is high. On average, observed grade 2 classrooms had Arabic language textbooks for 96.8% of their students and mathematics textbooks for 97% of their students. A majority (70%) of observed grade 2 classrooms had maths and Arabic textbooks for all their students. Only a small number of schools were missing a substantial number of textbooks. Conversely, non-textbook reading materials, essential for nascent readers, were almost non-existent in observed classrooms. In fact, 98% of the observed classrooms had no books, booklets, or magazines other than textbooks. Having a good supply of appropriate reading materials available in school and for home use can improve student reading fluency and comprehension.

Quality of instruction and availability of resources must be coupled with sufficient learning time for pupils. The official school year in Morocco consists of 34 weeks, or approximately 204 days (assuming a 6-day school week), or 1,020 hours (assuming a 5-hour school day for primary school students). This official schedule surpasses the 850–1,000 minimum number of annual instructional hours recommended by the World Bank and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) through the Education for All (EFA) initiative.⁷ School closures, student and teacher absenteeism, late arrival, and time off-task during the school day can all work to erode valuable instructional time, reducing curricular coverage. Reported numbers of school closures and days of Headteacher absence are negatively correlated with student performance. The importance of time-on-task is further demonstrated by examining the number of pages covered in student exercise books—a rough estimate for time-on-task during the school year—and correlating it with student performance. Students' exercise books were found to have a very large variation in coverage, with some books having no writing at all and others having writing on as many as 93 pages. On average though, students had writing on about 30 pages of their exercise book. As would be expected, classes that spent more time off-

⁶ “Math manipulatives” refers to the use of small objects, such as stones, sticks, or blocks that teachers may use with students to help them master rational counting and/or to understand and solve simple addition or subtraction problems.

⁷ *EFA Global Monitoring Report*, 2005, p. 149.

task tended to have fewer pages with writing in their exercise books.⁸ Students with more writing in their exercise books tended to perform better on assessments.

Lastly, parental engagement has been proven time and time again to have a positive impact on pupil performance. Pupils who reported reading out loud at home and/or had someone who read to them performed better at school.⁹ Yet, 73% of teachers reported that parents were not involved in their students' schoolwork. Thus, increasing parental involvement would be recommended.

⁸ Correlation between student writing on pages in exercise books and students observed off-task had a coefficient of $-.1796$ and a $p = .0001$.

⁹ Students in both grades who reported being asked to read aloud by someone at home received higher oral reading fluency scores: 5 more words per minute in grade 2 ($p = .001$) and 3 more words per minute in grade 3 ($p = .0001$). Students in both grades who reported being asked to read aloud by someone at home received higher oral reading fluency scores: 5 more words per minute in grade 2 ($p = .001$) and 3 more words per minute in grade 3 ($p = .0001$). Students who reported reading out loud at home performed significantly better with letter naming, reading passage, and addition subtasks. Similarly, grade 3 students who reported getting help with homework at home were able to read an average of 8 more words per minute ($p = .002$).

1. Background

Along with dozens of countries around the world that have adopted the Millennium Development Goals (MDGs), Morocco has made great efforts to improve its education system at all levels. The country has given particular attention to increasing primary enrollment rates, ensuring equal access for males and females, and targeting rural areas where learning outcomes have chronically lagged behind the urban centers. These efforts have been largely successful, with the net enrollment at 94% as of 2010,¹⁰ an increase from only 60% in 1994. Children in Morocco begin their free, compulsory education in grade 1 at age 6. Primary school lasts for six years, and is followed by three more years of basic education, to age 15. The most recent data (2010) show that 58% of Moroccan children attend preschool.¹¹ Classical Arabic is the language of instruction in all Moroccan public primary schools. Although the female enrollment rate was 52% in 1994, by 2004 it was 84%,¹² and the ratio of females to males in primary school is now 92%.¹³ From 1991 to 2008, the enrollment rate in rural areas had increased 55 percentage points to 91%.¹⁴ The primary completion rate is 85%.¹⁵

Much of this progress has been due to the National Charter for Education and Training, launched by the Kingdom of Morocco in 2000 and intended to span the decade. With high levels of national and international support, the Charter's three goals were (1) to achieve universal education and to improve quality and performance; (2) to reform the structure of the education system; and (3) to modernize the education system's management procedures.¹⁶

However, as the decade drew to a close, it became evident that although there was marked improvement in some areas, progress was less than desired in others. Namely, quantitative outputs, such as increased enrollment rates, were not necessarily being matched by qualitative learning outcomes.¹⁷ In light of this, Morocco created an emergency plan in 2009 to hasten the Charter's goals and extended the timeline to 2015.¹⁸ The government has backed its efforts with increased education spending, and King Mohammed VI declared education a priority second only to Morocco's territorial integrity.¹⁹

The objective of the Moroccan National Education Emergency Program is "to make education available to all and improve the quality of teaching and performance of the

¹⁰ Ibid.

¹¹ World Bank country data.

¹² United Nations, *Morocco - National Millennium Development Goals Report 2005*.

¹³ World Bank country data.

¹⁴ United Nations, *Morocco - National Millennium Development Goals Report 2009*, p. 22.

¹⁵ World Bank country data.

¹⁶ Ibid.

¹⁷ Morocco ranked 43rd out of 45 countries in the 2006 Progress in International Reading Literacy Study (PIRLS) in reading and comprehension and 40th out of 45 countries in the 2003 Trends in International Mathematics and Science Study (TIMSS).

¹⁸ Ibid.

¹⁹ *National Education Emergency Programme*, Kingdom of Morocco, Appendix 1, p. 1.

education system.”²⁰ Although the chief component of the plan that is specific to primary school students is “compulsory school attendance,”²¹ this component includes the “eradication of illiteracy” as an expected outcome.²²

2. Evaluation Approach

2.1 Research Questions and Assessment Design

The United States has observed remarkable efforts at education reform in Morocco since beginning development work in the country in 1953. Recently the United States Agency for International Development (USAID), together with the Moroccan Ministry of Education (MOE), contracted with the EdData II project, managed by RTI International, to assess school management effectiveness, early grade reading, and early grade mathematics within primary schools. This effort was undertaken to provide the MOE with accurate, detailed information with which to make further policy and intervention decisions.

The first step to effect such decisions is to develop a clear understanding of how children are learning to read and think mathematically in the primary grades. The assessments implemented in Morocco were abbreviated versions of the Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA), which offer an opportunity to determine whether children are developing the fundamental skills upon which all other literacy and mathematical skills build, and, if not, where efforts might be best directed. This is vital information for countries that are working to improve the quality of education in their schools. Indeed, growing international concern for learning outcomes, as opposed to attendance or completion rates, is evidenced by EGRA and EGMA having been adapted and used around the world, including EGRA implementations in over 40 countries.

Morocco is a multi-lingual country where the official language used for print and official transactions is Modern Standard Arabic (MSA). The vernacular languages used in everyday communication include languages of the Amazigh family and Darija, a dialectal variant of Arabic spoken in North Africa. Across the country, the language of instruction in school is MSA and in Doukkala Abda, the vernacular language spoken by the students at home is Darija Arabic.

In all EGRA and EGMA implementations, the assessments are administered individually and orally, typically using the students’ native language to ensure that they understand the instructions for each task. In Morocco, the assessment designers ensured that the phrasing of the instructions used words and sentences that were common to both formal MSA and vernacular Darija Arabic. However, given that the language of instruction at school is MSA, the material students read while taking the EGRA assessment was formulated in MSA.

²⁰ Ibid., p. iii.

²¹ Ibid., p. iv.

²² Ibid., p. 12.

The assessment instruments were adapted by staff members of a regional unit within the MOE, the Académie Régionale pour l'Education et la Formation (AREF), based in El Jedida, (see Section 2.5); and they align with the Moroccan curriculum for grades 2 and 3, as these were selected for assessment. The instruments involve subtasks that tap into skills that are foundational to early grade reading and mathematics acquisition. Sections 2.2 and 2.3 below both provide background on these instruments in general and present detailed information on the specific skills assessed in the Morocco EGRA and EGMA instruments.

In addition, to paint a larger picture of the relationship between school management, teaching, and learning outcomes, a set of interviews, checklists, and observations were employed. When these are taken as a whole, they constitute a tool called the Snapshot of School Management Effectiveness (SSME). The characteristics of the SSME are further described in Section 2.4.

Findings from the assessment in Morocco based on these tools appear in Sections 3 and 4.

2.2 Overview of EGRA

2.2.1 Why test early grade reading?

The ability to read and understand a simple text is one of the most fundamental skills a child can learn. Without basic literacy there is little chance that a child can escape the intergenerational cycle of poverty. Yet in many countries, students enrolled in school for as many as six years are unable to read and understand a simple text. Recent evidence indicates that learning to read both *early* and at a sufficient *rate* are essential for learning to read well. Acquiring literacy becomes more difficult as students grow older; children who do not learn to read in the first few grades are more likely to repeat and eventually drop out, while the gap between early readers and nonreaders increases over time.

When children are learning to read, they must learn the letters of the alphabet, learn the sounds associated with each letter, and apply this knowledge to decode (or “sound out”) new words that they can recognize instantly. By the end of this phase, children develop sufficient speed and accuracy in decoding and word recognition that they can read with fluency. When children read with fluency, they can read orally with the same speed and expression that they use in speech.

Written Arabic consists of 28 letters which all are consonants except three, the long vowels. In addition, diacritical marks can be added to mark short vowels that contribute phonologically to the Arabic alphabet.²³ While skilled and adult readers are expected to read texts without diacritical marks cuing short vowels, beginners and poor readers read fully vocalized texts with short vowels diacritics. In Morocco, students in grades 2 and 3 are given reading material that is systematically presented with vocalized texts; therefore the reading material in the EGRA reading assessment

²³ Abu-Rabia, S. (2001). The role of vowels in reading Semitic scripts: Data from Arabic and Hebrew. *Reading and Writing: An Interdisciplinary Journal*, 14, 39-59.

systematically marks short vowel diacritics. Letters and diacritical marks of the alphabet have a one-to-one correspondence with the phonemes of the Arabic language, causing vocalized Arabic to be considered a transparent script.

Early predictors of successful reading acquisition in transparent orthography are well established, and reading in the vocalized Arabic script follows similar developmental trends. The early phonological processing and phonological recoding skills that are involved in tasks such as letter sounding speed and phonemic awareness are crucial for accurate and fluent reading.²⁴ Studies involving students with reading impairments have also shown that reading-related tasks involving the manipulation of MSA sounds that do not exist in their vernacular language are particularly challenging for poor readers.²⁵

Another cornerstone of reading acquisition in Arabic is the ability to decode print with speed and accuracy by sounding out letters and assembling the resulting sounds to form words. It constitutes a self teaching mechanism which enables the learner to learn and read any new word in a text, leading to more automatic and fluent word recognition processes. Decoding is typically assessed using a timed non-word reading test and correlates highly with other literacy abilities in Arabic.²⁶ There is ample evidence that learning to read both early and at a sufficient rate, with comprehension, is essential for learning to read well. Besides, oral language skills contribute significantly to reading comprehension and students exposed to MSA prior to reading acquisition do significantly better in reading comprehension than students exposed to vernacular Arabic only²⁷. Therefore, that the linguistic distance between MSA and vernacular Arabic is related to reading comprehension and reading accuracy for poorly performing students in particular.

A substantial body of research documents the fact that children can learn to read by the end of grade 2, and indeed need to be able to read to be successful in school. Importantly, children who do not learn to read in the early grades (grades 1–3) are likely to fall behind in reading and other subjects, to repeat grades, and eventually to drop out.

2.2.2 Purpose of EGRA

Historically, there has been very little information regarding pupil learning in the early grades in low-income countries. EGRA was developed to provide a way to measure a child's initial reading skills. More specifically, it was constructed to assess the reading and language skills identified to be critical for becoming fluent readers who comprehend what they read. By assessing students' knowledge of decoding

²⁴ Saiegh-Haddad, E. (2005). Correlates of reading fluency in Arabic: Diglossic and orthographic factors. *Reading and Writing: An Interdisciplinary Journal*, 18, 559-582.

²⁵ Saiegh-Haddad, E. (2004). The impact of phonemic and lexical distance on the phonological analysis of words and pseudowords in a diglossic context. *Applied Psycholinguistics*, 25, 495-512

²⁶ Elbeheri, G., & Everatt, J. (2007). Literacy ability and phonological processing skills amongst dyslexic and non-dyslexic speakers of Arabic. *Reading and Writing*, 20, 273–294.

²⁷ Levin, I. & Saiegh-Haddad, E., Hende, N., & Ziv, M. (2008) Early Literacy in Arabic: An Intervention with Israeli Palestinian kindergarteners. *Applied Psycholinguistics*. 29, 413–436

Abu-Rabia, S. (2000). Effects of exposure to literary Arabic on reading comprehension in a diglossic situation. *Reading and Writing: An Interdisciplinary Journal*, 13, 147–157.

skills, oral reading fluency, and comprehension of written text and oral language, EGRA may inform ministries of education, donors, teachers, and parents about primary students' reading skills. Because of its direct links with the skills critical for successful reading achievement, EGRA may assist education systems in setting standards and curricular planning to best meet children's needs in learning to read.

EGRA, in Morocco as elsewhere, is not intended to be a high-stakes accountability measure to determine whether a pupil should move up to the next grade, nor should it be used to evaluate individual teachers. Rather, the subtasks included in EGRA can be adapted for teacher use as formative assessments. As a formative assessment, teachers can either use EGRA in its entirety, or select subtasks to monitor classroom progress as a whole, determine trends in student performance, and adapt instruction to meet the classroom needs.

2.2.3 What EGRA measures

The EGRA instrument is composed of a variety of subtasks designed to assess foundational reading skills crucial to becoming a fluent reader. EGRA is designed to be a method-independent approach to assessment—that is, the instrument does not reflect a particular method of reading instruction (i.e., “whole language” or “phonics-based” approach). Rather, EGRA measures basic skills that a child must have to eventually be able to read fluently and with comprehension—the ultimate goal of reading. The EGRA subtasks are based on research regarding a comprehensive approach to reading acquisition across languages. These skills are described below:

- **Oral reading fluency** is often defined as the ability to orally read connected text with speed, accuracy, and proper expression. Reading fluency is considered critical for comprehension, as rapid, effortless word-identification processes enable the reader to focus on the text and its meaning rather than decoding, or sounding out the words.²⁸
- **Reading comprehension**, considered the goal of reading, refers to the ability to actively engage with, and construct meaning from, the texts that are read.
- **Listening comprehension** refers to one's ability to make sense of oral language in the absence of print. Listening comprehension taps many skills and sources of knowledge, such as vocabulary knowledge, facility with grammar, and general background knowledge.

EGRA measures each of the above abilities/components to assess the foundational reading skills. The skills are tested in individual subtasks and presented in order of increased level of difficulty (i.e., letter sound identification, then word reading, etc.). Because the first few subtasks are easier, EGRA can therefore measure a range of reading abilities for beginning readers. The subtasks included in the EGRA Morocco instrument are described in the next subsection.

²⁸ National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office. See also C.A. Perfetti, (1992). The representation problem in reading acquisition. In P.B. Gough, L.C. Ehri, & R. Treiman (Eds.), *Reading acquisition* (pp. 145–174). Hillsdale, NJ: Erlbaum.

2.2.4 The EGRA instrument for Morocco

The EGRA as adapted for Morocco is an individually and orally administered standardized assessment of beginning reading and reading-related skills in Arabic. Those tasks have been shown to be important in beginning readers who are learning to read in the Arabic script.²⁹ In addition, the assessment was designed to target key curricular requirements in reading, language, and comprehension in grades 2 and 3. The Moroccan curriculum indicates that by the end of grade 2, students should have acquired the following skills:

- Productive language:
 - Describe their surrounding environment
 - Express their thoughts
 - Verbalize simple expressions, narratives, and dialogues
 - Use the stylistic and compositional structures and morphological patterns of Arabic
- Reading
 - Read all the letters of the Arabic alphabet, with short vowels
 - Read whole words, simple sentences, and texts by identifying both consonants and vowels
 - Read simple prose and poetry (descriptive, narrative, and dialogue)
- Reading comprehension
 - Understand whole words, simple sentences, and texts
 - Use what was read from a simple text to reflect and think.

The curriculum specifies goals and objectives for literacy instruction in grades 3 to 6, as follows:

- Receptive language (comprehension):
 - Listen to someone else read out loud and understand it well
 - Restructure paragraphs of a text read to students
- Productive language:
 - Use well-structured sentences
 - Pronounce adequately and use grammar appropriately while reading
- Reading:
 - Read silently and aloud
 - Read texts at various levels
 - Read texts other than typical school material, such as stories, newspapers, magazines
- Reading comprehension:

²⁹ E. Saiegh-Haddad. (2005). Correlates of reading fluency in Arabic: Diglossic and orthographic factors. *Reading and Writing: An Interdisciplinary Journal*, 18, 559-582.

- Comprehend what is read and understand texts other than typical school material, such as stories, newspapers, magazines
- Analyze a text by highlighting the main ideas and find information that would expand students' knowledge and allow them to read independently
- Be able to identify different types of text: poetry, prose, scientific, social, historical, fiction, essay, and speech
- Use reading to expand general and lexical knowledge, as well as developing level of expression.

In addition to productive and receptive language, reading and comprehension, the curriculum includes writing skills. It should be noted that due to the limited assessment time available in this study, it was decided not to assess writing skills or productive language, but rather to focus on the other core language- and reading-related skills that students are required to master in grades 2 and 3. Accordingly, the Morocco EGRA tool that assesses Arabic literacy measured the following sets of skills:

1. *Letter-sound reading subtask*: The student was required to give the sound of the letters presented on a page. These included consonants and vowels, presented in isolation. The subtask assessed the student's ability to match each letter with its corresponding sound, an ability that is crucial to learning to read and write in Arabic. The subtask comprised 100 letters, including consonants, long vowels, and short vowel diacritical signs. For consonants, different positional variants of the same letter were included. The frequency of appearance of each letter in the test depended on its frequency in one of Morocco's grade 2 textbooks.
The student was given one minute to read as many letters as possible, and the final score for this subtask was the number of letter sounds that the student was able to read correctly.
2. *Nonsense word reading subtask*: The student was required to read a list of words that do not exist in the Arabic language. The subtask assessed the student's ability to link each letter with the corresponding sound and assemble the resulting product to form words. Successful nonsense word reading indicates that students are able to decode and read new words, which is essential to successful reading acquisition. The 50 most frequent words in one of Morocco's grade 2 textbooks were selected. Each word was modified by swapping and changing one or two phonemes in each syllable to construct invented words, while ensuring that none violated any of the Arabic language's phonology and rules of pronunciation.
The student was given one minute to read as many words as possible and the final score for this subtask was the number of words that the student was able to read correctly.
3. *Connected text reading (oral reading fluency)*: The student was required to read a short passage of 58 words that told a simple story. A simple narrative text of 58 words was created to suit students' reading abilities in grades 2 and

3. It began with a short introduction of the situation, then described a problematic event that occurred, and ended with the resolution of the problem. The student was given one minute to read as much of the text as possible and the final score for this subtask was the number of words that the student was able to read correctly.
4. *Reading comprehension:* Six simple questions, based on the connected text, were asked of the student. Four questions were designed to be literal and the remaining two were inferential questions.
The final score was the number of questions that the student answered correctly.
5. *Listening comprehension:* A short text was read to the student, who was then asked to answer six questions.
The final score was the number of questions that the student was able to answer correctly.

All EGRA administrations also included a “stop” rule, which required assessors to discontinue the administration of a subtask if a student was unable to respond correctly to any of the items in the first line (in the case of Morocco, the first 10 letters, the first five words, or the first line of the oral reading fluency story). This rule was established to avoid frustrating students who do not understand the subtask or lack the skills to respond. If a subtask needed to be discontinued, the EGRA administrator marked a box indicating that the subtask was discontinued because the child had no correct answers in the first line. Before administering the EGRA test, administrators were required to read to children explicit information about the test and how it would be used. Students were asked to provide oral assent to participate in the assessment.

2.3 Overview of EGMA

2.3.1 Why test early grade mathematics?

A strong foundation in mathematics during the early grades is crucial for success in mathematics in the later years. Mathematics is a skill very much in demand in today’s economy, as has been demonstrated by various economists. Most competitive jobs require some level of mathematics skill. It has also been noted that the problem-solving skills and mental agility and flexibility that children develop through mathematics transfer to other areas of life and work. Furthermore, countries’ rankings on mathematics skills are becoming a matter of political currency, because of international assessments such as Trends in International Mathematics and Science Study (TIMSS). Most countries’ mathematics curricula for the early grades now coincide in terms of the skills children should have. For example, goals such as knowing and using number names, learning and understanding the values of numbers, knowing key symbols, and comparing and ordering sets of objects, are skills found in many curricula, including curricula in developing countries.

2.3.2 Purpose of EGMA

The Early Grade Mathematics Assessment was designed to provide information about basic competencies—those competencies which should typically be mastered in the very early grades, and without which students will struggle, or potentially drop out. Subtasks selected for EGMA were drawn from extensive research on early mathematics learning and assessment and were constructed by a panel of experts on mathematics education and cognition. The conceptual framework for mathematical development is grounded in extensive research that has been conducted over the past 60 years.³⁰ To develop the EGMA protocol, developers systematically sampled early numeracy skills, particularly those underlying number sense. These abilities and skills are key in the progression toward the ability to solve more advanced problems and the acquisition of more advanced mathematics skills.³¹

2.3.3 What EGMA measures

A number of criteria were defined for subtasks to be included in the instrument, in order to support the goal of providing stakeholders, from ministries of education to aid agencies to local education officials, with the information essential to making informed changes in teacher education and support, curriculum development, and implementation:

- represent skills that developing country and developed country curricula have determined should be acquired in early grades;
- reflect those skills that are most predictive of future performance, according to available research and scientific advice;
- represent a progression of skills that lead toward proficiency in mathematics;
- target both conceptual and computational skills; and
- represent skills and tasks that can be improved through instruction.

EGMA is an individually administered oral test, which allows for the targeted skills to be assessed without confounding by problems with language or writing that might otherwise impede their performance. By administering the test orally, administrators can better ensure that students understand instructions provided in a language they know.

2.3.4 The EGMA instrument for Morocco

The EGMA designed for Morocco consisted of the following five sections:

³⁰ E.g., A. J. Baroody, M.-L. Lai, & K. S. Mix, (2006). The development of number and operation sense in early childhood. In O. Saracho & B. Spodek (Eds.), *Handbook of research on the education of young children* (pp. 187–221). Mahwah, NJ: Erlbaum; D. J. Chard, B. Clarke, S. Baker, J. Otterstedt, D. Braun, & R. Katz, (2005). Using measures of number sense to screen for difficulties in mathematics: Preliminary findings. *Assessment for Effective Intervention*, 30(2), 3–14; and D. Clements & J. Samara, (2007). Early Childhood mathematics learning. In F.K. Lester, Jr. (Ed.), *Second handbook on mathematics teaching and learning* (pp.461–555). Charlotte, NC: Information Age.

³¹ E.g., Baroody, et. al. (2006); Clements & Samara (2007); and A. Foegen, C. Jiban, & S. Deno, (2007). Progress monitoring measures in mathematics: A review of literature. *The Journal of Special Education*, 41(2), 121–139.

All items on the test were presented orally to students in the language they would best understand. EGMA in Morocco included the following core subtasks:

1. *Number identification* assessed students' knowledge and ability to identify written symbols. Here, students orally identified printed number symbols presented in a grid and were asked to identify as many numbers as they could in one minute. This subtask consisted of 60 one- to three-digit numbers. This subtask corresponds directly to the Morocco curriculum, where by the end of grade 2, students are expected to be able to read and write numbers through 999. By the end of grade 3 they are expected to be able to read and write numbers through 9,999. The score for this section was the number of correct identifications made per minute.
2. *Quantity discrimination* assessed the students' ability to make judgments about differences by comparing quantities, represented by numbers. Each item presented to children consisted of two numbers. The children were asked to identify the larger number (e.g., "Which one is bigger?"). Numbers used ranged from 1 to 97. The competency assessed in this subtask is found explicitly in the Morocco curriculum, which states that in grades 2 and 3, students should be able to compare and arrange numbers in ascending and descending order with and without the use of the symbols "<" and ">." The score for quantity discrimination was the number of items completed correctly per minute.
3. *Missing number (number patterns)* assessed students' ability to discern and complete number patterns. Each item in this subtask consisted of three to four numbers in a number sequence and a placeholder for a next or missing number. The child was asked to name the missing number. Numbers used ranged from 1 to 400, with 16 of the 20 items involving numbers below 100. Patterns used included counting forward and backward by ones, counting by fives, and counting by tens. The Moroccan curriculum calls for students to be able to count by tens and 100s by grade 2. Missing number scores were the number of items completed correctly per minute.
4. *Addition* assessed students' procedural competency in the basic operation of addition. For this subtask, children were presented with addition items, with sums up to 20, and asked to solve them. According to the Moroccan curriculum, students should be able to routinely complete both addition and multiplication problems by the end of grade 2, and should be able to complete addition problems into the thousands by the end of grade 3. The score for this section was the number of addition problems completed correctly per minute.
5. *Subtraction* assessed students' procedural competency in the basic operation of subtraction. For this subtask, children were presented with subtraction items, with numbers up to 20, and asked to solve them. The Moroccan curriculum states that students should be able to complete mental math in addition, subtraction, and multiplication by the end of grade 2. The score for this section was the number of subtraction problems completed correctly per minute.

In the Moroccan instrument, all sections were timed for one minute in order to manage test length, such that, in each subtask, students were asked to complete as many items as they could in one minute. This approach enabled the research team to examine both automaticity (measured in number of correct items per minute) and accuracy (measured in percent correct out of number attempted).

2.4 Overview of SSME

The Snapshot of School Management Effectiveness is an instrument that yields a quick but rigorous and multifaceted picture of school management and pedagogic practice in a country or region. The SSME was designed to capture “best” indicators of effective schools that, as past research has shown, affect student learning. The resulting data are designed to let school, district, provincial, or national administrators and donors learn what is currently occurring in their schools and classrooms and to assess how to make their schools more effective.

Building on the framework for the analysis of effective schools described in the effective schools literature,³² the SSME collects information on (1) basic school inputs such as school infrastructure, pedagogical materials, teacher and Head Teacher/Director characteristics, student characteristics, and parental and community involvement; (2) classroom teaching and learning processes, including use of material, instructional content, student teacher interaction, time on task, assessment techniques, and administrative oversight; and (3) learning outcomes data, via the application of core portions of two other instruments: EGRA and EGMA (see Sections 2.2 and 2.3). These brief but thorough oral assessments that are administered individually to randomly selected students add to the information about school management effectiveness by accurately evaluating students’ knowledge of foundational reading and math skills.

The SSME is administered during one school day by a four-person team. Each of the components of the SSME is designed to supply information from a different perspective. The SSME design aims to balance the need to include a broad mix of variables—in order that potentially impactful characteristics can be identified—with the competing need to create a tool that is as undistruptive to the school day as possible. When combined as a whole, these instruments produce a multifaceted and comprehensive picture of a school’s learning environment, and when the results from multiple schools in a region are compared, it becomes possible to account for differences in school performance. Following is a listing of the SSME components (see *Annex A* for further descriptions):

1. Head Teacher/Director Questionnaire – administered to the Head Teacher/Director in each school visited;

³² This framework for the analysis of school effectiveness is based on research reported by H. Craig & W. Heneveld, (1996). *Schools count: World Bank project designs and the quality of primary education in sub-Saharan Africa*. World Bank Technical Paper Number 303 (Africa Technical Department Series). Washington DC: World Bank; and J. Carasco, C. Munene, D. Kasente, & M. Odada, (1996). *Factors affecting school effectiveness in Uganda: A Baseline study*. Kampala: Uganda National Examination Board.

2. Teacher Questionnaire – administered to the two teachers whose students are selected for assessment;
3. Parent Questionnaire – administered to a parent of a child in each grade being assessed (two total);
4. Student Questionnaire – administered to each student randomly selected for assessment;
5. Mini-EGRA and Mini-EGMA – administered to a random sample of students in grades 2 and 3 (see Sections 2.2 and 2.3);
6. School Observation – administered at each school visited;
7. Classroom Inventory – administered in each of the two sampled classes;
8. Classroom Observation (reading) – administered during the reading lesson in the lower grade classroom (grade 2 in the case of Morocco); and
9. Classroom Observation (mathematics) – administered during the mathematics lesson in the lower grade classroom (grade 2).

2.5 Instrument Development Process for Morocco: EGRA, EGMA, and SSME

The EGRA, EGMA, and SSME tools are always carefully tailored to the appropriate country or region, rather than existing tools simply being translated into the language selected for the implementation. In the case of Morocco, the content for the EGRA subtasks in particular was developed to ensure that the material presented to students was suitable for the requirements of the Moroccan curriculum.

Fourteen members of the AREF staff participated in a one-week instrument development and adaptation workshop that began on March 7, 2011. The group included school teachers and directors, education inspectors, career advisors, and curriculum experts posted in the Doukkala Abda region. The goal of the workshop was to create reading and mathematics assessment tools that reflected the Moroccan school curriculum and measured skills that were relevant to the acquisition of reading in Arabic.

Similarly, the SSME instrument was streamlined to include items that were of interest to the participants and were adapted to the conditions of school management in the region of interest, Doukkala Abda.

Each instrument was pretested in eight schools within the region of Doukkala Abda. (These schools were not included in the sample used for final assessment.) The SSME instrument was then reviewed in light of the pretesting experience, any phrasing of questions that led to misunderstandings was clarified, and problematic questions were removed or modified. The EGRA and EGMA assessments were then put through rigorous item-level psychometric analyses (using the Rasch model), which helped to identify items that were too difficult or easy, as well as items that were redundant. For EGRA, two reading passages and two listening passages were pretested, and one of each was selected to be included in the final assessment.

2.6 Sample

An unstratified systematic sample of 40 primary schools was selected, with equal probability from the official list of 1,400 primary schools located in the El Jadida, Safi, and Sidi Bennour provinces of the Doukkala Abda region, Morocco (see map in *Figure 1*).³³

Figure 1. Region selected for pilot assessment



Schools were randomly selected with equal probability. For each selected school, the two following schools in the list were set aside as backup schools. In each school, one grade 2 and one grade 3 classroom were selected. From each of the selected classrooms, the grade 2 teacher and one of the two grade 3 teachers were selected.

Within each of the selected teachers' classrooms, 10 students were randomly selected, except where fewer than 10 students were present on the day of the visit, in which case all students were selected. The final sample included 382 grade 2 students and 390 grade 3 students (see *Figure 2*).

Throughout this report, results are provided both for the entire sample and for each subgroup of interest. The results of the sample analysis are representative of the sample population. Estimations, including means and regressions, allow for

³³ The sampling approach is described in an annex of the *Early Grade Reading Assessment Toolkit* (RTI, 2009; Annex B in English version, Annex E in French version). The toolkit can be downloaded from the EdData II project website, www.eddataglobal.org. The sample size was determined with a statistical power calculation conducted over previously collected data. It assumes that a reasonable sample size should allow detecting a difference in scores between grades at a significance level of $p < 0.05$. For EGRA and EGMA, a sample size recommended is 409 students per grade across 40 schools, resulting in 10 students sampled per grade and per school (cluster size).

interpretation of results for the entire population of students from the four selected regions.

In addition to the students and teachers, the school Director and at least two parents were interviewed at each school. Final sample numbers are presented in *Table 1*.

Figure 2. Sampled students

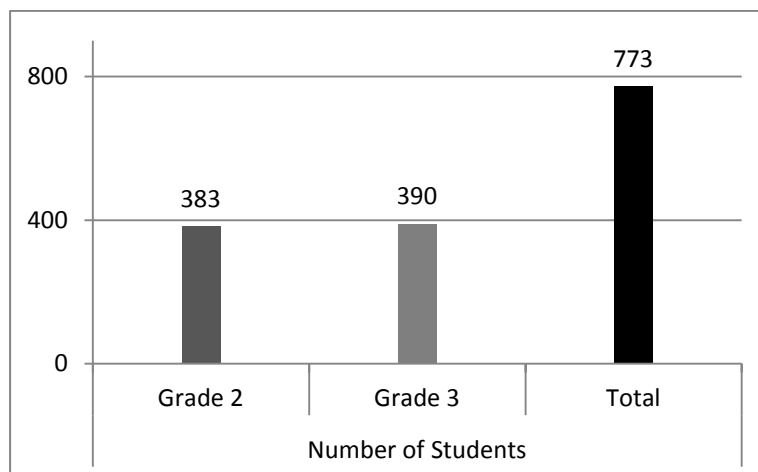


Table 1. Summary of Morocco sample: Schools, Head Teachers/Directors, teachers, and students

	Total	Grade 2	Grade 3
Schools	40		
Head Teachers/Directors	36		
Teachers	69	37	32
Students	773	383	390
Parents	83	46	37

Participants were presented with the goal of the study and informed that their participation was anonymous and confidential. Prior to administrating the assessment or interview, assessors indicated to participants that their participation was not compulsory and that they were free to withdraw from the study at any point. If a student decided to withdraw or refused to participate, the assessment was terminated and another student was selected.

The EGRA and EGMA instruments were administered by members of the AREF in Doukkala Abda. The 14 assessment team members were trained to administer the assessments in a workshop that took place the week of April 18, 2011. It included three days of instruction and practice in class, followed by two days of practice in schools. Teams of three assessors (two EGRA-EGMA assessors and one SSME assessor) were deployed to schools for two weeks, starting on May 3, 2011. The

assessors administered the instruments in a quiet room in the school, in one-on-one sessions with each student.

Students were tested in both reading and math, and to avoid learning or order effects, the instruments were presented in counter-balanced order. In other words, in half of the assessments, EGRA was administered first, and in the other half, EGMA was administered first. The EGRA and EGMA assessments together took 30 minutes to administer and were followed by a 10-minute SSME student interview.

In each school, the Head Teacher, the selected grade 2 and grade 3 teachers, ten of the selected teachers' students,³⁴ and two to four parents of grade 2 and grade 3 students were interviewed using the SSME questionnaires. The SSME assessor applied the school observation instrument, applied the classroom inventory instrument to the grade 2 and grade 3 classrooms from which students were sampled, and conducted a classroom observation of a reading and mathematics lesson in grade 2, each for 30 minutes.

2.7 Limitations of the study

One limitation of the present study stems from the administration of the assessment. A restricted number of assessors repeatedly failed to administer several assessment sections, which led to missing data points in the resulting database. Missing data points should be avoided so as to be able to report on data as thoroughly as possible. Although these omissions did not impact the quality of the data analysis, enumerators who experienced difficulties in administering the tests properly should, in the future, be provided with extra training and support prior to administering this series of assessments again. Similarly, lack of strong correlations between different EGRA/EGMA and SSME components may indicate improper coding of survey instruments, which would hinder proper linkage of the instruments.

Other inconsistencies added to the study's limitations as assessors frequently skipped questions that should not have been omitted, according to the proper skip patterns of the SSME tool. Low response rates to certain questions resulted in those questions being dropped from the analysis. For example, when asking a series of yes/no questions, assessors frequently only circled the "yes" responses and left the "no" responses blank. Also, student head-count data and teacher-reported enrollment numbers did not match. This mismatch resulted in unrealistic attendance rates—sometimes as high as 1500% of enrollment. This meant that observed student absenteeism rates could not be calculated.

3. EGRA and EGMA Findings

This section presents the most important research findings for the EGRA and EGMA portions of the assessment, first with overall summaries and then by subtask.

³⁴ In Morocco, grade 3 students are assigned two teachers: one who teaches mathematics and another who teaches the remaining topics. On the day of the visit, the teacher who was teaching grade 3 students that day was interviewed.

3.1 Summary of EGRA and EGMA Scores

As a first step, data for EGRA and EGMA were analyzed separately. The analyses provided average scores for each subtask for the assessed grade 2 and 3 students, as well as a more detailed study of the pattern of incorrect response, when relevant. They yielded a description of the early reading and mathematics skills in the region of interest, Doukkala Abda.

As a second step, EGRA and EGMA scores were analyzed in relation to the SSME information that was collected in the schools. RTI researchers carried out validity and reliability tests of the EGRA and EGMA. Cronbach's alpha values for both indicated that the instruments showed good internal consistency ($\alpha = 0.78$ and 0.83 respectively). Statistics such as these show how well a set of variables measures an underlying construct, and in the present study, they suggest that the different subtasks of the Morocco EGRA and EGMA all contributed to measuring early grade reading and mathematics knowledge.

3.1.1 EGRA results

In this section, results of each EGRA subtask are presented for grade 2 and grade 3 students.

The first set of analyses conducted examines student performance, measured by the number of correct items per minute for the timed subtasks (letter-sound reading, nonsense word reading, connected text reading) and the number of correct items for untimed subtasks (reading comprehension, listening comprehension). **Table 2** below presents the number of observations, mean, and standard error separately for grade 2 and grade 3 students. In addition, the series of one-way analyses of variance (ANOVAs) conducted to compare the scores in grades 2 and 3³⁵ are presented. Results are also discussed in relation to the Moroccan curriculum requirements.

In the second set of analyses, overall group performance was examined across subtasks, to determine whether the skills assessed were linked to text reading fluency. The weakest and strongest students were scrutinized across subtasks as well, to gain a better understanding of the relationship between good reading fluency and performance in each component of the assessment that measures different reading skills.

³⁵ With each subtask's score as the dependent variable and grade (two levels: grade 2 vs. grade 3) as the independent variable.

Table 2. Number of observations in the sample, population size (*N*), mean, and standard error for each EGRA subtask, by grade, including one-way ANOVA results for grade comparisons

Subtask scoring unit	Grade	No. of observations	<i>N</i>	Mean	Standard error	Grade 2 vs. grade 3
Correct letter sounds per minute	2	382	50341	23	3	$F(1, 39) = 34.9$ $p < .001$
	3	390	47250	33	2	
Correct nonsense words per minute	2	375	49256	10	2	$F(1, 39) = 61.05$ $p < .001$
	3	389	47033	15	2	
Oral reading fluency (connected text reading)	2	360	46130	16	3	$F(1, 39) = 92.36$ $p < .001$
	3	382	46141	27	3	
Total number of correct answers in reading comprehension	2	360	46130	0.74	0.26	$F(1, 39) = 38.62$ $p < .001$
	3	382	46141	1.49	0.27	
Total number of correct answers in listening comprehension	2	357	45567	2.34	0.27	$F(1, 39) = 48.14$ $p < .001$
	3	381	46053	3.37	0.25	

Letter-sound reading

For this subtask, students were presented with a page of 100 isolated letters, including consonants and short and long vowels. After three examples, students were asked to give the correct sound of each letter as quickly as they could. The subtask was timed for one minute. Letter-sound knowledge is an important skill for learning to read in the Arabic script.

Because research on the acquisition of the Arabic script showed that letter-sound knowledge is a crucial skill to learning to read and write,³⁶ it was this skill that was assessed among the students tested. In the early years of reading acquisition, the relationship between sounds and letters in Arabic is straightforward, because there is a single and unique sound associated with each letter. As a consequence, words are pronounced as they are spelled, which makes the Arabic orthography a transparent system.³⁷ Letter-sound knowledge is a foundational skill to assess and monitor when teaching reading in a transparent orthography, because once students have learned to sound out all existing letters and can assemble them to form words, they can virtually decode the content of any written text. Letter-sound knowledge has been consistently

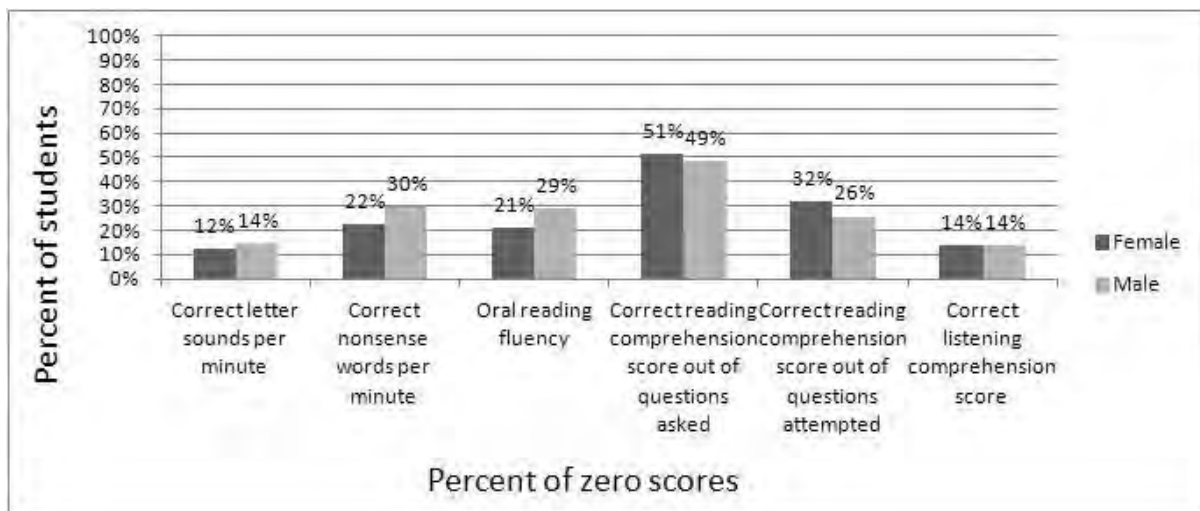
³⁶ Saiegh-Haddad (2005).

³⁷ It should be noted that the Arabic script is transparent in its vocalized version, which is used exclusively in texts for beginning readers. Adult reading material is written using script qualified as opaque, in which letters and sounds do not exhibit a straightforward relationship, as they represent consonants and long vowels, but not most of the short vowels.

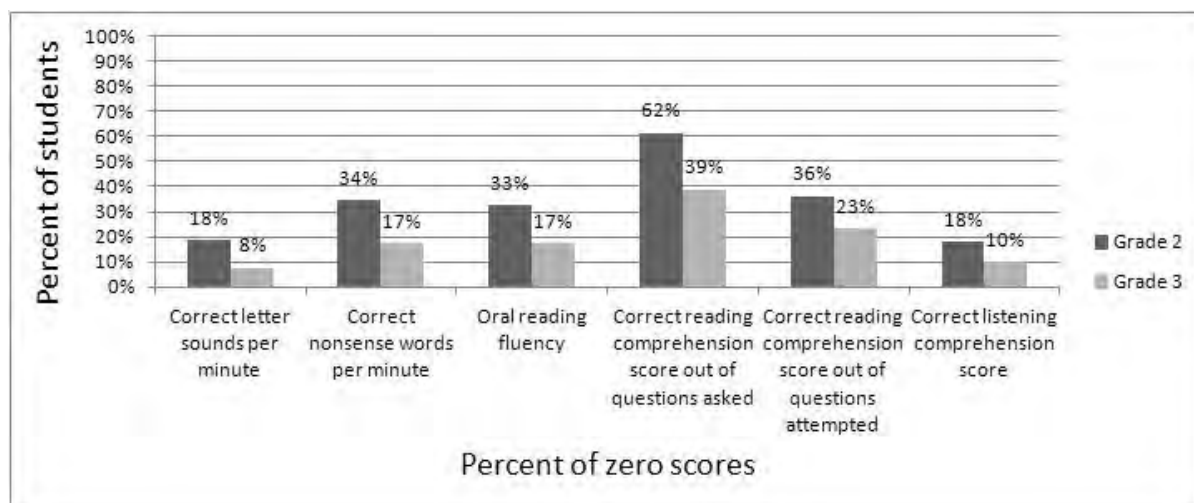
shown to be a powerful predictor of reading success in the early grades,³⁸ and the data from Morocco (as discussed below, beginning on p. 26) support this assumption.

In this study, letter-sound knowledge was measured by calculating the number of letters that students were able to sound out correctly in one minute. This measure provided an index of whether the letter sounds were known by students, while it also measured the speed at which students were able to perform this operation. On average, students in grade 2 were able to sound out 23 letters correctly, and students in grade 3 sounded out 33 letters correctly per minute (see **Table 2** above). The analysis also identified the prevalence of students with the weakest letter-sounding skills and revealed that 18% of grade 2 and 8% of grade 3 scored a zero on the subtask, meaning they did not succeed in correctly sounding out any of the letters in the assessment (see **Figures 3a and 3b**). Considering that the present data show a relationship between word identification and letter-sound knowledge (see section below on results for connected text reading), it is important to note that, during the minute they were allotted to perform this subtask, students proved to be unfamiliar with the sounds of several of the letters they were attempting to read.

Figure 3a. Percentages of students with EGRA zero scores, by gender



³⁸ M.J. Adams. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.

Figure 3b. Percentages of students with EGRA zero scores, by grade

Accuracy scores for the letter-sound reading subtask were examined for each individual letter to identify difficulties with any specific letter-sounds that students may have encountered. As a consequence of the methodology for administering the assessment (timed test), more participants tended to be presented with letters at the beginning of the test than at the end: 761 to 772 students were presented with the first 10 letters of the test, while only one participant was requested to read the last 10 letters of the assessment.³⁹ Therefore, scores of individual items must be considered with caution. Therefore, to depict a representative picture of the pattern of response to this test, only the first 10 letters that were presented to the majority of the students are considered here. Among these first 10 letters, one striking difference appears between consonants and vowels.⁴⁰ On average, 58% of the vowels attempted were read correctly by the students, compared to 71% of the consonants. The Moroccan curriculum indicates that reading instruction in grades 1 and 2 should include letter knowledge of consonants and vowels, including short vowels. By the end of grade 2 and grade 3, students should be able to identify letters accurately.

It should be noted that the seven consonants presented in this assessment were of low frequency, appearing in 1% to 2% of the grade 1 sample of textbook material used as a reference, while the three vowels were of relative higher frequency, because they appeared in 5% to 14% of the same text⁴¹. Therefore, students knew the sounds of consonants better than those of vowels, despite vowels being more frequent than

³⁹ Given that the task is timed and interrupted after one minute, students are only presented with how many letters they can read during the time of the task. Therefore, only the fastest students were presented with all 100 letters of the test, and they represent a minority of the sample.

⁴⁰ Among the first 10 letters, there were 3 vowels and 7 consonants.

⁴¹ High and low frequency letters are represented proportionately to their frequency within the letter reading test. However, their order of presentation is random to ensure that all students have the opportunity to be tested on both frequently and infrequently occurring letters. The fact that scores are low and students were stopped early in the test means that students' accuracy could only be evaluated over a small sample of letters that included low frequency consonants. However, students were still able to accurately read 71% of these low frequency consonants, although it should be noted that the curricular expectation is that students should know all letters by grade 2.

consonants in the Arabic orthography. An additional analysis presented below examines the relative contribution of vowels and consonants to word reading capabilities, and reveals that they are both equally important to reading words in Arabic (see section below on results for connected text reading).

Nonsense word reading

A list of 50 nonsense words was presented on a sheet to the students. None of the words on the sheet was a real word; however, they all respected the phonotactic properties of the Arabic language and were possible letter strings that could be uttered and pronounced in this language. Students were told that they would be reading invented words and after three examples, they were required to read as many words as accurately and quickly as possible. The test was interrupted after one minute. By definition, the readers had never encountered these nonsense words before and, therefore, this subtask constituted a proxy of students' ability to apply grapho-phonemic rules to read new words. As opposed to real words, nonsense words cannot be retrieved from memory or recognized on the basis of their global orthographic patterns. Students had to assemble sounds and rely on their decoding skills to read nonsense words accurately. Developing a good ability to decipher and read new words is crucial for beginning readers, given that, due to their inexperience with print, they are likely to encounter many new words in their reading. Therefore, this subtask provided information as to whether students were able to decode and learn to recognize new words, which is crucial to becoming an independent reader.

On average, students in grade 2 were able to read 10 nonsense words correctly per minute and students in grade 3 read 15 nonsense words correctly per minute. In all, 34% of grade 2 students and 17% of grade 3 students were not able to read any of the nonsense words correctly. In grade 2, the Moroccan curriculum recommends that students be exposed to new words in text every two weeks after being introduced to two new letters. In grade 3, students are expected to be able to rely on their reading abilities to expand their vocabulary—hence, read new words.

Connected text reading

Students were presented with a narrative text composed of 58 words (see image below). This genre was appropriate to assess reading in both grades 2 and 3.

يُحْكِي أَنَّ فَارًّا صَغِيرًا خَرَجَ مُحَاوِلًا إِثْبَاتَ شَجَاعَتِهِ . وَ فِي الطَّرِيقِ صَادَفَ
قِطًّا جَائِعًا .
فَحَاوَلَ أَنْ يُخَلِّصَ نَفْسَهُ، لَكِنَّ الْقِطَّ قَطَعَ عَلَيْهِ الطَّرِيقَ قَائِلًا بِمَكْرِ:
إِلَى أَيْنَ أَنْتَ ذَاهِبٌ أَيُّهَا الصَّغِيرُ؟ فَرَدَّ الْفَارُّ بَدَءًا: لِأَحْضِرَ إِلَيْكَ فَارًّا سَمِينًا.
فَصَدَّقَهُ الْقِطُّ طَامِعًا فِي الْحُصُولِ عَلَى وَجَبَةِ دَسِمَةٍ.
وَ هَكَذَا رَافَقَهُ، وَ دَخَلَ إِلَى جُحْرِهِ تَارِكًا الْقِطَّ يَنْتَظِرُ. وَبَعْدَهَا حَكَى لِأُمِّهِ وَ
إِخْوَتِهِ قِصَّتَهُ.

In the subtask presented, students were requested to read the text as accurately and quickly as possible. From this subtask, an oral reading fluency score was derived, which was a summative measure of the accuracy and speed at which students could recognize and read words aloud in a short text. A good level of fluency is necessary to understand a text, because fluent and effortless reading allows the student to allocate cognitive resources and attention to crucial comprehension processes. Slow and error-prone reading puts a strain on the reader's memory and leaves little processing ability to comprehend the written message due to the high demand that decoding and word identification place on the student's capacity. Therefore, oral reading fluency is an index of the speed and accuracy of word recognition in context, both of which are prerequisites to comprehending a text.

On average, grade 2 students read 16 words per minute, while grade 3 students read 27 words per minute. The proportion of students who scored zero in reading the text was similar to that of the nonsense word reading subtask: 33% of grade 2 and 17% of grade 3. The Moroccan curriculum requires students to be able to read a narrative text by the end of grades 2 and 3. In addition, the grade 3 curriculum indicates that students should be able to use their time efficiently and read at a sufficient pace.

The research team was interested in looking for linkages between the scores for letter-sound reading, nonsense word reading, and connected text reading. To determine whether the well-established relationships that typically exist among the three EGRA subtasks discussed so far could be replicated in the present study, the researchers conducted correlation analyses. This type of analysis allows an examination of the relationship between two variables and indicates the direction of the relationship. The results shown here corroborate other studies of learning to read in Arabic⁴² and indicate high and positive correlations between subtasks (see **Table 3** and **Figures 4a**

⁴² See Saiegh-Haddad (2005); and G. Elbeheri and J. Everatt, (2007). Literacy ability and phonological processing skills amongst dyslexic and non-dyslexic speakers of Arabic. *Reading and Writing*, 20, 273–294.

and 4b). The correlation coefficients are positive, meaning these results indicate that students with high letter-sound reading and nonsense word reading scores tended to read more words per minute on the connected text reading subtask.

Table 3. Correlations between correct letter sounds per minute, correct nonsense words per minute, and oral reading fluency scores

	Correct letter sounds per minute	Correct nonsense words per minute
Correct nonsense words per minute	$r = 0.7629$ $p < .001$	—
Oral reading fluency	$r = 0.7281$ $p < .001$	$r = 0.8893$ $p < .001$

Figure 4a. Correlation between correct letter sounds per minute and oral reading fluency scores

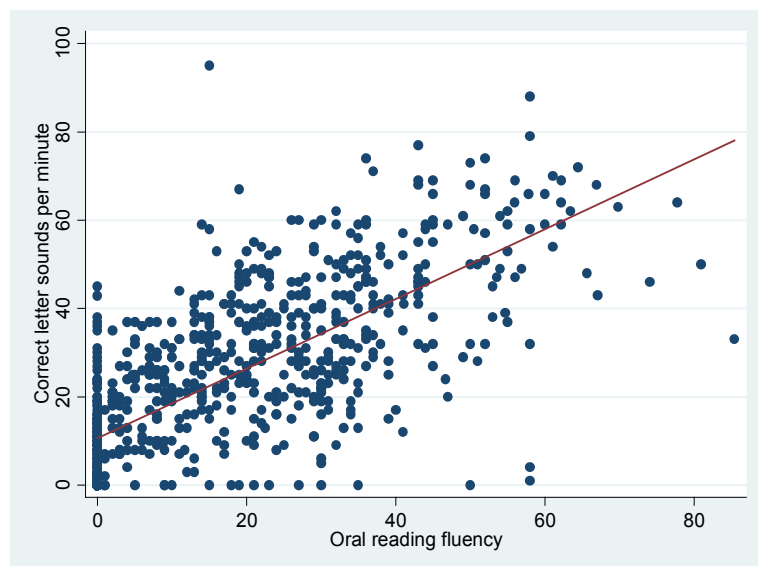
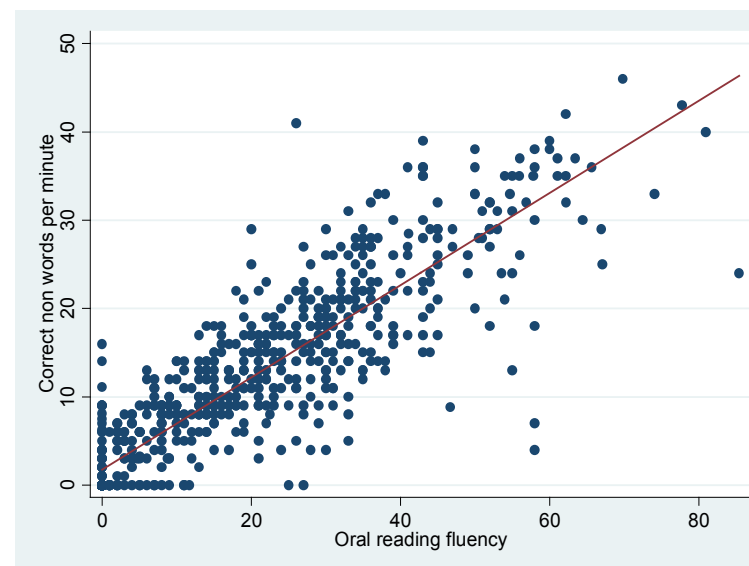


Figure 4b. Correlation between correct nonsense words per minute and oral reading fluency scores



Further analyses were conducted to examine the link between connected text reading and letter-sound reading. Because students' scores were lower when they sounded out vowels, as opposed to consonants, we were interested in looking separately at the relationship that consonant- and vowel-sound identification had with text reading. As can be seen in **Table 4**, the results for correlation coefficients between consonants and vowels were extremely high ($r > 0.8$), and their respective correlations with oral reading fluency were virtually identical, which indicates that the contribution of vowel-sound reading to reading the words in a text was as important as that of consonant-sound reading.

Table 4. Correlations between consonant- and vowel-sound reading scores and oral reading fluency scores

	Total correct number of vowels	Total correct number of consonants
Total correct number of consonants	$r = 0.8898$ $p < .001$	—
Oral reading fluency	$r = 0.7175$ $p < .001$	$r = 0.7103$ $p < .001$

Reading and listening comprehension

Reading comprehension was assessed by asking a series of questions about text that the students had previously read. There were six questions in total, but students were asked to answer only questions that dealt with the section of the text that they were able to read. Students' comprehension of the text indicates that, on average, in grade 2, students were able to answer less than one question correctly; in grade 3, students answered fewer than two questions correctly. This corresponds to 40% of correct answers for grade 2 and 51% for grade 3, out of the total questions attempted.⁴³ Thirty-six percent of the grade 2 students were unable to answer any of the questions about the short text they attempted to read. This was the case for 23% of the grade 3 students.

Listening comprehension is also a major component of reading comprehension.⁴⁴ This was assessed by asking students six questions about a short narrative story presented orally. On average, students in grade 2 were able to answer two questions correctly on the short story presented, and grade 3 students answered three questions correctly. Eighteen percent of the grade 2 students were unable to answer any of the questions asked about the story presented orally, and the same applies to 10% of the grade 3 students.

⁴³ The procedure of administration of the reading comprehension subtask requires the student to answer questions on the section of the text that they read only. Therefore, the total number of question attempted differs across students as it depends on how much of the text the student was able to read.

⁴⁴ S. Abu-Rabia. (2000). Effects of exposure to literary Arabic on reading comprehension in a diglossic situation. *Reading and Writing*, 13:147–157. See also E. Saiegh-Haddad. (2003), Linguistic distance and initial reading acquisition: The case of Arabic diglossia. *Applied Psycholinguistics*, 24: 431–451.

Curricular expectations for grades 2 and 3 stress reading and oral language comprehension as key skills students should master. Students should not only be able to read, but also be able to understand a simple text by grade 2. Between grades 3 and 6, students should acquire the ability to become independent readers and not only learn to read, but also read to learn and expand their knowledge. Because reading comprehension depends partly on the students' language abilities, the Moroccan curriculum also recommends that students be able to understand a text well that is read out loud and be able to express orally their understanding using simple expressions.

Analysis of extreme scores: How did low- and high-performing students do on EGRA subtasks?

The study of processes involved in learning cognitive skills has gained valuable insight from closely examining how successful performance is achieved. The goal of the EGRA instrument was to identify the specific domains and skills in which good readers excelled, in order to set the objectives and improve the performance of low-performing students. High-achieving readers, who were able to answer at least five, or all six, of the reading comprehension questions correctly (good-reader group), were scrutinized in how well they performed on EGRA's reading subtasks. The researchers also looked closely at students with low reading capabilities (poor-reader group), in order to identify discrepancies in basic reading skills relative to the top performers. Poor performers were identified as those who did not read a single word correctly from the text passage and who were unable to perform the reading comprehension subtask (see *Table 5*).

Table 5. Number of observations in the sample, population size (*N*), mean, and standard error for each score of the EGRA subtasks, by good readers and poor readers

Scores	Reading level	No. of observations	<i>N</i>	Mean	Standard error
Correct letter sounds per minute	Good readers	10	2065	66	5
	Poor readers	230	23114	7	1
Correct nonsense words per minute	Good readers	10	2065	37	2
	Poor readers	230	23114	1	0
Oral reading fluency (text reading)	Good readers	10	2065	61	2
	Poor readers	230	23114	0	0
Total number of correct answers, reading comprehension	Good readers	10	2065	5.65	0.15
	Poor readers	147	15141	0.00	0

Scores	Reading level	No. of observations	N	Mean	Standard error
Percentage of correct answers out of questions attempted, reading comprehension	Good readers	10	2065	97	2
	Poor readers	536	71369	3	3
Total number of correct answers, listening comprehension	Good readers	10	2065	6	0
	Poor readers	227	22712	1.47	0.24

The comparison of poor and good readers clearly indicates that students who were able to understand most of the text were able to perform substantially better on all EGRA subtasks than students who could not comprehend the text and could not read any of the words in the short reading passage presented. Poor readers identified the sounds of seven letters per minute on average, were able to read one nonsense word per minute, and answered fewer than two of the six listening comprehension questions, on average.

However, students with high reading comprehension skills in the Doukkala Abda region attained average scores of 66 letter sounds per minute, 37 nonsense words per minute, and 61 words per minute, in addition to being able to respond to all of the listening comprehension questions correctly. Students who scored high on the reading comprehension subtask exhibited strong reading skills in all the domains assessed by EGRA. The curricular expectation in grades 2 and 3 in Morocco places a heavy emphasis on reading for understanding. Students at those grades are expected to be able to read accurately and understand a short text. Given that all skills assessed in EGRA subtasks play a role in students' ability to read and understand print, scrutinizing the EGRA scores of good readers can enlighten our understanding of the gaps in learning that remain to be closed. Good readers' scores can be used as benchmarks for improving reading comprehension in all students. Results suggest that, on average, grade 2 students need to increase their letter-sounding scores of 43 letters per minute and the same can be said for grade 3 scores of 33 letters per minutes. To be on par with a good reader's decoding skills, grade 2 and grade 3 students need to more than double their non-word reading. Reading fluency also needs to more than double on average in both grades in order to equal a good reader's ability. With less than 1 oral question answered correctly on average in grades 2 and 3, language comprehension is indeed an area of improvement that would need to be considered for most students in order to foster greater reading comprehension.

3.1.2 EGMA results

Looking across the EGMA overall, there were a fair number of zero scores on every EGMA subtask, most markedly in subtraction. **Figure 5** shows the percentages of students who were not able to respond correctly to a single item on each subtask in each grade. While these percentages were low for number identification and quantity discrimination, 22% of grade 2 students were not able to answer a single addition

problem correctly and almost half (44%) were not able to answer a single subtraction problem correctly. This section consists of basic addition problems such as “ $4 + 2 =$ ” and “ $8 - 1 =$ ”.

Figure 5. Percentages of students with EGMA zero scores, by subtask and grade

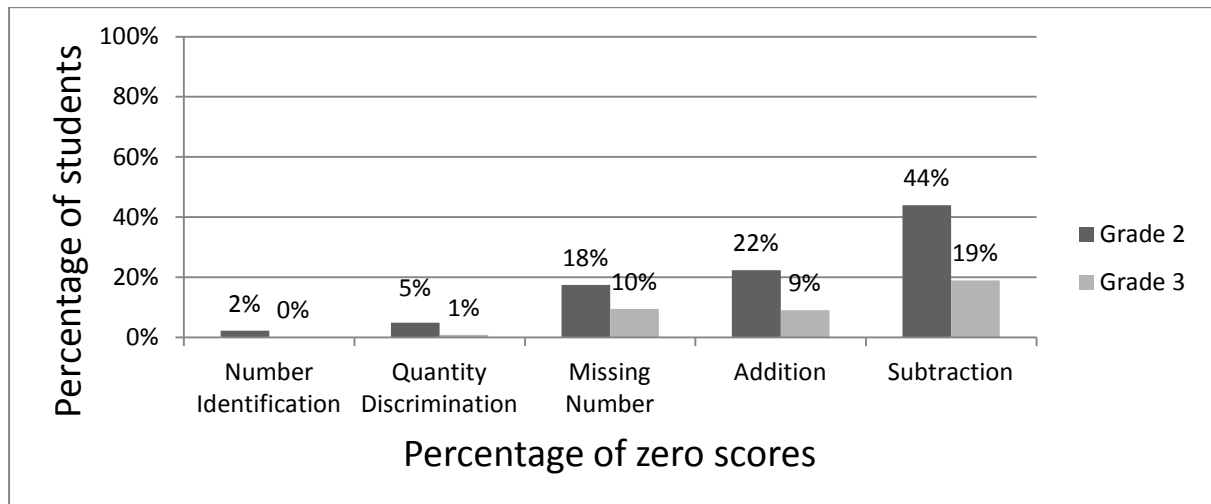


Table 6 shows the average percentage correct out of items attempted for each subtask and grade. There is a positive progression from grade 2 to grade 3. As with zero scores, the overall trend across subtasks is evident—students performed best on number identification and quantity discrimination and, particularly in grade 2, struggled with missing number, addition, and subtraction subtasks. Students in grade 2 were able to respond to 72% of the attempted number identification items correctly, and grade 3 students were able to respond to 88%. On average, grade 3 students were able to answer 74% of the attempted basic addition problems correctly and answered 55% of the attempted subtraction problems correctly. If students are not able to do these basic problems (all numbers below 20) correctly and gain automaticity, they will struggle with higher level numbers and problems as they move forward in school.

Table 6. Mean scores and percentages out of items attempted for each EGMA subtask, by grade

Scores	Grade 2		Grade 3	
	# Correct/ Minute	% Correct/ Attempted	# Correct/ Minute	% Correct/ Attempted
Number identification	20.2	71.2%	34.2	87.7%
Quantity discrimination	11.8	69.6%	17.9	85.1%
Missing number	5.7	47.3%	8.3	62.9%
Addition	7.3	56.2%	11.0	74.0%
Subtraction	5.1	33.3%	7.0	54.7%

Number identification

This subtask targeted the student's knowledge and identification of written symbols. It assessed a student's recognition and understanding that each of the numbers is a constant with one number-word associated with it, and that the student knows the number-word(s) associated with the number symbol.

Number identification: sample items

12	2	17
9	18	32
62	93	34
10	19	25

Grade 2 students were able to correctly identify an average of 20 numbers in one minute, while grade 3 students were able to correctly identify 34 numbers in one minute. Grade 2 students were accurate 72% of the time (percentage correct out of attempted) and grade 3 students, 88% of the time. There were very few zero scores on this subtask. Of the subtasks included in the Morocco EGMA, this was the most basic. According to the Moroccan curriculum, students should have mastered identification of numbers through 999 by the end of grade 2.

Quantity discrimination

Quantity discrimination in EGMA measures students' ability to make judgments about differences by comparing quantities. Quantity discrimination in the early grades is a critical link to effective and efficient problem-solving strategies. In the Moroccan EGMA, students were asked to compare single- and double-digit numbers.

As with the number identification section, the quantity discrimination section saw positive growth from grade 2 to grade 3, with average accuracy rising from 70% to 85% (percentage correct out of attempted). In grade 2, 5% of students were unable to

correctly answer a single quantity discrimination item, while in grade 3, 1% of students were unable to answer a single item. Students performed best on single-digit items. The items where students had the most difficulty were those where both the tens' place and ones' place digits were different (for example, over 80% of students were able to identify the larger number between 64 and 69, while just over 50% could identify the larger number between 51 and 35). Difficulty with these items may indicate that students have not mastered place value, as they may be recognizing the difference in the ones' place digit, but not recognizing the meaning of the difference in the tens' place digit. The Moroccan curriculum expects grade 2 students to be able to compare numbers and recognize place value.

Quantity discrimination:
Sample items

5	6
15	20
19	18
50	57

Missing number

As described earlier, for this subtask children were shown three numbers in a number sequence and a placeholder for a next or missing number. They were asked to name the missing number. Being able to recognize number patterns and counting in patterns (by ones, by twos, by tens, counting backwards, etc.) lays the foundation for multiplication and, later, algebra. Being able to identify patterns generally also aids students in problem solving.

Missing number:
Sample items

9, 10, 11, ____
87, ____, 89, 90
____, 2, 3, 4
20, 30, ____, 50

Almost 18% of second graders and 10% of third graders were unable to answer a single missing number item correctly, including items that were simply counting by one. On average, students in grade 2 responded correctly to 47% of the items attempted, and grade 3 students responded correctly to 63% of the items attempted.

Students had the most difficulty with items where the pattern was not a simple count-by-one pattern (such as counting by fives or tens). They also had difficulty with items involving double or triple digits. Students who struggle with recognizing or counting in patterns may have difficulty mastering multiplication and other, more complex, problem-solving later on. The Moroccan curriculum states that grade 2 students should be able to count in 10's and 100's and arrange numbers in ascending and descending order.

Addition and subtraction

The addition and subtraction sections tested these basic operations using numbers up to 20. In grade 2, 22% of students could not answer a single addition item correctly, while 44% could not correctly answer a single subtraction item. When

Addition and subtraction:
Sample items

Addition:

$4 + 2 =$	$8 + 2 =$	$8 + 6 =$
$5 + 4 =$	$10 + 3 =$	$2 + 2 =$

Subtraction:

$6 - 2 =$	$10 - 2 =$	$14 - 6 =$
$9 - 4 =$	$13 - 3 =$	$4 - 2 =$

considering only those students who were able to solve at least one problem, grade 2 students correctly responded to 72% of addition problems attempted and 60% of subtraction problems attempted (56% for addition and 33% for subtraction, if zero scores are included). Grade 3 students performed better—10% could not give the correct answer to any addition problems, and 20% could not do any subtraction problems. Again, considering only those students who did not have zero scores, grade 3 students correctly answered 68% of these basic subtraction problems (55%, if zero scores are included).

There were few subtraction problems that over 60% of students could answer correctly. For addition, students had the most difficulty with problems that crossed 10 (for example, $8+6$, where the addends are under 10, but the sum is greater than 10). In grade 3, a large proportion of students had not mastered the basic operations of addition and subtraction with numbers below 20.

According to the Moroccan curriculum, grade 2 students should be able to routinely complete subtraction and multiplication problems, and grade 3 students should be able to undertake mental arithmetic, including addition, subtraction, and multiplication.

4. SSME Findings

4.1 *Basic School Inputs*

4.1.1 *School infrastructure*

School infrastructure impacts the safety and comfort of students and teachers, which in turn can have an impact on attendance rates. It also serves as an indicator of resource allocations across schools and an indicator of school management.

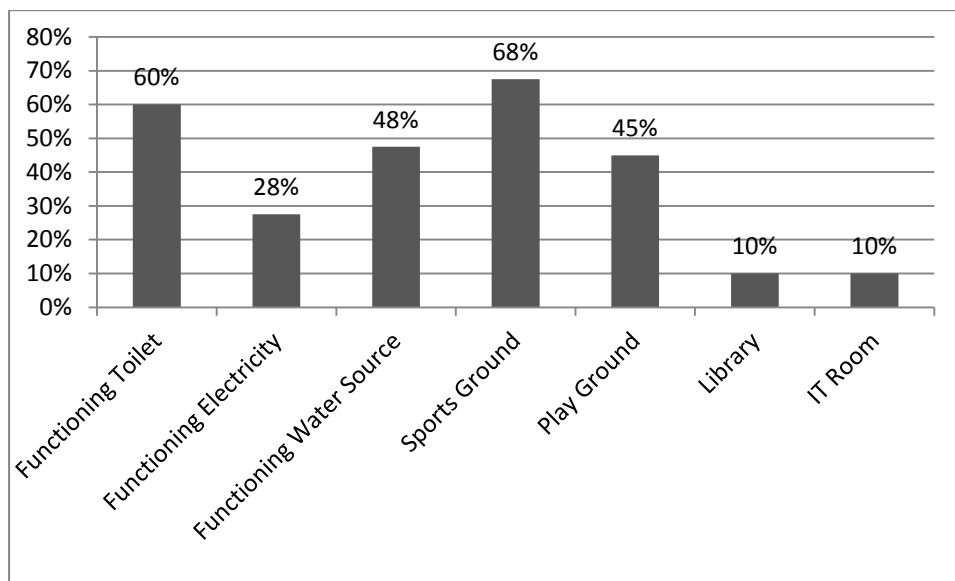
Results from the school observation instrument revealed that 70% of school buildings and grounds were considered clean and neat, with 20.5% in need of major repairs. On the day of the assessment, 27.5% of schools had functioning electricity, and 46.2% of schools had no source of clean drinking water. ORF scores were positively and significantly correlated with having functioning electricity ($p=0.029$) and clean drinking water ($p=0.011$) at the school. Students in schools with electricity and water were able to read an average of 11 more words per minute than students at schools without this basic infrastructure. Participants' responses indicated that 63% of schools had one or more functioning toilet. On average, 122 students shared one toilet—although this figure varied and was as high as 531 students per toilet in one school. Of the schools with toilets, 85% had at least some functioning toilets that were just for girls. Toilet cleanliness varied also, with 29.2% of schools having toilets that were not clean at all and another 29.2% being very clean. Most schools (80%) had a perimeter wall surrounding part of the school grounds. Nearly half (45%) of schools had a playground, and 68% had a sports ground (see *Figure 6*).

Ten percent (10%) of schools visited had a school library. Of these libraries, half (50%) were being used by students on the day of the visit. The difference in reading

performance between students with access to a library that was being used and those without access to a library was significant, with the former being able to read an average of 12 more words per minute ($p=.004$).

Two (5%) of the 40 schools visited had computers available with educational software installed; one had 9 computers and the other 12. In these schools, students were able to read an average of 18 more words per minute (ORF) than students in schools without computers ($p=0$).

Figure 6. Percentages of schools with various types of infrastructure available



At the classroom level, 42% of classrooms had both benches and desks for students; 54% of classrooms had benches but no desks, while the remaining 4% had neither desks nor chairs.

4.1.2 School Safety

A fair number of parents (17.3%) said that someone had physically hurt their child during the past school year, with 33.3% saying the harm had been inflicted on the school grounds, and 41.7% saying their child had been hurt on the way to school. Many students have long travel times to and from school; 51% of parents reported that their child spends an hour or more traveling one way.

Head Teachers/Directors and teachers reported some safety issues as well. Of those that responded, 52.6% of Head Teachers/Directors and 21.8% of teachers said there had been theft at the school, and 43.8% of Head Teachers/Directors and 28.2% of teachers said there had been vandalism on school property. When asked about violence toward students, 12.5% of Head Teachers/Directors and 2.6% of teachers reported its occurrence, and 5.6% of Head Teachers/Directors reported violence toward school staff.

4.1.3 Teachers and Head Teachers/Directors

As for characteristics of the school staff, males accounted for 89% of Head Teachers/Directors. However, differences in reading scores between students with a female versus a male Head Teacher/Director were significant. Students with a female Head Teacher/Director were able to read an average of 8 more words per minute than those with a male teacher ($p=.05$).

A minority (29%) of teachers were female, but similarly,, differences in reading scores between students with a female teacher versus a male teacher were significant. Students with a female teacher were able to read an average of 15 more words per minute than those with a male teacher ($p=.008$).

Teachers were asked if they had received training in how to teach reading and math. In all, 64% of teachers reported receiving training in how to teach reading. Of these teachers, 83% had received this training via pre-service, and 16% had received it via in-service courses. For grade 3 students, having teachers with pre-service training was positively and significantly correlated with ORF scores ($p=.0002$), with students reading an average of 15 words per minute more than students whose teacher had not received pre-service training. On the other hand, grade 3 students whose teacher reported receiving in-service training scored significantly worse on the ORF subtask ($p=.035$), reading an average of 11 words fewer per minute than students whose teachers had not received in-service training. A smaller percentage of teachers reported receiving training in teaching mathematics (42%). Nearly all (97%) of teachers reported receiving this math training during their pre-service coursework, while the remaining 3% received it through in-service training. A total of 86% of Head Teachers/Directors reported receiving management training.

4.1.4 Enrollment, class size, and class composition

The average enrollment in the schools observed was 261 students, with the smallest school having an enrollment of 32 students and the largest having an enrollment of 1,061 students. The average observed classroom size was 28 students. The smallest class had 10 students and the largest had 57. Morocco's efforts to ensure that girls and boys have equal access to school have seen fruition in the Doukkala Abda region, as the average ratio of boys to girls was 1, with a maximum ratio of 2.17.

4.1.5 Student characteristics

Among students sampled, 31% reported having attended preschool or nursery school prior to primary school. Among grade 2 students, 12.8% reported repeating the grade, and the same was reported by 11% of grade 3 students.

Most students (99.3%) reported speaking Darija, a dialect of Arabic, in their homes. A small minority (0.5%) reported speaking Amazigh.

Nutrition can play a role in how well a student can learn. When asked whether they had eaten breakfast before arriving at school on the day of the assessment, 83.2% of students reported that they had. The majority (78.6%) of students said that they normally have a meal at school, with 23.3% of these reporting that they eat at the

school canteen, and 9.1% saying they bring lunch from home. Having a meal at school was positively correlated with oral reading fluency scores. When asked about transportation to and from school, the vast majority (98%) said they walk to school, with 1.1% reporting they ride to school on a bicycle.

When asked about work outside of school, 86.5% of students responded that they do work, with 57.3% reporting that they do housework, 38.4% reporting fieldwork, and 39.5% reporting to work in a small trade.

In most of our studies, students' socioeconomic status is strongly correlated with their performance. This was true in the Doukkala Abda assessment as well. Student family economic status was estimated by asking students about the types of assets (electricity, vehicles, type of water and toileting system etc.) that they own in their homes. **Figures 7 and 8** indicate average student scores for on the reading passage and on the addition questions by wealth quartile, with 1 indicating the lowest level of wealth and 4 the highest. As can be seen, reading and addition scores tend to increase as wealth levels increase. This pattern was more marked among third graders.

Figure 7. Correct addition scores per minute, by wealth

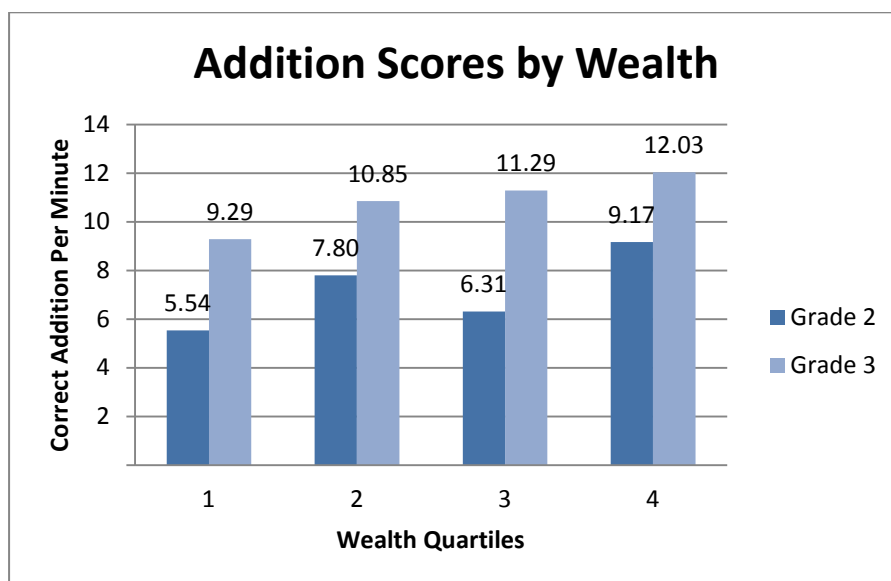
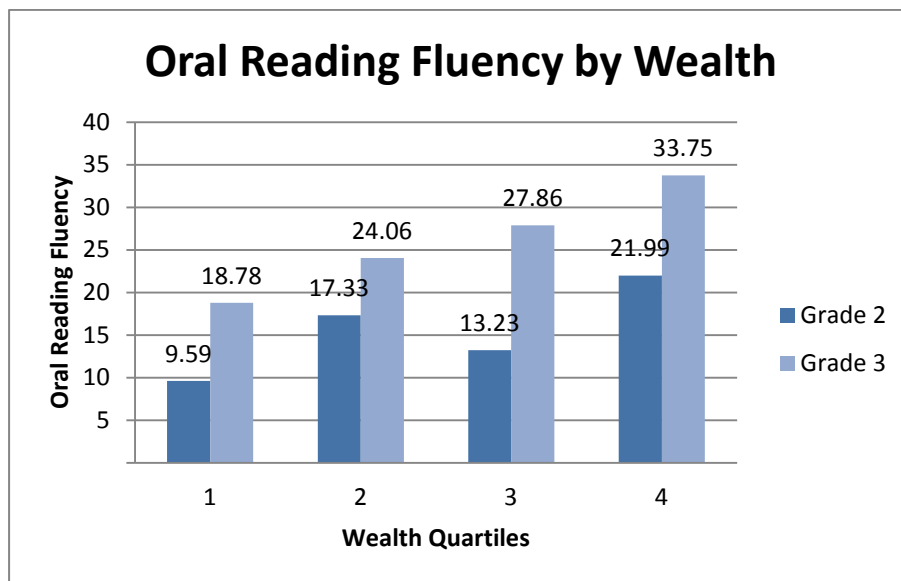


Figure 8. Oral reading fluency, by wealth

The relationship between student performance and wealth is not at all surprising. Families that are more well-to-do tend to enjoy higher parental literacy rates, have more access to books in the home, and have parents who are more involved in their children's schools. Wealthier students also tend to attend better resourced schools.

4.1.6 Parental and community support (parents and parent-teacher associations [PTAs])

Parental involvement can play a very important role in students' performance. Unfortunately, in many countries, parental involvement is lacking. When students were asked if anyone helps them with homework when they need it, 62.1% said they receive help, which was positively and significantly correlated with ORF scores among grade 3 students, resulting in an average of 8 more words per minute ($p=.002$). Of these, 20.2% responded that a parent helps them; 60.4% said they get help from a sibling. The fact that students rely more on siblings than their parents to help with their homework is not surprising, given that 46% of students noted that their fathers could not read and 73% reported that their mothers could not read. However, grade 2 students who reported their parents *could* read received better ORF scores. Having a literate father is correlated with over 5 more words per minute on average ($p=.002$) and having a literate mother is correlated with an average of 7 more words per minute ($p=.0006$). Similarly, students in both grades who reported being asked to read aloud by someone at home received higher ORF scores: 5 more words per minute in grade 2 ($p=.001$) and 3 more words per minute in grade 3 ($p=.0001$).

Although 59.3% of parents interviewed reported meeting with their child's teacher during the past school year, and 89.7% said they had received their child's school report, teachers felt that parental support was insufficient. When asked if parents were involved in their children's schoolwork, 73% of the teachers who responded said "no." Grade 3 students' ORF scores were positively and significantly correlated with parents being involved in their schoolwork, not surprisingly. These students were able

to read an average of 12 more words per minute than students whose parents were not involved, according to teacher reports ($p=.036$).

Of the schools sampled, 55.6% had a PTA. However, 47.4% of these PTAs had met in the past year, according to Head Teacher/Director reports. Among the active PTAs, the Head Teachers/Directors reported the PTA duties listed below (*Table 7*).

Table 7. PTA duties, as reported by Head Teachers/Directors in schools with an active PTA

Duties	%
Discuss school management problems	33%
Discuss student problems and solutions	37%
Review progress of school improvement efforts	42%
Review financial solutions (budgets) of the school	11%
Approve school policy	16%
Manage school infrastructure and equipment	47%
Discuss school curriculum	11%
Raise funds	21%
Manage procurement or distribution of textbooks	37%

Despite these activities, 63.2% of principals who reported active PTAs at their schools said they were not satisfied with the level of support they received from the PTA. Similarly, 28% of parents reported that there was a PTA at their child's school, and 17% of parents interviewed felt that the PTA had had a positive impact on student performance.

4.1.7 Availability and use of pedagogic materials

Pedagogic materials are essential for both students and teachers. Teachers need textbooks and reference materials to help them properly follow the ministry curriculum. Teaching instruments such as blackboards, chalk, writing materials, and student registers are fundamental teaching tools. Similarly, students need to have access to textbooks, reading books, exercise books or slates, math manipulatives,⁴⁵ and writing utensils.

The availability of resources for Moroccan students is high. On average, 96.8% of students were observed to have an Arabic language textbook, and 97.1% had a math textbook. A small proportion (9.5%) of students reported using their language

⁴⁵ "Manipulatives for counting" refers to the use of small objects, such as stones or sticks that teachers may use with students to help them master rational counting and/or to understand and solve simple addition or subtraction problems.

textbook at home, while 40.9% reported using their math textbook at home. Exercise books should, ideally, be available to each student individually. Assessors found that on average, 96.6% of students in sampled classrooms possessed a language exercise book. Somewhat surprisingly, 88% of students had a writing utensil during the day of the visit.

On average, teachers were well equipped with basic teaching tools, having at their disposal a blackboard/whiteboard (93%), chalk/markers (85%), pen or pencil (90%), and a notebook (95%) in the classroom. Reference materials were also prevalent, although not universally so; 85% of teachers had a language reference book and 82% had a math reference book in the classroom.

4.1.8 Reading materials available

Having ready access to a variety of reading materials is essential for nascent readers. Without this access, students miss opportunities to develop and practice reading skills, expand their vocabulary and strengthen their understanding of the language. Reading materials can range from posters and booklets of short stories in classrooms to readers and books at home. Availability of reading materials in Moroccan schools was found to be sparse. In the few schools that had libraries, half of Head Teachers/Directors said that students could get books from the library. As for reading materials in the classroom, 98% of the observed classrooms had no books, booklets, or magazines other than textbooks. Posters, which contribute to a literate class environment, were observed on the walls in 55% of classrooms.

4.2 Classroom Teaching and Learning Process

4.2.1 Use of reading materials in the classroom

Table 8 presents the materials used during classroom observations of reading lessons. Clearly, the language textbook was the most frequently used material, followed by the blackboard. Other materials, such as other books (0.3%) and posters (0.6%) were almost never used.

Table 8. Proportion of classrooms using various types of reading instructional materials

Materials used	%
Blackboard	26.3%
Textbook	59.9%
Other book	0.3%
Flashcards	0.6%
Posters/Wall charts	0.6%
Slates	2.4%
Student notebooks	9.2%

Note: While the proportions remain accurate, the percentages presented here were normalized for ease of presentation, as the total observation times did not add up to 100%. The original total was 93.2%.

4.2.2 Use of math materials in the classroom

Table 9 presents the materials used during classroom observations of mathematics lessons. Teachers spent 53.1% of the time using the blackboard, and students used their slates and textbooks 21.3% and 16.7% of the time, respectively. No classrooms were observed to use posters or wall charts during mathematics lessons.

Table 9. Proportions of classrooms using various types of mathematics instructional materials

Materials used	%
Blackboard	53.1%
Textbook	16.7%
Workbook/Worksheet/Copies	2.3%
Manipulatives: Counting	0.5%
Addition and multiplication table	2.8%
Slates	21.3%
Student notebooks	0.5%

4.2.3 Lesson content

The content of the lesson is also an essential factor contributing to what students learn. During reading lessons, content focused primarily on students reading texts (54.4%) and reading comprehension activities (24.8%; see *Table 10*). Such pedagogical practices foster better oral and reading comprehension and favor fluent oral reading skills. However, as with mastery of any skill, basic our foundational

skills must be mastered before any students can master more advanced skills such as reading fluency and comprehension. Strong reading comprehension is not possible unless a student has first mastered reading fluency. Reading fluency, in turn, requires a strong mastery of letter sounds and the ability to assemble letter sounds to form words. As mentioned previously, the 2.5% of students who responded correctly to 5 of the 6 questions on the EGRA, were able to read at a pace of 61 correct words per minute. These students were also able to read 66 letters per minute, which is more than twice as many as the grade 3 regional average (33 clspm) and 10 times better than students who were unable to read and understand the text. Reading isolated nonsense words is also a task where good readers scored more than twice as many as the regional average (15) and outperformed poor readers by 36 words.

To ensure that more students are able to read fluently and with comprehension, current classroom activities should be complemented with other pedagogical practices designed to improve foundational skills such as letter-sound knowledge, decoding, and word reading correspondence among students that are not yet fluent. Currently, reading lessons do not focus on sounds (0%) and only rarely focus on sound-letter correspondence (2.3%) and isolated word reading (4.3%).

Table 10. Proportions of classrooms exhibiting various types of content instruction in reading

Instructional Content: Reading	%
Letters/Sounds	2.3%
Reading isolated words	4.3%
Reading sentences	8.0%
Vocabulary (word meanings)	2.8%
Writing/Dictation	3.4%
Reading texts	54.4%
Reading comprehension – text	24.8%
Writing – creating texts	0.6%

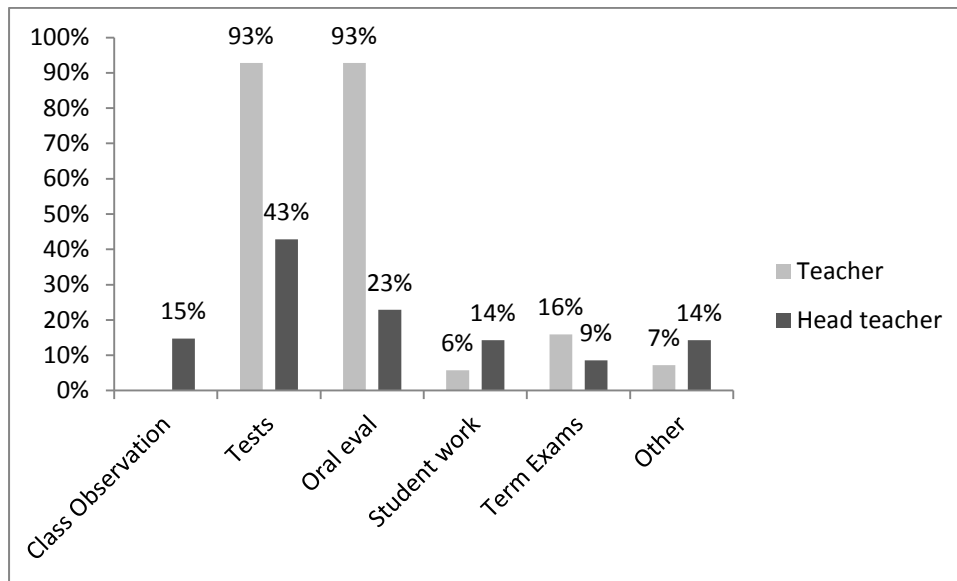
During mathematics lessons, addition with two or more digits and multiplication were the content areas that comprised the largest portion of time, on average at 24.6% for each. This is a fairly sizable percentage of observations. Given that students do not seem to have mastered single-digit addition, it may be that teachers are moving ahead with the curriculum nonetheless, with students never having mastered that basic element. Very little lesson time was spent on subtraction (11.5%; see *Table 11*). No classroom time was spent teaching about money, and very little (0.3%) was spent on standard units of measurement.

Table 11. Proportions of classrooms exhibiting various types of content instruction in mathematics

Instructional Content: Math	%
Reciting number words	5.6%
Number Identification	7.7%
Counting	1.8%
Comparing sets or groups	4.9%
Addition – 1 digit	7.9%
Addition – 2 or more digits	24.6%
Subtraction – 1 digit	5.1%
Subtraction – 2 or more digits	6.4%
Multiplication	24.6%
Time	3.3%
Geometry (shapes, attributes)	6.4%

4.2.4 Evaluation approaches

Evaluation of students by both teachers and head teachers is an extremely important component of effective teaching. Head Teachers/Directors reported applying a number of direct and indirect approaches to evaluate how students were doing (see **Figure 9**). Approaches included classroom observation, oral evaluation of students, review of student work, and student assessments. Direct observation seemed to be associated with stronger student performance. This approach could indicate a Head Teacher/Director who is more actively engaged in what takes place in the school's classrooms. Teachers relied more heavily on two evaluation approaches: with 93% of teachers relying on (1) student tests and (2) oral evaluation. Observation of the grade 2 classroom found that teachers spent a substantial amount of their time (16.5% during reading and 19.5% during math lessons) asking students questions.

Figure 9. Evaluation approaches reported by Head Teachers/Directors

4.2.5 Teacher interaction with students

Several questions were designed to capture information about the interaction between teachers and their students, because the type and frequency of interaction impacts student performance. For example, teachers who are more engaged—that is, spend more time teaching and focused on students, assign homework, and routinely provide constructive feedback—would tend to have students that are more successful than less engaged teachers. The researchers asked students and parents about teacher interaction, examined student exercise books, and observed grade 2 teachers during reading and math lessons.

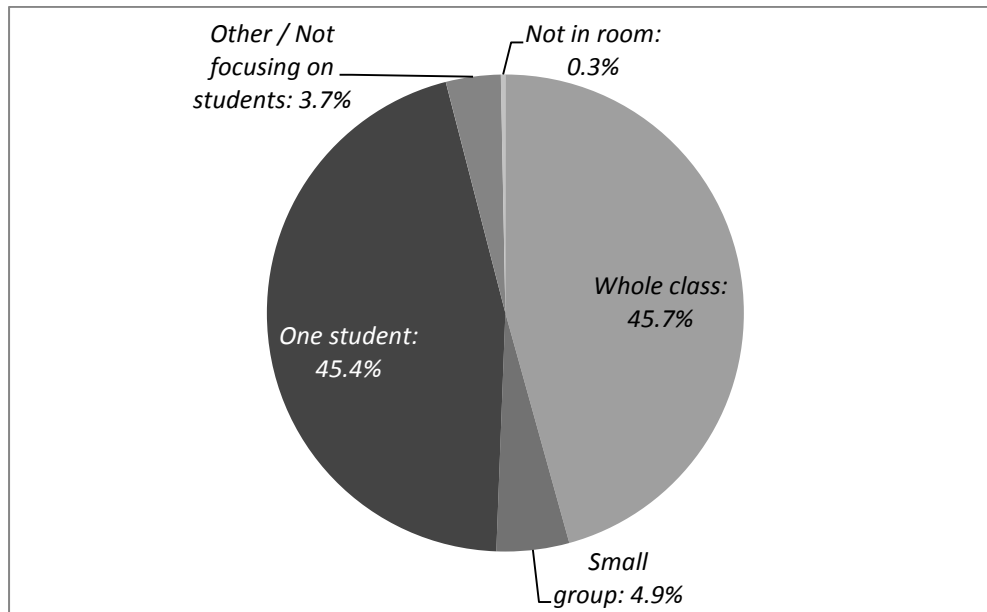
Figures 10a through 10c present the observations made during reading lessons in the schools where students were assessed. Reading teachers mostly divided their focus between the whole class (45.7%) and individual students (45.5%), while spending a small portion of the lesson time with a small group of students (4.9%) and only 4% of the time not focused on students. The amount of time teachers spent focusing on the whole class was negatively and significantly (although weakly) correlated with both the letter sounds and the reading comprehension subtasks of the EGRA ($r = -.14$, $p = .005$), while the amount of time teachers spent focusing on individual students was positively and significantly (although weakly) correlated with the same subtasks ($r = .19$, $p = .0002$).

Observations of teacher action during reading lessons revealed that on average, 30.8% and 27.1% of lesson time was spent monitoring and listening to students, respectively, suggesting that students were frequently engaged in individual class work.

Observations of student action during reading lessons showed that the most common activity, comprising 57.3% of the time, was reading out loud by individual students. This was positively and significantly correlated (although weakly) with the ORF, letter sounds, and reading comprehension subtasks of the EGRA ($r = .124$, $p = .015$). Students answered questions 14.8% of the time and spent 15.4% of the class time

paying direct attention to the teacher. Students spent very little time reading silently or writing.

Figure 10a. Teacher focus: Reading lesson



Note: While the proportions remain accurate, the percentages presented here were normalized for ease of presentation as the total observation times did not add up to 100%. The original total was 92.3%.

Figure 10b. Teacher action: Reading lesson

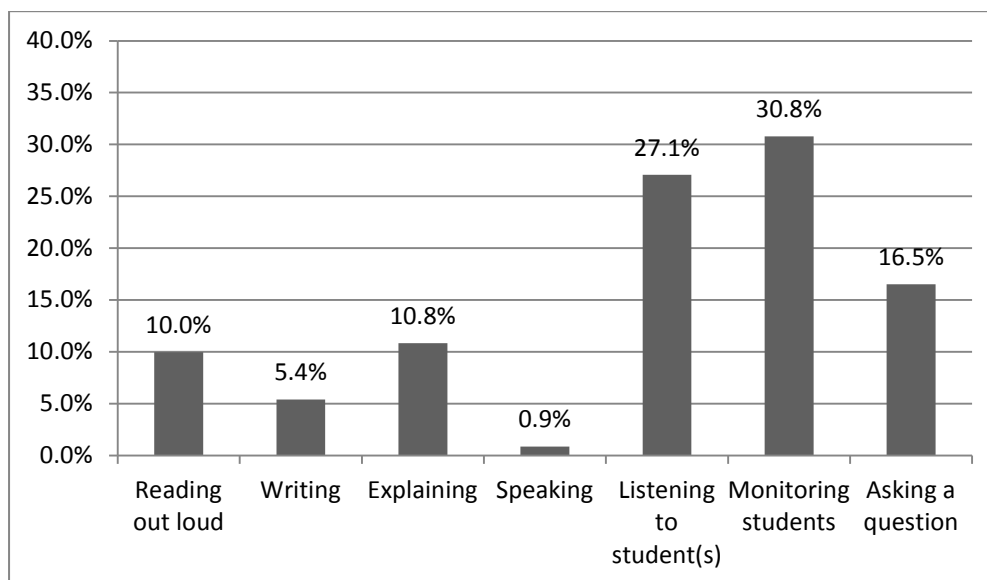
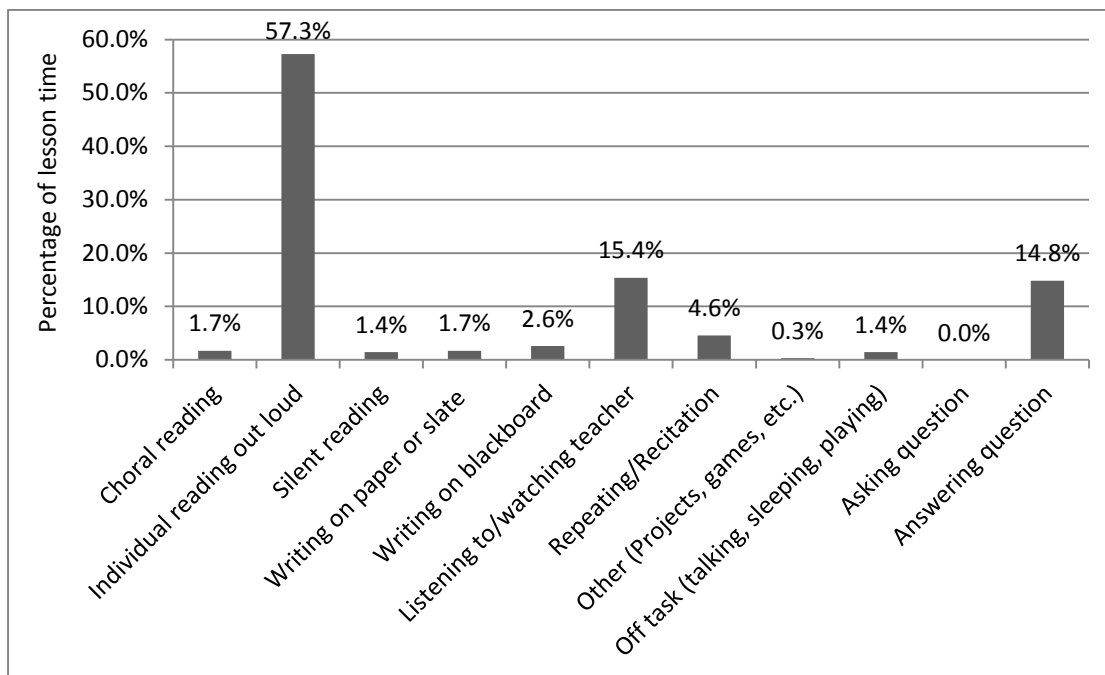
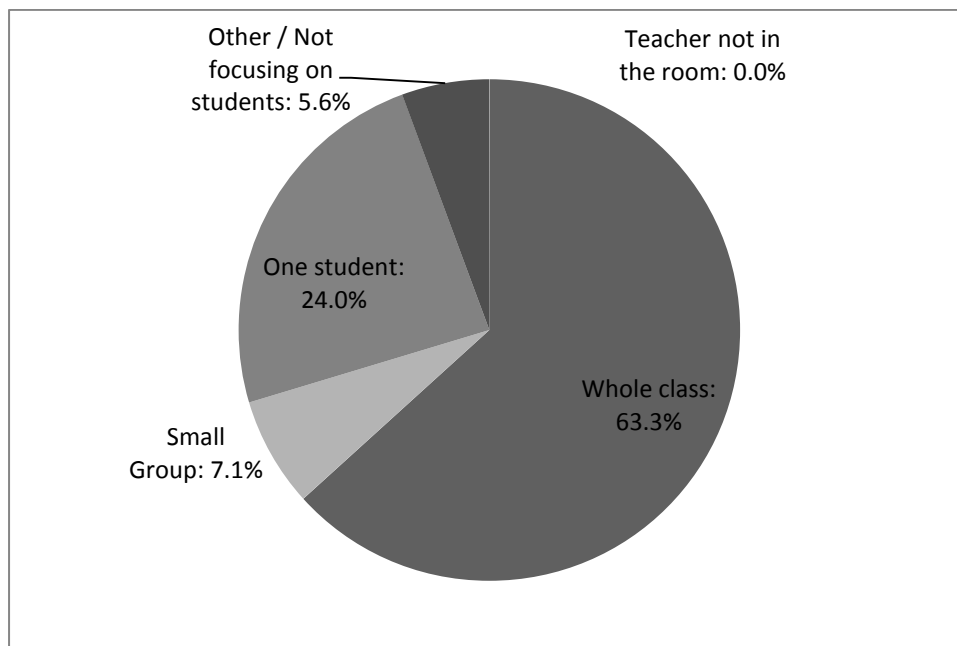


Figure 10c. Student action: Reading lesson

During observed mathematics lessons (see **Figures 11a through 11c**), teachers spent 63.3% of the lesson time focusing on the whole class and 24% with one individual student. They spent a brief amount of time working with a small group (7.1%) or focusing on something other than the students (5.6%).

Similar to observations of reading lessons, in math lessons, teachers were observed spending the largest portion of time monitoring students (36.4%), followed by writing problems on the blackboard (22.3%), explaining problems or concepts (21%), and asking questions of the class (19.5%).

Students engaged in a variety of activities during math lessons, from working individually at their desks (35.9%) and answering questions (22.1%), to writing at the blackboard (18.7%) and paying direct attention to the teacher (17.4%).

Figure 11a. Teacher focus: Mathematics lesson

Note: While the proportions remain accurate, the percentages presented here were normalized for ease of presentation as the total observation times did not add up to 100%. The original total was 90.8%.

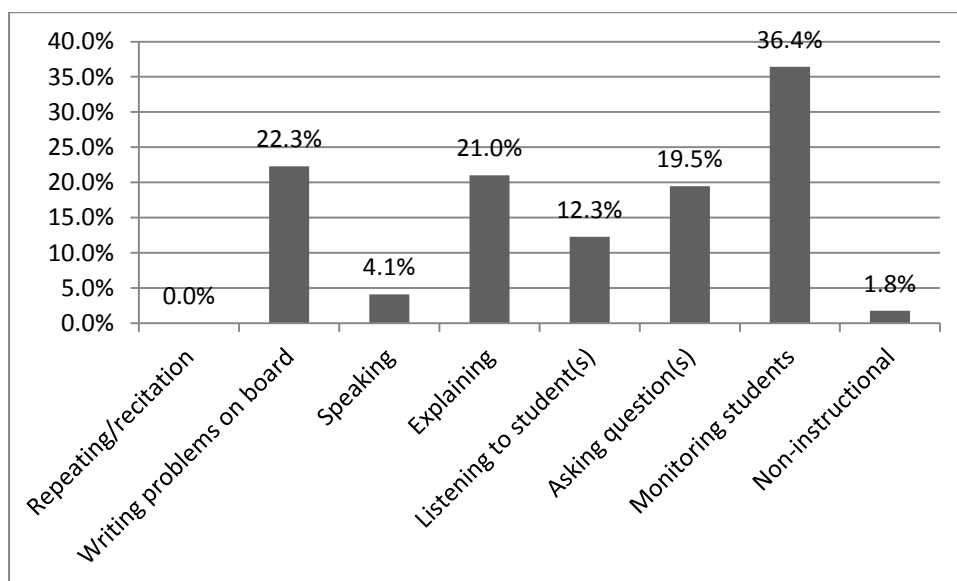
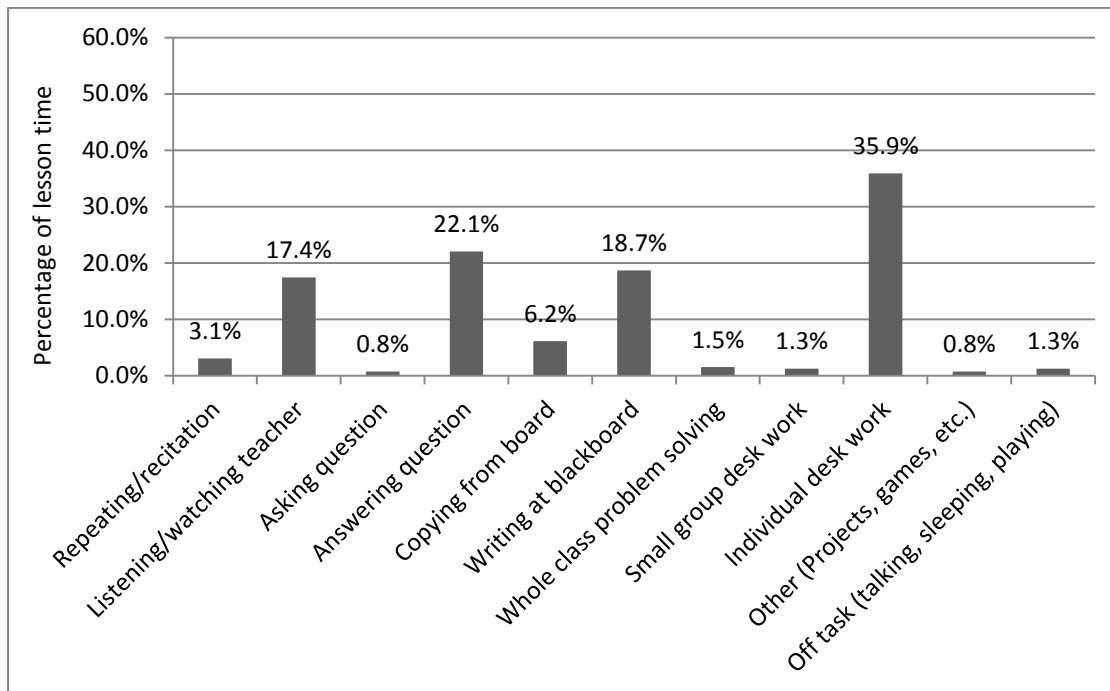
Figure 11b. Teacher action: Mathematics lesson

Figure 11c. Student action: Mathematics lesson

4.2.6 Feedback

Teacher feedback facilitates students' ongoing improvement and better ensures that they will achieve curricular goals. The majority of teachers observed did provide students with feedback, based on student reports and observation. The majority (86%) of exercise books examined were found to have comments written by the teacher. Of these, 83% of pages in students' exercise books contained comments from the teacher. As could be expected, the frequency of marks and comments does matter. Students who receive more comments tend to fare better.

4.2.7 Learning environment

Creating a positive learning environment can help students to flourish as they feel encouraged to succeed and are comfortable asking questions without fear of reprisal.⁴⁶ Most (92%) students said that when they do well on an exam, they are praised by their teachers. Students reported that when they are unable to answer a question correctly, their teachers correct them (49.1%), do nothing (33.2%), or sanction them (10.8%).

During math and reading lessons, students spent a substantial amount of time responding to teacher questions (22.1% and 14.8% respectively). Student questions occupied very little time (0.8% in math and no time in reading) during the lessons, which may indicate reluctance on the part of the students to ask questions.

⁴⁶ F. Pajares, 1996, "Current Directions in Self-efficacy Research," In M. Maehr & P. R. Pintrich (Eds.). *Advances in motivation and achievement*, Volume 10, (pp. 1-49). Greenwich, CT: JAI Press.

4.3 Time on Task

Even when good teaching techniques are applied, students cannot succeed if they are not given sufficient learning time at school. Time on task is, therefore, an important indicator in determining school effectiveness. Time on task in the classroom includes such teacher activities as oral instruction, lecturing, and leading a discussion or group activity. Classroom management and discipline are not on-task activities. Students are spending time on task when they are reading aloud or silently, engaging in a discussion or debate, practicing a skill, or doing seatwork. They are off task if they are interacting socially or are otherwise disengaged.⁴⁷

Several SSME questions are designed to provide information from which to calculate time on-task, such as when the school day starts, the length of the school day, the number of days during the school year that the school is closed, absenteeism, and the amount of time set aside for assembly and breaks. Additionally, the classroom observation instrument (previously mentioned) provides crucial insight into how lesson time is spent. Thus, rather than relying on self-reporting by teachers about time on task, researchers were able to make direct observations in the classroom. The following highlights significant findings from schools in Morocco.

4.3.1 Length of the school year

The official school year in Morocco consists of 34 weeks or approximately 204 days (assuming a 6-day school week) and 1,020 hours (assuming a 5-hour school day for primary school students). This official schedule surpasses the 850–1,000 minimal number of annual instructional hours recommended by the World Bank and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) through the Education for All (EFA) initiative.⁴⁸ Ninety-four percent (94%) of responding Head Teachers reported school closings ranging from 1 to 16 days. On average, Head Teachers/Directors reported that their schools had been closed for 4.74 days, bringing the official teaching hours to 996 per year.

4.3.2 Length of the school day

The average length of the school day was 8.5 hours. The majority of schools functioned on a shift system with Head Teachers/Directors reporting that students' average time in school was approximately 4.5 hours per day, providing students slightly less school time than is envisioned by the curriculum. Curricular guidelines recommend 11 and 6 hours of Arabic instruction per week for grade 2 and grade 3, respectively.⁴⁹ Within this time, grade 2 students should spend approximately 4 hours per week reading, and grade 3 students should spend 2.5 hours reading. Over the

⁴⁷ Time-on-task activities derived from Joseph DeStefano et al., *Using Opportunity to Learn and Early Grade Reading Fluency to Measure School Effectiveness in Ethiopia, Guatemala, Honduras, and Nepal*, USAID EQUIP2 Working Paper, 2010, p. 17.

⁴⁸ EFA Global Monitoring Report, 2005, p. 149.

⁴⁹ National Ministry of Education Website. http://www.men.gov.ma/sites/fr/Lists/Pages/cycles_ens_presco-prim_horaires.aspx (viewed on Nov. 22, 2011).

course of the year, this would total to 136 reading hours in Arabic for grade 2 students, and 85 reading hours for grade 3 students.⁵⁰

4.3.3 Teaching time during observed lessons

In addition to understanding how much time is spent in school, understanding how much of that time is spent on instruction is crucial. The majority of time during the observed grade 2 reading and math lessons was focused on learning. On average, 5.6% of the math lesson and 3.7% of the reading lesson was not focused on the students. On average, teachers spent 1.8% of the reading lesson on behavior management. A similarly low 1.3% and 1.4% of students' time was spent off task (playing, socializing, or sleeping) during the math and reading lessons. At virtually no time were teachers observed to be outside of the classroom during the observed lesson.⁵¹

Having limited amount of time off-task is crucial to preserving instruction time throughout the year. Time on-task impacts the amount of material a teacher and students are able to cover during the school year. Assessors examined students' Arabic exercise books to see how many pages had student writing in them. As was previously noted, the data collection took place in May, toward the end of the school year. We found a very large variation in exercise book coverage, with some books having no writing at all and others having writing on as many as 93 pages. On average though, students had writing on about 30 pages of their exercise book. As would be expected, classes that spent more time off-task tended to have fewer pages with writing in their exercise books.⁵² Students with more writing in their exercise books tended to perform better on the EGRA and EGMA assessments.

The school schedule requires that school be in session for 30 hours per week. Given a 6-day school week, this will require 5 hours of school time for students every day. The majority of Head Teachers/Directors reported that their schools came close to providing their students this amount of time each day. On average, Head Teachers/Directors reported students were in school for 4 hours and 25 minutes per day. The minimum time reported was 4 hours and the maximum 5 hours. If these total times are divided by 6, then an average of 50 minutes should be spent teaching mathematics each day and 110 minutes spent teaching Arabic each day for grade 2 students.

According to the curriculum, the 11 hours of Arabic instruction per week for grade 2 should be divided as follows:

- Expression (grade 2 total: 4.5 hours);
- Reading (grade 2 total: 4 hours);

⁵⁰ Note that in grade 3, students' time is split between Arabic and French instruction, thus total reading time, when considering both languages, is considerably more.

⁵¹ Teachers were never observed to be outside of the class during the math lesson, and teachers were observed outside of the classroom during just 0.3% of the time during the reading lesson.

⁵² Correlation between student writing on pages in exercise books and students observed off-task had a coefficient of -0.1796 and a $p = .0001$.

- Writing (grade 2 total: 2.5 hours); and
- Grammar (integrated through other areas).⁵³

Among grade 3 students, 50 minutes per day should be spent on mathematics and 60 minutes on Arabic. The time spent on Arabic is reduced in grade 3 to accommodate the introduction to French.

Thus, 34 weeks per year multiplied by 30 hours per week equal 1,020 hours per year (assuming no closures and no absenteeism or late arrival). Eleven hours per week of Arabic instruction add up to 374 hours per year for grade 2 students. Four hours of reading per week add up to 136 hours per year of in-school reading time.

4.3.4 Absenteeism

Student absenteeism can have an obvious correlation with low performance. When students were asked whether they were absent during the week prior to the assessment, 42% said they had been absent on one or more days. Given the 6-day school week, this would imply that weekly absenteeism rate could range anywhere from 7% to 42% depending on the number of days that children were absent during the week. This will require further investigation⁵⁴. Among students reporting having missed one or more days of school in the previous week, reasons for absence included illness (67%), bad weather (5.8%), taking care of family members (7.7%), or helping with market day (3.3%).

Attendance records are key, as they keep teachers and the school administration informed and aware of absenteeism issues. Nearly all (94.2%) sampled teachers reported keeping attendance records, and 93.8% of these were verified by the assessment team to keep a daily record, with another 3% keeping a weekly record. Similarly, nearly all (97%) Head Teachers/Directors reported that they keep teacher attendance records. Of these, 71% provided records that were kept on a daily basis, while a much smaller 12% recorded teacher attendance data on a monthly basis.

As with student absenteeism, teacher absenteeism has been shown to be a major factor in school ineffectiveness and low student performance. Surveys in several other countries have shown that schools routinely miss a quarter of their staff, with rural schools faring even worse.⁵⁵ Head Teachers/Directors reported an average teacher absenteeism rate of 3.4%.

Although 97% of Head Teachers/Directors reported keeping a teacher attendance record, 82% produced the record on the day of assessment. Of these, 82% kept a daily record of teacher attendance, and the remaining recorded on a monthly basis.

⁵³ Ministry of Education White Pages. Translation from Arabic by research team.

⁵⁴ Note that as observed attendance exceeded enrollment levels in 62% of observed classes, we were not able to calculate attendance rates based on observation. In the classrooms where enrollment was equal or greater than observed attendance, the attendance rate ranged from 0 to 29%.

⁵⁵ Helen Abadzi, 2007, *Absenteeism and Beyond: Instructional Time Loss and Consequences*, World Bank Policy Research Working Paper No. 4376, p. v.

4.3.5 Late arrival

Late arrival undermines students' learning time, and recurrent late arrival is associated with lower performance. The impact of late arrival is particularly strong in cases where the length of the school day or shift is short. When asked whether they had arrived late to school one or more days during the week prior to the assessment, 41% reported being late, citing oversleeping (46.3%), sickness (16%), bad weather (6.1%), and no transport or late transport (5.4%) among other reasons. Late arrival among teachers, as reported by Head Teachers/Directors, was 4.1% on average. As with time off-task during lessons, absenteeism and late arrival of both students and teachers can significantly erode curriculum coverage and student performance.

4.3.6 Reading practice

As previously mentioned, having time to practice reading is essential for new readers. Observed grade 2 reading lessons indicated that the majority (57%) of the students' lesson time was spent reading out loud individually. Reading outside of school appears to be uncommon: 9.5% of students reported using their reading textbook at home (see **Table 12**), and 52.2% of students reported that they "never" read out loud at home; 31.8% reported reading aloud at home "sometimes," and 9.1% reported reading at home "every day."

Table 12. Students' responses on reading at home

Frequency	Child reads out loud at home (student report)
Never	52.2%
Sometimes	31.8%
Once a week	1.0%
2 to 3 times per week	5.8%
Every day	9.1%

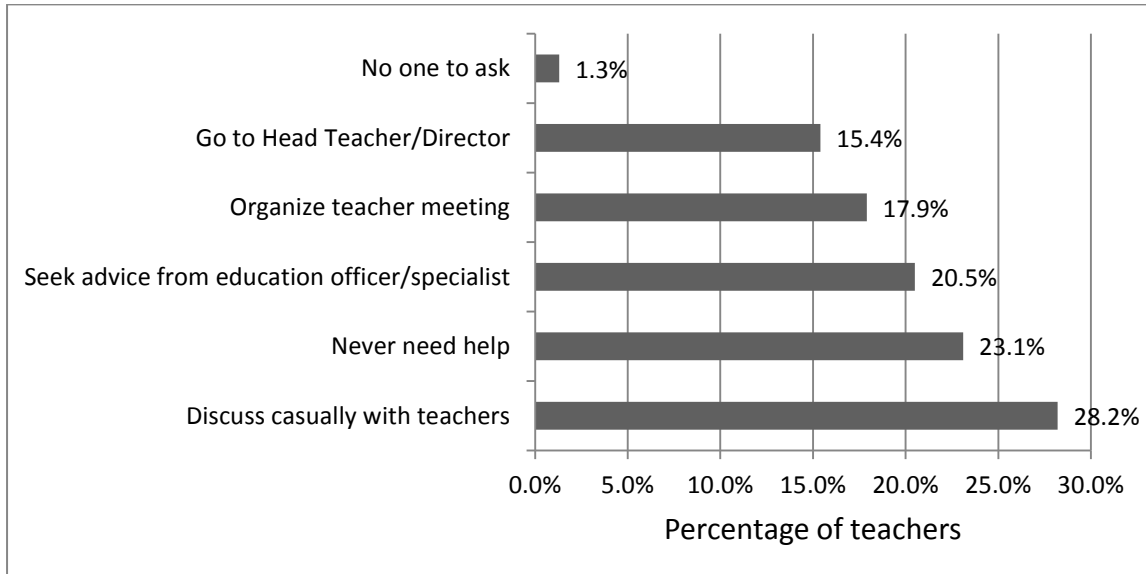
4.4 Pedagogic Oversight

The extent to which Head Teachers/Directors are or are not involved with the day-to-day work of their teaching staff can be indicative of the management and oversight capabilities of Head Teachers/Directors, the level of accountability felt by teachers, and the working atmosphere for staff.

For oversight of lesson plans, 47.2% of Head Teachers/Directors reported checking teachers' lesson plans once a month, and 41.7% said they did so weekly. None reported checking lesson plans daily, and 8.7% reported they never check lesson plans. Of those that responded, 86% of Head Teachers/Directors said that they visit or observe classrooms on a daily basis.

Among teachers, most (28.2%) reported that when they need assistance, they discuss the problem casually with their fellow teachers, and 15.4% said they ask the Head Teacher/Director (see *Figure 12*).

Figure 12. Whom teachers consult for help



5. Conclusions and Recommendations

The aim of the present study was to measure how early reading and mathematics skills were acquired among grade 2 and grade 3 students of the Doukkala Abda region in Morocco. The study also sought to identify school and student characteristics that were related to student performance. Early grade reading and mathematics tests were administered to a representative sample of students. The EGRA instrument, which was developed in Arabic by reading experts of the region, was consistent with Moroccan curricular requirements.⁵⁶

While there is abundant literature on Arabic literacy acquisition pointing to the importance of the skills assessed using the EGRA, there are no universal standards or fluency benchmarks against which students' performance can be compared. EGRA benchmarks are best established using the participants' own data as a point of reference. The primary aim of reading is to comprehend the text, and reading for comprehension is described as paramount by the Moroccan curriculum. Therefore, scores associated with good comprehension represent an ideal standard with which to appraise Doukkala Abda students' performance.

⁵⁶ The skills assessed were congruent with the level of reading mastery required by the Moroccan grade 2 and grade 3 curricula, which sets the following goals: by the end of grade 2, students must know all the letters and diacritics of the Arabic alphabet and must be able to read new words independently. By both grade 2 and 3, students should be able to read short texts accurately at a pace that assures understanding. Receptive language in Modern Standard Arabic is also set to enable students to successfully understand a story presented orally and contributes to their understanding by enabling them to think critically and produce language appropriately.

Students who were able to correctly answer five or more reading comprehension questions out of six were identified and defined as good readers. On average, good readers who were proficient in more basic alphabetic and decoding skills were able to sound out 66 letters per minute and 37 nonwords per minute, while their oral reading fluency was 61 words per minute. The average Doukkala Abda student answered less than one reading comprehension question correctly, which is well below the reference point previously set to define good reading comprehension. All other average EGRA scores were below the good reader benchmark as well: 23 and 33 correct letter sounds per minute, 10 and 15 correct nonwords per minute, and 16 and 27 correct words in connected text per minute (for second- and third-grade students). The failure by a majority of grade 2 and grade 3 students to achieve good reading comprehension scores can be explained partly by their inability to reach good reading benchmarks in letter-sound reading, decoding, and oral reading fluency.

As with EGRA, all EGMA subtasks indicated progression in student performance from grade 2 to grade 3. The number identification subtask targeted students' knowledge and identification of one- and two-digit numbers (e.g., 12, 2, 17, 93, 9). Grade 2 students were able to correctly identify an average of 20 numbers in one minute, while grade 3 students were able to correctly identify 34 numbers in one minute. Students showed a fair amount of accuracy on this task, with grade 2 students correctly answering 72% of the time (percentage correct out of attempted) and grade 3 students, 88% of the time. Quantity discrimination measures students' ability to make judgments about differences by comparing quantities. Students were asked to compare single- and double-digit numbers, and to say which was the larger of the two numbers. For example, in comparing 15 and 20, the correct response was 20. On average, grade 2 students responded correctly 70% of the time and grade 3 students responded correctly 85% of the time. Students performed best on single-digit items.

According to the Moroccan curriculum, second graders are expected to be able to do mental math with addition, subtraction, and multiplication; and third graders are expected to have mastered these operations to the point that they can use them to solve multiple-digit mental math problems. The EGMA results indicate, however, that many students have not mastered basic addition and subtraction by the end of grade 2, and some even by the end of grade 3. Twenty-two percent of grade 2 students could not answer any simple addition problems, and 44% of grade 3 students could not answer any of the simple subtraction problems. Further, of those who could do any subtraction problems, grade 2 students were able to correctly answer 60% of the items attempted, and grade 3 students were able to answer 68% correctly.

Overall, the results in mathematics indicate a range of competency, with some students showing some automaticity in identifying numbers and solving simple addition problems, naming over 50 numbers in a minute and solving over 20 addition and subtraction problems in a minute. However, some grade 2 students (13%) were able to identify at most five of the numbers presented, and many (50%) could answer at most two of the subtraction problems.

The Snapshot of School Management Effectiveness was used in the sampled schools to assess the school conditions and practices that are historically linked to student

performance. Once compared across EGRA and EGMA scores, SSME often can explain why pupils are having difficulty with mathematics and learning to read. Based on these outcomes, the team of Moroccan education experts who developed the instrument and collected the data convened a workshop in January 2012 that defined key areas of improvements and formulated recommendations as to how to enhance students' results in reading and mathematics acquisition.

As part of the SSME tool, the classroom observation of math and reading instructional practices indicated that teachers only rarely focused on some of the crucial foundational skills and exercises necessary to develop good reading and mathematics abilities. For example, observed reading lessons seldom focused on sound-letter correspondence or isolated word reading. During mathematics lessons, relatively little time was spent on number identification, counting, comparing sets, or single-digit addition or subtraction. The absence of practice in foundational reading and math skills was also clearly mirrored in the difficulties experienced by students. The panel of experts who reviewed the results deplored the abandonment of pedagogical practices centered on phonics for reading instruction. They proposed that the use of explicit instruction in letter-sound correspondence, phonemic awareness, and decoding could contribute to resolving the deficiencies in instructional practices in reading instruction. The panel revealed that such pedagogical practices were common before the 1980s and indicated that a return to such practices in the classroom could contribute to bridging the gap in foundational reading skills that the study exposed.

When teacher characteristics were examined, further explanatory factors of students' reading and mathematics difficulties arose. Students' mathematics and reading scores were significantly higher when their teachers had received training in reading and mathematics instruction, relative to teachers who did not receive this specialized training. Based on this outcome, the panel indicated that pre-service and in-service training for primary school teachers must become an area of priority. They proposed reinforcing teachers' content knowledge of foundational acquisition by extending their training to cover the psychology of early reading and mathematics development as well as the science of language acquisition. The need for improvement in instructional methodology that the study revealed also called the panel to recommend training to include state-of-the-art best pedagogical practices in Arabic reading instruction and in mathematics instruction. The panel stressed the importance of putting in place teacher trainings that are tailored to the systems' needs, which are meant to be different for experienced versus less experienced teachers. Due to the importance of early grade learning in these domains, the panel's recommendation stipulated that actions need to prioritize training for first grade teachers.

Reported numbers of school closures and days of Headteacher absence were shown to be negatively correlated with student performance. Therefore it was also advised that supporting and enhancing principals' pedagogical and advisory role among teachers could contribute to increasing teachers' in-service resources to improve instruction. Including the inspector as a pedagogical advisor for teachers was another suggestion that would leverage existing resources to provide further in-service support to teachers. To improve students' early access to foundational skills, the generalization

of kindergarten education included in the National Charter for Education and Training was another point of action that the panel particularly wanted to see implemented in priority in rural areas such as Doukkala Abda.

The importance of time-on-task was also demonstrated by examining the number of pages covered in student exercise books—a rough estimate for time-on-task during the school year—and correlating it with student performance. Students' exercise books were found to have a very large variation in coverage, with some books having no writing at all and others having writing on as many as 93 pages. On average, students had writing on about 30 pages of their exercise book. As would be expected, classes that spent more time off-task tended to have fewer pages with writing in their exercise books. Students with more writing in their exercise books tended to perform better on assessments.

Parents' involvement in students and schools performance was another key area of action defined by the panel. While parents reported meeting with teachers at least once a year, teachers largely reported parental involvement to be insufficient. To increase parental involvement, the panel envisaged relying on existing measures stipulated by the Moroccan National Education Emergency Program and the National Charter for Education and Training, which request schools to establish an improvement and educational work plan. The panel also recommended the creation of additional participatory mechanisms in schools in order to encourage parents' participation and to provide increased opportunities for dialogue and awareness-raising on the crucial importance of parental involvement in supporting students' learning of foundational mathematics and reading skills.

The inventory of classroom and school resources revealed that the availability of resources for Moroccan students is high. On average, observed grade 2 classrooms had Arabic language textbooks for 96.8% of their students and mathematics textbooks for 97% of their students. A majority (70%) of observed grade 2 classrooms had maths and Arabic textbooks for all their students. Only a small number of schools were missing a substantial number of textbooks. Conversely, non-textbook reading materials, essential for nascent readers, were almost non-existent in observed classrooms. In fact, 98% of the observed classrooms had no books, booklets, or magazines other than textbooks. Ensuring a good supply of appropriate reading materials available in school and for home use would be a crucial step toward improving student reading fluency and comprehension.

Finally, the panel proposed to expand the scope of the EGRA/EGMA and SSME tools to assess other foundational competencies of the Moroccan curriculum, such as knowledge of multiplication in mathematics, sound awareness, and other text-comprehension mechanisms not currently included in the EGRA/EGMA instruments. The use and development of tools to assess later grades was also suggested, as well as the replication of this study to other regions in Morocco. Adapting these tools to monitor school improvement regionally and to allow classroom progress monitoring by teachers was a future area of research that the panel of experts aimed at exploring.

Annex A: Description of SSME Components

This annex describes the content of the standard SSME tool, including the mini-EGRA and mini-EGMA. The instrument for Morocco closely followed this typical structure.

- Head Teacher/Director Questionnaire: This instrument is administered to the Head Teacher or Director in each school visited during an in-person interview. He or she is asked questions about a host of areas, including the education level and training of the Head Teacher/Director; lateness or absenteeism on the part of the school staff; the number of days the school is open and time spent in the classroom; frequency of visits from education officials; availability of curricular materials; parental involvement; involvement in lesson planning; procedure for teacher dismissal; and safety at the school.
- Teacher Questionnaire: This instrument is administered to the two teachers—one from a lower grade and one from a higher grade—whose students are selected for assessment. The interviewer asks several questions that are similar to those asked of the Head Teacher/Director about teacher training, availability of curricular materials, and visits by administration. The instrument also records information about lesson planning, teaching style, and assessment.
- Parent Questionnaire: This instrument is administered to the parent of a child in each grade being assessed (two parents total). The purpose of this instrument is to gain a sense of parents' investment in and perception of their child's education experience, how involved they are both at the school and at home, what they like and dislike about the school or teachers, and any safety concerns they have.
- Student Questionnaire: This instrument is administered to each student who is randomly selected for assessment. The assessor asks questions about language, transportation to school, experience with teachers, homework, meals, family involvement, and literacy, as well as a number of questions about family assets (electricity, vehicle, water source, etc.) to gain a sense of the student's socioeconomic status.
- Mini-EGRA and Mini-EGMA: These instruments are administered to a random sampling of students in two grades and are used to measure students' basic literacy and numeracy skills. The mini-EGRA measures letter-sound knowledge, invented word decoding, oral reading and reading comprehension, and listening comprehension. The mini-EGMA measures number identification, quantity discrimination, comprehension of number sequencing and patterns, and ability to perform addition and subtraction.
- School Observation: This instrument is administered at each school visited and is used to record information about the condition of the school's infrastructure and the existence of various facilities. The observer notes the working

condition of toilets, telephones, electricity, and water sources, as well as whether there is a playground and a library.

- Classroom Inventory: This instrument is administered in each of the two sampled classrooms and is used to record the resources available to the teacher and students. The observer records the number of girls and boys in class, the number of available textbooks and other reading materials, the presence or absence of student work displayed in the classroom, and the furniture and its configuration in the room.
- Classroom Observation – Reading: This instrument is administered during the reading lesson in the lower grade classroom. Its purpose is to record the language of instruction, the teacher’s focus, action, and instructional content, as well as student action and materials used. At three-minute intervals during the lesson, the observer takes note of what is occurring in each of these areas. For example, nine minutes into the class the observer may record that the teacher is focusing on the whole class, is speaking Arabic, the content is reading comprehension, the teacher is reading out loud, the students are listening/watching the teacher, and the materials being used are a textbook and student notebooks.
- Classroom Observation – Mathematics: This instrument is administered during the mathematics lesson in the lower grade classroom and serves the same purpose as the classroom observation during a reading lesson. In a mathematics lesson, for example, 12 minutes into the class the observer may record that the teacher is focusing on a small group of students, is speaking English, the content is multiplication, the teacher is listening to the students, the students are answering a question, and a worksheet is being used. At the next three-minute mark, the scenario may be the same or completely different.

Annex B: EGMA and EGRA instruments

أداة تقييم مهارات القراءة في المرحلة الابتدائية: نموذج التعليمات للممرر 2011

تعليمات عامة

المهم هو أن تبني علاقة فيها اللعب والمرح مع التلميذ الذي سيخضع للتقييم بحيث تبدأ بمحادثة بسيطة حول مواضيع تهم التلميذ (انظر المثال أدناه). ليحس بأن هذا التقييم - تقريباً - مثل لعبة سينتجع بها وليس بشيء صعب. من المهم جداً أن تقرأ فقط بصوت عال وبوضوح وبمهمل مضمون المربعات.

صباح الخير. اسمي _____ أسكن في _____. أريد أن أتكلم معك على نفسي عندي الأطفال، عمرهم؛ عندي في الدار.....، الرياضة التي أمارسها، [الخ]

1. تكلم لي عن نفسك وعن عائلتك؟ [انتظر الجواب؛ إذا كان التلميذ غير متحمس للكلام، ضع عليه السؤال رقم 2. إذا تكلم بارتياح، انتقل للفقرة الموالية: الموافقة الشفهية].
2. ماذا يعجبك أن تعمل خارج المدرسة؟

الموافقة الشفهية

- اسمح لي أن أقول لك لماذا أنا معك اليوم. أنا أشتغل مع وزارة التربية الوطنية وأحاول أن أفهم كيف يتعلم الأطفال القراءة. تم اختيارك بالصدفة مثل في لعبة.
- أحب أن تتعاون معي في هذه العملية. ولكن إذا لم ترد المشاركة، أنت حر.
- سنلعب لعبة القراءة. سأطلب منك أن تقرأ بعض الحروف وبعض الكلمات وقصة قصيرة بصوت عال.
- سأستعمل هذا العداد لأقيس الوقت الذي تحتاجه في القراءة.
- هذا ليس امتحاناً وليس له أي تأثير على نقطك المدرسية.
- سأسألك بعض الأسئلة الأخرى عن عائلتك. مثلاً بأي لغة تتكلم في البيت وبعض الأمور عن عائلتك.
- لن أكتب اسمك. لن يتعرف أي أحد على أجوبتك.
- مرة أخرى، أنت غير ملزم بالمشاركة إذا لم تكن ترغب في ذلك. وإذا بدأنا ولم ترد الجواب على أي سؤال، فلا بأس.
- هل لديك سؤال؟ هل أنت مستعد؟

إذا حصلت على الموافقة الشفهية للطفل ضع علامة في هذا المربع ☐ نعم ☐ لا

(إذا لم تحصل على الموافقة، أ شكر الطفل وانتقل للطفل الذي بعده واستعمل نفس الاستمارة)

أ. تاريخ التقييم	اليوم: _____ الشهر: _____
ب. اسم الممرر	
ج. اسم المدرسة	
د. الإقليم	
هـ. الدائرة	
و. مواقيت تدرس التلاميذ	1 = يوم كامل 2 = الصباح 3 = بعد الظهر
ز. قسم بمستويات متعددة	0 = لا 1 = نعم
ن. المستوى الدراسي	2 = الثاني 3 = الثالث
ح. اسم الأستاذ	
ي. الرمز الوحيد للتلميذ	
ك. سن التلميذ	
ل. جنس التلميذ	1 = طفل 2 = طفلة
م. وقت الشروع: _____ : _____ (حسب نظام 24 ساعة)	

التعرف أصوات الحروف 1 القسم

أظهر للطفل ورقة الحروف الموجودة في كتيب التنشيط وقل له:

هذه ورقة مملوءة بالحروف الأبجدية العربية. اقرأ الأصوات التي عرفتـها—و ليس اسم الحرف ولكن صوته. مثلاً ، صوت هذا الحرف [أشـر إلى الحرف ـ] هو " ـ " مثل في كلمة "هَرَبَ".

و الآن لنقم بتمرين: قل لي صوت هذا الحرف [وأشـر لحرف ـ]:

إذا كان جواب الطفل صحيحاً، قل : جيد، صوت هذا الحرف هو " كـ "

إذا كان جواب الطفل غير صحيح، قل : صوت هذا الحرف هو " كـ "

لنجرب حرفاً آخر: قل لي صوت هذا الحرف [أشـر لحرف ـ]:

إذا كان جواب الطفل صحيحاً، قل : جيد، صوت هذا الحرف هو " لـ "

إذا كان جواب الطفل غير صحيح، قل : صوت هذا الحرف هو " لـ "

هل فهمت المطلوب منك؟

عندما أقول لك "لنبدأ"، ركز جيداً و اعطني صوت الحروف بسرعة قدر ما تستطيع. سنبدأ من هنا ونكمل بهذه الطريقة [أشـر للحرف الموالي لحرف المثال وتتبع معه بأصبعك على السطر الأول بالكامل إذا وصلت إلى حرف لم تتعرف عليه سأقوله لك. وإلا سأبقى صامتاً أستمع إليك. مستعد؟ لنبدأ.

شغل العداد عندما يبدأ التلميذ الحرف الأول. تتبع معه بالقلم وضع **بوضوح** علامة / على أي خطأ. عندما يصلح الطفل خطاه وحده أحسب الإجابة صحيحة. إذا فات وعلمت الإجابات الخاطئة التي يصححها التلميذ بنفسه على أنها خطأ، علم الحرف بدائرة وواصل التمرين. **ابق صامتاً**، ما عدا لما تعطي الأجوبة كالتالي: حين يتردد الطفل لمدة ثلاث ثواني، إعطيه صوت الحرف. أشـر للحرف الموالي وقل : "**لنكمل من فضلك**". ضع علامة على الحرف الذي صححته للطفل. إذا أعطاك الطفل اسم الحرف عوض الصوت، إعطيه صوت الحرف وقل : "[من فضلك إعطيني صوت الحرف]". هذا التذكير يمكن أن يكون مرة واحدة فقط خلال التمرين.

بعد مرور 60 ثانية، ستقول 'لنتوقف'. ضع العلامة () على آخر حرف قرأه.

قاعدة التوقف المبكر: إذا وضعت علامة على جميع الأجوبة في السطر الأول على أنها خطأ ولم يتدارك التلميذ أي خطأ من أخطائه، قل "**شكراً**" و أوقف التمرين. ضع علامة في المربع الموجود في أسفل الصفحة وانتقل للتمرين الذي بعده.

لـ كـ ـ :مثال

10	9	8	7	6	5	4	3	2	1	
ـ	يـ	ةـ	وـ	سـ	ـ	غـ	فـ	دـ	ـ	(10)
شـ	ـ	ـ	وـ	مـ	تـ	يـ	ـ	ـ	ـ	(20)
خـ	ـ	ـ	ـ	ـ	بـ	ـ	ـ	ـ	ـ	(30)
جـ	حـ	ـ	ـ	ـ	نـ	ـ	ـ	ـ	ـ	(40)
ـ	ـ	رـ	ـ	ـ	تـ	زـ	ـ	كـ	عـ	(50)
ذـ	طـ	ـ	فـ	ـ	جـ	تـ	ثـ	ـ	رـ	(60)
كـ	غـ	ـ	ـ	ـ	ـ	ذـ	خـ	قـ	ـ	(70)
مـ	ثـ	هـ	زـ	ظـ	صـ	يـ	سـ	ـ	طـ	(80)
شـ	رـ	ـ	ـ	ـ	ـ	دـ	ـ	ـ	قـ	(90)
رـ	نـ	مـ	ـ	ـ	عـ	ـ	وـ	بـ	ضـ	(100)

الوقت الذي بقي في العداد في نهاية التمرين (عدد الثواني) :

ضع علامة في هذا المربع إذا أوقفت التمرين حيث الطفل لم يجب على أي سؤال في السطر الأول :

☐

قراءة كلمات غير مألوفة :2 القسم

أظهر للطفل صفحة الكلمات المخترعة في كتيب التنشيط وقل :

هذه بعض الكلمات المخترعة. اقرأ أكبر عدد من الكلمات ما استطعت. لا تقرأ حرف بحرف. هذه الكلمة المخترعة " الفلأط ".
الآن نقوم بالتمرين التالي: اقرأ هذه الكلمة [أشر إلى كلمة شلاميذ]:

إذا قال الطفل "شلاميذ"، قل له: حسن جدا، " شلاميذ"

إذا لم ينطق الطفل " شلاميذ " بشكل صحيح، قل : هذه الكلمة المخترعة هي " شلاميذ"

ناسب": نجرب الآن كلمة أخرى: اقرأ من فضلك هذه الكلمة [أشر إلى كلمة "

ناسب " ناسب"، قل : حسن جدا، " إذا قال الطفل "

" ناسب ناسب " بشكل صحيح، قل : هذه الكلمة المخترعة هي " إذا لم ينطق الطفل "

حين أقول لك "نبدأ" ركز جيدا واقرأ الكلمة بأكثر سرعة ممكنة. اقرأ الكلمات الموجودة بالصفحة. ابدأ بالسطر الأول. سألقي صامتا أستمع إليك إلا إذا احتجت مساعدتي. هل فهمت المطلوب منك. مستعد؟ نبدأ.

شغل العداد حين يقرأ التلميذ الكلمة الأولى. تابع معه بقلمك وضع بوضوح علامة / على أي خطأ. حين يصلح الطفل خطاه وحده أحسب الإجابة صحيحة. إذا سبق أن وضعت علامة / على الإجابات الخاطئة التي يصلحها التلميذ بنفسه على أنها خطأ، أخط الحرف بدائرة وواصل التمرين. التزم الصمت ، ما عدا في الحالات التالية يمكنك الإجابة: حين يتردد الطفل لمدة ثلاث ثواني، اقرأ أنت الكلمة. أشر للكلمة التي تليها وقل : "تابع من فضلك". ضع علامة على الكلمة التي تم تصحيحها للطفل.

بعد مرور 60 ثانية، قل 'نتوقف'. ضع العلامة ([]) على آخر كلمة قرأها الطفل.

قاعدة التوقف المبكر: إذا كانت جميع الأجوبة في السطر الأول خاطئة، قل "شكرا" وأوقف التمرين. ضع علامة في المربع الموجود في أسفل الصفحة وانتقل للتمرين الموالي.

الفلأط شلاميذ ناسب : أمثلة

5	4	3	2	1	
سَدَع	قِمَا	رُوكَ	سُوهِشَ	أَفَالُ	(5)
عَنُ	أُصِيخُ	أُسْرَأُ	مَجَكُ	يَاشَتُ	(10)
وُجِيبُ	أُشْبِقُ	الْقُسُنُ	سَطِيفُ	كَنْتُ	(15)
جُمْدُهُ	حُبُّبُ	مَادُوا	خَنَّ	طَذَا	(20)
دُلَى	وَضَعُ	قِرَا	أَشِيْمَةُ	أَسِلُ	(25)
يَاسِبُ	رَمِيلُ	إِلْقَامُ	مَعَكْنُ	شَا	(30)
زَيْدَبُ	أُضِي	مَرَبُ	عَجَّةُ	النَّدِيقُ	(35)
لِجَادَا	الْكِرْفُ	سُلْمَى	عُبِيرَا	بَيْفَ	(40)
تَمْشِيرُ	مِكُ	عَلُ	مُنُ	كِسَامُ	(45)
الْأَمِظُ	صُدْمُنُ	مَخِكُ	رَشَالَةُ	هَابَرُ	(50)

الوقت المتبقي على العداد في نهاية التمرين (عدد الثواني) :

ضع علامة في هذا المربع إذا تم توقيف التمرين حيث أن الطفل لم يجب على أي سؤال في السطر الأول :

القسم 3 - ب.

بعد مرور 60 ثانية، إذا قرأ الطفل المقطع في أقل من 60 ثانية،
اسحب من أمامه مقطع القصة وضع عليه السؤال الأول أدناه.

اترك للطفل 15 ثانية على الأكثر كي يجيب على السؤال. ضع علامة على جواب الطفل في الخانة المناسبة وانتقل إلى السؤال الثاني.

اقرأ الأسئلة في كل سطر حتى تصل للقوس () ووضح إلى أين وصل الطفل في قراءة المقطع.

سأضع عليك الآن بعض الأسئلة حول القصة التي قرأت. حاول أن تجيب على الأسئلة قد ما استطعت.

- أ. قراءة مقطع شفوي 3 القسم

أظهر للطفل القصة الموجودة في كتيب التنشيط وقل له:

هذه قصة قصيرة. أريد أن تركز جيداً وقرأها بصوت عالٍ و بأقصى سرعة ممكنة. حين تنتهي ، سأطرح عليك بعض الأسئلة حول ما قرأته. هل فهمت المطلوب منك؟ حين أقول لك "نبدأ"، اقرأ القصة جيداً.
سأبقى صامتاً أستمع اليك إلا إذا احتجت مساعدتي . مستعد؟ نبدأ.

شغل العداد حين يقرأ التلميذ الكلمة الأولى. تابع معه بقلمك وضع بوضوح علامة / على أي خطأ. حين يصلح الطفل خطأه بنفسه - اعتبر الإجابة صحيحة. ابق صامتاً، ما عدا إذا تردد التلميذ اعط الأجابة كالتالي: حين يتردد الطفل لمدة ثلاث ثواني، اعط أنت الكلمة. أشر للكلمة التي بعدها وقل : "تابع من فضلك". علم على الكلمة التي تم تصحيحها للطفل على أنها خطأ.
بعد مرور 60 ثانية، قل 'نتوقف'. ضع علامة (/) على آخر كلمة قرأها الطفل .
قاعدة التوقف المبكر: إذا لم يقرأ الطفل أي كلمة صحيحة في السطر الأول، قل "شكراً" وأوقف التمرين. ضع علامة في المربع الموجود في أسفل الصفحة وانتقل للتمرين الموالي.

لا إجابة	غير صحيح	صحيح	
			لماذا خرج الفأر؟ خرج الفأر من أجل إثبات شجاعته.
			ماذا صادف في طريقه؟ صادف في طريقه قطاً جائعاً.
			لماذا حاول الفأر تخليص نفسه ؟ لأنه شعر بالخوف.
			بماذا وعد الفأر القط؟ وعده بوجبة دسمة.
			لماذا صدق القط الفأر؟ صدق القط الفأر طمعاً في الحصول على وجبة دسمة.
			بماذا تصف هذا الفأر؟ فأر نكي - فأر داهية
			وبعداً حكى و هكذا رافقه، ودخل إلى جحره تاركاً القط ينتظر. لأمه وإخوته قصته. 58

الوقت المتبقي على العداد في نهاية التمرين (عدد الثواني) :

ضع علامة في هذا المربع إذا تم توقيف التمرين حيث أن الطفل لم يجب على أي سؤال فالسطر الأول:

القسم 4 - فهم المسموع

هذا التمرين لا يعتمد التوقيت. ليس هناك ورقة للتلميذ. المسير يقرأ بصوت عال المقطع التالي مرة واحدة فقط، بتمهل (كلمة كل ثانية تقريبا). قل:

سأقرأ عليك قصة قصيرة بصوت عال، مرة واحدة. و بعد ذلك سأطرح عليك بعض الأسئلة. اسمع جيدا من فضلك وحاول أن تجيب قدر ما استطعت على الأسئلة. هل فهمت المطلوب منك؟

كُلَّ صَبَاحٍ، تَحْلُبُ أُمِّي بَقَرَتَهَا، وَ تُحَضِّرُ لَنَا الْفُطُورَ. ذَاتَ يَوْمٍ، لَمْ تَجِدِ الْبَقْرَةَ فِي الْإِسْطَبْلِ. اسْتَيْقَظْتُ فَلَمْ أَرْ فُطُورًا عَلَى الطَّائِلَةِ. كَانَتْ أُمِّي قَدْ خَرَجَتْ لِلْبَحْثِ عَنْهَا عِنْدَ الْجِيرَانِ، فِي الْحَقْلِ، وَ قَرَبَ النَّهْرِ. غَيْرَ أَنَّهَا لَمْ تَعُثِرْ عَلَيْهَا. فَبَكَتْ حُزْنًا لِأَنَّهَا كَانَتْ تُحِبُّهَا كَثِيرًا. فَلَمَّا عَادَتْ سَمِعْتُ ضَجِيجًا فِي الْمَطْبَخِ. إِنَّهَا الْبَقْرَةُ تَأْكُلُ جُزْأًا مِنْ سَلَّةِ الْخُضَرِ

ماكاين جواب	<input type="radio"/>	<input type="radio"/>	لا إجابة	<input type="radio"/>	غير صحيح	<input type="radio"/>	صحيح	تحلب الام بقرتها	-ماذا تفعل الأم كل صباح ؟
ماكاين جواب	<input type="radio"/>	<input type="radio"/>	لا إجابة	<input type="radio"/>	غير صحيح	<input type="radio"/>	صحيح	لم تجد البقرة.	ماذا حدث للام في الاسطبل ؟
ماكاين جواب	<input type="radio"/>	<input type="radio"/>	لا إجابة	<input type="radio"/>	غير صحيح	<input type="radio"/>	صحيح	لان الام لم تحلب البقرة.	لماذا لم يجد الطفل فطورا على الطاولة
ماكاين جواب	<input type="radio"/>	<input type="radio"/>	لا إجابة	<input type="radio"/>	غير صحيح	<input type="radio"/>	صحيح	بحثت عنها عند الجيران و في الحقل و قرب النهر	اين بحثت الام عن البقرة ؟
ماكاين جواب	<input type="radio"/>	<input type="radio"/>	لا إجابة	<input type="radio"/>	غير صحيح	<input type="radio"/>	صحيح	لأنها تحب بقرتها لم تجد البقرة	لما بكت الأم ؟
ماكاين جواب	<input type="radio"/>	<input type="radio"/>	لا إجابة	<input type="radio"/>	غير صحيح	<input type="radio"/>	صحيح	البقرة	مالذي احدث الضجيج في المطبخ؟

الآن ، لدي بعض التمارين في الرياضيات. المرجو أن تحاول جاهداً و أن تنتبه. بعض التمارين قد تكون صعبة، لذلك لا تقلق إذا لم تعرف الجواب. موافق؟

60 ثانية ⌚		التعرف على الأعداد : 1 المهمة		ورقة 1M" 📖																															
<div>👉</div> <div>● عند انتهاء الوقت (ثانية 60)المحدد</div> <div>● عند ارتكاب 5 أخطاء متتالية</div> <div>➡</div> <div>● (ة) إذا توقف الطفل 3دون جواب لمدة ثوان.</div> <div>● إذا تجاوز سطر (ة)الطفل وجب تنبيهه بالرجوع إليه</div>	<div>سأستعمل العداد وسأخبرك .فيما يلي بعض الأعداد، أريد منك أن تشير إلى كل عدد وأن تنطق به 🗣️ عندما أقول إبدأ ، قل الأعداد حسب استطاعتك وابدأ من هذا العدد وتابع . متى تبدأ ومتى تتوقف من اليسار الى اليمين سطرًا بسطر . ما هو هذا العدد ؟ هل أنت مستعد ؟ إبدأ من هنا</div> <div>غير صحيح أو بدون جواب (/) ✖ الخطأ (ة)إحاطة العدد بدائرة إذا استدرك الطفل (O) عند آخر عدد منطوق به ()</div> <div>يقرأ الجدول من اليسار الى اليمين ⇒</div> <table><tr><td>12</td><td>2</td><td>17</td><td>100</td><td>77</td></tr><tr><td>59</td><td>81</td><td>32</td><td>53</td><td>511</td></tr><tr><td>62</td><td>93</td><td>34</td><td>5</td><td>83</td></tr><tr><td>10</td><td>19</td><td>25</td><td>39</td><td>20</td></tr><tr><td>74</td><td>4</td><td>60</td><td>215</td><td>46</td></tr><tr><td>48</td><td>313</td><td>410</td><td>97</td><td>15</td></tr></table>					12	2	17	100	77	59	81	32	53	511	62	93	34	5	83	10	19	25	39	20	74	4	60	215	46	48	313	410	97	15
	12	2	17	100	77																														
	59	81	32	53	511																														
	62	93	34	5	83																														
10	19	25	39	20																															
74	4	60	215	46																															
48	313	410	97	15																															
الوقت المتبقى على العداد ✖																																			
عدد المحاولات ✖																																			
عدد الأجوبة الصحيحة ✖																																			

60 ثانية ⌚	تمرين -مقارنة الأعداد : 2 المهمة						"B2M"- و "A2M"- ورقة 📖	
✖ 🖐	أيهما الأكبر ؟ .أنظر إلى هذين العددين 🧮							
	4 9 صحيح ، 9 هو الأكبر لنحاول مثالا آخر. _ ✓ . هذا العدد هو 9 . [أشر إلى 9] هذا العدد هو 4 . [أشر إلى 4] العدد 9 هو الأكبر . _ ✖ 9 أكبر من 4 لنحاول مثالا آخر.							
	أيهما الأكبر ؟ .أنظر إلى هذين العددين 🧮							
	21 18 صحيح ، 21 هو الأكبر. لنتابع. _ ✓ . هذا العدد هو [أشر إلى 21] هذا العدد هو 18 . [أشر إلى 18] العدد 21 هو الأكبر _ ✖ 21. 21 أكبر من 18 . لنتابع							
🖐	هل فهمت ماذا ينبغي أن تفعل ؟ الآن أريد منك أن تقول لي الجواب بأسرع ما يمكن. سأستعمل _ عندما أقول إبدأ ، أنظر إلى "B2M"- خذ الصفحة .العداد وسأخبرك متى تبدأ ومتى تتوقف الأعداد، وقل لي ما هو العدد الأكبر و أشر إليه . مستعد ؟ إبدأ _							
	غير صحيح أو بدون جواب (/) الخطأ (ة) إحاطة العدد بدائرة إذا استدرك الطفل (0) عند آخر عدد منطوق به ([]) بالعدد وليس فقط الإشارة اليه (ة) ينبغي أن ينطق الطفل							
● عند انتهاء الوقت (ثانية 60) المحدد ● أخطاء 5 عند ارتكاب متتالية ➡ ● دون (ة) إذا توقف الطفل. ● ثوان 3 جواب لمدة (ة) إذا تجاوز الطفل سطرًا وجب تنبيهه بالرجوع اليه ● انتقل إلى الصفحة M2-B الموالية	1.	5	<u>6</u>		11.	<u>32</u>	23	
	2.	15	<u>20</u>		12	14	<u>17</u>	
	3.	<u>19</u>	8		13.	<u>96</u>	40	
	4.	50	<u>57</u>		1.	<u>42</u>	21	
	5.	<u>79</u>	76		15.	32	<u>36</u>	
	6	64	<u>69</u>		16	<u>3</u>	53	
	7.				17.	2	<u>0</u>	
	8.	<u>11</u>	10		18.	22	<u>25</u>	
	9.	45	<u>64</u>		1.	84	<u>97</u>	
	10.	<u>51</u>	35		20.	<u>29</u>	25	
	الوقت المتبقى على العداد 🕒							
	عدد المحاولات 🕒							
	عدد الأجوبة الصحيحة 🕒							

⌚ x	M3-C و M3-B و M3-A ورقة	مثال (متتالية أعداد): الأرقام المناسبة 3 المهمة
x	<p>لاحظ الأعداد التالية: أربعة، ستة، ثمانية، ما هو العدد المناسب (أشر إلى الفراغ) _</p> <p>صحيح عشرة نتابع. ✓</p> <p>هنا العدد هو عشرة. أحسب معي؛ (مع الإشارة إلى كل عدد على حدة)؛ أربعة، ستة، ثمانية، عشرة. إذن العدد _ x</p> <p>المناسب هو عشرة. نتابع.</p>	
	<p>لدينا الأعداد التالية: سبعة عشر؛ (أشر إلى الفراغ دون تلفظ)؛ تسعة عشر؛ عشرون؛... ما هو العدد المناسب (مع _</p> <p>الإشارة بالأصبع إلى الفراغ)</p> <p>صحيح ثمانية عشر نتابع. ✓</p> <p>هنا العدد هو ثمانية عشر؛ أحسب معي؛ (مع الإشارة إلى كل عدد على حدة)؛ سبعة عشر؛ ثمانية عشر؛ _ x</p> <p>تسعة عشر؛ عشرون؛ إذن العدد المناسب هو ثمانية عشر نتابع.</p>	

60 ثانية ⌚	M3-B و M3-C ورقة 📖	تمرين (متتالية أعداد)الأرقام المناسبة :3المهمة																				
<div>✋</div> <ul style="list-style-type: none">عند انتهاء الوقت المحدد (60 ثانية)عند ارتكاب 5 أخطاء متتالية <div>➡</div> <ul style="list-style-type: none">إذا توقف الطفل(ة) دون جواب لمدة 4 ثوان.إذا تجاوز الطفل(ة) سطرا وجب تنبيهه بالرجوع اليهانتقل إلى الصفحة الموالية من دفتر M3-C التلميذ(ة)	<p>M3-B هل فهمت ماذا ينبغي أن تفعل؟ نعم (اذهب إلى فيما يلي لدينا أسئلة أخرى من هذا النوع: لكل سؤال من كل سطر أوجد العدد المناسب وفي وقت وجيز ما أمكن.</p> <p>سأستعمل العداد وسأخبرك متى تبدأ ومتى تنتهي. عندما أقول إبدأ، أنظر إلى الأعداد و قل لي ما هو العدد المناسب . مستعد؟ إبدأ . (مع الإشارة إلى مجموعة أعداد السطر الأول).</p>																					
	<p>(/) غير صحيح أو بدون جواب</p> <p>الخطأ (ة)إحاطة العدد بدائرة إذا استدرك التلميذ (O)</p> <p>([]) عندد آخر عدد منطوق به</p> <p>القراءة تكون سطرا سطرا ومن اليسار إلى اليمين⇒</p>																					
	<table><tr><td>9,10, 11, <u>(12)</u></td><td>87, <u>(88)</u>, 89 90</td><td><u>(1)</u>, 2, 3, 4</td><td>20, 30, <u>(40)</u>, 50</td></tr><tr><td>97, <u>(98)</u>, 99, 100</td><td><u>(18)</u>, 19, 20, 21</td><td>6, 7, <u>(8)</u></td><td>4, <u>(5)</u>, 7</td></tr><tr><td>0, 10, <u>(20)</u>, 30</td><td>348, 349, <u>(350)</u>, 351 [قلب الصفحة]</td><td><u>(5)</u>, 10, 15, 20</td><td>122, 123, <u>(124)</u>, 125</td></tr><tr><td>2, <u>(4)</u>, 6, 8</td><td>57, 58, <u>(59)</u>, 60</td><td><u>(100)</u>, 200, 300, 400</td><td>298, 299, <u>(300)</u>, 301</td></tr><tr><td>18, <u>(19)</u>, 20, 21</td><td>40, 45, <u>(50)</u>, 55</td><td>68, 69, 70, <u>(71)</u></td><td>8, 9, <u>(10)</u>, 11</td></tr></table>	9,10, 11, <u>(12)</u>	87, <u>(88)</u> , 89 90	<u>(1)</u> , 2, 3, 4	20, 30, <u>(40)</u> , 50	97, <u>(98)</u> , 99, 100	<u>(18)</u> , 19, 20, 21	6, 7, <u>(8)</u>	4, <u>(5)</u> , 7	0, 10, <u>(20)</u> , 30	348, 349, <u>(350)</u> , 351 [قلب الصفحة]	<u>(5)</u> , 10, 15, 20	122, 123, <u>(124)</u> , 125	2, <u>(4)</u> , 6, 8	57, 58, <u>(59)</u> , 60	<u>(100)</u> , 200, 300, 400	298, 299, <u>(300)</u> , 301	18, <u>(19)</u> , 20, 21	40, 45, <u>(50)</u> , 55	68, 69, 70, <u>(71)</u>	8, 9, <u>(10)</u> , 11	
	9,10, 11, <u>(12)</u>	87, <u>(88)</u> , 89 90	<u>(1)</u> , 2, 3, 4	20, 30, <u>(40)</u> , 50																		
	97, <u>(98)</u> , 99, 100	<u>(18)</u> , 19, 20, 21	6, 7, <u>(8)</u>	4, <u>(5)</u> , 7																		
	0, 10, <u>(20)</u> , 30	348, 349, <u>(350)</u> , 351 [قلب الصفحة]	<u>(5)</u> , 10, 15, 20	122, 123, <u>(124)</u> , 125																		
2, <u>(4)</u> , 6, 8	57, 58, <u>(59)</u> , 60	<u>(100)</u> , 200, 300, 400	298, 299, <u>(300)</u> , 301																			
18, <u>(19)</u> , 20, 21	40, 45, <u>(50)</u> , 55	68, 69, 70, <u>(71)</u>	8, 9, <u>(10)</u> , 11																			
	الوقت المتبقى على العداد ✍																					
	عدد المحاولات ✍																					
	عدد الأجوبة الصحيحة ✍																					

🕒 x	📖 ورقة M4-A	المهمة 4: عملية الجمع - مثال
✋ x	<p>🧠 لدينا عملية الجمع التالية: ثلاثة زائد اثنان تساوي كم؟ يمكنك أن تتطرق بالنتيجة فقط ربعا للوقت</p> <p>$3+2=...$</p> <p>✓ 🧠 صحيح $3+2$ تساوي 5. نتابع</p> <p>x 🧠 هنا الإجابة هي: 5 . $3+2$ تساوي خمسة، نتابع.</p> <p>🧠 لدينا عملية جمع أخرى: $4+8$ كم تساوي</p> <p>✓ 🧠 صحيح $4+8$ تساوي 12.</p> <p>x 🧠 هنا الإجابة هي: 12 . $4+8$ تساوي اثنا عشر.</p>	

⌚ 60 ثانية	📖 ورقة M4-B و M4-C	المهمة 4: عملية الجمع - تمرين
<p>✋</p> <ul style="list-style-type: none"> عند انتهاء الوقت المحدد (60 ثانية) عند ارتكاب 5 أخطاء متتالية <p>➡</p> <ul style="list-style-type: none"> إذا توقف الطفل(ة) دون جواب لمدة 5 ثوان. إذا تجاوز الطفل(ة) سطرا وجب تنبيهه 	<p>🧠 هل فهمت ماذا ينبغي عليك أن تفعل؟ نعم (أنظر الصفحة: M4-B. مرر يدك من اليسار إلى اليمين) لدينا عمليات الجمع التالية المطلوب منك إيجاد الجواب الصحيح لكل منها. سأستعمل العداد وسأخبرك متى تبدأ ومتى تنتهي ، اوجد الجواب الصحيح وفي أسرع وقت ممكن. سنبدأ من هنا (مع الإشارة إلى العملية الأولى من ناحية اليسار). عندما ننتهي من عمليات السطر الأول ننتقل إلى السطر الموالي وهكذا دواليك. إذا لم تعرف الجواب ،انتقل إلى السؤال الموالي ربعا للوقت.</p> <p>🧠 مستعد؟ إبدأ.</p>	
		<p>✍ (/) غير صحيح أو بدون جواب</p> <p>(0) إحاطة العدد بدائرة إذا استدرك الطفل (ة) الخطأ</p> <p>() عند آخر عدد منطوق به</p> <p>➡ القراءة تكون سطرا سطرا ومن اليسار إلى اليمين</p>



بالرجوع اليه • انتقل إلى الصفحة الموالية M4-C من دفتر التلميذ(ة)	$4 + 2 = (6)$	$8 + 2 = (10)$	$8 + 6 = (14)$	$16 + 4 = (20)$	$7 + 1 = (8)$
	$5 + 4 = (9)$	$10 + 3 = (13)$	$10 + 10 = (20)$	$2 + (4)$	$5 + 7 = (12)$
	$6 + 6 = (12)$	$4 = (7)$	$6 + 2 = (8)$	$5 + 6 = (11)$	$15 + 5 = (20)$ [قلب الصفحة]
	$4 + 5 = (9)$	$7 + 2 = (9)$	$3 \ 9 = (12)$	$13 + 3 = (16)$	$1 + 5 = (6)$
	$5 + 5 = (10)$	$2 + 11 = (13)$	$3 + 2 = (5)$	$+ 4 = (10)$	$+ 10 = (16)$
	$10 + 5 = (15)$	$5 + 3 = (8)$	$7 + 3 = (10)$	$4 + 7 = (11)$	$11 + 9 = (20)$
الوقت المتبقى على العداد					
عدد المحاولات المنجزة					
عدد الإجابة الصحيحة					

x	المهمة 5: عملية الطرح - مثال لدينا عملية طرح أخرى: 6-4 كم تساوي ✓ صحيح 6-4 تساوي 2. x هنا الإجابة هي: 2 . 6-4 تساوي اثنان، نتابع. لدينا عملية الطرح التالية: خمسة عشر ناقص سبعة تساوي كم ؟ يمكنك أن تذكر النتيجة فقط ربعا للوقت. $15 - 7 = \dots$ ✓ صحيح 15-7 تساوي 8. نتابع x هنا الإجابة هي: 8 . 15-7 تساوي ثمانية .
x	ص: M5-A

60 ثانية ⌚	المهمة 5: عملية الطرح - تمرين	ورقة M5-B و M5-C
عند انتهاء الوقت المحدد (60 ثانية)	هل فهمت ماذا ينبغي عليك أن تفعل؟ نعم (أنظر الصفحة: M5-B. مرر يدك من اليسار إلى اليمين) لدينا عمليات الطرح التالية المطلوب منك إيجاد الجواب الصحيح لكل منها. سأستعمل العداد وسأخبرك متى تبدأ ومتى تنتهي ، اوجد الجواب الصحيح وفي أسرع وقت ممكن. سنبدأ من	

<p>هنا (مع الإشارة إلى العملية الأولى من ناحية اليسار). عندما ننتهي من عمليات السطر الأول ننتقل إلى السطر الموالي وهكذا دواليك. إذا لم تعرف الجواب ،انتقل إلى السؤال الموالي ربعا للوقت.</p> <p>• مستعد؟ إبدأ.</p>																															
<p>• عند ارتكاب 5 أخطاء متتالية</p> <p>➡</p> <p>• إذا توقف الطفل(ة) دون جواب لمدة 5 ثوانٍ.</p> <p>• إذا تجاوز الطفل(ة) سطرا وجب تنبيهه بالرجوع اليه</p> <p>• انتقل إلى الصفحة الموالية M5-C من دفتر التلميذ(ة)</p>	<p>(/) غير صحيح أو بدون جواب</p> <p>(0) إحاطة العدد بدائرة اذا استدرك الطفل(ة) الخطأ</p> <p>(1) عند آخر عدد منطوق به</p> <p>➡القراءة تكون سطرا سطرا ومن اليسار إلى</p> <table><tr><td>$6 - 2 = (4)$</td><td>$10 - 2 = (8)$</td><td>$14 - 6 = (8)$</td><td>$20 - 4 = (1)$</td><td>$- = (7)$</td></tr><tr><td>$9 - 4 = (5)$</td><td>$13 - (10)$</td><td>$20 - 10 = (10)$</td><td>$4 - 2 = (2)$</td><td>$12 - 7 = (5)$</td></tr><tr><td>$12 - 6 = (6)$</td><td>$7 - 4 = (3)$</td><td>$8 - 2 = (6)$</td><td>$11 - 6 = (5)$</td><td>$20 - 5 = (15)$ [قلب الصفحة]</td></tr><tr><td>$9 - 5 = (4)$</td><td>$9 - 2 = (7)$</td><td>$12 - 9 = (3)$</td><td>$16 - 3 = (13)$</td><td>$6 5 = (1)$</td></tr><tr><td>$10 - 5 = (5)$</td><td>$13 - 11 = (2)$</td><td>$5 - 2 = (3)$</td><td>$10 - 4 = (6)$</td><td>$16 - 10 = (6)$</td></tr><tr><td>$15 - 5 = (10)$</td><td>$8 - 3 = (5)$</td><td>$10 - 3 = (7)$</td><td>$11 - 7 = (4)$</td><td>$20 - 9 = (11)$</td></tr></table>	$6 - 2 = (4)$	$10 - 2 = (8)$	$14 - 6 = (8)$	$20 - 4 = (1)$	$- = (7)$	$9 - 4 = (5)$	$13 - (10)$	$20 - 10 = (10)$	$4 - 2 = (2)$	$12 - 7 = (5)$	$12 - 6 = (6)$	$7 - 4 = (3)$	$8 - 2 = (6)$	$11 - 6 = (5)$	$20 - 5 = (15)$ [قلب الصفحة]	$9 - 5 = (4)$	$9 - 2 = (7)$	$12 - 9 = (3)$	$16 - 3 = (13)$	$6 5 = (1)$	$10 - 5 = (5)$	$13 - 11 = (2)$	$5 - 2 = (3)$	$10 - 4 = (6)$	$16 - 10 = (6)$	$15 - 5 = (10)$	$8 - 3 = (5)$	$10 - 3 = (7)$	$11 - 7 = (4)$	$20 - 9 = (11)$
$6 - 2 = (4)$	$10 - 2 = (8)$	$14 - 6 = (8)$	$20 - 4 = (1)$	$- = (7)$																											
$9 - 4 = (5)$	$13 - (10)$	$20 - 10 = (10)$	$4 - 2 = (2)$	$12 - 7 = (5)$																											
$12 - 6 = (6)$	$7 - 4 = (3)$	$8 - 2 = (6)$	$11 - 6 = (5)$	$20 - 5 = (15)$ [قلب الصفحة]																											
$9 - 5 = (4)$	$9 - 2 = (7)$	$12 - 9 = (3)$	$16 - 3 = (13)$	$6 5 = (1)$																											
$10 - 5 = (5)$	$13 - 11 = (2)$	$5 - 2 = (3)$	$10 - 4 = (6)$	$16 - 10 = (6)$																											
$15 - 5 = (10)$	$8 - 3 = (5)$	$10 - 3 = (7)$	$11 - 7 = (4)$	$20 - 9 = (11)$																											
	<p>⌚ الوقت المتبقى على العداد</p>																														
	<p>⌚ عدد المحاولات المنجزة</p>																														
	<p>⌚ عدد الإجابة الصحيحة</p>																														

Annex C: SSME Instruments

 	
SSME - April 2011 MOROCCO	
CORE PRINCIPAL INTERVIEW ITEMS	
<p>تسمية</p> <p>اسم المدرسة HT1</p> <p>رقم EMIS : HT2</p> <p>(د) تعريف المدير : HT3</p> <p>(د) اسم الباحث HT4</p> <p>(د) رمز الباحث : HT5</p> <p>اسم مؤمن (د) الجودة HT6</p> <p>رمز مؤمن (د) الجودة HT7</p> <p>توقيع مؤمن (د) الجودة HT8</p>	
<p>وقت البداية</p> <p>(استمروا نظام 24 ساعة)</p>	HT9
<p>تاريخ الاستجواب</p> <p>ي ي ي ي ي ي</p>	HT10
<p>وضع الاستجواب</p> <p>1 مرفوض</p> <p>2 غير كامل</p> <p>3 كامل</p>	HT11
<p>هل تشغلون منصب مدير؟</p> <p>1</p> <p>هل تشغلون منصب مدير مساعد؟</p> <p>2</p>	HT12
<p>(هل المدير امرأة؟)</p> <p>0 لا</p> <p>1 نعم</p>	HT13
<p>ما هي أدميتكم كمدير أو مساعد مدير ؟</p> <p>عدد السنوات</p>	HT14
<p>ما هو أعلى مستوى دراسي أكاديمي لكم؟</p> <p>1 الثانوي</p> <p>2 الإجازة</p> <p>3 ماجستير أو شهادة أخرى</p> <p>4 شهادة أخرى؟</p> <p>888 لا يعلم / يرفض</p>	HT15
<p>هل تلقيتكم أي تكوين خاص حول كيفية تدبير مدرسة؟</p> <p>0 لا</p> <p>1 نعم</p> <p>إذا كان الجواب بنعم هل:</p> <p>1 خلال التكوين الأساسي</p> <p>1 التكوين المستمر</p> <p>888 لا يعلم / يرفض</p>	HT16
	HT16.01
	HT16.02


HT17	خلال الشهر الماضي كم من يوم تحذر عليكم الحضور إلى المدرسة ؟ عدد الأيام	
HT18	ما هي المستويات التي تدرس بهذه المدرسة [ضعوا علامة دائرة على جميع المستويات المذكورة]	
HT18.01	حضانة	1
HT18.02	الروض 1	1
HT18.03	المستوى 1	1
HT18.04	المستوى 2	1
HT18.05	المستوى 3	1
HT18.06	المستوى 4	1
HT18.07	المستوى 5	1
HT18.08	المستوى 6	1
888	لا أعلم / يرفض	
HT19	كم عدد الأيام التي توقفت الدراسة بهذه المدرسة خارج المصل؟ ولا يوم عدد الأيام لا أعلم / يرفض	0 888
HT20	في أي ساعة يبدأ اليوم الدراسي. لا أعلم / يرفض	AM/PM : 888
HT21	في أي ساعة ينتهي اليوم الدراسي. لا أعلم / يرفض	AM/PM : 888
HT22	ما هو العلاف الزمني اليومي لكل تلميذ ؟	
HT22.01	ساعات	
HT22.02	دقائق لا أعلم / يرفض	888
HT23	ما هو عدد التلاميذ ؟	
HT23.01	عدد الصبيان	
HT23.02	عدد الفتيات لا أعلم / يرفض	888
HT24	ما هو عدد المدرسين:	
HT24.01	عدد المدرسين	
HT24.02	عدد المدرسات لا أعلم / يرفض	888
HT25	كم كان عدد المدرسين المتخربين آخر يوم دراسي ؟ لا أعلم / يرفض	888
HT26	كم كان عدد المدرسين الذين حضروا متأخرين آخر يوم دراسي ؟ لا أعلم / يرفض	888
HT27	ماذا تفعل عندما يتخيب الأستاذ(ة) ؟ ترك التلاميذ في الفصل لوحدهم توزيع التلاميذ على باقي الحجرات تبحث عن أستاذ إحتياطي يتكلم المدير بحراستهم إرسال التلاميذ إلى منازلهم آخر لا أعلم / يرفض	1 2 3 4 5 6 888
	الآن، لتي بعض الأسئلة حول سجلات المدرسة	

0	لا	هل تقوم بتسجيل غياب الأساتذة ؟	HT28
1	نعم		
888	لا يعرف / يرفض		
مرؤا إلى الخالة HT30			
1	السجل غير متوفر للإطلاع عليه	إذا كان الجواب بنعم , هل يمكنني الإطلاع على بعض النماذج ؟	HT29
2	تم إملاء سجلات الحضور يوميا		
3	تم إملاء سجلات الحضور أسبوعيا		
4	تم إملاء سجلات الحضور كل أسبوعين		
5	تم إملاء سجلات الحضور شهريا		
6	آخر		
888	لا يعرف / يرفض		
0	لا	هل تطلعون على جذاذات الدروس؟ إذا كان الجواب بنعم بأية وتيرة ؟ هل تراقبونها ؟	HT30
1	نعم يوميا		
2	نعم مرة في الأسبوع		
3	نعم مرة كل شهر		
4	نعم مرة في الدورة		
5	نعم مرة في السنة		
888	لا يعلم / يرفض		
0	لا	هل تراقبون عمل الأساتذة في القسم ؟	HT31
1	نعم		
1	نعم يوميا		HT31.01
1	نعم مرة في الأسبوع		HT31.02
1	نعم مرة في الشهر		HT31.03
1	نعم مرة في الدورة		HT31.04
1	نعم مرة في السنة		HT31.05
888	لا يعرف / يرفض		
0	لا	كيف يمكنك التعرف أن كان تلاميذك يتقدمون أكاديميا؟	HT32
1	تتبع الفصل		HT32.01
1	تتبع نتائج الاختبارات التي يعدها الأساتذة		HT32.02
1	أقوم بنفسي بتقييم شفوي للتلاميذ		HT32.03
1	مراجعة الفروض المنزلية للتلاميذ		HT32.04
1	أتوصل من الأساتذة بتقارير حول تقدم التلاميذ		HT32.05
1	تقييمات آخر الدورة		HT32.06
1	آخر		HT32.07
888	لا يعرف / يرفض		
0	لا	في بداية هذه السنة, هل كانت المدرسة تتوفر على القدر الكافي من الكتب المدرسية لفائدة تلامذتكم, وفقا للسياسة الحالية للوزارة؟	HT33
1	نعم		
888	لا يعرف / يرفض		
0	لا	إذا الأمر غير ذلك, كم مضى من الوقت من السنة الدراسية قبل أن تتوصلوا الكتب المفقودة؟	HT34
1	لم أتوصل بها أبدا		
2	سنة واحدة		
3	ما بين 4 و 5 أشهر		
4	ما بين شهرين و3 أشهر		
5	شهر واحد		
888	لا يعرف / يرفض		
0	لا	هل تتوفر المدرسة على مكتبة؟	HT35
1	نعم		
888	لا يعرف / يرفض		

0	لا	هل يأخذ التلاميذ الكتب من المكتبة؟	HT36
1	نعم		
888	لا يعرف / يرفض		
1	شهرًا	ما هي وتيرة تردد التلاميذ على المكتبة ؟	HT37
2	أسبوعيًا		
3	يوميًا		
888	لا يعرف / يرفض		
0	لا	هل توجد بالمؤسسة جمعية آباء وأمهات التلاميذ ؟	HT38
1	نعم		
888	لا يعرف / يرفض		
0	لا مرة	إذا كان الجواب "نعم"، خلال هذه السنة كم مرة اجتمعت؟	HT39
1	مرة كل شهرين أو ثلاثة		
2	شهرًا		
3	أسبوعيًا		
888	لا يعرف / يرفض		
1	مناقشة مشاكل تسيير المدرسة	في أي مجال تتدخل الجمعية [ضعوا علامة دائرة على كل ما يمكن تطبيقه]	HT40
1	مناقشة مشاكل التلاميذ والحلول الممكنة		HT40.01
1	دراسة تقدم المجهودات من أجل تحسين عمل		HT40.02
1	مراجعة الوثائق المالية (الميزانية) للمدرسة		HT40.03
1	المصادقة على سياسة المدرسة		HT40.04
1	تدبير مرافق ومعدات المدرسة		HT40.05
1	مناقشة البرامج الدراسية		HT40.06
1	جمع الموارد والأموال		HT40.07
1	تسيير اتفاقيات شراء أو توزيع الكتب المدرسية		HT40.08
1	أمر آخر		HT40.09
888	لا يعرف / يرفض		HT40.10
0	لا	هل أنتم راضون على مساهمة الجمعية بالمؤسسة ؟	HT41
1	نعم		
888	لا يعرف / يرفض		
0	لا	منذ بداية السنة الدراسية، هل سبق لأي مفتش تربوي أن زاركم بالمدرسة استجابة لطلبكم؟	HT42
1	نعم		
888	لا يعرف / يرفض		
1	التحقق من توفر السجلات المالية للمدرسة	في أي من الأنشطة التالية شارك المفتش التربوي خلال زيارته؟	HT43
1	مراقبة سجلات حضور التلاميذ		HT43.01
1	مراقبة سجلات حضور الأساتذة		HT43.02
1	مراقبة الملفات الشخصية للأساتذة		HT43.03
1	مراقبة تقارير تقييم التلميذ		HT43.04
1	الجلوس في الفصل ومراقبة سير إحدى الحصص الدراسية		HT43.05
1	مراقبة الاختبارات الأخيرة للتلاميذ وطريقة التقييم		HT43.06
1	تقديم نصائح حول نظام وانضباط التلاميذ		HT43.07
1	منح نصائح حول تقييم التلاميذ		HT43.8
1	منح نصائح حول تسيير المدرسة للمدير		HT43.9
1	تقديم نصائح حول التدريس للمدرسين		HT43.10
1	تقديم معلومات حول المستندات المتعلقة بالبرامج الدراسية		HT43.11
1	تقديم معلومات حول إمكانيات التقدم مهنيًا		HT43.12
1	تقديم نصائح حول الممارسات بشأن نظافة المدرسة		HT43.13
1	لا يعرف / يرفض		HT43.14
888			

والآن أود أن أطرح عليكم بعض الأسئلة حول الأمن والأمان بالمدرسة

		خلال هذه السلة هل عاينتم من مشاكل أمنية؟ في حال الجابة بنعم، ما هي؟	HT44	
1	سرقة		HT44,01	
1	تخريب		HT44,02	
1	تلف عند الأطفال		HT44,03	
1	تلف عند العاملين بالمؤسسة		HT44,04	
888	لا يعرف / يرفض			
:			HT45	وقت انتهاء الاستجواب (استمروا نظام 24 ساعة)
مع جزيل الشكر				

 المملكة المغربية وزارة التربية الوطنية والتعليم العالي والتكوين المهني والتشغيل	Teacher instrument	 USAID DU PEUPLE AMERICAIN 
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الصف

م. 1: اسم المدرسة م. 2: رقم EMIS م. 3: رقم المدرس (ة) م. 4: اسم الباحث (ة) م. 5: رمز الباحث (ة) م. 6: اسم مؤمن (ة) الجودة م. 7: رمز مؤمن (ة) الجودة م. 8: توقيع مؤمن (ة) الجودة
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: _____	م 9 وقت البداية (استعملوا نظام 24 ساعة)
م 10 تاريخ الاستجواب	م 11 وضع الاستجواب
م 12 هل المدرس امرأة؟	م 13 ما هو أعلى مستوى دراسي أكاديمي لكم؟
م 14 هل لديكم شهادات مهنية؟ (مثلا: دبلوم في التدريس) إذا كان نعم، ما هو؟	م 15 هل تلقيتكم تكوينا خاصا حول كيفية تدريس القراءة؟
م 15.01 م 15.02	م 15.01 م 15.02

م 16	هل تلقيتكم أي تكوين خاص حول تدريس الرياضيات؟	لا 0 نعم 1 إذا كان الجواب نعم هل تكوين أساسي؟ 1 أم تكوين مستمر؟ 1 لا يحلم / يرفض 888	م 16.01 م 16.02
م 17	ما هو المستوى أو المستويات التي تدرسونها في هذا الفصل وفي هذه الفترة من السنة الدراسية؟ (ضعوا دائرة على جميع الأمور الواردة)	المستوى 1 1 المستوى 2 1 إذا كانت معلم المستوى الثاني كم من سنة تدرسون في هذا المستوى؟ المستوى 3 1 إذا كانت معلم المستوى الثالث، هل أنت مدرس اللغة: العربية؟ 1 الرياضيات؟ 1 أم هما معا؟ 1 إذا كانت معلم المستوى الثالث كم من سنة تدرسون في هذا المستوى؟ المستوى 4 1 المستوى 5 1 المستوى 6 1 لا يحلم / يرفض 888	17.01 17.02 17.03 17.04 17.05 17.06 17.07 17.08 17.09 17.10 17.11
م 18	هل تتوفرون على سجل حضور التلاميذ؟	لا 0 نعم 1 لا يحلم / يرفض 888	
م 19	هل يمكنني من فصلكم الاطلاع على سجل الحضور؟	السجل غير متوفر للاطلاع عليه 1 تم إملاء سجلات الحضور يوميا 2 تم إملاء سجلات الحضور أسبوعيا 3 تم إملاء سجلات الحضور كل أسبوعين 4 تم إملاء سجلات الحضور شهريا 5 غير ما سبق 6 لا يحلم / يرفض 888	
م 20	ما هو عدد التلاميذ في قسمكم؟	عدد التلاميذ مكررون لا يحلم / يرفض 888	م 20.01 م 20.02
م 21	متى حينت جدادة الدرس؟	نعم، مرة في الأسبوع 0 نعم، مرة في الشهر 1 نعم، مرة في السنة 2 نعم، مرة في سنتين 3 أكثر من سنتين 4 لا يحلم / يرفض 888	
م 22	هل تتعاونون مع آخرين في إعداد دروسكم؟ أنكرهم؟	لا 0 نعم 1 في حالة نعم هل مع: المدرسين؟ 1 المدير 1 آخرين 1 لا يحلم / يرفض 888	م 22.01 م 22.02 م 22.03

م 23	ما هي الوسائل ديداكتيكية التي تستعملها في العملية التعليمية؟	لا المقررات المدرسية دليل الأستاذ كتب، مجلات، جرائد وسائل عملية يومية وسائل الاعلام لا يعلم / يرفض	23.01 م 23.02 م 23.03 م 23.04 م 23.05 م 23.06 م
1..... 1..... 1..... 1..... 1..... 1..... 888.....			
م 24	في حالة حاجتكم للمساعدة في دروسكم، إلى من تتوجهون؟	لا أحتاج أبدا لأي مساعدة لا يوجد من أطلب منه المساعدة تنظيم اجتماعات مع المدرسين التحدث بصورة غير رسمية مع المدرسين المدير أطلب النصيح من المسؤول التربوي أو أخصائي في الموضوع لا يعلم / يرفض	24.01 م 24.02 م 24.03 م 24.04 م 24.05 م 24.06 م
1..... 1..... 1..... 1..... 1..... 1..... 888.....			
الآن: أود أن أطرح عليكم بعض الأسئلة حول ما قام به المسؤول التربوي خلال زيارته لمدرستكم؟			
م 25	ما هي الوثيرة التي يراقب بها المفتش عملية تدريسكم؟	أبدا نعم، مرة كل الشهر مرة في الدورة مرة في السنة مرة في السنتين أو أكثر لا يعلم / يرفض	
0..... 1..... 2..... 3..... 4..... 888.....			
م 26	حول أية مجالات قدم لكم المفتش النصائح؟	لم يأتي في حالة نعم : لم يعط نصائح ولكن قام بمراقبة إدارية قدم نصائح حول احترام التلاميذ قدم نصائح حول طريقة التقييم قدم نصائح حول طرق التدريس آخر ما هي؟ لا يعلم / يرفض	26.01 م 26.02 م 26.03 م 26.04 م 26.05 م
0..... 1..... 1..... 1..... 1..... 1..... 888.....			
م 27	كيف تقيسون تقدم التحلمات للتلميذ؟	اختبارات كتابية تقييمات شفوية ملفات ومشاريع أخرى فروض منزلية تقييم آخر الدورة آخر لا يعلم / يرفض	27.01 م 27.02 م 27.03 م 27.04 م 27.05 م 27.06 م
1..... 1..... 1..... 1..... 1..... 1..... 888.....			
م 28	كيف تستعملون نتائج عمليات التقييم الشفوي ؟	تتقبط التلاميذ تقييم فهم التلاميذ للموضوع تصميم أنشطة تعليمية تكيف الدروس للاستجابة أحسن لاحتياجات التلميذ آخر: لا يعلم / يرفض	28.01 م 28.02 م 28.03 م 28.04 م 28.05 م
1..... 1..... 1..... 1..... 1..... 1..... 888.....			

م 29	كيف تستعملون نتائج عملية التقييم الكتابية؟	1.....تنقيط التلاميذ 1.....تقييم فهم التلاميذ للموضوع 1.....تصميم أنشطة تعليمية 1.....تكثيف الدروس للاستجابة أحسن لاحتياجات التلميذ 1.....آخر: 888.....لا يعلم / يرفض	م 29.02 م 29.03 م 29.04 م 29.05
م 30	هل تعتقدون أن الآباء منخرطون في العمل التربوي؟	0.....لا 1.....نعم 888.....لا يعلم / يرفض	
الآن: أود أن أطرح عليكم بعض الأسئلة حول مرافق مدرستكم			
م 31	خلال هذه السنة، هل عانيتكم مشاكل أمنية؟ ماهي: هل هي:	1.....سرقة 2.....تخريب 3.....عنف ضد الأطفال 4.....عنف ضد عاملين بالمؤسسة 888.....لا يعلم / يرفض	
م 32	ساعة انتهاء العملية [استعملوا نظام 24 ساعة]	:	

مع جزيل

 المملكة المغربية وزارة التعليم العالي والبحث العلمي	 SSME January 2011 CORE STUDENT INTERVIEW ITEMS	
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الصف

	أ.ج.ف. 1: اسم المدرسة أ.ج.ف. 2: رقم EMIS أ.ج.ف. 3: رقم تعريف المدرس(ة) أ.ج.ف. 4: اسم الباحث(ة) أ.ج.ف. 5: رمز الباحث(ة) أ.ج.ف. 6: رمز مؤمن(ة) الجودة أ.ج.ف. 7: رمز مؤمن(ة) الجودة أ.ج.ف. 8: توقيع مؤمن(ة) الجودة
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<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>	S9 رقم صف التلميذ
: _____	S10 وقت الاستجواب
ي ي ش ش ت ت ن ن ن <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>	S11 تاريخ الاستجواب
1 مرفوض 2 غير كامل 3 كامل	S12 وضع الاستجواب
0 لا 1 نعم	S13 هل يتحقق الأمر بتلميذ؟
<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div>	S14 كم سنة؟
1 الدارجة 1 العربية 1 الأمازيغية 1 الفرنسية 1 آخر 888 لا يعرف / يرفض	S15 S 15,01 تداوية اللغات لتكلمها (تكلمها) بالمنزل في الغالب ؟ إذا كانت اللغة العربية S 15,02 المرجوا تحديد ما بين الدارجة و اللغة العربية. S 15,03 S 15,04 S 15,05
1 مستوى 1 2 مستوى 2 3 مستوى 3 4 مستوى 4 888 لا يعرف / يرفض	S16 فاش كتفرا (كتفراي)؟



1 مستوى 1	فأش كنتي العام اللي فات؟	S17
2 مستوى 2		
3 مستوى 3		
4 مستوى 4		
888 لا يعرف/ يرفض		
1 مشيا	بأية وسيلة تذهب (تذهبن) إلى المدرسة؟	S18
1 بالدراجة	أختر اجابة واحدة فقط	S18,01
1 استقل الحافلة		S18,02
1 بالسيارة		S18,03
1 وسيلة أخرى		S18,04
888 لا يعرف/ يرفض		S18,05
1 مشيا، لوحدي	من يرافقك؟	S 19
1 مشيا، برفقة والدي	أختر اجابة واحدة فقط	S 19,01
1 مشيا، برفقة زملائي		S 19,02
1 مشيا، برفقة شخص آخر		S 19,03
888 لا يعرف/ يرفض		S 19,04
0 لا	واتش عندك دفتر تمارين ؟	S20
1 في حالة نعم واتش يمكن ليا نشوفوا ؟		
العدد:	كم عدد الصفحات المملوءة؟	S20.1
العدد:	كم عدد الصفحات المصححة؟	S20.2
نظر (Vu)	ما هو نوع التفتيط ؟	S20.3
0 لا شيء	أش كيدير الأستاذ (ة) ملي كتجاوب مزيان؟	S21
1 يمدح عملي		
2 يعطيني هدية (لاصقة، قلم رصاص)		
3 يعطيني من عمل أو واجب منزلي		
4 آخر:		
888 لا يعرف/ يرفض		
0 لا شيء	أش كيدير الأستاذ ملي كتخطأ؟	S22
1 يصحح		
2 الأستاذ يوبخ التلميذ (ة)		
3 وسيلة أخرى		
888 لا يعرف/ يرفض		
0 لا	واتش كيعاونك شي واحد في إنجاز التمارين؟	S23
1 نعم		
888 لا يعرف/ يرفض		

S24	إذا كان الجواب بنعم من يساعذك؟	لا أحد 1 أخ / أخت 1 الأم / الأب 1 الجد / الجدة 1 شخص آخر: 1 لا يعرف/ يرفض 888
S24.01		
S24.02		
S24.03		
S24.04		
S24.05		
S25	واتن كليتي قبل ما جيتي للمدرسة ؟	لا 0 نعم 1 لا يعرف/ يرفض 888
S26	واتن كنتاكل في المدرسة ؟	لا 1 نعم 1 إذا كان الجواب نعم ماذا تاكل؟ في المطعم المدرسي 1 أحمل معي مأكولات 1 اشتري في عين المكان 1 آخر : 1 لا يعرف/ يرفض 888
S27	هل تخيبت عن المدرسة في الأسبوع الماضي؟ إذا كان الجواب "نعم"، ماذا كان سبب غيابك؟	لا 0 نعم، لأنني كنت مريضا 1 نعم، لأنني استيقظت متأخرا 2 نعم، لأنني لم أكن أتوفر على أكل 3 نعم، لأنني كنت في جنازة 4 نعم، بسبب يوم السوق أو الإعداد ليوم السوق 5 نعم، لأنه كان علي الاعتناء بإخوتي 6 نعم، لأنه كان علي الاعتناء بأحد أفراد عائلتي المريض 7 نعم، بسبب يحمل آخر بالمنزل 8 نعم، لم تكن هناك أي وسيلة للنقل 9 نعم، لأنني لم أكن أتوفر على البدلة المدرسية 10 الأستاذة أو الأطفال بالمدرسة 11 نعم، لأن المدرسة مخوفة بالخطر 12 نعم، لأن المدرسة مصعبة جدا 13 نعم، لأن المدرسة غير مهمة 14 نعم، بسبب سوء حالة الجو 15 سبب آخر: 16 لا يعرف/ يرفض 888
S28	في الأسبوع الماضي وفي الصباح، هل وصلت متأخرا إلى المدرسة ؟ إذا كان الجواب بنعم لماذا ؟	لا 0 نعم، لأنني كنت مريضا 1 نعم، لأنني استيقظت متأخرا 2 نعم، لأنه كان علي الاعتناء بإخوتي 3 نعم، لأنه كان علي الاعتناء بأحد أفراد عائلتي المريض 4 نعم، بسبب يحمل آخر بالمنزل 5 نعم، لم تكن هناك أي وسيلة للنقل أو تأخر النقل 6 نعم، لأنني لم أجد بدلة المدرسة أو البدلة لم تكن جاهزة 7 الأستاذة أو الأطفال بالمدرسة 8 نعم، بسبب سوء حالة الجو 9 سبب آخر: 10 لا يعرف/ يرفض 888

S29	هل ذهبت إلى مدرسة للتعليم الأولي أو روض للأطفال؟	لا نعم لا يعرف/ يرفض 888
S30	هل تعرف والتك القراء؟	لا نعم لا يعرف/ يرفض 888
S31	هل تعرف والتك القراء؟	لا نعم لا يعرف/ يرفض 888
S32	هل لديك كتاب اللغة العربية ؟ هل تستعمله في المنزل ؟	لا نعم إذا كان الجواب نعم، هل تستعمله في المنزل لا نعم لا لا يعرف/ يرفض 888
S32,01		
S33	هل لديك كراسة الرياضيات ؟	لا نعم إذا كان الجواب نعم، هل تستعملها بالمنزل؟ لا نعم لا لا يعرف/ يرفض 888
S33,01		
S34	هل لديك كتب، مجلات، جرائد، بالمنزل؟	لا نعم لا يعرف/ يرفض 888
S35	هل يطلب منك شخص آخر أن تقرأ بصوت عال؟	لا مرة بعض الأحيان مرة في الأسبوع مرات في الأسبوع 2-3 كل يوم لا يعرف/ يرفض 888
S36	هل هناك شخص يقرأ معك الكتب؟	لا بعض الأحيان مرة في الأسبوع مرات في الأسبوع 2-3 كل يوم لا يعرف/ يرفض 888

هل تتوفر عائلتك على :		S37
1	مرحاض خارجي	S37.01
1	مرحاض	S37.02
1	خفزة	S37.03
1	كهرياء أو ضوء	S37.04
1	كم عدد التلفرات لديك بالمنزل؟	S37.05
1	التلاجة	S37.06
1	آلة غسيل	S37.07
1	حاسوب	S37.08
1	الإنترنت	S37.09
1	سيارة	S37.10
888	لا يعرف/ يرفض	
هل تتوفر عائلتك على الماء ؟		
0	لا	S38
1	نعم (في حال الإجابة بنعم هل من)	
1	الصنوبر	S38,01
1	الحين	S38,02
1	خزان	S38,03
1	بئر	S38,04
1	آخر:	S38,05
888	لا يعرف/ يرفض	
مع من كنتعيش في الدار ؟		S39
1	الأم	S39,01
1	الأب	S39,02
1	الإخوة،	S39,03
1	كم عدد الذكور؟	S39,04
1	كم عدد الإناث؟	S39,05
1	ما هو ترتيبك العائلي (الرقم)؟	S39,06
1	الأجداد	S39,07
1	آخر	S39,08
888	لا يعرف/ يرفض	
هل تقوم بأشغال خارج أوقات الدراسة ؟		S40
0	لا	
1	نعم	
1	في حال الإجابة بنعم هل	
1	أشغال البيت	S40.01
1	العمل في الحقل	S40.02
1	شراء مستلزمات البيت	S40.03
888	لا يعرف/ يرفض	
النتهاء الاستجواب (استعملوا نظام 24 ساعة)		S41

مع جزيل الشكر

 المملكة المغربية وزارة التربية الوطنية والتعليم العالي وتنسيق الأقاليم والبحث العلمي	 USAID DU PEUPLE AMERICAIN	SSME April 2011 MOROCCO CORE PARENT INTERVIEW ITEMS
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تسمية

أ.ج.ف. 1: اسم المدرسة أ.ج.ف. 2: رقم EMIS أ.ج.ف. 3: رقم تعريف المدرس(ة) أ.ج.ف. 4: اسم الباحث(ة) أ.ج.ف. 5: رمز الباحث(ة) أ.ج.ف. 6: رمز مؤمن(ة) الجودة أ.ج.ف. 7: رمز مؤمن(ة) الجودة أ.ج.ف. 8: توقيع مؤمن(ة) الجودة	
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: _____	P9 وقت البداية (استعملوا نظام 24 ساعة)						
تاريخ الاستجواب ي ي ش ش ش ش ش <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>							P10 تاريخ الاستجواب
مرفوض غير كامل كامل 1 2 3	P11 وضع الاستجواب						
لا نعم 0 1	P12 هل يتلقى الأمر بسيدة مستجيبة						
لا اشكروا الأب/الأم وانتهوا الاستجواب نعم 0 1	P13 واث عندك تلمي أولاد تقرأ في هذا المدرسة ؟						
غادي نسولوكم عليهم :							
ساعة دقيقة <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>			P14 تحال ديال الوقت كيدير أولدكم أولا بنتكم إلى المدرسة؟				
لا في حالة لا المرجوا الانتقال إلى خانة 17 نعم لا يعرف/ يرفض في حالة لا المرجوا الانتقال إلى خانة 17 0 1 888	P15 واث كينا جمعية آباء و أولياء التلاميذ في هذه المدرسة؟						

P16	واتس الجمعية مساهمات في تحسين المدرسة؟	لا 0 نعم 1 لا يعرف/ يرفض 888
P17	واتس كتوصلوا بنتائج أبنائكم؟	لا 0 نعم 1 لا يعرف/ يرفض 888
P18	واتس قايت منكم تلافيتو بأستاذ ديال أبنائكم هذه السنة الدراسية؟ أش كان لموضوع اللي ناقشتوا؟	لا 0 نعم 1 في حالة نعم لماذا؟ لا يعرف/ يرفض 888
P19	علائش كيتخيروا أبنائكم ؟	المرض 0 عدم الاستيقاظ في الصباح الباكر 1 عدم توفر الأكل 2 جنازة 3 يوم السوق أو الإعداد للسوق 4 الاعتناء بالإخوة 5 الاعتناء بفرد مريض من الأسرة 6 أعمال أخرى بالمنزل 7 مشاكل متعلقة بالنقل 8 حالة الجو 9 البدلة المدرسية غير جاهزة 10 عدم الرغبة في الذهاب إلى المدرسة 11 سبب آخر 12 لا يعرف/ يرفض 888
P20	واتس كاين شي حد كيتخدا على ولدك أو بنتك في هذه السنة الدراسية؟	لا 0 نعم 1 في حالة نعم هل في المدرسة : 1 أم في الطريق للمدرسة : 1 لا يعرف/ يرفض 888
P21	وقت الانتهاء (استعملوا نظام 24 ساعة)	:

مع جزيل الشكر



المملكة المغربية
وزارة التربية الوطنية
والتعليم العالي
وتكوين الأطر
والبحث العلمي

SSME April 2011

SCHOOL OBSERVATION INSTRUMENT

Label	
	<p>أ.ج.ف.1: اسم المدرسة</p> <p>أ.ج.ف.2: رقم EMIS</p> <p>أ.ج.ف.3: اسم الباحث(ة)</p> <p>أ.ج.ف.4: رمز الباحث(ة)</p> <p>أ.ج.ف.5: رمز مؤمن(ة) الجودة</p> <p>أ.ج.ف.6: رمز مؤمن(ة) الجودة</p> <p>أ.ج.ف.7: توقيع مؤمن(ة) الجودة</p>
: _____	وقت البداية
Date of Interview ي ي ي ي ي ي [][][][][][]	تاريخ الاستجواب
1 2 3	وضع الاستجواب مرفوض غير كامل كامل
0 1	هل بنايات وأرض المدرسة نظيفة ونقية؟ لا نعم
0 1	هل هناك إصلاحات كبرى ؟ لا نعم
0 1 2	هل تتوفر المدرسة على الكهرباء؟ إذا كان الجواب بالإيجاب، هل الكهرباء مشغلة اليوم؟ لا نعم، ولكن غير مشغلة اليوم نعم، وهي مشغلة اليوم
0 1 2 3 4	ما هي موارد الماء الصالح للشرب التي تتوفر عليها المدرسة؟ لا توجد أي موارد ماء البئر مضخة يدوية ماء الصنبور ماء المطر في البراميل / الخزان
0 1	هل موارد الماء الصالح للشرب مشغلة؟ (يعني هل الماء الصالح للشرب متوفر خلال زيارتكم؟) لا نعم

SO16	كم عدد المراحل المستعملة؟ (مراحل في حالة استعمال هو المراحل الصالح للاستعمال؛ إذا كان المراحل يستعمل بنظام الدافق، هل الدافق في حالة استعمال؟)	عدد المراحل إذا كان عدد المراحل هو صفر، مروا للخانة SO19	<input type="text"/>
SO17	من بين المراحل المستعملة، كم منها مخصصة للفتيات (إن وُجدن)؟	عدد المراحل	<input type="text"/>
SO18	هل المراحل نظيفة؟	لا، بالمرءة إلى حد ما نظيفة جدا	0 1 2
SO19	هل هناك مكتبة بالمدرسة؟ إذا كان الجواب بنعم، هل كان التلاميذ يستعملونها وقت زيارتهم؟	لا، توجد مكتبة نعم، ولكن لا يستعملها التلاميذ نعم، ويستعملها التلاميذ	0 1 2
SO20	هل هناك هاتف ثابت صالح للاستعمال ؟	لا نعم	0 1
SO21	هل هناك ساحة للعب؟	نعم لا	1 0
SO22	هل هناك ملاعب رياضية ؟	نعم لا	1 0
SO23	هل المدرسة مسيجة ؟	كلها جزءيا لا يوجد	1 2 3
SO24	هل هناك ملصقات في فضاء المدرسة تحمل أخبارا إدارية ومهنية مفيدة؟	لا نعم	0 1
SO25	هل تتوفر المدرسة على قاعة متعددة الرسائل؟	لا في حالة الإجابة بلا مروا إلى السؤال 29 نعم	0 1
SO26	كم عدد الحراسب	العدد :	<input type="text"/>
SO27	كم عدد الحراسب التي تحمل و المجهزة ببرنماجات تربوية؟	العدد :	<input type="text"/>
SO28	ما هو عدد التلاميذ بالقاعات متعددة الوسائط ؟	إناث : ذكور :	<input type="text"/>
SO29	تاريخ انتهاء الاستجواب [استعملوا نظام 24 ساعة]	:	<input type="text"/>

مراقبة الفصل – القراءة في الأقسام الأولى (م.ف.ق)**Classroom Observation – Early Grade Reading**

م.ف.ق 1: اسم المدرسة
م.ف.ق 2: رقم EMIS
م.ف.ق 3: رمز رقم المدرس
م.ف.ق 4: اسم الباحث(ة)
م.ف.ق 5: رمز الباحث(ة)
م.ف.ق 6: رمز مؤمن الجودة
م.ف.ق 7: رمز مؤمن الجودة
م.ف.ق 8: توقيع مؤمن الجودة

يتعين ملء استمارة المراقبة داخل الفصل خلال حصّة القراءة. إذا ذكر المدرس أنه لا توجد حصّة مستقلة للقراءة، اطلبوا أن تقوم بعملية المراقبة على درس يركز على مادة القراءة.

لدى وصولكم للفصل، اجلسوا على كرسي بالخلف وحاولوا ألا تقاطعوا أو تزعجوا سير الدرس.

املئوا جدول المراقبة كل 3 دقائق، أشيروا للنقطة التي يركز عليها المدرس ومحتوى الدرس ونشاط المدرس والتلاميذ والمادة التي يستعملها المدرس وقت المراقبة. في الفقرتين "أ" و "ب"، أشيروا للنقطة التي يركز عليها الأستاذ ومحتوى الدرس بوضع علامة "X" بجانب المادة موضوع المراقبة. في الفقرتين "ج" و "د"، أشيروا لنشاط الأستاذ والتلاميذ واللغة المستعملة بوضع رمز اللغة المناسب بجانب النشاط موضوع المراقبة. في الفقرة "هـ"، أشيروا للمادة واللغة المستعملتين بوضع رمز اللغة المناسب بجانب المادة موضوع المراقبة وقت المراقبة.

مراقبة رقم:									
10	9	8	7	6	5	4	3	2	1
وقت بداية عملية المراقبة									

(أ) النقطة التي يركز عليها المدرس (علامة x واحدة فقط)

(ب) محتوى تعليمي: (x)

القسم بأكمله	COR9
مجموعة صغيرة	COR10
تلميذ(ة) واحد(ة)	COR11
شيء آخر / لا يركز على التلاميذ	COR12
الأستاذ غير موجود بقاعة الدرس	COR13

(ج) نشاط المدرس (اللغة)

الأصوات غير مكتوبة	COR14
الحروف / الأصوات	COR15
قراءة المفردات	COR16
قراءة الجمل	COR17
مفردات اللغة (معاني الكلمات)	COR18
الكتابة / الإملاء	COR19
قراءة النص	COR20
القراءة والفهم _ النص	COR21
الكتابة - إبداع النصوص	COR22
شيء آخر أو لا أعلم	COR23

(د) نشاط التلاميذ (اللغة)

القراءة بصوت عال	COR24
الكتابة	COR25
التشرح	COR26
الكلام	COR27
الاستماع للتلميذ أو التلاميذ	COR28
نتيجة للتلميذ أو التلاميذ	COR29
طرح سؤال	COR30

(هـ) الأدوات المستعملة (اللغة)

القراءة الجماعية	COR31
القراءة الفردية بصوت عال	COR32
القراءة في صمت	COR33
الكتابة على الورقة أو اللوحة الفردية (لوحة الطباشير)	COR34
الكتابة على السبورة	COR35
الاستماع للأستاذ/ النظر إلى الأستاذ	COR36
الإعادة / التلاوة	COR37
شيء آخر (مشاريع، لعب، إلخ...)	COR38
عدم التركيز (الكلام، النوم، اللعب)	COR39
طرح سؤال	COR40
إجابة على سؤال	COR41

السبورة	COR42
الكتاب المدرسي	COR43
كتاب آخر	COR44
أوراق (أوراق التمارين أو النسخ)	COR45
البطاقات التعليمية	COR46
الملصقات / الخرائط الحائطية	COR47
اللوحات	COR48
كراسات التلاميذ	COR49
أدوات أخرى	COR50

مراقبة الفصل – الرياضيات في الأقسام الأولىClassroom Observation – Early Grade Mathematics


اسم المدرسة:	COM1
اسم EMIS	COM2
رمز رقم المدرس	COM3
اسم الباحث (ة)	COM4
رمز الباحث (ة)	COM5
رمز مؤمن الجودة	COM6
رمز مؤمن الجودة	COM7
توقيع مؤمن الجودة	COM8

يُتَعيَّن ملء استمارة المراقبة داخل الفصل خلال حصّة الرياضيات. إذا ذكر المدرس أنه لا توجد حصّة مستقلة للرياضيات، اطلبوا أن تقوموا بعملية المراقبة على درس يركّز على مادة الرياضيات.


لدى وصولكم للفصل، اجلسوا على كرسي بالخلف وحاولوا ألا تقاطعوا أو تزعجوا سير الدرس.

املأوا جدول المراقبة كل 3 دقائق، أشيروا للنقطة التي يركّز عليها المدرس ومحتوى الدرس ونشاط المدرس والتلاميذ والمادة التي يستعملها المدرس وقت المراقبة. في الفقرتين "أ" و "ب"، أشيروا للنقطة التي يركّز عليها الأستاذ ومحتوى الدرس بوضع علامة "x" بجانب المادة موضوع المراقبة. في الفقرتين "ج" و "د"، أشيروا لنشاط الأستاذ والتلاميذ واللغة المستعملة بوضع رمز اللغة المناسب بجانب النشاط موضوع المراقبة. في الفقرة "هـ"، أشيروا للمادة واللغة المستعملتين بوضع رمز اللغة المناسب بجانب المادة موضوع المراقبة وقت المراقبة.

							صور على الحائط	COM55
							معينات ديدانتيكية خاصة بالحساب)	COM56
							الأعمال اليدوية : علم الهندسة	COM57
							الالواح	COM58
							دفاتر التلاميذ	COM59
							مسطرة	COM60
							بركار	COM61
							منقلة	COM62
							كوس	COM63
							جدول الضرب / الجمع	COM64
							الترصيف و التصفيف	COM65
							مقارنة الاعداد	COM66
							مكعب عددي	COM67
							أدوات أخرى	COM68



الجمهورية المغربية
العلمانية والديمقراطية
الحرية والعدالة



SSME April 2011

أداة جرد الفصل CLASSROOM INVENTORY INSTRUMENT

الصف

أ.ج.ف. 1: اسم المدرسة

أ.ج.ف. 2: رقم EMIS

أ.ج.ف. 3: رقم تعريف المدرس (س)

أ.ج.ف. 4: اسم الباحث (س)

أ.ج.ف. 5: رمز الباحث (س)

أ.ج.ف. 6: رمز مؤمن (س) الجودة

أ.ج.ف. 7: رمز مؤمن (س) الجودة

أ.ج.ف. 8: توقيع مؤمن (س) الجودة

:		أ.ج.ف. 9 وقت البداية
تاريخ الاستجواب ي ي ي ي ي ي ي ي		أ.ج.ف. 10 تاريخ الاستجواب
[][]		أ.ج.ف. 11 ما هو عدد الأقسام المشغلة حاليا ؟
[][]		أ.ج.ف. 12 ما هو عدد الأقسام التي يفترض أن تشغل الآن ؟
[][]	صبيان	أ.ج.ف. 13 كم عدد الصبيان الحاضرين في الفصل وقت المراقبة التي تقومون بها؟ [مطلوب من جميع الصبيان أن يبقوا وحسبوا عددهم]
[][]	فتيات	أ.ج.ف. 14 كم عدد الفتيات الحاضرات في الفصل وقت المراقبة التي تقومون بها؟ [مطلوب من جميع الفتيات أن يقفن وحسبوا عددهن]
أ.ج.ف. 15 من أجل تحديد عدد الكتب المدرسية المتوفرة ، الرجاء أن تملأوا من كل تلميذ أن يتناول في يده كتاب اللغة العربية (إذا دعت الضرورة، املأوا أن يتم إخراج كتب الدرس من خزانة الفصل وتوزيعه "كالمادة" على الأطفال).		
[][]		أ.ج.ف. 16 الرجاء أن تملأوا من كل تلميذ أن يتناول في يده كتاب الرياضيات ويرفعه في الهواء (إذا دعت الضرورة، املأوا أن يتم إخراج كتب درس الرياضيات من خزانة الفصل وتوزيعه "كالمادة" على الأطفال).
[][]		أ.ج.ف. 17 الأدوات [املأوا من كل تلميذ أن يتناول في يده كل صنف من الأدوات الواحد بعد الآخر]:
[][]		أ.ج.ف. 17,01 عدد الأطفال الذين يتوفرون على كتاب للتمارين.
[][]		أ.ج.ف. 17,02 عدد الأطفال الذين يتوفرون على قلم جاف / قلم الرصاص.

أ.ج.ف.18 هل يتوفر المدرس على الأدوات والمواد التالية؟ [ضع علامة دائرة على جميع الأدوات التي يتوفر عليها المدرس]	
أ.ج.ف.18,01 أ.ج.ف.18,02 أ.ج.ف.18,03 أ.ج.ف.18,04 أ.ج.ف.18,05 أ.ج.ف.18,06	سبورة سوداء / سبورة بيضاء طباشير / أقلام خاصة بالسبورة البيضاء قلم / قلم الرصاص منكرة دليل الأستاذ في اللغة العربية دليل الأستاذ في الرياضيات
أ.ج.ف.19 هل هناك كتب/كتيبات أخرى متوفرة وسهلة المزال (ليست موضوعة في مكان مغلق)؟	غير موجودة عددها ما بين 4-1 عددها ما بين 5-9 عددها ما بين 10-19 عددها ما بين 20-39 عددها يزيد عن 40
أ.ج.ف.20 هل توجد ملصقات على الحائط؟	لا نعم
أ.ج.ف.21 هل أعمال التلاميذ معلقة على الحائط؟	لا نعم
أ.ج.ف.22 أتيروا لمعدات الأثاث المتوفرة للتلاميذ.	لا مكتب ولا طاولات توجد طاولات ولا توجد مكاتب توجد طاولات ومكاتب
أ.ج.ف.23 أتيروا للمكتب أو موقع الطاولات في هذا الفصل.	في صفوف في مجموعات صغيرة في شكل دائرة شكل آخر
أ.ج.ف.24	وقت انتهاء العملية (استعملوا نظام 24 ساعة) :