



EdData II

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Research on Reading in Morocco: Analysis of the National Education Curriculum and Textbooks (Component 1)

Final Report

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Final Report

Prepared for

Christine Capacci-Carneal, Senior Education Advisor, Middle East Bureau
Mitch Kirby, Senior Education Advisor, Asia Bureau
Contracting Officer's Technical Representative
Data for Education Programming/Asia and Middle East
USAID / Washington
1300 Pennsylvania Avenue NW
Washington, DC 20523

Prepared by

RTI International
3040 E. Cornwallis Road
Post Office Box 12194
Research Triangle Park, NC 27709-2194
and
Al Akhawayn University in Ifrane
Avenue Hassan II, Ifrane 53000, Morocco

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Preface

Morocco is a country with unique cultural and linguistic assets thanks to its historical influences and to its geographical position at the crossroads of sub-Saharan Africa, North Africa, and Europe and its proximity to the Middle East. The official language of the country is Arabic (known as “classical Arabic” or “modern standard Arabic” [MSA]) while native and community languages used by most children are either a Moroccan version of colloquial Arabic (Darija) or one of the Amazigh languages and its regional variations, such as Tamazight, which is spoken in central Morocco (the Middle Atlas, large parts of the High Atlas, and the south east of Morocco), Tarifiyt in the North, and Tashelhiyt in the northern slopes of the High-Atlas, south of the Anti-Atlas, and in the Sous area bordering the Atlantic Ocean. Wherever it is spoken, Arabic is characterized by “diglossia,” that is to say, the co-presence of two language variations, one that is used in formal education and is codified, and another that is used in regular exchanges in everyday life. In Morocco, MSA is used in the school and governmental offices, while Darija is the local variation, largely limited to oral expression with no written codification.¹ Darija is constantly evolving under the influence of borrowings from Amazigh, French, Spanish, etc. Even within Morocco, Darija can vary from one region to another. As many words of Darija are identical to MSA, it is not considered a separate language, but this does not mean that the two languages are mutually intelligible. An individual who has never been to school and only speaks Darija at home will hardly understand MSA.² However, for an educated person, the two varieties, colloquial and MSA, are not seen as two separate languages; Arabic dialects and MSA interact with each other and are complementary to the extent that they build a multifunctional linguistic continuum.³

Amazigh, on the other hand, has become a codified written language since 2003 and uses Tifinagh as its own alphabet. In 2011 Amazigh was recognized by the Constitution as an official language of Morocco in addition to Arabic, and the methods of its integration in government offices and society are still being negotiated.

The National Charter for Education and Training (CNEF), introduced in 2000, aims to achieve three objectives:

- Primary education for all and improved education in quality and performance
- Reformed educational system
- Modernized educational system

¹ On the other hand, more recently the use of new technologies—especially SMS and online discussion forums or social networks—has spurred the codification of Darija phonetically, using the Latin alphabet, with the use of numbers for phonemes that don’t exist in that alphabet; for example: “fus7a”, where the number 7 represents a version of the phoneme /h/[ح].

² FHI360 (2013). Mapping for reading best practices: Moroccan organizations improving reading skills in and out of school. Draft Report. Report prepared for USAID/Morocco.

³ Chekayri, 2013: 151

However, as the end of the decade approached, in 2009, the Government of Morocco was forced to put in place a national emergency program to attain the above objectives. This program extended the deadline for achievement of the objectives to 2015 and added one more objective: The eradication of illiteracy. Moroccan children start primary education at the age of 6 years old. Primary school runs for six years, followed by three years of secondary education until the age of 15. The standard Arabic (MSA⁴) is the official teaching language starting from the first grade. In Morocco, French is still used in public life, and is considered the mother tongue of some Moroccans. It is introduced from an early age as a teaching language in some preschools. The CNEF recommended access to education for all school-age children and delivery of quality educational services. The Charter granted fundamental importance to learning reading skills in preschool:

... activities to get started on learning reading and writing skills in Arabic, particularly through having good command of spoken Arabic, and relying on mother tongues. (Article 63, p 33)

If the drop-out rate at the primary level is still estimated at 38 percent,⁵ this is partly due to difficulties caused by languages of instruction, low initial teacher training, and high rates of teacher absenteeism.⁶ According to the data obtained from the evaluation of the Emergency Education Program, lack of schooling is mainly due to cost, accessibility, and family problems; however, the implementation of a student monitoring system was successful in reducing repetition rates.⁷ The quality of education is also an important factor in whether a child stays in school.

Learning to read is the key to academic success. Reading, writing, and arithmetic skills constitute the basis of all future student achievement. Academic success is furthermore associated with other economic advantages that will benefit the individual and the country. However, Morocco is losing this advantage because of the lack of quality learning for all children in the first school years. In 2007, the Progress in International Reading Literacy Study (PIRLS) report ranked Morocco in second-to-last place among the participating countries, with a score of 323 compared to an average of 500 in other countries. The same report showed that 74 percent of students do not reach the minimum threshold required to develop their reading skills. The 2011 report shows

⁴ Throughout this report, the term “Arabic” may be understood to refer to MSA, whereas “Darija” is used when referring specifically to the variation spoken in Morocco.

⁵ UNICEF, At a glance: Morocco. Retrieved August 8, 2014, from http://www.unicef.org/infobycountry/morocco_2238.html

⁶ FHI360. (2013).

⁷ SOFRECO (2013). Evaluation de mesures et de stratégies mises en œuvre dans le cadre du programme d’urgence pour l’éducation au Maroc [Evaluation of strategic measures put in under the Emergency Education Program of Morocco]. Rapport Final [Final Report]

an even lower result, with Morocco having dropped to 310 in the field of reading.⁸ This downward trend in the level of reading of Moroccan students was observed between 2003 and 2011 for secondary education as well.

Similarly, the 2008 reading assessments, done by the National Center for Evaluation and Testing (CNEE) (now the National Center for Evaluation, Testing, and Guidance [CNEEO] after inclusion of guidance [the National Program for Educational Achievement Testing (PNEA) program]) in collaboration with the Higher Council on Teaching (CSE), produced the following results, in rate of correct answers, and further validated the conclusion that reading skills are low in Morocco in the early years. Table 1 provides the results

Table 1. CNEE Reading Assessment Rate of Correct Answers

Language	Primary Grade 2	Primary Grade 3
Arabic	32%	43%
French	31%	33%

Source: CSE, 2008

Finally, in 2011, the United States Agency for International Development (USAID) funded an evaluation conducted by RTI,⁹ an early grade reading assessment (EGRA), in the region of Doukkala Abda, using an oral methodology that gives accurate and reliable results. The EGRA¹⁰ showed that only 34 percent of students in the second and third years of primary school could read well a text adapted to their level in Arabic and fully understand its meaning. A large share of boys as well as girls could not give the names of the letters of the alphabet or read simple words; 33 percent of second grade students and 17 percent of third grade students could not read a single word of the text (these students are called “non- readers”). Only 2.5 percent of the surveyed students correctly answered 5 out of 6 questions on comprehension. The assessment showed that the factors that affect students’ performance are multiple and complex:

- Lack of teacher training: Studies have shown that Moroccan teachers receive little or no specialized training in reading instruction and the assessment of students’ reading skills, leaving them ill equipped to enable students to succeed in the first years of primary school.
- Lack of supplementary reading materials: Without these materials for all students and the school, the global learning environment is greatly limited.

⁸ PIRLS (2011) *Reading Achievement*. <http://timssandpirls.bc.edu/data-release-2011/pdf/Overview-TIMSS-and-PIRLS-2011-Achievement.pdf>

⁹ See www.eddataglobal.org

¹⁰ RTI International (2011). *Student performance in reading and mathematics, pedagogic practice, and school management in Doukkala Abda, Morocco*. Report prepared for USAID under EdDataII.

- Lack of reading materials at home: Few children have the chance to read outside the school. Only 9.5 percent of students answered that they do use their textbooks at home or read every day at home. Over 52 percent of students reported that they never read aloud at home, and only 32 percent do so “sometimes.”
- Lack of parental involvement in student and school achievements: Parents meet with teachers at least once a year, but the majority of teachers believe parental involvement is insufficient.
- Diversity of languages: The linguistic context of Morocco further complicates the learning environment.

Within this framework, USAID and the Ministry of National Education and Vocational Training (MENFP) decided in early 2013 to scrutinize some of the factors that promote or hinder the acquisition of reading in Arabic in the early years, through three components of a broad study, namely:

- A review of curriculum and learning materials (textbooks, teachers’ guidebook, etc.)
- An analysis of initial teacher training and reading instruction
- An analysis of the perceptions and attitudes of teachers and how they influence practice

The question of reading improvement has not always been overlooked, but deserves to be discussed more deeply. Here are some direct and indirect examples of previous activities:

- The promotion of reading in primary schools in rural areas under the BAJ (Barnamaj alaoulaouiat alijtimaia) or Social Priorities Program. Several buses were purchased and equipped as libraries, with books, comics, textbooks, dictionaries, etc. These bus libraries were supplied in the 14 provinces covered by BAJ. The main objective was to bring the information center to students and enable them to access various sources of reading.
- A pilot project launched in five provinces, consisting of a project on workshops for reading. The pilot aimed to make reading material available to students and to teach them to read in conditions different from those in the classroom.
- School theater activities, organized in all schools, allowing students to play and learn from texts. Students were motivated to represent their schools at provincial, regional, and national level events (Directorate of Technical Education and School Life [DETVS]/ MENFP).
- The Emergency Education Program recommended the establishment of a system that would allow personalized tracking of students and would provide support to students encountering troubles. This system aimed to reduce school dropout and repetition. The Emergency Education Program, through the “million schoolbags operation” distributed school kits with textbooks (recycled), pens, slates, etc.
- Recently, MENFP introduced new modules of reading at secondary schools as part of USAID’s Improving Training for Quality Advancement in National Education (ITQANE) project.

In addition to these experiences, there are other initiatives that have been launched by socioeconomic entities and civil society organizations. However, these initiatives are still conducted on a small scale without being generalized or supported, and most initiatives have targeted literacy among older individuals or improving remedial skills of students. Teaching the basic elements of reading seems to remain the responsibility of preschool, for which there is a curriculum and a teacher's guide. However, access to preschool education, depending largely on private initiative, is limited and not universal. For the year 2012–2013, the gross rate of enrollment in preschool was 60 percent in all types of preschool institutions (traditional, modern, public).¹¹ It is within the context of this movement aimed at promoting reading in schools initiated by these different studies and actions, that USAID and the MENFP have launched this broad study. This component concerns the second topic, analyzing the contribution of preservice teacher training in preparing teachers to teach reading in Arabic.

Textbook analysis. This analysis is based on a set of criteria designed to answer the following research questions:

- Do the textbooks reflect the evolution in academic research related to reading instruction?
- Is reading being taught explicitly or implicitly in the pedagogical guide and the textbook?
- What are the criteria that may improve the quality of the Arabic language textbook in primary education?

These questions are further guided by the answers to more specific questions, such as:

- What are the general characteristics of a good reading textbook and the quality control criteria they should meet (and subsequently, the criteria used to assess and analyze the textbook)?
- Is improving the quality of the textbook enough to make the student acquire the tools of reading—and make the student an independent reader?
- Is it possible to improve reading competency in the absence of strong initial teacher training in this regard?

With this in mind, the textbook analysis represents the practical application of the pedagogical curriculum and the basis for the content to be taught. The textbook is a key tool for enabling children to acquire the objectives of the Arabic language curriculum.¹² For this reason, the analysis of the textbooks is a first step towards being able to improve them as a teaching and learning tool.

¹¹ Ministère de l'Éducation Nationale, Direction de la Stratégie, des Statistiques et de la Planification, Division des Etudes et des Statistiques [National Ministry of Education, Directorate of Strategy, Statistics, and Planning, Division of Studies and Statistics] *Recueil statistique de l'éducation [Record of Education Statistics] 2012–2013*.

¹² Daawuud Darwiiš Halas. (2007).

Methodology - Scope. The present study is limited to analyzing the Pedagogical Guidelines; the textbook specifications and the first unit of the select, available textbooks; and the teacher’s guide of the first three years of primary school, adopted by the Ministry of National Education and Vocational Training (MENFP) in Morocco since 2002. Table 2, below, shows which textbooks were available on the market and which were consequently selected for analysis.

Table 2. Availability of textbooks

Grade level	<i>al mufiid fii-llughat al’arabiyya (1)</i>	<i>muršidi fii llughat al’aarabiyya (2)</i>	<i>fii riHaab llughat al’arabiyya (3)</i>	<i>kitaabii illughat al’arabiyya (4)</i>
Grade 1	Yes	No	No	Yes
Grade 2	No	Yes	Yes	Yes
Grade 3	Yes	Yes	No	No

From now on referred to as: (1) al mufiid, (2) murchidi, (3) fii riHaab, (4) kitaabii.

The research team, made up of teachers and researchers from Al Akhawayn University in Ifrane (AUI), an expert from RTI International, and inspectors and Arabic language teachers from public and private institutions in the region of Meknès-Tafilalet, looked at the above texts and extracted the vocabulary, sentences, and paragraphs for analysis. This study was conducted in two stages: at first, the focus was on identifying the type and nature of the words, then extracting sentences and paragraphs in the texts. In the second stage, the focus was on the content of texts, reading comprehension, and assessment.

Methodology – process. The team established a methodological framework covering the objectives, instruments, and procedures for the study, which was submitted to the MNEFP Department of Curricula, and validated through discussion and feedback on their part. The study took place between May 19 and June 12, 2014. A training workshop was held from May 24 to 29 at AUI, in which experts introduced concepts of reading and evidence-based practices in reading instruction, presented and discussed the framework of the study and the methodology of the analysis, and explained to participants how to use the suggested analytical tools. The participants were given practical, hands-on training on the analytical process using samples of text. They were divided into groups in so that every group was responsible for analyzing the textbooks of a given school level, presenting and analyzing data and writing a report about the results of the study.

The first unit of the textbook available was analyzed according to a set of general themes, including:

- Distribution of objectives in accordance with Bloom’s cognitive taxonomy (recall – understanding – application – analysis – composition – assessment)
- Formulation of objectives in a procedural way (specific – measurable – attainable – realistic – timely)

- Focus of objectives on developing language as a competence (reading – writing – listening – speaking)

More specifically, the page-by-page review collected detailed information on the following elements of the content:

- **Text readability.** Includes the sentence, style, composition, and nature of the text presented to the student: scientific, literary, narrative, theatrical, or philosophical; the number of paragraphs in the lesson; the way in which they are divided; and the scientific terms and the values in the lesson
- **Assessment.** Presence of methods for learner assessment
- **Aesthetics:** Includes the drawings, illustrations, font and size, page layout/text density, clarity of colors, print and paper quality.

Study tools. Instruments used for the quantitative analysis of the textbook were designed to capture the extent to which the different components of reading are explicitly present. They were adapted from instruments previously validated during a similar study conducted by RTI in Egypt. The analytical tools covered the following.

- Vocabulary
- Phonemic awareness
- Fluency
- Reading comprehension (according to text type)
- Sentence and grammar analysis tool
- Text book characteristics tool
- Gender analysis

1. Introduction

1.1 Overview

A child's success in school depends to a large extent on reading skills that are developed between 4 and 8 years old. There is a strong correlation between the amount of time a student is engaged in reading in and out of school and the student's ability to decode words, write, note dictation correctly, use a robust vocabulary, comprehend what is read, and understand grammar and syntax. Being able to read is also a lever for personal, academic, and professional success. After the first three years in school, reading becomes the key that opens the door to studying academic subjects such as history, science, and other subjects. Research demonstrates that students who have difficulty reading in Grade 3 have little chance of catching up with their peers, and that those who are weak in reading cannot understand the homework and classroom exercises assigned to them.^{13,14} Accordingly, they have difficulty succeeding in school. Moreover, this situation can lead to school dropout and repetition, which are increasingly difficult to rectify after the third year of primary school.¹⁵ It is therefore essential to detect and diagnose reading problems as early as possible and to provide students with necessary supports to help them avoid persistent academic problems throughout their educational careers.

The objective of this study is to review the Morocco National Curriculum (*Livre Blanc*) and Pedagogical Guidelines (*Guide Pédagogique [Pedagogical Guidelines]*, 2009), the textbook specifications (*Cahier de charges [CDC]*, 2011), the textbooks, and the teacher's guide for Arabic language lessons in Grades 1 to 3. This review seeks to highlight the extent to which textbook content is compatible with the pedagogical principles stated in the National Curriculum (according to the Pedagogical Guidelines) and the national recommendations for textbook production specifications.

Moreover, this study seeks to analyze the pedagogical approach promoted in teaching Arabic to young learners. It also examines how reading is presented in the textbooks and teachers' guides as a competence on its own, and as a tool to apply in other subject areas. This is done through several guiding questions:

- Is reading instruction explicitly or implicitly presented in the Pedagogical Guidelines and in the textbook?

¹³ Eakle, A. J., Garber, A. M. (2003). International reports on literacy research: Canada. *Reading Research Quarterly*, 38(3), 414-17.

¹⁴ Stanovich, K.E. (2008). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Journal of Education*, 189(1/2), 23-55.

¹⁵ McClelland, M.M., Acock, A.C., & Morrison, F.J. (2006). The impact of kindergarten learning-related skills on academic trajectories at the end of elementary school. *Early Childhood Research Quarterly*, 21(4), 471-490. doi: <http://dx.doi.org/10.1016/j.ecresq.2006.09.003>

- Do instructional methods presented in the textbooks reflect the increasing body of evidence-based research related to how students learn to read in Arabic?
- What opportunities are there to improve students' reading competency in the absence of strong initial teacher training in this area?

Accordingly, this study presents the results of the curriculum and the textbook analyses, taking into account that the latter represents the implementation of the educational curriculum and encompasses the subject matter that is supposed to enable pupils to achieve the Arabic curriculum objectives.

This study emphasizes that it is necessary to adopt explicit instruction of basic components of reading in order to build reading competencies in Arabic in the early grades. This can be achieved through ensuring the explicit teaching of the five components of reading (phonemic awareness, alphabetic principal, vocabulary, fluency, and reading comprehension) via student books and instruction methods, in addition to the application of evidence-based pedagogical principles of teaching Arabic.

1.2 Importance of early reading

Learning to read is a universal skill that must be explicitly and systematically taught. It starts with the development of oral language competencies, which eventually progress to independent reading.¹⁶ Oral language—ability to speak and listen—provides an essential foundation for successful reading. In every culture, children learn language at home through listening, speaking, and interacting with adults and others in their environment. This process takes place in a natural and expected way in almost all cases and in all languages. Although building oral language competencies is a natural process, developing reading skills is not. According to Brown,¹⁷ the mechanics of learning to read take place during a key stage of the child's life—between 4 and 8 years old. During this stage, a child learns the relationship between sounds and letters, combined sounds and syllables, meaningful sounds and words, and finally words and the message of a sentence.¹⁸ In addition, a child's recognition of letters and words with clear meaning in different reading contexts undergirds the cognitive mechanisms of phonetic and alphabetic reading that are necessary for mastering all components of reading, which then lead to fluent comprehension of texts.¹⁹

¹⁶ Primary National Strategy. (2006) Primary framework for literacy and mathematics. Department of Education and Skills. Crown publishing. Retrieved from <http://www.educationengland.org.uk/documents/pdfs/2006-primary-national-strategy.pdf>

¹⁷ Brown, D. H. (2001) Teaching by principles: and interactive approach to language pedagogy. Second edition. New York: Longman.

¹⁸ Anthony, J. L. Lonigan, C. J. Driscoll, K.Y. Phillips, B. M. and Burgess, S. R. (2003). Reading Research Quarterly, 38 (4), 470-487.

¹⁹ Ehri, L.C. (2005). Learning to read words: Theory, findings, and issues. *Scientific Studies of Reading*, 9(2), 167-188.

Honig²⁰ indicated that decoding ability in first grade predicts 80 to 90 percent of reading comprehension in the second and third grade. This stage of learning to read also requires that the school and the teacher provide conditions favorable to successful reading so that students can learn to read for the sake of learning and for pleasure in the coming years.

Research clearly demonstrates that pupils who are weak in reading in the first three years face many academic barriers in keeping pace with their peers. As they get older, pupils may resist being corrected by the teacher when reading aloud in front of their classmates. This psychologically affects their performance and may affect their self-esteem. During adolescence, students are acutely cognizant when academic abilities are not on par with their respective grade level. These pupils are more at risk of school dropout.

The ability to read and understand text is the key to learning in the academic context, as success in any subject is predicated on it. Clearly, the ability to read and comprehend what is read opens the door to learning. It is imperative, therefore, that educational institutions make it a primary aim to support learners in their first three years of schooling so that they are able to overcome any difficulties related to reading.

1.3 Importance of the textbook

Textbooks are of vital importance in the teaching-learning process because of their inherent characteristics,^{21, 22} textbooks

- give an overview of a subject area and how it may be taught;
- present the basic information, ideas, and concepts in a curricular area;
- demonstrate educational reforms to teachers when curriculum and teaching methods change;
- contain the subjects and images that illustrate what the pupils read; and
- help develop values, skills, and ethics in students through content and images.

Well-crafted textbook products are an essential ingredient in the critical learning that takes place in schools; they help learners master a subject and provide solid guidance for the teacher.

²⁰ Honig, B. (1998). Preventing failure in early reading programs: A summary of research and instructional best practice. In W.M. Evers (Ed.), *What's gone wrong in America's classrooms* (pp. 91-116). Stanford, CA: Hoover Institution Press.

²¹ Elley, W. B. (2000). The Potential of Book Floods for Raising Literacy Levels. *International Review Of Education / Internationale Zeitschrift Für Erziehungswissenschaft*, 46(3/4), 233-255.

²² Daawuud Darwiiš Halas, 2007. The quality of the Arabic language book for primary classes of minimum essential stage from the standpoint of teachers in Gaza province.

داود درويش حلس، 2007. معايير جودة كتاب لغتنا العربية للصفوف الأولية من المرحلة الأساسية الدنيا من وجهة نظر معلمي ومعلمات الصف في محافظة غزة.

1.4 The stages of reading development

Children learn to read in a series of stages, inside and outside of school. Reading specialists often describe these stages in different ways, but the phases remain consistent in terms of essential learned skills.²³

Pre-reading stage. Children simulate the process of reading without actually reading. This stage starts with understanding the meaning of reading and its requirements. The learner starts in this stage to understand that everything that one says can be written or read.

Beginning reading stage. Children start to pay attention to the details of print and the way in which the letters and words, representing sounds and words of the spoken language, are printed. Children come to understand sounds are represented by written symbols. In order to help students in this stage, it is necessary to introduce the symbols' system to them in a simple, explicit manner. It is obligatory in this stage to coach learners in reading the symbols through suitable texts that may help them segment the word and connect word parts together.

Learners in this stage will be able to recognize word units and will be able to distinguish letters from words, distinguish between the letters that are similar in form (for example, the group: ب، ن، ث، ت، ي، ث، and the group: ج، ح، خ) and between words that rhyme: جاد [jaad]، قاد [qaad]، ساد [saad], etc.).^{24, 25} Beginning readers should also be able to distinguish the stress of the sound, short sounds, long sounds, and, in addition, identify and differentiate the smallest unit of sounds (phonemes). Comparing rhyming sounds and words at the sound, syllable, or word level makes it easier to identify and reproduce them. For this reason reciting, singing, and listening to rhythms of the language are necessary practices that can be used to develop this skill of *phonemic awareness*. Learning Qur'anic texts and poetry can develop and strengthen the ability to hear assonance and rhyme.^{26,27}

One study on reading achievement found that oral comprehension improved for five-year olds who were exposed every day during preschool, over a period of five months, to story reading in Modern Standard Arabic (MSA).²⁸ The results also showed that these children had a richer

²³ Primary National Strategy. (2006)

²⁴ Hazoury, K.H., Oweini, A.A., & Bahous, R. (2009). A multisensory approach to teach arabic decoding to students with dyslexia. *Learning Disabilities -- A Contemporary Journal*, 7(1), 1-20.

²⁵ Lyon, R. G. (1999). *Education research: Is what we don't know hurting our children?* Statement to the House Science Committee Subcommittee on Basic Research, U.S. House of Representatives. Retrieved January 9, 2002, from the World Wide Web: http://www.nichd.nih.gov/crmc/cdb/r_house.htm

²⁶ Surty, M.I. (2006). *The science of reciting the quran*. The Islamic Foundation. Markfield: Leicestershire

²⁷ Tibi, S. (2006). [طبيبي، سناء عورتاني] Early Intervention Procedures for the Prevention of Reading Failure. *Arab Journal of Special Education* 8 (1):126-178 [المجلة العربية للتربية] [إجراءات التدخل المبكر في الوقاية من الفشل في القراءة]

²⁸ Feitelson, D., et al. 1993 Effects of listening to story reading on aspects of literacy acquisition in a diglossic situation. *Reading Research Quarterly* 28 (1): 70-79.

vocabulary from which to draw on in retelling stories that they heard, using sequential images as a guide.

Fluency stage. Becoming a fluent reader is the next essential phase in learning to read. Fluency refers to the ability to read letters, sounds, words, sentences, and paragraphs with automaticity and accuracy and at a reasonable rate for understanding the text. Studies show that the slow reading of words hinders reading comprehension due to the way the short-term memory functions^{29, 30} Fluency is a sign that the mechanics of letter and word recognition have become automatic, and those automatic mechanics allow the student to read with speed and to focus cognitive processes on understanding. Fluency is therefore a foundational component of reading comprehension.

As part of building fluency, readers learn to automatically recognize words when they frequently appear in common language use in the language of instruction. For this reason, textbooks or early grade readers are often designed with frequent word repetition to support reading and vocabulary development (for example, Ali loves his mother; Ali loves his father; Ali loves his sister). This process draws on recalling main features of the visual stimulus. Pupils with weak short-term memory and poor decoding skills often cannot distinguish familiar words when they see them. This difficulty strongly weakens the reading ability of these pupils.^{31, 32}

Students need to have access to texts that can be easily understood and whose meaning can be predicted. In order for these texts to be comprehended quickly with minimal effort, it is helpful that the texts are relevant to the learners. Fluency increases with practice. Practice enables the student to read with less frustration. It is expected that classrooms provide a suitable environment for learning to read using interesting books for children, such as stories with exciting drawings and colors.³³

Children need to learn how to decode words quickly and accurately, whether the words are in isolation or in a sentence, so that they can acquire fluency. Teachers can help students develop fluency by:

- using a functional and concrete vocabulary that reflects the students' daily activities;
- providing pupils the opportunity to read the same thing many times with support and feedback;

²⁹ Abadzi, H., Crouch, L., Echegaray, C.P., & Sampe, J. (2005). Monitoring basic skills acquisition through rapid learning assessments: A case study from Peru. *Prospects* 35(2):137-156.

³⁰ Wagner, D.A. (2011) *Smaller, quicker, cheaper: Improving learning assessments for developing countries*, International Institute for Educational Planning, Paris.

³¹ Adams, M. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.

³² Vellutino, F.R., Fletcher, J.M., Snowling, M.J., & Scanlon, D.M. (2004). Specific reading disability (dyslexia): What have we learned in the past four decades? *Journal of Child Psychology and Psychiatry*, 45(1), 2-40.

³³ Brookshire, J., Scharff, L.F.V., & Moses, L.E. (2002). The influence of illustrations on children's book preferences and comprehension. *Reading Psychology*, 23(4), 323 – 339

- identifying students' reading levels and providing texts that suit this level; and
- employing teaching practices that continually monitor students' mastery of skills in the classroom.

However, according to the conclusions of the other research studies carried out under this research on reading in Morocco³⁴, many teachers address letter identification, word and sentence reading in the classroom, but fail to address fluency and comprehension as specific skills that can be developed with practice. Teaching fluency means bridging the gaps between decoding, automatic recognition of the word and understanding. Given the importance of this subject, there are many studies about reading speed and the number of words the pupil is expected to read in a given level. Reading fluency is measured by two criteria: 1) reading a given number of words in one minute, and 2) *correctly* reading a given number of words in one minute.

Further establishing reading benchmarks by grade provides teachers with an objective method for monitoring progress of children throughout the year and governments with a method to communicate performance standards. In many English first-language contexts, the level of fluency necessary for comprehension is between 50 and 70 correct words per minute in Grade 1.³⁵

Recommendations for English first-language learners are not necessarily the same as recommendations for Arabic learners due to differences in the languages. For example, in Arabic words consist of roots with different forms of vocalization that can have many different meanings: **مَلِكٌ، مَلِكًا، مَلِكِ، مَلِكًا، مَلِكًا، مَلِكًا** etc. Only by reading the entire phrase can the reader of Arabic be expected to read with ease and fluency. Therefore, the rate of reading, in terms of number of words per minute, must take into consideration whether all sounds are spoken and the ambiguity that words can have depending on the context. That said, fluency, as it is defined in English context, provides only an indication of the method to adopt to define the number of words per minute. Characteristics of Arabic language must be taken into consideration in establishing fluency norms in that language.

Reading to learn stage. During the early reading stages, focus is on the mechanics of reading. **Over time, concentration moves to reading to learn. Reading motivation becomes increasingly** important in this phase. In order to reach the ultimate objective, the students need help becoming active and efficient readers. They need clear instructions and understanding of tools and strategies that enable them to understand and remember the main ideas of the text.

³⁴ RTI International (2014). Research on reading in Morocco: Analysis of initial teacher training. Final report: Component 2. Report prepared for USAID under EdData II; RTI International (2014); and Research on reading in Morocco: Analysis of teachers' perceptions and practices. Final report: Component 3. Report prepared for USAID under EdData II.

³⁵ Rasinski, T., Homan, S., & Biggs, M. (2009). Teaching Reading Fluency to Struggling Readers: Method, Materials, and Evidence. *Reading & Writing Quarterly*, 25(2/3), 192-204.
doi:10.1080/10573560802683622

They also need help integrating the information contained in the text with their prior knowledge in order to construct learning and deepen their understanding.

2. About this Study

2.1 Objectives of the analyses

Curriculum analysis. The National Education and Training Charter (*La Charte Nationale de l'Education et de la Formation*, 1999) uniquely establishes foundational principles of the Moroccan educational system. The inception of this document was exceptional in that participants and stakeholders arrived at a consensus on the essential precepts surrounding religion, civilization, and society. The document recognizes the importance of further developing the teaching of Arabic, making provisions for confronting contemporary challenges.

Accordingly, the Arabic curriculum was adopted as a concrete measure to achieve these goals while addressing the needs of the learners. It stresses the necessity of being conscious of the expectations of students and their social, artistic, intellectual, psychological, emotional, and physical needs and of making learners the center of interest, thinking, and action during the process of education and training. It also promotes achievement of its goals through developing self-confidence, openness to others, and positive interaction with the social environment, regardless of its different levels, and through appreciation of work, diligence, and perseverance.

The achievement of these objectives led to adopting the concept of “competency” in the Arabic language curriculum through the gradual construction and interaction between the learner, knowledge, and the environment. This is achieved through adopting a set of principles, namely:

- Interactive learning, instead of learning by rote
- Continuity, in which every stage established a foundation for the subsequent one
- Complementarity, in which there is no separation between linguistic and cultural knowledge
- Production, which focuses on creating unique speech (not choral recitation), whether sentences, grammatical structures, or longer presentations

This study aims to analyze the competency of reading as it is presented in the Arabic language textbook and teacher’s guide for the first three years of primary school in Morocco, and determine the extent to which the books comply with:

- the pedagogical principles stated in the “Arabic language curriculum” mentioned in the primary education Pedagogical Guidelines; and
- the parameters of the specifications for textbook production, as well as the textbooks themselves.

This part of the study seeks to:

- shed light on the curriculum and how to execute it in the context of recent evidence in the teaching of reading;
- describe the pedagogical approach used in Arabic language teaching and the extent to which it meets the needs of students;
- analyze the theory adopted by the Arabic curriculum (whole word, or global method) compared to the phonetic method of teaching Arabic reading in the early grades, and the relative promotion of either method in the textbooks reviewed;
- highlight the generally accepted pedagogical principles of reading instruction (known as the five fundamental components of reading: phonemic awareness, alphabetic principle, vocabulary knowledge, fluency, and comprehension) and the degree to which they are present in the textbooks, given the result of recent research on teaching reading in Arabic; and
- outline general curriculum criteria and examine the pedagogical principles that are included in the Arabic language textbook.

Textbook analysis. The above information provides the background for the analysis of the Arabic language textbook and the teacher’s guide. This analysis is based on a set of criteria designed to answer the following research questions:

- Do the textbooks reflect the evolution in academic research related to reading instruction?
- Is reading being taught explicitly or implicitly in the pedagogical guide and the textbook?
- What are the criteria that may improve the quality of the Arabic language textbook in primary education?

These questions are further guided by the answers to more specific questions, such as:

- What are the general characteristics of a good reading textbook and the quality control criteria they should meet (and subsequently, the criteria used to assess and analyze the textbook)?
- Is improving the quality of the textbook enough to make the student acquire the tools of reading—and make the student an independent reader?
- Is it possible to improve reading competency in the absence of strong initial teacher training in this regard?

With this in mind, the textbook analysis represents the practical application of the pedagogical curriculum and the basis for the content to be taught. The textbook is a key tool for enabling children to acquire the objectives of the Arabic language curriculum.³⁶ For this reason, the analysis of the textbooks is a first step towards being able to improve them as a teaching and learning tool.

36 Daawuud Darwiiš Halas. (2007).

2.2 Methodology

Scope. The present study is limited to analyzing the Pedagogical Guidelines; the textbook specifications and the first unit of the select, available textbooks; and the teacher’s guide of the first three years of primary school, adopted by the Ministry of National Education and Vocational Training (MNEFP) in Morocco since 2002. Table 3 below, shows which of all textbooks were available on the market and which were consequently selected for analysis.³⁷

Table 3. Availability of textbooks (repeat of Table 2)

Grade level	<i>al mufiid fii-llughat al’arabiyya (1)</i>	<i>muršidi fii llughat al’arabiyya (2)</i>	<i>fii riHaab llughat al’arabiyya (3)</i>	<i>kitaabii illughat al’arabiyya (4)</i>
Grade 1	Yes	No	No	Yes
Grade 2	No	Yes	Yes	Yes
Grade 3	Yes	Yes	No	No

From now on referred to as: (1) al mufiid, (2) murchidi, (3) fii riHaab, (4) kitaabii.

The research team, made up of teachers and researchers from Al Akhawayn University in Ifrane (AUI), an expert from RTI International, and inspectors and Arabic language teachers from public and private institutions in the region of Meknès-Tafilalet, looked at the above texts and extracted the vocabulary, sentences, and paragraphs for analysis. This study was conducted in two stages: at first, the focus was on identifying the type and nature of the words, then extracting sentences and paragraphs in the texts. In the second stage, the focus was on the content of texts, reading comprehension, and assessment.

The process. The team established a methodological framework covering the objectives, instruments, and procedures for the study, which was submitted to the MNEFP Department of Curricula, and validated through discussion and feedback on their part. The study took place between May 19 and June 12, 2014. A training workshop was held from May 24 to 29 at AUI, in which experts introduced concepts of reading and evidence-based practices in reading instruction, presented and discussed the framework of the study and the methodology of the analysis, and explained to participants how to use the suggested analytical tools. The participants were given practical, hands-on training on the analytical process using samples of text. They were divided into groups in so that every group was responsible for analyzing the textbooks of a given school level, presenting and analyzing data and writing a report about the results of the study.

The first unit of the textbook available was analyzed according to a set of general themes, including:

- Distribution of objectives in accordance with Bloom’s cognitive taxonomy (recall – understanding – application – analysis – composition – assessment)

³⁷ See Annex 1 for full references of the textbooks.

- Formulation of objectives in a procedural way (specific – measurable – attainable – realistic – timely)
- Focus of objectives on developing language as a competence (reading – writing – listening – speaking)

More specifically, the page-by-page review collected detailed information on the following elements of the content:

- **Text readability.** Includes the sentence, style, composition, and nature of the text presented to the student: scientific, literary, narrative, theatrical, or philosophical; the number of paragraphs in the lesson; the way in which they are divided; and the scientific terms and the values in the lesson
- **Assessment.** Presence of methods for learner assessment
- **Aesthetics:** Includes the drawings, illustrations, font and size, page layout/text density, clarity of colors, print and paper quality.

2.3 Study tools

Instruments used for the quantitative analysis of the textbook were designed to capture the extent to which the different components of reading are explicitly present. They were adapted from instruments previously validated during a similar study conducted by RTI in Egypt. The analytical tools covered the following.

- Vocabulary
- Phonemic awareness
- Fluency
- Reading comprehension (according to text type)
- Sentence and grammar analysis tool
- Text book characteristics tool
- Gender analysis

3. Curriculum Analysis

3.1 The White Book (2002)

Primary school in Morocco lasts for six years, and is divided in two “cycles.” The first cycle (*le cycle fondamental*) lasts two years, and the second cycle (*le cycle moyen*) from third to sixth grades. Yet the National Education and Training Charter also introduced a new vision for preschool education, for children from 4 to 6 years old, that associates preschool closely with primary education. The White Book (*Le Livre Blanc*) is the main document that lays out the national public school curriculum. According to the White Book, preschool is part of a “necessary foundational phase for primary education by integrating these two years [preschool]

with the following first two years of primary education, resulting in a fundamental cycle that lasts 4 years.” Through a pedagogy of “immersion and awareness,” this two-year cycle should allow student to succeed in school through mastery of a set of basic competencies, among which is the mastery of oral expression in the student’s native language. The latter would prepare the child for reading and writing in the Arabic language.

Preschool. The White Book anchors the teaching of Arabic language in preschool through three main components: communication, pre-reading skills, and writing (including penmanship). The pedagogical guide matches these objectives and emphasizes that the ultimate goal is that learners are able to properly express themselves in Arabic. The curriculum is guided by certain principles, namely:

- Oral communication aims to initiate students to standard verbal styles of speech, *implicitly* introducing them to grammar and conjugation.
- Teachers should be providing students with a functional vocabulary related to daily life themes.
- The entire alphabet is not covered in the preschool curriculum since this stage is meant to *prepare* students for reading and not to acquire competence in reading. The alphabet is part of the primary school curriculum.

According to the White Book, in the first year of preschool, the content of reading instruction concerns a limited number of vocabulary words taken from areas of functional communication and then used to demonstrate a target letter. The activity of “reading” in this case focuses on recognizing words through playing reading games and using illustrated flashcards containing those words. Note that the words themselves are not specified by the White Book.

In the second year, reading instruction begins more formally, starting with a simple sentence and words that are related to a theme of oral communication and contain a target letter. Firstly, the phrase is read as a whole, then the word containing the letter, and finally the letter is separated and read. This letter becomes the focus of tracing and writing exercises.

The number of hours per week, out of a total of 25, allotted to Arabic language in preschool are as follows in Table 4:

Table 4. Curricular hours per week for Arabic language subject areas

Subject	Number of lessons per week	Length of the lesson	Total
Oral communication	4	30 minutes	2 hours
Preparing for reading	4	30 minutes	2 hours
Writing	2	30 minutes	1 hour

At the end of the second year of preschool, the learner should be able to master a set of school-readiness skills, among which are the following, most closely related to reading and oral or written expression:

- Speak, listen, understand, and communicate with others;
- Use symbols representing aspects of reality, which will develop skills in reading and writing;
- Develop good manners and social behaviors that will facilitate integration and communication in society.

The preschool curriculum consists of educational activities representing 78 percent of the total, actual hours in the year (the remainder going to recess and other downtime including school arrival and departure). Skills targeted by these activities, as cited in the White Book, include:

- Improving visual-spatial motor skills, in preparation for reading
- Controlling finger movements and muscles in the hands, which will facilitate writing
- Understanding classification, generalization, and symbols, within the limits of the cognitive level
- Understanding the spoken phrases, within the limits of cognitive level
- Using a functional vocabulary related to themes in the local context
- Becoming familiar with all of the Arabic alphabet using a simple vocabulary
- Drawing a variety of line styles, in order to prepare for writing the alphabet
- Drawing some letters of the Arabic alphabet and some simple words

Primary school. According to the White Book, 11 of 28 hours of instructional time are allocated to Arabic language per week in Grades 1 and 2 of primary school, representing a total of 374 hours per year. The curriculum is structured according to thematic units; each year is divided into 8 units of three weeks. The three weeks are divided into two weeks of presentation of the lesson and one week of review and evaluation. The four components of instruction are: expression, reading, writing, and grammar. An important principle is that the “style, syntax, morphology, and orthography” are presented implicitly in the first two years and become explicit only in the third year of instruction. The White Book presents a detailed sequence for teaching the letters of the alphabet during the first two years of primary school. Each letter is presented in conjunction with the bi-weekly themes, as presented in Table 5 (Grade 1) and Table 6 (Grade 2), below.

Table 5. Grade 1 curricular topics and introduction of letters

Weeks	Oral communication	Preparing to read	Writing
1-2	Introduction and adaptation		
3-4	I get to know my classmates	Words with the letter <i>m</i> [م]	Movement (joints)

Weeks	Oral communication	Preparing to read	Writing
5-6	I am responsible for my things	Words with the letter <i>b</i> [ب]	Horizontal and vertical lines
7-8	I recognize the members of my family	Words with the letter ' [ء] (<i>hamza</i>)	Horizontal and vertical lines
9	Evaluation and review		
10-11	I recognize the parts of the body	Words with the letter <i>l</i> [ل]	Oblique lines
12-13	I maintain my health	Words with the letter <i>s</i> [س]	Dotted lines
14-15	I eat	Words with the letter <i>d</i> [د]	Oblique and dotted lines
16-17	Evaluation and review		
18-19	I am careful in the street	Words with the letter <i>S</i> [ص]	Curved and rounded lines
20-21	I know the days of the week	Words with the letter <i>n</i> [ن]	Curved and rounded lines
22-23	I use correct expressions of greeting	Words with the letter <i>h</i> [ه]	Spiral lines
24-25	Evaluation and review		
26-27	I recognize fruits and vegetables	Words with the letter <i>f</i> [ف]	The letters <i>f</i> [ف] et <i>m</i> [م]
28-29	I recognize animals	Words with the letter <i>k</i> [ك]	The letters <i>k</i> [ك] et <i>b</i> [ب]
30-31	I celebrate the festival d'Al-Aïd	Words with the letter <i>j</i> [ج]	The letters <i>j</i> [ج] et <i>l</i> [ل]
32-33	Evaluation and review		
34	End of year formalities		

Table 6. Grade 2 curricular subject and introduction of letters

Week	Oral communication	Writing/reading preparation
1-2	Initiation and adaptation	
3-4	I present my house	Letters <i>m</i> [م] et <i>b</i> [ب]
5-6	I present my school	Letters <i>t</i> [ت] et <i>k</i> [ك]
7-8	I visit neighbors	Letters ' [ء] et <i>h</i> [ه]
9	Evaluation and review	
10-11	I get dressed	Letters <i>r</i> [ر] et <i>l</i> [ل]
12-13	I eat	Letters <i>d</i> [د] et <i>n</i> [ن]
14-15	The seasons of the year	Letters <i>b</i> [ب] et <i>j</i> [ج]

Week	Oral communication	Writing/reading preparation
16-17	Evaluation and review	
18-19	I visit the school	Letters s [س] et c [ع]
20-21	I recognize animals	Letters t [ت] et H [ح]
22-23	I take care of plants	Letters z [ز] et S [ص]
24-25	Evaluation and review	
26-27	Insects	Letters q [ق] et ḥ [ح]
28-29	I walk in the street	Letters x [خ] et š [ش]
30-31	I play with friends	Letters ġ [غ] et T [ط]
32-33	Evaluation and review	
34	End of the year formalities	

As the tables above show, it takes a full two school years to cover the entire Arabic alphabet, at the current required pace of one letter every two weeks. Yet at the same time, the curriculum of Grade 2 is based on the presentation of one reading text per week. Similarly, as early as Grade 1 children are given dictation and copying exercises. More specifically, the skills targeted by the end of Grade 2 in reading and writing are the following:

- Read the Arabic alphabet with short vowels, *la shadda*, in the context of a corpus of modern and variable vocabulary.
- Read with comprehension from constant vocabulary (letters and words) and variable (phrases and simple texts), taking into consideration correct pronunciation of phonemes and punctuation marks.
- Read simple prose and poetry, descriptive and narrative texts, and dialogs;
- Write the letters of the Arabic alphabet correctly on their own, and in the context of words and phrases, demonstrating care and perfect organization according to the models of writing that are provided;
- Rewrite words, phrases, and short paragraphs using punctuation marks;
- Correctly write certain simple orthographic patterns.
- Write correctly certain simple exercises of style, syntax, and morphology.

Summary. The White Book's primary purpose is to outline the number of hours by subject throughout the year and, within subject areas, the sequence of instruction by theme and by week. It communicates the general objectives of the curriculum in terms of pre-reading skills to develop in preschool, followed by the study of letters, words, sentences, and prose texts in the first two years of primary school. It provides some indication of the structure that units should follow and the general framework for lesson delivery.

Theoretically, the White Book is limited to giving a list of objectives and activities for teaching the Arabic language. Although it gives a sequence of letters and themes to cover each week, it does not provide specific details about:

- the most common vocabulary to teach;
- how to identify phrases that are “aligned to the child’s cognitive level”
- how to use a functional vocabulary related to themes that are close to the student’s reality when the vocabulary has not been provided;
- how to do dictation and copying exercises when the students have not even finished studying each letter of the alphabet;
- how to measure progress in vocabulary and oral expression;
- what content authors of the textbooks should produce; and
- how to present, in an abstract manner, all of the Arabic alphabet in a simple language before even introducing concepts of print and the relationship between the written and the spoken word.

Similarly, although the White Book mentions several times the importance of aligning activities “to the cognitive level” of the children, it does not define cognitive levels or how to evaluate a child’s level. In primary school, the curriculum prescribes the introduction of one letter every two weeks; consequently, it takes two years to cover the whole alphabet. Moreover, in its entirety, the White Book omits 5 letters of the alphabet: D [ض], th [ث], Z [ظ], w [و], y [ي]. It appears that the thematic content takes instructional precedence over the linguistic or pedagogical dimensions of the sequence of instruction. Although this global and communicative approach to language expects specific details of language structure to be taught implicitly, evidence shows that learning to read requires very explicit and direct instruction. Particularly in the case of Arabic, research has determined that drawing on explicit instruction of word morphology is associated with better early learning outcomes³⁸.

As touched on previously, the bridge between preschool and primary school is not made explicit in the White Book, which is a source of confusion for the reader. Is the first “cycle” of primary school, according to the way the curriculum is designed, actually four years (two preschool plus two primary school), or only two years of primary? Wouldn’t it be more appropriate to present the first cycle as four years long? But if this is the case, what happens to children who do not go to preschool, which is not mandatory? In fact, the primary school reading curriculum is dependent on what children would have learned in preschool, according to the preschool curriculum.

Finally, the White Book gives no indication of

- short and long vowels;
- when they should be introduced; or
- the point at which children should be able to read texts without short vowel markers.

³⁸ Boyle, H., Al Ajjawi, S., & Xiang, Y. (2014). *Topical analysis of early grade reading instruction* (Project report for EdData II Task Order 15: Data for Education Programming in Asia and Middle East). Research Triangle Park, NC: RTI International. Retrieved at: <https://www.eddataglobal.org/documents/index.cfm?fuseaction=pubDetail&ID=707>

From a practical standpoint, the preschool curriculum as it is presented in the White Book is an ambitious project that is not implemented in reality, where most schools do not benefit from preschool training. The two-year preschool curriculum should be integrated in the first two years of primary school. This requires a rethinking of the curriculum for these first four years given the reality of schools and classrooms for which it is destined. Such a revision would benefit from a more rapid introduction of the letters of the alphabet, without sacrificing quality or depth of instruction, giving the student a full “kit” of letters with which to attack word recognition and decoding more easily. For example, in Egypt, each letter is taught in two lessons, and each lesson lasts two days. Thus the whole alphabet is covered in the first year.

3.2 Pedagogical Guide (2009)

Content. The Pedagogical Guide, written after the Arabic language textbooks were published, describes the content domains of the textbooks, the parts of each unit, and the number and duration of lessons; this is reflected clearly in the textbooks. It also provides the general pedagogical framework for carrying out lessons in the specific domains of Arabic language, oral expression, reading, writing, and developing listening skills. It recommends the whole language method for teaching these competencies.

The times allotted in the school week for the reading lesson, as described by the Pedagogical Guide, are as follows, in Table 7.

Table 7. Weekly lessons by textbook

Reading component	Number of lessons	Lesson length (minutes)	Total
Grade 1			
Pedagogical Guide	9	30	4h30min
<i>Kitaabii</i>	9	30	4h30min
<i>Al mufiid</i>	9	30	4h30min
Grade 2			
Pedagogical Guide	8	30	4h
<i>Fii riHaab</i>	8	30	4h
<i>Murchidi</i>	8	30	4h
<i>Kitaabii</i>	8	30	4h
Grade 3			
Pedagogical Guide	5	30	2h30min
<i>Al mufiid</i>	5	30	2h30min
<i>Murchidi</i>	5	30	2h30min

The distribution of reading lessons, according to the textbooks, corresponds to what is written in the Pedagogical Guide. In Grade 1, children have a total of 4.5 hours per week of reading, 4 hours in Grade 2, 2.5 hours in Grade 3, and only 2 hours in Grade 4 (not shown in the table). By Grades 5 and 6, only 1.5 hours are allocated to reading. In other words, as children advance in primary school, classroom time dedicated to reading decreases.

According to the curriculum, themes covered in the first and second grades must be familiar to the student and his or her environment, and they should be age-appropriate. Activities should be adapted to the student’s motor skills development (games, for example). Table 8 provides the order of the themes of the curriculum (from the Pedagogical Guide, p. 75). By Grade 3, the themes become more abstract, but should still be adapted appropriately to the context. These are only loosely connected to the themes presented in the White Book (see Table 5 and Table 6 above).

Table 8. Themes by week

Grades 1 and 2
1. The student and family
2. The student and school
3. The student and relations with the neighborhood and town
4. The student and the natural environment
5. The student, nutrition, health and sports
6. Cooperation in the life of the student
7. Ceremonies and festivals in the life of the student
8. Games and innovations in the life of the student
Grade 3
9. Islamic, national, and human values
10. Cultural and social life
11. Democracy and human rights
12. Social services
13. The world of innovation and creation
14. The natural balance and protection of the environment
15. Nutrition, health, and sports
16. Travel, excursions, and games

Underlying pedagogical principals and theory. The Pedagogical Guide suggests that teachers start the Arabic language lesson, in Grades 1 and 2, with oral language practice. In the other grades, children start by reading. Writing practice in Grades 1 and 2 is associated with reading practice through copy and dictation activities. It is only in Grade 3 that children start free writing exercises (essays).

As Table 8 above shows, the curriculum is divided into eight units. Each unit lasts three weeks. The first two weeks are dedicated to presenting new lessons, and the third is for evaluation and review.

The language lessons, according to the Pedagogical Guide (p. 75) should last 30 minutes for Grades 1 and 2. This same amount of time is allocated to reading in the higher grades. This changes when the schedule changes to accommodate the teaching of Amazigh (see p. 77).

According to the theory behind the Pedagogical Guide, children learn language as a whole, and not in a fragmented manner. Language is used for facing various situations. The Pedagogical Guide explains that “this is what allows a child to acquire his mother tongue and understand implicitly its rules within two or three years. School needs to follow this example in its teaching methods.”

The Pedagogical Guide adopted, from the White Book (2002), five general skills that together make up a well-rounded student and citizen. The Guide defines them in terms of their relevance to teaching Arabic (Table 9).

Table 9. General curricular competencies adopted by the Pedagogical Guide

Skill	Definition in relation to Arabic language (p. 73)
Strategic	“use the Arabic language to acquire grade-appropriate* knowledge and experience”
Communicative	“acquire a functional vocabulary in relation to the learner’s life and which develops in line with the themes of the curriculum”
Methodological	“Implicitly teaching the stylistic structures, syntax, and morphology of the Arabic language according to grade level, age and mental capacities”; “Reading, comprehension, and use of reading texts at multiple levels”
Cultural	“the assimilation of the linguistic context is considered to be a basic element of social integration”
Technological	“opening up to the world of technology and assimilation of advancements through language”

* It is worth noting that the Pedagogical Guide does not define “grade-appropriate.”

These skills are related to

- existence (self-knowledge and relationships with others, investment in cognition and values to be embedded in the personality of every student);

- communication inside and outside the school; and
- channeling knowledge for the sake of openness to the natural and social surroundings.

The competency-based approach, as described by the Pedagogical Guide, puts the learner at the center of the learning process, encouraging him or her to take responsibility for learning. The learner does not learn information for exams, but instead acquires a skill that can be drawn upon anytime and anywhere. Therefore, the learner “learns how to learn.” This function- and structure-oriented approach gives the learner the basic tools to apply the knowledge. The characteristics of the competency-based approach can be summed up as follows:

- Gives attention to the active role of the learner in the teaching-learning process
- Encourages initiative and independence of the learner
- Suggests meaningful learning activities that push learners to raise questions
- Establishes links between what is learned and asks learners to consider their learning and the learning strategies

The Pedagogical Guide concretizes of these skills and their components. However, it confuses at time the skills with objectives and contents. Moreover, it does not clearly show the cognitive domains in which these skills will be achieved.

The Guide provides two general descriptions of the learning objectives for pupils in the primary grades:

- **Objectives related to skills and content**, which include the ability to correctly express oneself in Arabic and interact with others as well as the ability to organize time, be disciplined, and develop mental and sensory abilities.
- **Objectives related to values and social standards**, which comprise the absorption of human, national, ethical, and religious values; unshaking belief in solidarity, cooperation, tolerance, and honesty; knowledge, systems, and basic rules for engaging with the natural and sociocultural environment.

Methods of teaching Arabic reading. The curriculum prescribes many things that students should know, but these objectives, particularly those related to skills and content, are introduced in a general way and without specifying a systemic, sequenced approach to Arabic language learning in the early grades.

The Guide alludes to several methods for teaching reading in Arabic.

- The first builds on the smallest and easiest units of the language to recognize—the letters—rather than composed elements such as words, paragraphs, and texts, which are more difficult to recognize—the partial syntax method (**méthode syntaxique (partielle)** (الطريقة التركيبية الجزئية)).
- The second promotes learning letters according to the sound they make (“mmm” instead of “mim”). The student is expected to recognize the symbol of the letters and their different sounds, as a function of their vowels, germination, and casual markers

(*nuunation*). The method works from easier to harder, from simple to complex--the phonics or phonetic method, (**La méthode phonique/phonétique** (الطريقة الصوتية)).

- The third method is known as “analytical” or whole language (**analytique ou globale** (الطريقة التحليلية الكلية)). In this method students begin with texts they understand before moving to independent letters without any meaning. This method builds on prior knowledge of the students that they bring from their environment in order to construct meaning and perceive what is written.
- Finally, the last method is known as **mixte** (الطريقة المزجية), and is characterized by the fact that it teaches language units with meaning (sentences) and promotes understanding through images. The method introduces words that include the target letter. The words are analyzed phonetically in order to isolate the target letter and give it independent status.

In Grade 1 the Guide provides the following principles for carrying out the reading/writing lesson.

- Letters are using the global method, starting from the whole, moving to the part, then coming back to the whole, which carries the meaning. In other words, instruction starts with texts whose meaning is known to learners before moving to separate letters, which carry no meaning.
- Letters are read as they are pronounced in their normal context and not in their “name”: a=ay, b=bee, c=cee, etc.
- Letters are taught beginning with the most easily pronounced and most frequently used and proceeding to the most difficult and the least frequently used.
- Complementarity between the senses, including use of gestures, movements, colors, boards, modeling clay, etc., facilitates learning the letters.
- Links are established between writing and reading, as writing, even simple copying, also requires reading.
- Synchronization is accomplished between the visual and the audio. It is this synchronization that creates the link between different information (one of the behavioral bases of learning); for example, showing only the written part that is being read and hiding the parts that are not being read.
- Diacritic markers are taught in relation to the drawn letters and not separately (damma [u], kasra [i], fatHa [a]).
- Grammar are taught rules implicitly.
- Previous knowledge is integrated, incorporating games and activities (songs, music, theatre, etc.).

The Guide focuses on the necessity of teaching letters starting with the easily pronounced and written and most frequently used letter and continuing to the most difficult and least frequently

used one. The choice to begin with the most frequent will allow the learner to rapidly increase the repertoire of words that the he or she can start reading and composing.

Second year

- The first unit is devoted to introducing one reading text every week, followed by a set of lessons aimed at addressing reading difficulties. In Units 2 to 8, each week is devoted to introducing many and various reading texts (prose, poetry).
- Focus is on comprehension and the main functions of reading in society and daily life as a means of communication and integration;
- Reading aims to develop comprehension not limited only to spelling and good pronunciation.
- Silent and independent reading allow for better understanding.

Third year

The third year focus is on three reading types, namely: functional, complimentary, and poetic. All of these are related to the eight fields (Table 10).

Table 10. Reading types targeted by unit

Unit week	Session 1	Session 2	Session 3	Session 4	Session 5
First	Functional text	Basic 1	Text	Complementary text	Poetic 1
Second	Functional text	Basic 2	Text	Complementary text	Poetic 2
Third	Functional text	Basic 3	Text	Complementary text	Poetic 2

Summary. The Pedagogical Guide was written after adoption of the current textbooks, and its primary function is to help teachers understand how to implement reading lessons in conjunction with the textbooks. The Guide concludes by providing suggested teaching strategies at different levels. Examples provided are based on the principles of the global method, however the Guide doesn't actually provide definitions of the different methods suggested (analytic, phonic, global, etc.) Suggested instruction is then subject to major difficulties that can be summarized as follows.

- Decoding is not targeted as a skill even though it contributes to more fluent reading, first of words and subsequently of phrases, which in turn contributes to comprehension.^{39, 40}

³⁹ Cunningham, P.M. (2000). *Phonics they use: Words for reading and writing* (3rd ed.). New York: Harper Collins.

⁴⁰ Ehri, L. and Nunes, S. (2002). The role of phonemic awareness in learning to read. In A.E. Farstrup & S.J. Samuels (eds). *What research has to say about reading instruction. (3rd Ed.)*, pp. 110-139. Newark, Delaware: International Reading Association.

- The Pedagogical Guide, like the White Book, does not specify a list of functional vocabulary based on MSA, nor does it show how to find the key words to target. Developing a functional vocabulary list would help to standardize achievement across the country and would facilitate interpretation of national evaluation measures.
- The absence of a list of frequently used words limits the ability of teachers and authors to develop leveled texts that would also help children understand texts more rapidly, even if they have not mastered letters or decoding skills.

Moreover, like the White Book, the Pedagogical Guide also repeats the importance of adapting instruction to the level of the child and his or her age and mental aptitude. However, the Guide does not determine the criteria relative to these levels in primary school.

The Guide does not provide clear strategies for evaluating objectively whether cultural competencies were acquired or not. As such it is difficult to plan a strategy aligned to supporting learners who are falling behind.

The Guide discusses the mastery of the Arabic language (Modern Standard Arabic) for social integration; however, this integration remains very general and does not take into consideration the sociolinguistic context of Morocco, especially since social integration is done in maternal languages and not in MSA. The Guide should be more specific in determining the nature of the standard context from a sociolinguistic standpoint. Is the language used in primary school meant to be a compromise between the dialect and classic Arabic, or is it just a simplified version of classic Arabic? Is there a bridge between the colloquial language and the language with which social integration is actually achieved?

Since technological competencies are one stated goal of the curriculum, it is worth reflecting in the future on what types of technology could be used to support the Arabic language textbook, (the content of which hasn't changed since 2002).

Finally, since the textbooks were produced prior to development of the Pedagogical Guide, one wonders what impact the Guide has on the content of the textbooks, and why the textbook authors have not updated or improved the content of the books in light of the framework given by the Guide.

3.3 Analysis of the national textbook specifications (2002)

The specifications for writing and production of textbooks identify characteristics that should be considered during the writing of the pupil's book and the teacher's guide. These specifications are followed by publishers who submit their textbooks in response to a bidding process.

Student textbook

The characteristics cover three types of design considerations:

- Methodological
- Pedagogical

- Aesthetic and technical

Methodological considerations. The specifications (2002) give priority to oral language development (listening and speaking), and advance progressively from oral language to writing. They recommend using amusing situations that motivate children to interact, discover new situations, speak, and make meaning from things in the local environment. The specifications imply a focus on phonemic awareness and decoding that is not immediately apparent in the textbooks or in the emphasis given to them in the White Book or Pedagogical Guide. For example, the specifications require “adoption of an approach based on ...creating links between what is read and what is written; the sound and the word; the word and the phrase; the phrase and the paragraph; the image, pronunciation and meaning; the auditory, the visual and comprehension.” They also requires he textbooks to integrate the use of different types of content—short texts, songs, theater, self-directed games—for developing communicative competency and imagination.

Pedagogical considerations. The elements that are required by the textbook specifications under the heading “Educational and pedagogical characteristics of the textbook” cover ways in which the books should:

- facilitate the use of the book for the pupil, such as including the general structure (e.g., “present the objectives,” “highlight definitions in a colored text box,” “include a detailed table of contents”);
- develop content, including alignment of content with the curriculum and schedule; promote patriotism, respect for the Islamic religion, sustainable development, and other international themes; take into consideration the “personality” and “cognitive level” of the children; and bridge other disciplines and school subjects; and
- promote teaching strategies or activities; for example, promoting interactivity, question and answer, reinforcement of concepts, and problem solving.

It is important to note that in this category, the textbook specifications ask editors to design the content of books so that they can be considered a source of “self-teaching” (*auto-apprentissage*) and self-evaluation even though there is little, if any, evidence that children can actually learn to read on their own. In fact, some research stresses the importance of peer learning and collaboration in learning to read, especially in multilingual situations⁴¹. Among the list of 19 characteristics for content development, the emphasis is on thematic content (such as citizenship and human rights) as well as functional objectives such as “developing a scientific method and creative initiative.” However there is nothing related to fundamental components of learning to read, such as letter-sound knowledge, phonemic awareness, vocabulary development, fluency development, and comprehension strategies. The specifications do, however, mention that the textbooks should use vowel markers (*tashkil*).

⁴¹ Turkan, S., Bicknell, J., & Croft, A. (2012) Effective Practices for Developing Literacy Skills of English Language Learners in the English Language Arts Classroom. ETS Research Report. Princeton: ETS.

These instructions are clearly very ambitious, and require textbook editors to cover a large amount of thematic content in addition to basic reading skills. It is not surprising, therefore, that many fall short of adhering to all of the criteria. However, one does wonder how the books were evaluated and why some of them were accepted if they were lacking conformity in several areas.

Instructions for using the textbooks are offered in most textbooks. However, Grade 1 textbooks address only the teacher, while textbooks for higher grades address the students in a language that may not be understood by the average student. Not a single book provides a general plan at the beginning of each section or part. No textbook states the intended (set of) skills to be taught or learning outcomes for each lesson except the textbook *Murchidi*. All of the textbooks fail to refer to the learning gains in the previous level except *Murchidi* for Grade 2. This particular failure undermines a coherent, leveled, unit-by-unit approach especially when the textbooks are not part of a series. The textbooks do not help the students gain knowledge about and motivate their interest in new developments in the sciences, technology, and education, even by the technological standards of 2002. Given that the textbooks have not been updated since 2002, they do not reflect the standards of today. The textbooks do not make any allusion to supplementary or any other education materials or aids to enhance students' learning. Furthermore there is no apparent content in the books that is designed to help students develop higher order skills like scientific reasoning, problem solving, and creativity, although it is questionable whether it is really the role of early grade reading textbooks to do so.

On the other hand, most textbooks conform to the guidelines by providing extension activities for each theme, providing specific elements and language rules in frames and in different colors, and including detailed tables of contents (except the *Al Mufiid* for Grade 1). Additionally the contents of the textbook are in agreement with the educational guidelines, the school curriculum, and the required topics and themes. All the textbooks have texts that aim at developing the learner's sense of belonging to the nation, and their content reflects reality. But they do not reflect regional and local characteristics, nor do they take into consideration the learner's personal traits; moreover, they do not help the learner integrate into the global community. Topics like immigration, global warming, democracy, distance learning, knowing the other, etc., are absent in the textbooks. The textbooks contain a limited number of texts that expose learners to issues related to education, sustainable development, health, and environment, and all of the books conform to the standards of respect for the religion of Islam, for the principles and rights established for individuals and groups, and for the treaties and international conventions ratified by the kingdom of Morocco.

Table 11 below shows the degree to which the various textbooks conform to the above standards.

Table 11. Conformity of books to textbook specifications (content-related aspects)

Specifications of CDC	Grade 1		Grade 2			Grade 3	
	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>	<i>fi riHaab</i>	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>
1. Contains specific instructions that facilitate its use	No	Yes	Yes	Yes	Yes	Yes	Yes
2. Provides the overall organization of each part or section at the beginning	No	No	No	No	No	No	No
3. Provides a description of targeted competencies	No	No	No	No	No	No	No
4. Introduces the expected objectives at the beginning of each lesson or unit	No	No	Yes	No	No	No	Yes
5. Offers expected extensions for each part or section of the textbook	No	Yes	Yes	Yes	Yes	Yes	Yes
6. Highlights the targeted pieces of knowledge and rules by coloring them and placing them within frames	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7. Contains detailed tables of contents	No	Yes	Yes	Yes	Yes	Yes	Yes
8. Refers, at each level, to essential learning gains in the previous level	No	No	Yes	No	No	No	No
Specific characteristics of the textbook contents							
9. Contents are in agreement with the educational objectives and the school curriculum	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10. Organized around topics or themes of the unit	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Specifications of CDC	Grade 1		Grade 2			Grade 3	
	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>	<i>fi riHaab</i>	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>
11. Presents recent developments in the areas of the sciences, technology, and education	No	No	No	No	No	No	No
12. Contributes to enhancing the student's national identity, with regional and local characteristics, all in accordance with the student's personal traits	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13. Contributes to the student's opening up to the global context	No	No	No	No	No	No	No
14. Takes into consideration the students' age factor/range, their knowledge and linguistic levels, and their cognitive capacities	No	No	No	No	No	No	No
15. Includes new issues in education on sustainable development (health, environment, and civic engagement)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16. Respects the religion of Islam, and the principles and rights established for individuals and groups, and the treaties and international conventions ratified by the kingdom of Morocco	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17. Helps the student in the development of the scientific approach and the spirit of initiative and creativity	No	No	No	No	No	No	No
18. Refers to educational aids that facilitate teaching and learning	No	No	No	No	No	No	No

Specifications of CDC	Grade 1		Grade 2			Grade 3	
	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>	<i>fi riHaab</i>	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>
19. Compatibility of photos, drawings, and designs with textbook topics	No	No	Yes	Yes	No	No	No
20. Aids in the development of self-teaching and is a source of knowledge	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21. Opens up to other school courses and course units	No	No	No	No	No	No	No
Characteristics of learning activities and exercises in the textbooks							
22. Contains learning activities that are suitable for the academic level of the students	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23. Problem-based approaches to activities, with situations capable of highlighting the importance of the target knowledge	No	No	No	No	No	No	No
24. Includes a variety of activities that take into account individual differences among students in order to facilitate the achievement of the main learning objectives	No	No	No	No	No	No	No
25. Contains activities that are related to the child's perceptible reality	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26. Exercises are ordered according to their degree of difficulty or easiness	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Specifications of CDC	Grade 1		Grade 2			Grade 3	
	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>	<i>fi riHaab</i>	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>
27. Exercises use appropriate knowledge, skills, and attitudes that the students are expected to gain	No	No	No	No	No	No	No
28. Uses practical drills that make use of already acquired learning gains in order to strengthen them	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29. Exercises allow the student's self-evaluation and promote problem-solving strategies	No	No	No	No	No	No	No

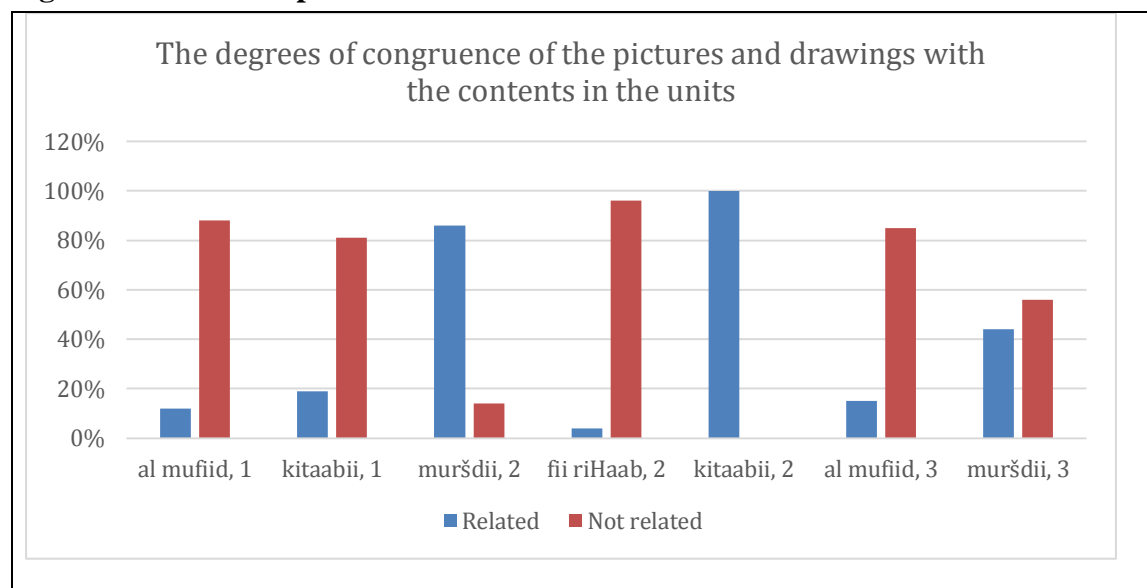
Technical and aesthetic considerations. The specifications present a determined set of artistic characteristics for the textbook, including the size (21cm x 27 cm), paper weight, number of pages, colors, style of letters, font and size, binding type, and guidelines for images and drawings. Specific instructions are given for the cover, including title, identifying elements, year, and price.

Table 12 shows how much textbooks respect the specifications of the CDC.

Table 12. Themes by week

Textbooks	Grade 1		Grade 2			Grade 3	
	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>	<i>fii riHaab</i>	<i>Al Mufiid</i>	<i>Kitaabii</i>	<i>Murchidi</i>
1. Size	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Paper	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Size	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4. Colors	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5. Letters	(See the section about pictures and drawing below)						
6. Pictures and drawings	(See the section about pictures and drawing below)						
7. Cover	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8. Authors	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9. Page design	(See the section about pictures and drawing below)						
10. Form Adjustment	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11. Assemblage	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Pictures and drawings in the textbooks are expected to support and facilitate learners' understanding of the texts. Most of them, however, are not related to the themes in the textbook units, except for those in *fii riHaab* for Grade 2, as Figure 1 below shows.

Figure 1. Relationship between illustrations and text

However, in *Murchidii* for Grade 2, 86% of the pictures and drawings are related to the textual content. On the other hand, the other textbooks contain more incongruent pictures and drawings; 88% of them in *Al mufiid* for Grade 1; 81% in *Kitaabii* Grade 1; 96% in *Kitaabii* Grade 2; 85% in *Al mufiid* Grade 3; and 56% in *Murchidii* Grade 3.

Characteristics of the teacher's guide

The specifications document explains that the teacher's guide is "the primary supporting document for reinforcing teacher training related to cognitive, educational and pedagogical developments in the field." As they do for the student textbook, the specifications for the teacher's guide request a number of artistic and technical characteristics for the production of the guide; these include the color and weight of paper, colors, font size, images, and drawings.

With regards to educational and pedagogical characteristics of the teacher's guide, the instructions in the specifications document maintain that:

- it should align to the curriculum, educational objectives, and content of the textbook;
- it should have instructions for its use, including general clarifications about teaching methods that the manual is promoting and specifically instructions for using kinesthetic techniques to help develop oral language competency;
- it should present objectives, competencies, and extension activities related to each lesson;
- It should provide the teacher with tools and strategies for evaluation; and
- it should include a table of contents, bibliography, and additional resources, especially those that can help "enrich the teacher's knowledge and the development of the teacher's self-directed learning."

Summary. The textbook specifications, like the other guidance documents described in this section, focus at a high level of ambitious theoretical objectives (e.g., teaching scientific reasoning, creativity, social integration, etc.). However, they neglect to provide guidance on specific reading-focused objectives and methods, such as teaching letters, promoting phonemic awareness, and strategies for increasing fluency and comprehension. They do highlight the importance of kinesthetic methods for building oral communication skills, which is in line with evidence-based practices for bilingual learners.⁴² They could go one step further in pointing out how these methods can also support reading skills and how oral language fluency is a critical first step in learning how to read in addition, as well as important for socialization. More importantly, the guidelines do not provide domain-specific instructions concerning, for example, what sequence of letters to introduce, what level of sentence structure to use (length, complexity), or what vocabulary to focus on.

These specifications also do not specify whether the bidders should include supplementary materials such as a student workbook or exercise book to support the textbook. This is surprising given the focus on self-directed learning.

The specifications do not say whether or not the bidders must have any particular qualifications or must justify the soundness of the content and methods they are providing in the textbooks. They also do not spell out a timeline or procedures for submissions, including whether or not the Ministry reserves the right to request changes in the final product or if the editors and the Ministry will work together in any way to finalize the documents, and in what timeframe.

3.4 Conclusions

Overall, analysis of the curriculum sheds light on the prevailing mindset regarding learning to read in Arabic. This mindset reflects the belief that reading happens easily, or naturally (even is self-taught), once oral language competency has been acquired. In the current context of Morocco, where most children speak a dialect of Arabic at home, if not one of the Berber languages (see Preface), the curriculum is correct to place a significant emphasis on communicative (oral) competency and use a variety of methods, including kinesthetic, to raise oral language skills. Much of this competency-based approach resembles methods used to teach Arabic as a second language to adults, who may already know how to read a different language.

For all of the emphasis on adapting the lessons to the ‘mental level’ of the children, all textbooks fail to take into consideration the learners’ multilingualism and the role of pre-school education in creating discrepancies in to their school readiness. The specific pedagogical adaptation to teaching reading in the early grades based on how children learn to read in Arabic is not apparent. For example, there is no mention of storytelling or time dedicated to reading books aloud as part of this oral language development. Most importantly, there is little emphasis on direct and explicit instruction of basic components of reading—letters, letter sounds, phonemic awareness, vocabulary, decoding, word roots or morphological pattern, fluency building, and

⁴² Turkan, S., Bicknell, J., & Croft, A. (2012).

comprehension strategies. Making teaching reading more explicit does not mean that the focus on themes, values, and higher-order skills cannot be accomplished. What is certain, however, is that children cannot learn to read implicitly, but they can learn to read early if significant time and intensity are given reading instruction in the first year of primary school.

4. Textbook Analysis

4.1 Phonemic awareness

Phonemic awareness allows the learner to perceive words pronounced as small units of sound, not as a single unit of sound. This awareness includes the ability to listen and learn to play with sounds.

Scientific research shows that phonemic awareness as a mental and linguistic capacity develops even before children have been exposed to print. This pre-awareness subsequently helps to make the association between the letters of the alphabet and their sound in a given language, as learning the letters of the alphabet necessarily involves learning their sounds. Activities that can help strengthen phonemic awareness are:

- awareness of rhyming words (saal / qaal, jibaal / jimaal, etc.);
- division of words into syllables (mu / cal / li / ma / tun til / mii / Djun);
- division of words into sounds (kitaab = k + i + t + a + b); and
- removal or substitution of sounds to form new words (replace the sound [s] by [j] in saamic for jaamic).

These activities are part of direct and explicit instruction of the relationship between sounds and their symbols, and will help children acquire reading fluency more rapidly.⁴³

Activities related to phonemic and phonological awareness, e.g., sound recognition, syllable segmentation, manipulation of sounds, rhyme, etc., are absent in the textbooks for the first year.

4.2 Alphabetic principle

The alphabetic principle is the relationship between the sound and the symbol, or the written letter. How do the Moroccan textbooks address this fundamental component of learning to read?

Teaching the Arabic alphabet in the first grade

The Pedagogical Guide emphasizes teaching letters beginning with the easiest to pronounce and to write, and the most frequent, before moving on to those that are more difficult and less

⁴³ Levin, I., Saiegh-Haddad, E., Hende, N., et Ziv, M. (2008). Early literacy in Arabic: An intervention study among Israeli Palestinian kindergartners. *Applied Psycholinguistics*, 29: 413-436.

frequent.⁴⁴ There is no objective basis given in the Guide indicating which letters are “easy” or “hard” to write and pronounce. However, studies exist to show that the most frequently used Arabic words begin with: 1. ألف [alif], 2. لام [laam], 3. نون [nuun], 4. ياء [yaa’], 5. واو [waaw], 6. هاء [haa’], 7. باء [baa’]. (See *Annex 2*.) Analysis of the grade 1 textbooks *Kitaabii* and *Al Mufiid* show that all of the letters are taught, and this is accomplished by the end of the 7th unit in the case of *Kitaabii*. Since the textbook specifications don’t give any detail on the sequence to follow for introducing the letters, it is not surprising to find that each book does it differently, as in Table 13, below.

Table 13. Order of introduction of the letters of the Arabic alphabet, by Moroccan textbook

Book	Order of letters (from right to left)
<i>Kitaabii</i>	س [s]، ت [t]، ل [l]، ب [b]، ح [H]، ر [r]، م [m]، ي [y]، ش [š]، ج [j]، ف [f]، ك [k]، و [w]، ق [q]، ث [θ]، خ [x]، ه [h]، ء [’]، ع [c]، غ [ġ]، ن [n]، ص [S]، د [d]، ذ [ḍ]، ط [T]، ظ [Ḍ]، ز [z]، ض [D].
<i>Al Mufiid</i>	م [m]، ك [k]، ب [b]، ت [t]، ه [h]، أ [’]، ر [r]، ل [l]، د [d]، ن [n]، ي [y]، ج [j]، س [s]، ف [f]، ح [H]، ز [z]، ذ [ḍ]، [Ḍ]، ص [S]، ق [q]، ع [c]، خ [x]، ش [š]، غ [ġ]، ط [T]، ض [D]، ث [θ]، و [w]، ط [T].

By way of comparison, Table 14 shows the order presented in other available Arabic textbooks.

Table 14. Order of introduction of the letters of the alphabet, foreign textbooks

Country	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
Egypt	Oral preparation	1. أ 2. ب 3. ت 4. ث 5. ج 6. ح 7. خ	1. س 2. ش 3. ص 4. ض 5. ط 6. ظ 7. ع	Texts				

⁴⁴ See Part 1 of this report. RTI International (2015). *Research on reading in Morocco: Curriculum and textbook analysis (Component 1, Part 1)*. Prepared for USAID under EdData II.

Country	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
		d د .8 ḍ ذ .9 r ر .10 z ز .11	ḡ غ .8 f ف .9 q ق .10 k ك .11 l ل .12 m م .13 n ن .14 h هـ .15 w و .16 y ي .17					
Yémen		1.م- 2.ب- 3.ل- 4.ن- 5.ر- 6.د- 7.ت- 8.ق- 9.ف- 10.ص- 11.ح- 12.س- 13.و 14.ج- 15.ش- 16.ظ- 17.ز- 18.أ- 19.ك- 20.خ- 21.ذ- 22.ع 23.ض- 24.ي- 25.ه- 26.ث- 27.ظ 28.غ						

Saiegh Haddad (2008)⁴⁵ suggests that fricative sounds such as:

θ, j, ح, x, د, ذ, ز, S, س, ش, ḡ, f, ف, S, ص, D, ظ

may be pronounced independently, which is what differentiates them from other letters. This makes them difficult for children to pronounce; it also makes it more difficult for children to develop a phonemic awareness of the sounds of these letters. This is also evident in the nasal consonants: م n م n, as well as liquids such as: ر ل r.

On the basis of a neuro-linguistic study, Taha (2014) reports that the impact of letter connectivity on visual processing (visual load) is more noticeable for beginning readers than advanced ones. It recommends introducing in textbooks for beginning readers the words whose letters are not connected (دورو wuruudun “pink”) or are partially connected (رون nuurun “light”) before introducing more complex words, namely those whose letters are completely connected (لسع casulun “honey”).⁴⁶

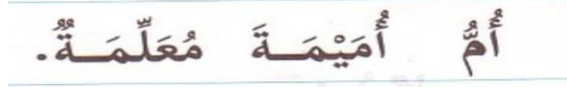
In the book *Al Muftiid* (Grade 1) we find that the lesson starts with reading a sentence composed of words that use the letter that is being taught; in this case, the target letter is mim (m). Figure 2 provides an example.

⁴⁵ Saiegh Haddad, E. (2008). The acquisition of basic skills in reading, writing: conception of examination. http://cms.education.gov.il/NR/rdonlyres/DCBE2E90-9535-4886-843F-51554F5D1067/150296/Mivdak_Kita_A_arab.pdf

صايغ حداد، اليانور (2008) مهارات أساسية في اكتساب القراءة والكتابة: التصور الفكري للفحص. متاح على

⁴⁶ Taha, H. (2013). Reading and Spelling in Arabic: Linguistic and Orthographic Complexity. in *Theory and Practice in Language Studies*, Vol. 3, No. 5, pp. 721-727, Finland: Academy Publisher.

Figure 2. Example from the first lesson of Al Mufiid:



Transcription: 'umm 'umayma mucallimatun. Source: *Al Mufiid*, p. 5

Some remarks regarding the sentence:

- The sentence's three words contain the letter (m).
- The sentence focuses on words that contain the letter (m) at the end of the word (Um), two in the middle (*Oumaima*, *Mu'alima*), and at the beginning and the middle of the word (*Mu'alima*). The other exercises present words comprising the letter (m) in different positions.
- The letter (m) was vowelized with "a" three times (*fatha* —) and with "u" two times (*Damma* —.) The sentence did not contain a word where (m) is vowelized with "i" (*kasra* —).
- The text contains words with nuunation, or "tanwiin." Nuunation constitutes a challenge for pupils in both writing and pronunciation (*Mu'alimatun*).
- The next sentence in the lesson contains words that are difficult for the learner to decode in the first lesson, such as *Taskono*.
- The letter is not presented in its long-vowelized form. There is no obvious comparison between the letter's long-vowelized form and short-vowelized one.

Another example (**Figure 3**) comes from the textbook *Kitaabii*. The title of the section is "I build and I read," implying that the teacher and child should construct or assemble the text.

Figure 3. Extract from the first lesson of *Kitaabii*:

I build and I read **The target letter is: S**

jalasat salmaa maca 'usratihaa 'ilaa lmaa'ida. 'akalat salmaa xubzan wa zubdatan, wa saribat Haliiban.



[س]

أبني وأقرأ

جَلَسَتْ سَلْمَى مَعَ أُسْرَتِهَا إِلَى الْمَائِدَةِ.
أَكَلَتْ سَلْمَى خُبْزًا وَزُبْدَةً،
وَشَرِبَتْ حَلِيبًا.

Salma is seated at the table with her family. Salma ate bread and butter and drank milk.

Here we note the following:

- The target letter is (س) (s).
- The text contains 14 words, 4 of which comprise the letter (s).
- The letter (s) occurred twice at the beginning in (سَلْمَى Salma) and twice in the middle (جَلَسَتْ Jalasat and أُسْرَتِهَا Usratiha); although no word contained (s) at the end.
- The letter (s) occurred three times vowelized with short “a,” and the sign that represents the absence of a vowel (sukuun) once. The words did not present (s) vowelized with “u” and “i.”
- The text contains a sentence comprising the letter ش (ch). This may constitute a difficulty as this letter resembles س (s).

Furthermore, at the bottom of page 7, the text gives a list of isolated (out of context) words (**Figure 4**).

Figure 4. Continuation of the first lesson of *Kitaabii*:

مَدْرَسَةٌ	سِتَارٌ	أَشْرَةٌ	
سَاحَةٌ	سُورٌ	غَسِيلٌ	
مدرسة سُـ	سُـترة سُـ	أشـرة سُـ	
سَاحـة سُـ	سُـور سُـ	غـسـيل سُـ	
سُـتار سُـ	أشـرة سُـ	مـسـاكة سُـ	
غـسـيل سُـ	مـسـاكة سُـ		
'usra	sitar	sutra	madrasa
massaaka	ğasiil	suur	saaHa
su	sutra	sa	madrasa
suu	suur	saa	saaHa
'us	'usra	si	sitaar
saa	massaaka	sii	ğasiil

Figure 4 shows that:

- All of the words contain the letter “s.”
- The examples present the letter “s” in first position and in the middle.
- There are no words that contain the letter “s” at the end.
- There are words in which “s” is long-vowelized (*saaHa* سَاحَةٌ, *suur* سُور, *ğasiil* غَسِيل).
- There is a word in which “s” has no vowel (*Usra*) and another word in which the letter “s” is stressed (*ma'saka*). Stress and lack of vowels constitute a challenge for the learner, especially in the first lesson of the book.
- These words have no relationship to the preceding text on the same page (the image presented in Figure 3, above).

On the next page, the textbook provides a sentence with four words, of which two have the target letter (Figure 5).

Figure 5. Continuation of the lesson for letter “s” in *Kitaabii*

I read and I write			
šaribat	salmaa	ka'sa	Haliib.
šaribat	--- lmaa	ka'--	Haliib.

Source: *Kitaabii*, page 8

Again, these examples have no connection with the story that started the lesson. It is difficult, from the words listed under the title “I read and I write” to establish links between the different components of the lesson. In other words, the lesson misses the opportunity to use repetition as a key element of reinforcement and consolidation of linguistic concepts.

Together these examples provide a picture of how letters are taught. In addition to the above points, we notice the following:

- The letter “s” was not shown at the end of the word in the first and second letters, whereas the third sample gives the word (kaâs) which ends with “s.” In the activity “I read and I write,” learners are expected to be familiar with the letter “s” in all positions and ready to decode it through the reading exercise.
- The activity “I read and I write” did not target the competence of identifying the sound of the letter, distinguishing what is being heard, and developing the decoding competence.

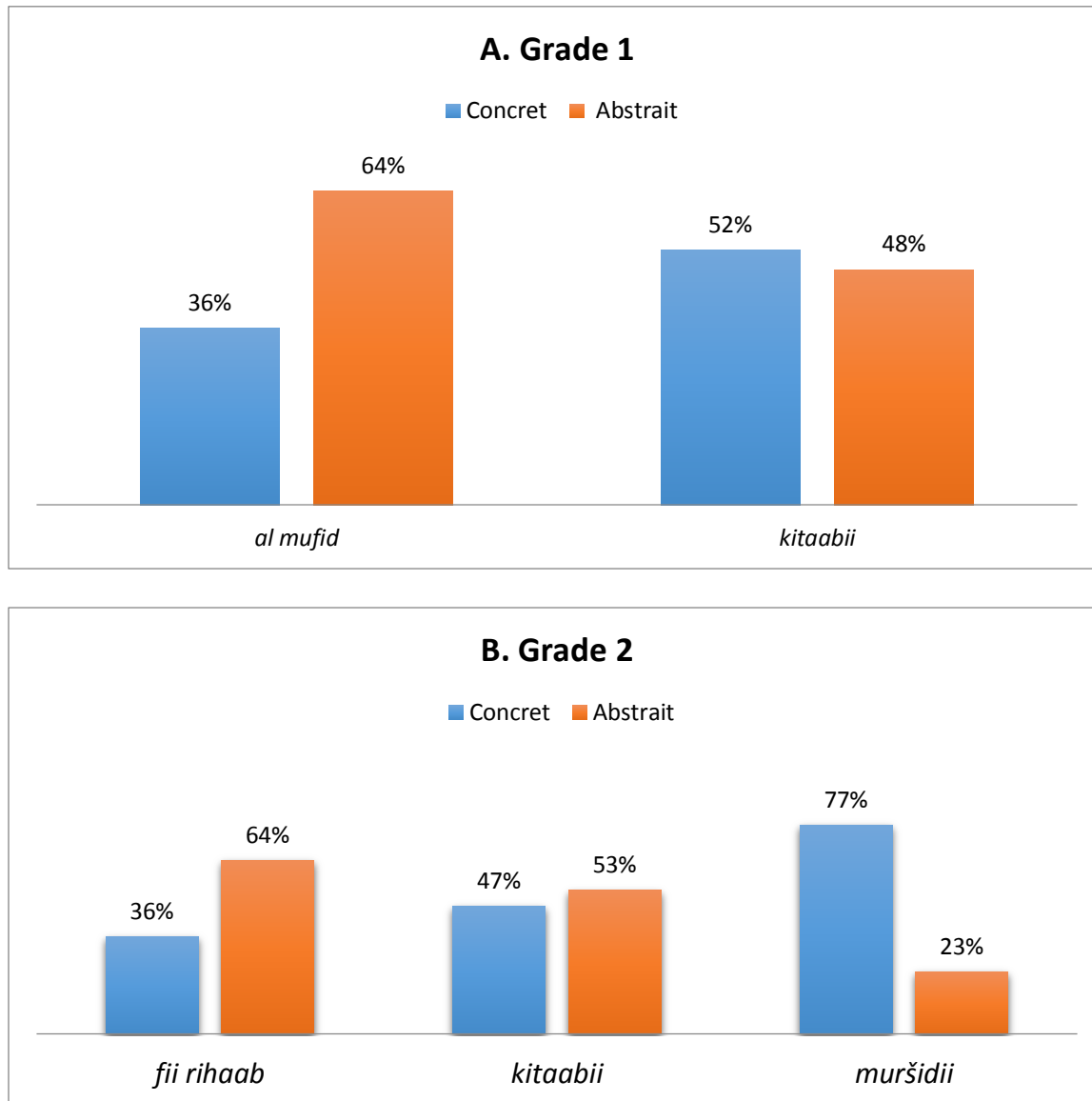
Although we have highlighted only one example from one book, the other lessons follow a similar pattern, and this analysis allows us to conclude that the textbook alone is not adequate for efficiently teaching the Arabic alphabet to beginning readers. This does not mean that teachers aren’t doing other, more simplified, enrichment activities outside of what is in the textbook, or that children haven’t learned basic skills earlier (in preschool). However, it does raise questions about the likelihood that all students are getting an equitable chance to learn how to read through standardized, leveled materials.

4.3 Vocabulary development

Concrete vs. abstract words.

In this study “concrete” refers to real, tangible objects and materials that are perceptible to the senses. Images, actual objects, and gestures can support learning concrete words, while the meaning of abstract words comes through experience and context. Use of concrete words is among best practices in vocabulary development, since children naturally have a repertoire of more concrete vocabulary than abstract,⁴⁷ and presence of abstract ideas is associated with higher levels of reading texts. This study analyzed the proportion of concrete and abstract words used in stories and exercises of the textbooks. The results of the analysis for Grades 1 and 2 is shown in Figure 6.

⁴⁷ Fountas, I. C., & Pinnell, G. S. (2006). *Leveled books (k-8): Matching texts to readers for effective teaching.* Heinemann.

Figure 6. Proportion of abstract (*abstrait*) vs. concrete (*concret*) words in Grades 1 and 2

The only edition with books in both Grade 1 and Grade 2 is *Kitaabii*. The analysis shows that the proportion of concrete words to abstract words is slightly higher in Grade 1, but by the first unit of Grade 2 *Kitaabii* has a total of 169 words, of which 106 are concrete (47%) and 90 are abstract (53%). An additional 80 words are prepositions and linking words that are classified as neither concrete nor abstract, such as:

مع with ، إلى ، at ، في ، in ، و ، and ، ف ، since ، منذ ، how ، متى ، when ، هكذا ، so ، يا ، oh

Table 15 shows examples of concrete and abstract words.

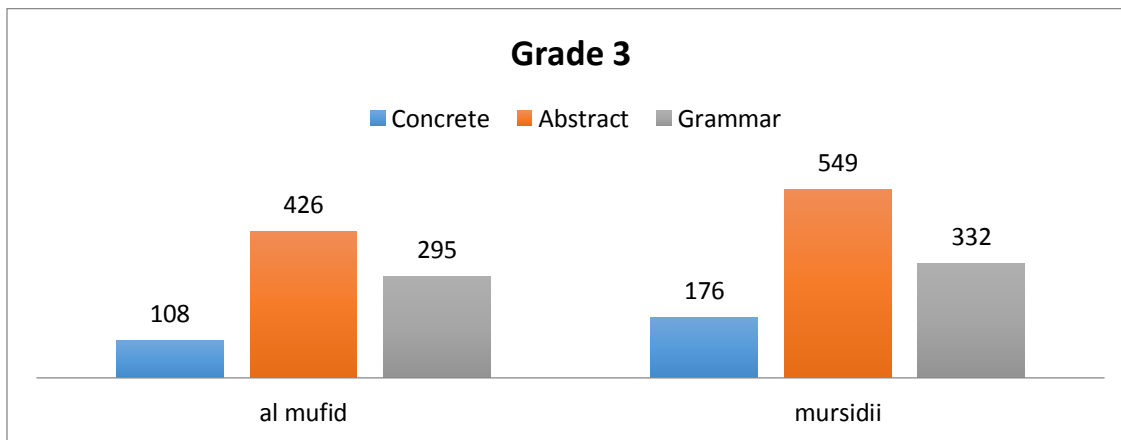
Table 15. Examples of concrete and abstract words

Abstract words			
Page	Transcription	Word	Meaning
14	<i>Sadaaqaatii</i>	صداقتي	My friendships
9	<i>jamiila</i>	جميلة	Beautiful
14	<i>fariHat</i>	فرحت	happy
Concrete words			
6	<i>bint</i>	بنت	Girl
6	<i>Imadrasa</i>	المدرسة	School
9	<i>casal wa xubz</i>	عسل وخبز	Honey and bread

Source: Kitaabi

It is only in the textbook *Murchidi* that concrete words outnumber abstract words in Grade 2. In *Kitaabii* the proportions are almost equal, but there are many more abstract words in *Fii RiHaab* than in the other books.

By third grade, abstract words represent an even larger proportion of words in the text (Figure 7). In the Grade 3 textbook *Al Mufiid* there are 534 words (excluding connectors), of which 108 are concrete (20%), and 426 are abstract (80%). Connectors and prepositions (295 total) represent 36% of the total when added to the calculation.

Figure 7. Proportion concrete and abstract words in Grade 3 textbooks

If in the first grade *Al Mufiid* was already using more abstract words than concrete ones, by Grade 3 the level of difficulty has increased substantially, given the presence of a large proportion of abstract words, as shown in Figure 9.

Word frequency

Studies of the development of reading competence stress that the repetition of vocabulary in reading texts is necessary for learners to acquire fluency and understanding.⁴⁸ The reoccurrence of a word in one text or in different texts allows learners to evolve from decoding to automatic recognition, and this increase in reading speed supports increased comprehension. In addition, the frequency of word repetition helps learners identify the word in different contexts, which allows them to make use of the word in different subject areas. Therefore this study also sought to determine to what extent the textbooks support vocabulary development through repetition.

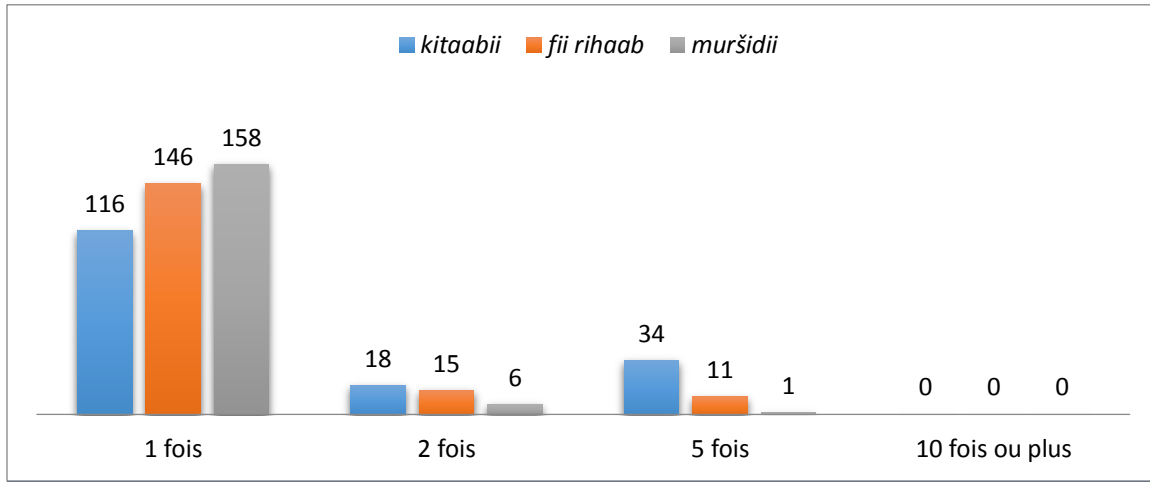
Grade 1. The analysis of the Grade 1 textbook revealed that word repetition is very low. For instance, in *Kitaabii*, out of 204 words, 91 words occurred only once (45%); 12 words occurred twice (6%). In *Al Mufiid*, out of 195 words in the first unit, 79 words occurred only once (49%) and 13 occurred twice (7%).

These results reflect that Grade 1 students are overwhelmingly presented with more new words than familiar ones, and words are not reinforced through repetition in different contexts. Contrary to good educational practices, neither textbook adopted repetition as a strategy for building vocabulary and fluency. The proportion of words reoccurring more than 10 times did not exceed 2% in *Al Mufiid*.

If we consider that Arabic is almost a second language for Grade 1 pupils (most of whom use an Arabic dialect or a version of Amazigh in the home), the development of oral language fluency and then of fluent reading requires increasing the repetition of new words used in reading texts.

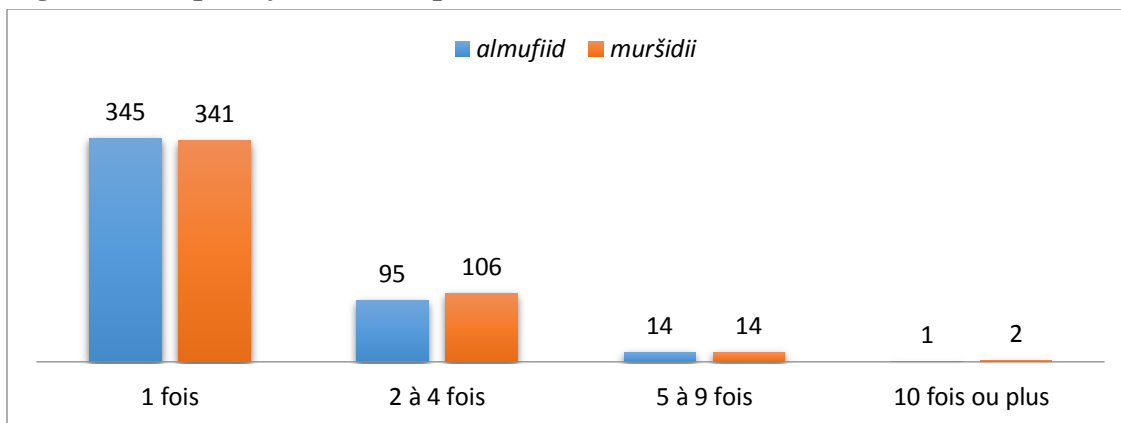
Grade 2. As in Grade 1, the proportion of words that occurred only once is drastically higher than that of words that are repeated two or more times. The number of words that a learner sees only once in the first unit of Grade 2 is 116 for *Kitaabii*, 146 for *Fii RiHaab* and 158 in *Murchidi*. Words that occurred twice are as follows: 18 in *Kitaabii*; 15 in *Fii RiHaab* and 6 in *Murchidi*, and so forth, as shown in Figure 8.

⁴⁸ Fountas, I. C., & Pinnell, G. S. (2006). *Leveled books (k-8): Matching texts to readers for effective teaching*. Heinemann.

Figure 8. Frequency of word repetition in Grade 2

No words are repeated more than five times in any of the textbooks. This is far from an effective level of repetition according to research-based standards that suggest that contextual repetition (hearing or reading the same word in the same context) is important for learning new words, although the actual number of times a word needs to be repeated depends on many factors.⁴⁹

Grade 3. After counting all the words of two units of *Murchidi* and *Al Mufiid*, we again note the absence of a strategy for vocabulary repetition within texts and between texts within a unit (Figure 9). In *Murchidi* the total of words used in all functional, complementary, and poetic texts is 464, of which 341 (73%) occurred only once; 65 occurred twice, 24 occurred three times, and 17 occurred four times. The same applies to *Al Mufiid*: of 455 words total, 345 (76%) occurred only once, 62 words occurred twice, 23 words occurred three times, and 10 words occurred four times.

Figure 9. Frequency of word repetition in Grade 3

⁴⁹ Horst, J. S., Parsons, K. L., and Bryan, N. M. (2011a). Get the story straight: contextual repetition promotes word learning from storybooks. *Front. Psychol.* 2:17. doi: 10.3389/fpsyg.2011.00017

This study has shown that the Moroccan textbooks for the first three grades are far from adequate in meeting the needs of learners in the area of vocabulary development, including automatic recognition of high-frequency words. Students are faced with an abundance of text, most of which is composed of new words, before they have even become familiar with all letters of the alphabet. In this context, it is not surprising that students find themselves struggling with basic achievement, as evidenced by empirical studies in this sector (see Preface, Component 1 – Part 1). These challenges prevent students from pursuing learning and undermine the comprehension and assimilation of content that lead to achieving a school’s fundamental objectives. The difficulties that children face in Arabic language at the secondary level, according to reports by teachers who participated in workshops to strengthen school achievement (2012–2013) include the following:

- Difficulty pronouncing certain letters when reading a paragraph of text
- Inability to distinguish between the *Hamza*, which is a radical (*hamzat qaTc*), and *alif*, which serves to support vowels at the beginning of a noun or adjective (*hamzat waSl*)
- Problems linking the form of the letter with its corresponding sound
- Difficulty reading long words
- Poor reading comprehension

These difficulties, as reported by teachers, can only be the result of an absence of effective strategy for teaching reading in the early grades. Figure 10 presents some specifications for teaching vocabulary that are found in Egyptian textbooks, as an example.

Figure 10. Example specifications from Egyptian textbooks

Specifications for book production in the area of <u>vocabulary</u> :
Grade 1: The textbook contains 250 new words with an average repetition rate of 12–15 times for each word. The percentage of concrete words should be greater than the percentage of abstract words (ratio of 80% concrete to 20% abstract).
Grade 2: The textbook should contain 350 new words, with an average repetition rate of 10–12 times per word. The percentage of concrete words should be more than the percentage of abstract words (ratio of 70% concrete to 30% abstract).
Grade 3: The book should include 400–500 new words, with an average repetition of 5 times per word, and reusing words from Grade 1 and Grade 2. The percentage of concrete words should be more than the percentage of abstract words (ratio of 60% concrete to 40% abstract).

To conclude this section, it is clear that the ability of the Moroccan textbooks to support vocabulary development and fluency is extremely limited. As described in the previous sections

related to alphabetic knowledge and phonemic awareness, teachers bear the responsibility for developing and delivering word recognition and fluency-building strategies outside of the textbooks. The content of the stories and exercises in textbooks appears to be primarily concerned with the thematic unit rather than with the characteristics of the language and the literacy development needs of the pupils. The textbooks miss the opportunity to strengthen both thematic and language development capacities through more deliberate presentation and sequencing of the language.

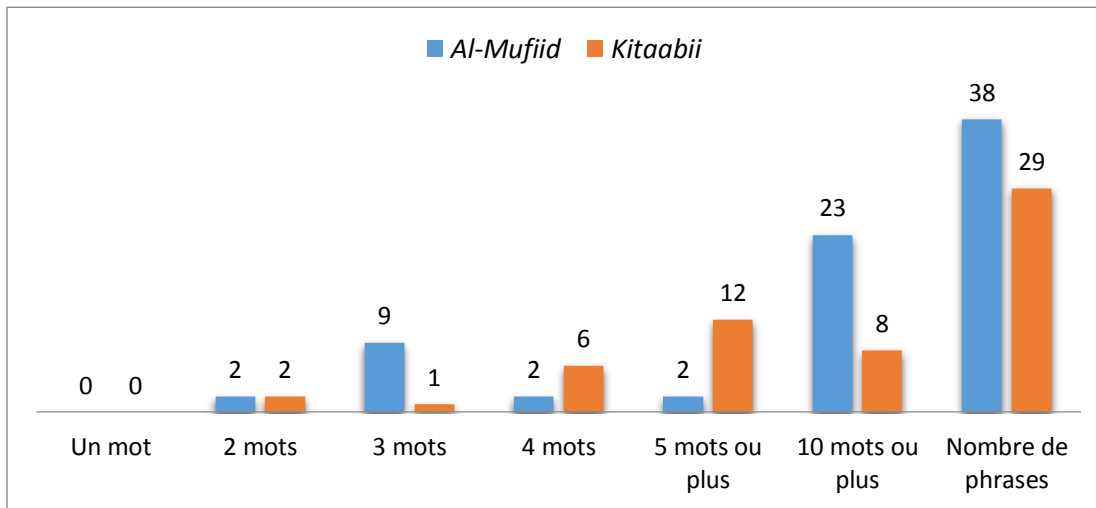
4.4 Fluency

Sentence length

Studies in reading acquisition have confirmed that sentence length has an effect on reading skills development.⁵⁰ Sentence length is one of the factors that increase complexity of sentence structure and can prevent the student from reading correctly and seizing the meaning of the sentence. The findings of the analysis of sentence length in each grade are presented in this section.

Grade 1. The following chart (Figure 11) shows that sentence length, even in Grade 1, is typically very long in the Moroccan textbooks. For example, out of 38 sentences in the first unit of *Al Mufiid*, 23 (60%) were longer than 10 words. Similarly, *Kitaabii* presents 8 out of 29 (28%) sentences that are longer than 10 words.

Figure 11. Number of words per sentence, Grade 1



Most texts have titles of two or three words. However, the number of simple sentences composed of three to four words—the kind that are more apt to help young learners acquire confident reading skills—remains relatively small compared to the proportion of sentences that are much longer.

⁵⁰ Fountas & Pinnell (2006)

The type of phrase is an indicator not only of the difficulty level of the reading text, but also of the difficulty in teaching the reading texts.

The following table (Table 16) compares the average number of words in the two first grade textbooks with grade-level averages established for English and Arabic. According to this table, the average sentence length in the textbooks is more closely aligned to the norm, even if the distribution appears heavily biased towards lengthy sentences.

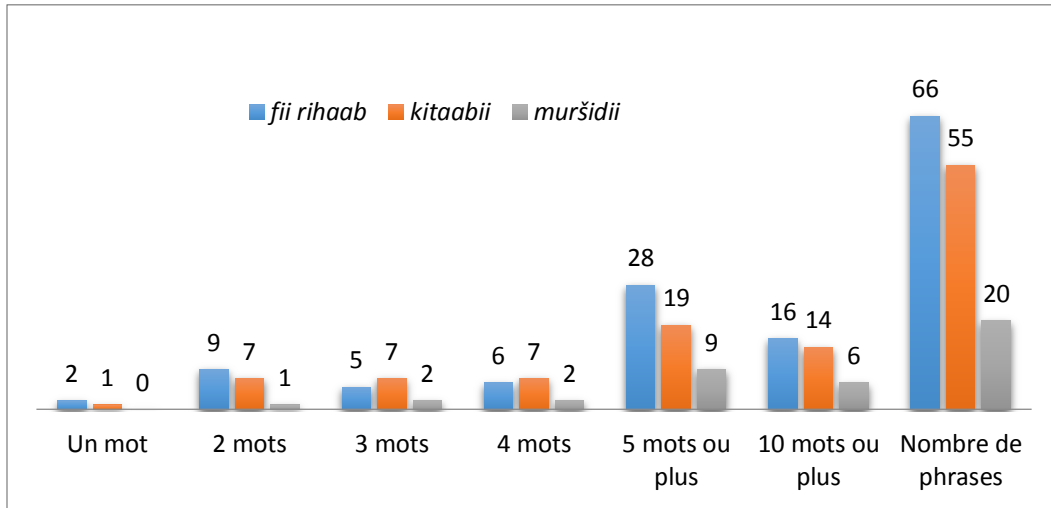
Table 16. Comparison of sentence length norms by grade

Grade level	Average sentence length by grade			
	<i>Al Mufiid</i>	<i>Kitaabii</i>	Reading A-Z (English)	Arabic readability indicator ⁵¹
Grade 1	7.6	5.8	7	6.5
Grade 2	6.7	4	16.5	8.4

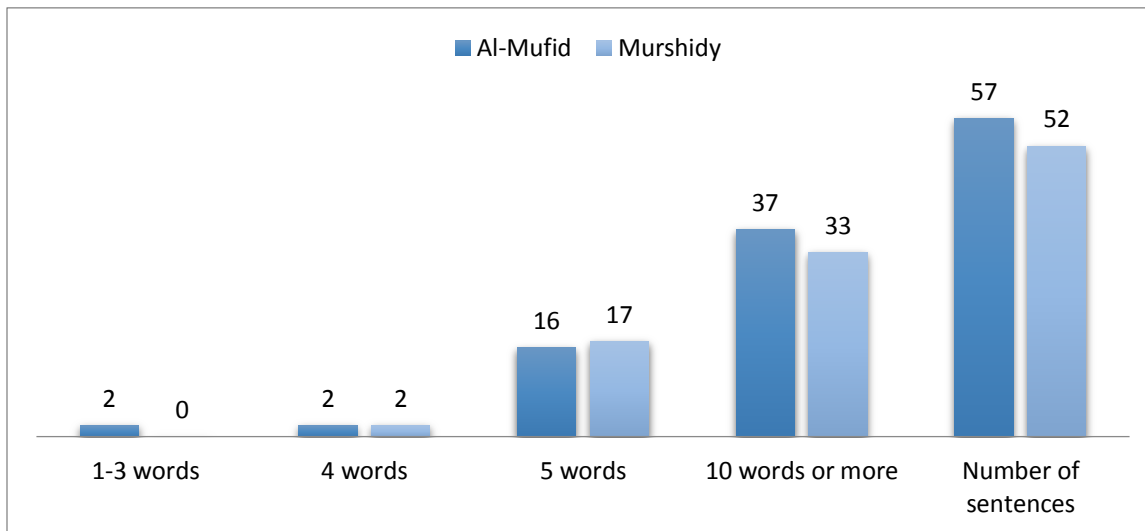
Note: Arabic readability indicator developed from a collection of texts used in the Jordanian curriculum.

Grade 2. The following graph (Figure 12) shows that the first unit of *Fii RiHaab* contains 66 sentences, of which 42% are sentences with between 5 and 9 words; 24% of *Fii RiHaab* sentences have 10 or more words. This leaves about a third of sentences in the category of 1 to 4 words in length. The second grade book, *Kitaabii*, has a slightly lower proportion of sentences in the range of 5 to 9 words (34%); 25% include 10 words or more, and 38% have between 2 and 5 words per phrase. Finally, in *Murchidi* we see that the text density (overall number of sentences in the unit) is much lower than in the other two books. In *Murchidi* 45% of sentences contain between 5 and 9 words, 35% of sentences have 10 or more words, and 25% of sentences contain between 2 and 4 words. (Figure 12 includes the numbers. Refer also to Table 16 above for average words per sentence in each book and grade level).

⁵¹ Abdel-Karim Al-Tamimi, Manar Jaradat, Nuha Aljarrah, and Sahar Ghanim (2014). AARI: Automatic Arabic Readability Index. *International Arab Journal of Information Technology*, 11(4):370-378.

Figure 12. Number of words per sentence in Grade 2 textbooks

Grade 3. Consistent with those of Grades 1 and 2, the Grade 3 textbooks use mainly sentences with 10 words or more. There are also far fewer sentences with fewer than 5 words, as shown in Figure 13. Number of words per sentence in Grade 3 textbooks below.

Figure 13. Number of words per sentence in Grade 3 textbooks

Simple and complex phrases

The length of sentences is important, but equally informative is the sentence type and complexity (Table 17). This analysis looked at sentence types (nominal and verbal sentences, indicative and declarative), on the one hand and the complexity (simple or compound) on the other hand.

Grade 1. The analysis noted that first year textbooks comprise from 5 to 8 sentences in each text and that verbal sentences (beginning with a verb) are the most common, with a proportion of 64% verb to 36% nominal sentences (beginning with a noun; see Figure 14. Number of noun and

verb phrases. From unit to unit, the proportions vary and verbal sentences become abundant in reading texts.

At the level of simple and compound sentences, the analysis shows that *Kitaabii* relies much on compound sentences, with a proportion of 59% compared to 41% for simple sentences.

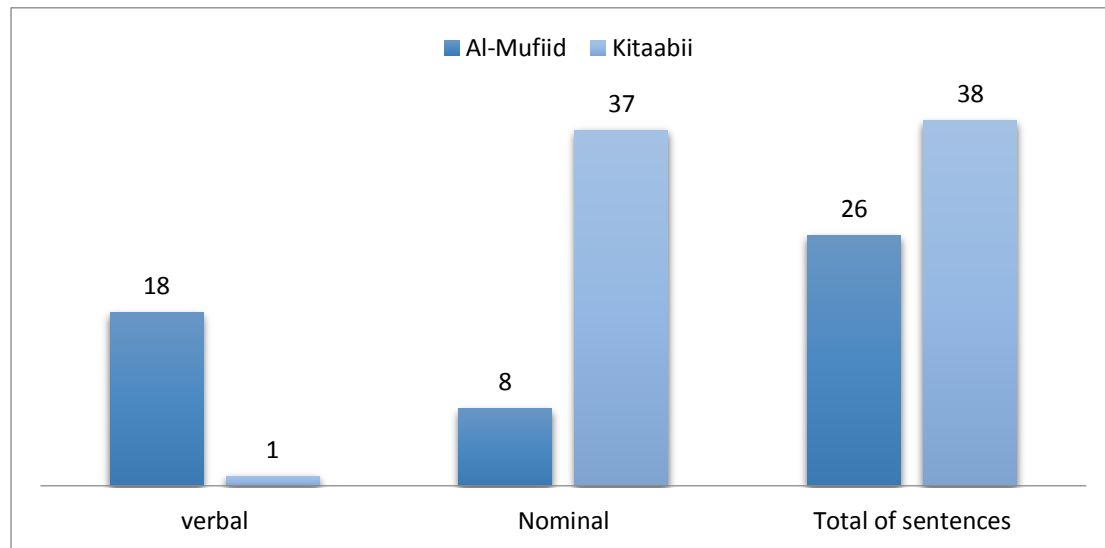
Table 17. Example sentence types from the books

Type	Kitaabii	Al Mufiid
Simple sentences	Salma was happy with Toutou bird's friendship	Oumaima arranges the pillows of the foyer
Compound sentences	Salma stood drying her hands with the towel and was surprised by her brother calling her: "Salma, Salma!"	[Not included in the first unit]

For beginning readers it is recommended to use short- to medium-length sentences and avoid long, compound ones. Texts with simple phrases are less frustrating and easier to understand. Compound sentences make the text more difficult for the novice reader.

Some research suggests the use of nominal sentences more than verbal ones in the texts intended for early age children, and emphasizes keeping the main parts of the sentences close to each other and avoiding use of subordinate clauses.

Figure 14. Number of noun and verb phrases



Considering the fact that sentence type and length help or hinder fluency and understanding in reading performance, it is notable that the majority of sentences in *Kitaabii* are long and complex, although there are more nominal phrases than verbal. *Al Mufiid* contains equivalent numbers of simple and complex (compound) phrases, but it has more verbal sentences than

nominal. However, the number of compound sentences in this textbook is enough to create difficulties for reading learners.

Grade 2. The first unit of the books contained the following proportions:

- *Kitaabii* contains 55 sentences, 33 of which are compound and 22 are simple.
- *Murchidi* contains 22 sentences, 14 of which are compound and 7 are simple.
- In *Fii riHaab*, there are 62 sentences, 36 of which are compound and 26 are simple.

These numbers translate into the following percentages (see Figure 15).

Figure 15. Percentage of simple and complex sentences

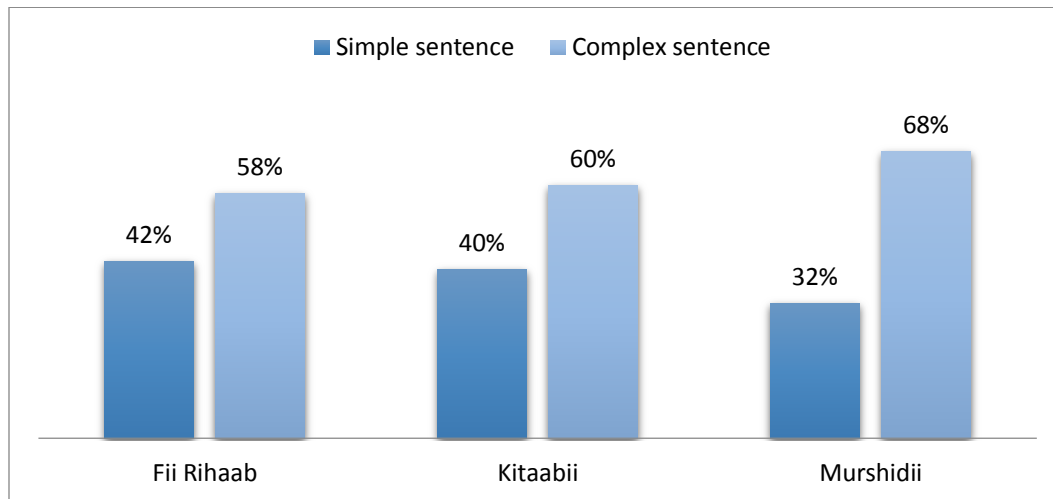


Table 18 below provides examples of different types of phrases in the Grade 2 books.

Table 18. Example sentence types from the books

Number of sentences	Sentence word length	Number	Examples	Page
Textbook: Kitaabii				
92	10 words or more	2	Adam revised his lessons, arranged his school tools, and started looking for his uncle's little house.	11
	5 to 9 words	60	The family members started walking around the house.	6
	4 words	10	How do I arrange the house supplies?	6
	3 words	12	Is the address lost?	11
	2 words	7	The house's address	12
	One word	1	Oh!	11
Textbook: Murchidi				
	10 words or more	9	The Imam of the mosque prayed for me while entering the house with men who learn the Koran by heart.	10

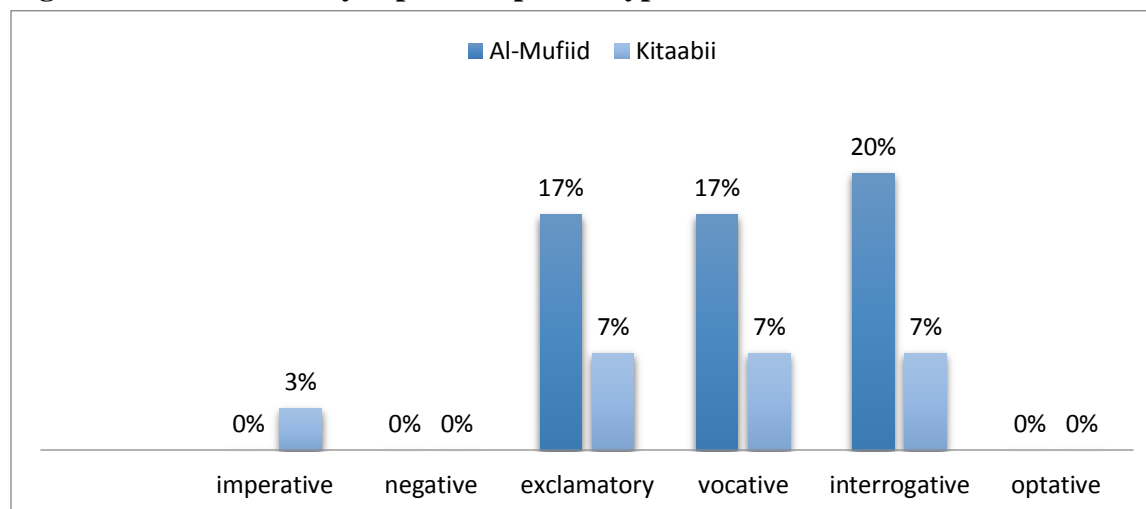
Number of sentences	Sentence word length	Number	Examples	Page
	5 to 9 words	9	I prepared soup, cheese, and eggs	6
	4 words	2	The Cheikh asked me: Where is the Koran?	10
	3 words	1	My family at night.	6
	2 words	1	My uncle's visit	14
	One word	0	-----	-----

Declarative and expressive sentences

A declarative sentence is a sentence that contains an enunciation that may be true or false; e.g., “Knowledge is useless.” The statement in this sentence is false because reality tells us otherwise. An expressive sentence is one that cannot be qualified as true or false. This includes sentence types such as imperative, prohibition, interjection, interrogation, wishing, exclamation, oath, praise, slander, etc.

Grade 1. The analysis of the first unit of *Kitaabii* and *Al Mufiid* shows that 92% of the sentences in *Kitaabii* are expressive, as are 48% in *Al Mufiid*. The difference between the two textbooks can be explained by the fact that Morocco’s textbook specifications did not include guidance on this point. Figure 16, below, provides a breakdown of expressive phrase types.

Figure 16. Breakdown by expressive phrase type in Grade 1 textbooks



Grade 2. Declarative-style sentences outnumber expressive-style ones in the second grade texts. The first unit of *Kitaabii* contains 39 declarative sentences and 32 expressive ones. The first unit of *Fii RiHaab* contains 41 declarative sentences and 23 expressive ones, and of *Murchidi*, 13 declarative and 11 expressive sentences.

Kitaabii contains four expressive styles out of six:

- Imperative: 2 examples, e.g., “Enter peacefully.” (page 6)

- Prohibition: 1 example, e.g., “Do not exhaust yourself.” (page 8)
- Exclamation: 3 examples, e.g., “How beautiful is his face!” (page 17)
- Interrogation: 26 examples, e.g., “What was the mother’s answer?” (page 17)

The book contained no wishing and interjection-style sentences, whereas the interrogative style is predominant.

Murchidi contained four styles out of six:

- Exclamation: 4 sentences, e.g., “What a wonderful night!” (page 10)
- Interrogation: 13 sentences, e.g., “When will the film start?”
- Imperative: 3 sentences, e.g., “Come and read.” (page 10)
- Calling: e.g., “May God bless you” (page 10)

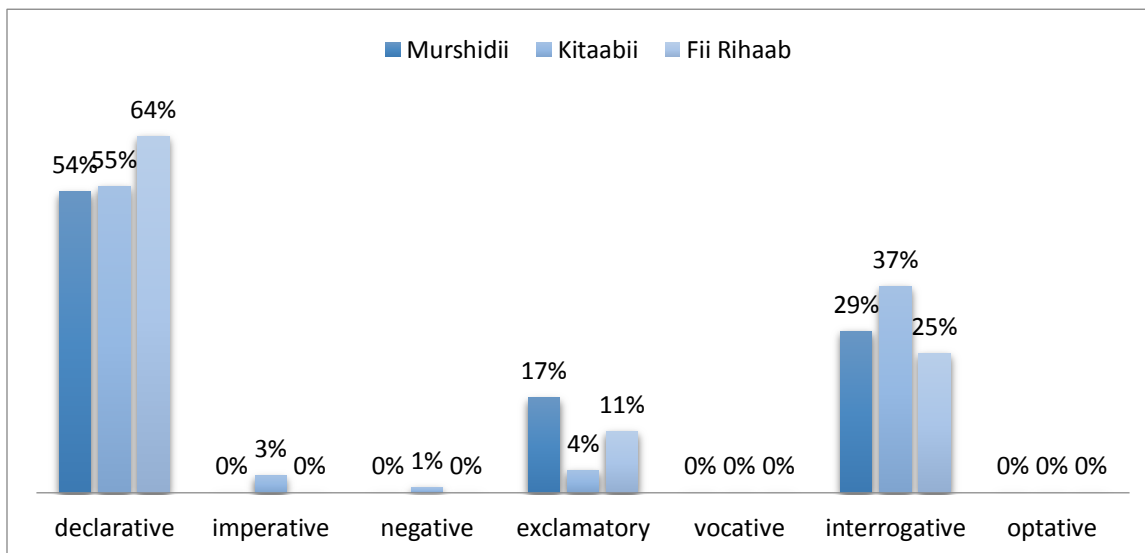
The book did not contain examples of prohibition and wishing

Fii RiHaab contained five styles out of six:

- Imperative: 3 sentences, e.g., “Come in, look.” (page 11)
- Exclamation: 1 sentence, e.g., “How beautiful it is!”
- Interjection: 8 sentences, e.g., “Hey, Zaynab” (page 5)
- Interrogation: 17 sentences, e.g., “What will be my role?” (page 18)

The book did not contain examples of prohibition and wishing. Therefore, the presence of styles was different. In addition, the abundance of interrogative sentences contradicts the idea of motivating pupils to raise questions themselves and discuss the text for the sake of understanding. Figure 17 shows the breakdown by phrase type encountered in the Grade 2 texts.

Figure 17. Breakdown by expressive phrase type in Grade 2 textbooks



Grade 3. Finally, in Grade 3 the textbooks' style is predominantly verbal and compound sentences of the expressive type, with the exception of *Al Mufiid*, in which declarative sentences outnumber expressive ones. In the first unit of *Al Mufiid* there are seven lessons. These contain 21 paragraphs with a total of 52 sentences; 15 of these sentences are nominal, and 37 are verbal. The first unit of *Murchidi* comprises seven lessons. These contain 14 paragraphs and 57 sentences, 26 of which are nominal and 31 are verbal. These findings suggest that pupils would face difficulty reading these texts. Verbal sentences can be difficult to understand, particularly because they require knowledge of conjugation and verb tenses as well as of the distinction between strong and weak verbs. What complicates things is the high number of compound sentences in the two books: 58, compared to only 24 simple sentences. In addition, in total, we found 102 declarative sentences and 98 expressive ones.

Use of punctuation

Punctuation can break up a complex sentence into component parts. Punctuation is also a marker of intonation, depending on the language (e.g., raising the voice at the end of an interrogative sentence; lowering it before a period), helping the reader develop prosody. Although Arabic contains criteria relative to sentence structure and punctuation, many of the textbooks use a loose punctuation style that does not respect the predicative sentence structure of Arabic. This can make sentences longer and is probably one of the obstacles that pupils face in learning to read these texts. Although the textbook specifications urge publishers to use simple and clear sentences, many textbooks do not respect punctuation rules to the extent that the “comma” or “semi-colon” plays the role of the “full-stop.”

Textbook specifications must make reference to standards of punctuation use, and such specifications should become part of the evaluation process. During both development and evaluation of the textbooks, textbooks producers should ensure that punctuation is used to show places to pause, stop, and start as well as voice tones and speech purposes. These elements facilitate understanding during reading. The overuse of punctuation marks results in long sentences, and may constitute a challenge for learners. They may not remember the content of the beginning of the sentence when they are close to its end.

4.5 Reading comprehension

Strategies and objectives

Reading comprehension is the ultimate purpose of reading. If learners are able to read words but they do not understand them, it is as if they cannot read them at all. Reading comprehension means use of the highest processes of understanding and thinking during reading; comprehension involves removing ambiguity in a text through the assimilation of context or through the development of new meanings.

Developing reading comprehension skills comprises a set of strategies that are used during the teaching process, such as the strategy of prediction, self-monitoring, questioning, summarization, and more. Characteristics of pupils who can understand what is being read are as follows:

- They use a set of comprehension strategies to deepen and enrich their understanding.
- They are aware of the use of thinking processes and select the strategy to use during reading, especially when they encounter understanding difficulties.
- They are able to understand any subject if they apply the appropriate comprehension strategy.⁵²

Analysis of reading comprehension in the texts is based on focusing on the following:

- Including explicit objectives related to comprehension strategies
- Strategies of teaching reading comprehension
- The literary genre of the textbook's texts

Overall, we see that Moroccan textbooks focus on direct understanding but do not make use of strategies or develop skills such as prediction, checking the guess, summarization, and others. The following sections present in more detail the different elements of the analysis.

The teacher's guide for *Kitaabii* in Grade 2 specifies that pupils should be able to build the meanings of sentences, grasp the content of texts, and know sentence structure through the relations among textual components, such as characters and setting. The present study found that the textbook contains a number of performance objectives for direct auditory and reading comprehension. For instance, *Kitaabii* targets grasping the general meaning of the text through listening, understanding, and expressing its content as well as identifying the setting of events and answering direct questions.

The textbook presents these skills in the form of exercises done by pupils or questions asked by the teacher. These skills are introduced to pupils in the form of tasks that they execute through the instructions of the teacher in order to grasp and remember the content of the text.

The strategies of teaching reading comprehension skills are limited to explanation and discussion; the teacher reads the questions and pupils discuss by giving answers and make a distinction between choices in case of choosing between multiple response questions. The teacher then asks pupils to write the answers down. It is worth noting that these types of exercises (reading multiple choice questions and writing down the answers) are included here before all of the letters of the alphabet have been introduced.

In the Grade 1 version, each of the eight units of *Kitaabii* presents 5 listening texts, 10 reading texts, and 1 poem. The listening texts are dominated by a large number of words and many long sentences. *Al Mufiid* presents short sentences that comprise words with the target letter.

For Grades 2 and 3, every lesson includes a reading text in the form of a story or poem.

⁵² Brown, D. H. (2001) *Teaching by principles: and interactive approach to language pedagogy*. Second edition. New York: Longman.

Monitoring comprehension

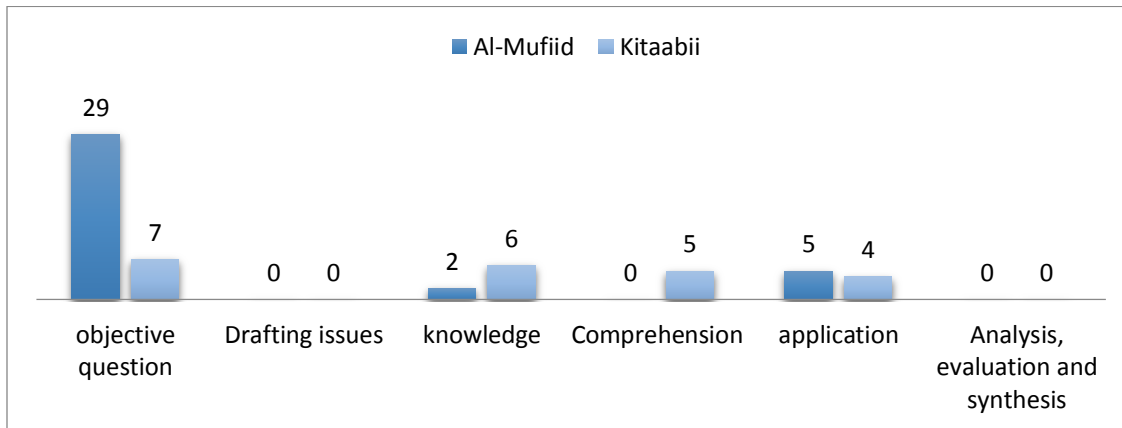
Assessment is a basic component in methodological skill-building in all linguistic activities that aim to teach children how to read in Arabic. Building reading skills is done through stages, each of which is based on the previous one; assessment is the mechanism used to detect learning difficulties and acts as a corrective measure for all the components of the teaching-learning process to help move learners from one stage to the next.

In this study, assessment means that all the activities presented in the textbook seek to monitor the progress of pupils and their knowledge, acquisition of learning objectives, and reading ability development on a regular basis. Research shows that effective teachers ask higher-level questions that go beyond information recall or literal understanding, as well as using different types of questioning involving different levels of comprehension.⁵³

Grade 1. Our analysis focused on comprehensive assessment by classifying the subject areas evaluated in the manuals by type according to Bloom's taxonomy (Figure 18). We also tried to observe the content and competences targeted by each textbook's assessment.

The analysis reveals that the most-used questions in the first year editions of the textbooks are objective questions (60% in *Al Mufiid* and 27% in *Kitaabii*). Because pupils at this level have little linguistic background, they would find it difficult to produce essay answers (declarative or expressive).

Figure 18. Levels of comprehension, Grade 1



The two textbooks focus on the lower levels of understanding (recall, understanding, applying). The first unit did not contain any question to assess the higher abilities (analysis, evaluation/comprehension, synthesis).

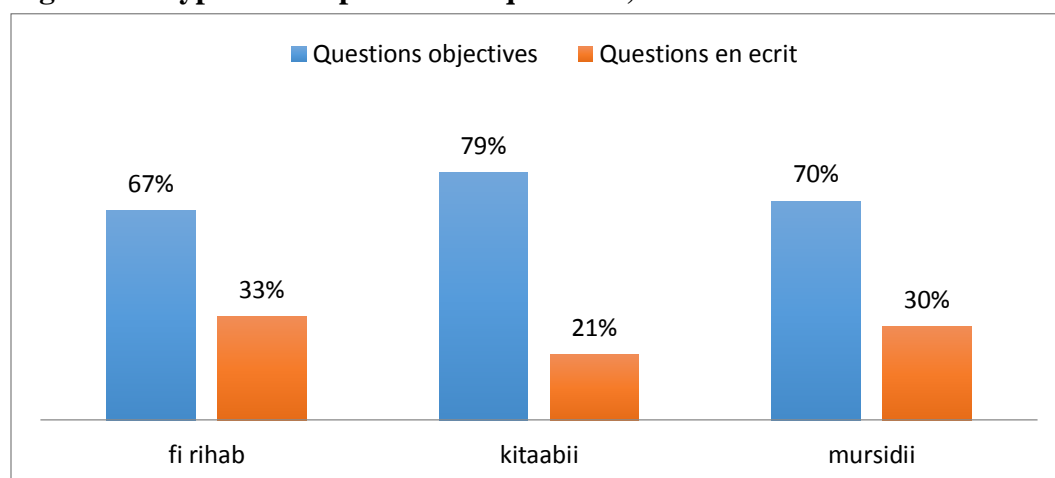
⁵³ Day, R. and Park, J. (2005). Developing reading comprehension questions. *Reading in a foreign language*, 17(1). <http://nflrc.hawaii.edu/rfl/April2005/day/day.pdf>

What is worth mentioning is the weak assessment of both listening and speaking skills. The activities used to evaluate reading competency also concern writing, yet they remain limited (16% in *Kitaabii*). Our analysis did not detect any activity to assess reading in *Al Mufiid*.

Second level. In second year, we note the following:

- Near absence of evaluation of listening and speaking skills and literary fluency in reading aloud
- Lack of evaluation of assimilation skills, particularly those that require a linguistic and intellectual effort, such as the higher levels of deduction, analysis, synthesis, and understanding
- Predominance of objective questions (Figure 19)

Figure 19. Types of comprehension questions, Grade 2



For **Grade 3**, the first unit of the two textbooks *Al Mufiid* and *Murchidi* show the results in Table 19.

Table 19. Question types by textbook, Grade 3

Objectives of question types	Al Mufiid	Murchidi	Total
Remember	7	6	13
Understand	1	20	21
Apply	14	8	22
Analysis/Synthesis/Evaluation	6	6	12

Table 19 shows that *Al Mufiid* contained 22 comprehension questions related to the lower levels, and 6 questions related to the higher levels (analysis/synthesis/evaluation). *Murchidi* contained 34 comprehension questions related to the lower levels, and 6 questions related to the higher levels.

The objectives are general and expressed in constructive sentences, as is the case for *Murchidi* (Grade 3). The preamble of the first unit reads: “In this unit I will:

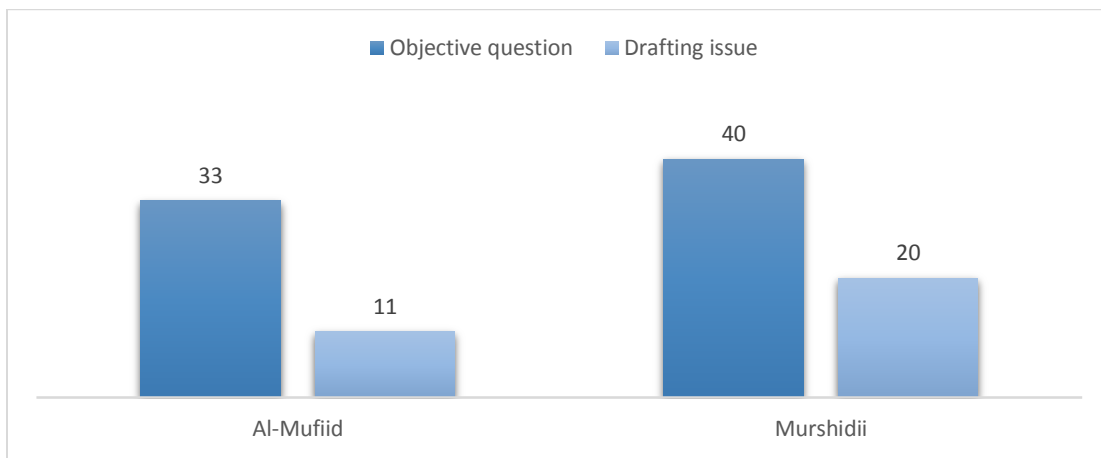
- Be able to read poems and prose texts in a correct and expressive way;
- Identify the vocabulary and understand their meaning;
- Acquire vocabulary related to certain values.”

The same objectives are noted in *Al Mufiid* and point to Islamic values: identification, concentration, ability, writing, and cooperation.

However, the practice exercises do not have a clear strategy to achieve the given objectives. This reflects a gap between the fixed objectives and the type of the suggested activities. Accordingly, assessment remains limited to the lower levels of the Bloom’s classification (remember, understand, apply) and does not reach the levels of thinking and criticizing (analysis, synthesis, evaluation). The questions in *Al Mufiid* are based on memorization and understanding using question words (why, what, etc.).

The fixed objectives, in addition to being general, are unobservable and immeasurable. The suggested objectives for *Al Mufiid*: “I read, I understand, I analyze, I discuss, I search,” and for *Murchidi*: “I think, I answer, I search,” are abstract and not specified by behavioral and procedural actions. These suggested activities are unobservable and immeasurable. Reading comprehension assessment is dominated by objective questions compared to essay (drafting) questions. Accordingly, these objectives are based on knowledge that requires recalling and remembering, and comprehension questions do not reach the higher levels of cognition (See Figure 20).

Figure 20. Types of comprehension questions, Grade 3

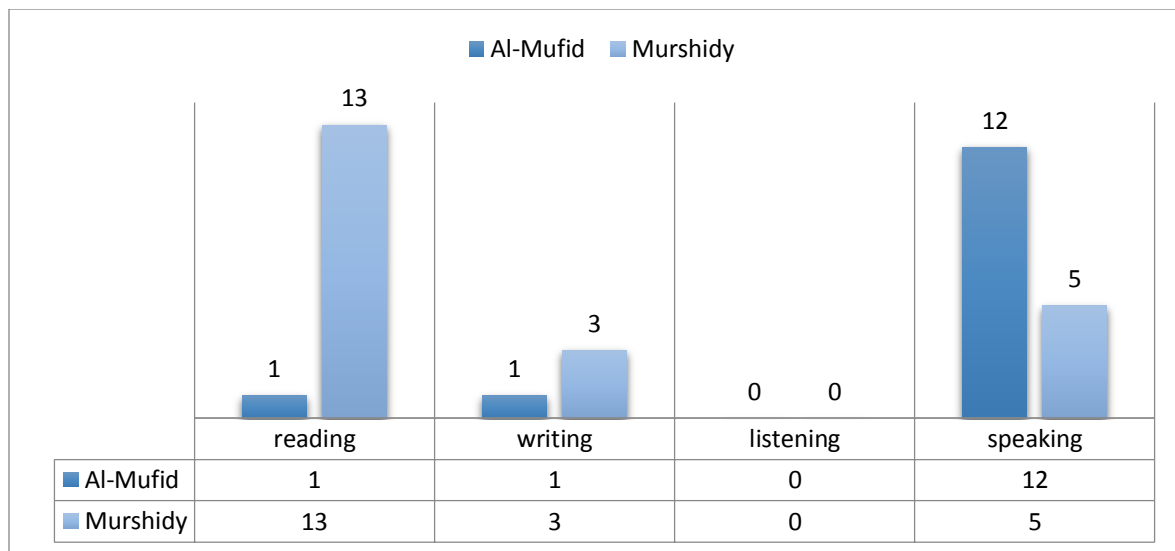


There are 56 total questions related to the lower levels (remembering, understanding, applying), and 6 questions related to the levels of thinking and criticizing (analysis, composition, assessment). The same is applicable to activities that deal with linguistic competences that are considered as information being stored and recalled after the direct question, whereas the other fields of competence and emotion remained weak. Written production that reflects pupils’ feelings (love, dislike, positions, attitudes, etc.) but lacks development.

4.6 Teaching methods

Figure 21 shows that the books cover reading and discussion as activities, but in different degrees depending on the book. There are no activities that target listening skills.

Figure 21. Skills covered by the books



The level of difficulty of the text, as well as the way in which the class is taught can have an effect on the concentration of the students and their capacity to learn. Table 20 below provides details about how teachers divide their attention when teaching reading, based on the study of perceptions and practices⁵⁴.

⁵⁴ RTI International (2014). Research on reading in Morocco: Analysis of teachers’ perceptions and practices. Final report: Component 3. Report prepared for USAID under EdData II.

Table 20. Teaching style in the reading classroom

Teacher's attention	All classroom types	Multigrade classrooms	Non-multigrade classrooms
All of the children	59%	52%	61%
One child only	35%	39%	34%
Small groups	4.5%	7.9%	3.3%
On someone other than the pupils	0.9%	1%	.9%
Is not in the classroom	0.3	0%	.4%

Source: RTI (2014)

We conclude that most of the time is dedicated to the whole class instruction; that is, all children receive the same information simultaneously. Students receive individual attention only 35% of the time. This kind of situation is associated with direct teacher-centered methods that focus on simple memorization rather than a guided discovery of reading skills.

In fact, looking more closely at the actions of the pupils (Table 21) indicates that a lot of time is spent on reading aloud and listening to the teacher, who is at the center of instruction. According to qualitative notes concerning these observations, the activity of “reading aloud” is usually reading the same text off of the board, in turn, which is similar to collective memorization of text.

Table 21. Actions of the pupils

Action of the pupils	Grade 1	Grade 2	Grade 3	Total
Recitation	0.2	1,3	1,7	0,9
Group reading	1.9	0.3	0.7	1.1
Individual loud reading	32.5	40.3	39.1	36.6
General participation	17.5	23.3	29.1	22.6
Asking questions	0.0	0.5	0.1	0.2
Listening and following with the teacher	21.9	21.6	21.5	21.7
Writing on the board	4.5	0.1	0.3	2.0
Dictation (board. panel. etc.)	5.6	1.6	1.9	3.4
Openness (writing on papers, copybooks)	0.8	2.6	0.4	1.2
Work in small groups	0.3	0.7	0.0	0.3
Individual activities	1.9	2.4	1.5	1.9
Silent reading	5.1	0.0	1.0	2.5
Other expression activities (games)	0.3	1.4	0.6	0.7

Action of the pupils	Grade 1	Grade 2	Grade 3	Total
Orientation, switch	6.0	1.4	1.5	3.4
Other	0.6	1.2	0.2	0.6
Nothing	1,0	1.3	0.5	0.9

Source: RTI (2014)

The number of pupils in class, class arrangement and the way of making pupils participate in class indicate that the methodology used to teach reading is particularly teacher-centered and does not provide opportunities for differentiated learning.

4.7 Values, issues and scientific vocabulary in the textbook

Education on values in the Moroccan education system is a relatively new phenomenon, which aims to address previously weak aspects of introducing scientific concepts in education. A focus on values in the curriculum is emphasized by national Charter on Education and Training (*la Charte Nationale*)--the main reference for educational reforms leading to the revision of the curriculum. The analysis of values in the first three grades follows.

Grade 1

The two textbooks (*Kitaabii* et *Al Mufiid*) presented the following values and issues (Table 22):

Table 22. Subjects of the Grade 1 textbooks

Subject	<i>Kitaabii</i>	<i>Al Mufiid</i>
Values	Respect of parents – Greeting etiquette – Eating etiquette - Cleanliness – Love of learning	Family relationship – Kinship – Cooperation
Topics	Learning – Road safety	Nuclear family – Lodging – Communication – Participative approach
Scientific concepts	None	None

Grade 2

The two textbooks (*al Mufiid* and *Murchidii*) presented the following values and issues (Table 23):

Table 23. Subjects of the Grade 2 textbooks

Subject	<i>Al Mufiid</i>	<i>Murchidii</i>
Values	<ul style="list-style-type: none"> • Cooperation • Visiting family • Giving praise • Visits 	<ul style="list-style-type: none"> • Family ties • The value of memorizing the Quraan • Visiting • Knowledge • Taking care of family members • Love for parents • Value of family members
Topics	Relation entre l'enfant et la famille	Relation entre l'enfant, la famille et les amis
Scientific concepts	None	None

Grade 3

The two textbooks (*Kitaabii* and *Al Mufiid*) presented the following values and issues (Table 24):

Table 24. Subjects of the Grade 3 textbooks

Subject	<i>Kitaabii</i>	<i>Al Mufiid</i>
Values	<ul style="list-style-type: none"> • Honoring parents • Freedom • National patriotism • Behavior • Helping others • Disagreements 	<ul style="list-style-type: none"> • Love for Islam • Reading • National patriotism • Disagreements • Cooperation and interdependence
Topics	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • None
Scientific concepts	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • None

Together, we see that there are many similar concepts covered in the units of the book that were studied, and this is not surprising since the textbook specifications provide the thematic requirements. However, in the details there are some differences in the extent of the specific values covered.

More importantly, it appears that during the development of these books, the thematic content is the primary concern of the writers rather than the pedagogical requirements. Teaching children to read requires a focus on language characteristics first and foremost, and introducing these

fundamental concepts first. This will ultimately allow children to read larger texts related to thematic subjects later. It may be possible to accomplish both at the same time, but the more emphasis should be on the fundamental components of reading.

4.8 Analysis of gender in the textbooks

The issue of gender at school is one of the development axes for any teaching system, which, in its turn, reflects the development of the whole society. Analysis articles include six standards:

1. Both sexes should be mentioned in the textbooks' texts in an equal number of times;
2. Inclusion of drawings that express gender equality;
3. Use of a language that takes gender equality into account;
4. Presents gender roles that express equality;
5. Presenting the characteristics that express gender equality;
6. Presenting positions that do not support violence.

The gender analysis tool aims to offer guidance regarding the different ways in which individuals are represented. This tool contains a set of strategies for assessing books used in teaching and learning in order to make them feel inclusive for all children.

Based on analyzing the first unit of the textbooks used in the first three years, it is clear that these books respect these standards and consider gender (Table 25). However, some textbooks do not respect the standards of: equal repetition in texts, inclusion of drawings that express gender equality and introduction of the performance of roles that express equality.

Table 25. Gender analysis

Gender criterion	Grade 1		Grade 2			Grade 3	
	Murchidii	Al Mufiid	Kitaabii	Fii RiHaab	Murchidi	Al Mufiid	Kitaabii
Equal mention of gender throughout in the books	No	No	No	Yes	Yes	Yes	Yes
Illustrations represent gender equitably	No	Yes	No	Yes	Yes	Yes	Yes
Language used is respectful of gender equality	Yes	No	No	Yes	Yes	Yes	Yes
Roles are represented equitably	No	No	No	Yes	Yes	Yes	Yes
Other elements reflect gender equity	Yes		No	Yes	Yes	Yes	Yes
Promotes non-violence	Yes	Yes	Yes	Yes	Yes	Yes	Yes

In addition to this, the textbooks use reading texts about issues that do not keep pace with Morocco's development and do not reflect modern society. The texts reflect a traditional society that has nothing to do with the modern one where the learner lives. In addition, these texts are written from the perspective of adults and did not reflect the interests of the learners such as interest in specific thematic aspects, e.g. frogs, snakes, princesses, dinosaurs, etc. Moreover, some social issues are negatively treated. For instance, the blind person is represented as always being in need of help and mercy. The textbook then consciously encourages begging and does not teach self-reliance. Consequently, it creates a stereotype of the blind as a beggar in society and not as a self-reliant person who participates in the development of the country.

4.9 Artistic aspects of the textbook

The textbook can be viewed from different perspectives: material, communicative, pedagogical and cultural. The material aspect is important because it plays an important role in achieving the required skills in teaching reading. This aspect is reflected on the following points:

- Easy handling;
- Bookbinding;
- The page layout;
- The extent to which it is appealing to learners.

Most of the images in *Murshidi* are ambiguous, and from an esthetic perspective are unlikely to appeal to young learners and attract their attention to the texts, therefore, undermining the expected objective which is encouraging them to become avid readers.

The visual aspect of the books are also affected by text density and the number of words used on the page. In addition, the lines are close to each other, the font size is 12 or 14, which does not align with best practices that suggest between 32 and 38 point font for young readers (between 5 and 8 years old).⁵⁵

These comments relative to *Murshidi* to a large extent, applicable to *Al Mufiid*, with some slight exceptions; for example, the texts are less dense, and the space between words and lines is better, which makes reading more comfortable. A comparison of the two books is in Table 26 below:

⁵⁵ USAID (2014). Research Paper: Best Practices For Developing Supplementary Reading Materials.

Table 26. Esthetic aspects of two textbooks

Murchidi	Al Mufiid
Images	
Nine images, of which 4 reoccurred. 30 drawings of which 1 reoccurred 4 times. The size of most of the drawings does not help analyze them in a way that motivates learners to read the text.	18 drawings and 9 images. Alternates between Islamic and modern dress of children in the images. Traditional ones: page 7 and modern ones, page 13.
Colors	
Weak consistency and harmony among colors which hinders the understanding of the content of images.	All colors are dark, making it difficult to discern the details of the images.
Vocabulary	
Abundant vocabulary: 20 words in one line of some texts. Lines are close to each other and the font size is between 12 and 14 which does not take readability into account and fatigues the sight.	Size of words is between 16 and 18. More space between lines helps to read comfortably.
Cover and paper	
Paper quality is good regarding size and type, helping to conserve its quality throughout the year.	

4.10 Other issues

Vowelization

Reading texts contained vowelization marks (diacritics) at the end of words to indicate inflection, and in some cases at the beginning or middle of words. The vowelization of words assists pupils both in pronunciation of words and in understanding their grammatical role in the sentence.

Punctuation

Punctuation is associated with text complexity. However, Arabic lacks standards that regulate the sentence's structure. Many textbooks adopt inconsistent punctuation, which may be an obstacles that face pupils in reading process. Punctuation defines the length of the sentence and urges pupils to express using simple and clear sentences. On the other hand, many textbooks do not respect punctuation rules to the extent that the "comma" or "semi-colon" plays the role of the "full-stop". In addition, the number of words in sentences exceeded ten words and more.

It is necessary for the specifications to include the rules of punctuation in a clear manner to show the place of pause, stop and start as well as the voice tones and speech purposes. This is for the sake of facilitating the understanding process during reading. The overuse of punctuation marks, which is actually an indicator that sentences are too long and complex, may constitute a challenge for learners. It is probable that they do not remember the content of the beginning of the sentence when they are close to its end.

Prior Knowledge

The natural and spontaneous expression of children is done in their native language, which is the common language acquired intuitively through normal communication. They use this language to interact with family members at home, and then with friends and members of the immediate local community. For children, it is also a tool for self-expression in this close and personal environment, which is considered as a common and rich cultural heritage. Furthermore, this mother tongue is full of emotions associated with their feelings and personality and is a vehicle to transfer their identity.⁵⁶ Children start primary school at the age of 6 or 7 years, bringing with them a rich knowledge about themselves, their body, the environment (flora and fauna, topography and geography); the social environment (family relations, neighborhood, and classification of people according to their activities with regard to self and family and according to material and moral characteristics); the world that surrounds them, and about their own perception of the world.⁵⁷ However, the teaching language in primary schools is modern standard Arabic (MSA) as stated by article 65 of the National Charter for Education and Training:

"The first stage of primary school (6-8 years) aims to consolidate and expand the knowledge acquired in preschools (4-6 years), so as to make of all Moroccan children, when they reach the age of eight, the base of a unified and coherent set of knowledge which prepares them to follow the subsequent stages of education. The first stage of primary school seeks, among other things, to help pupils acquire the basic knowledge and skills to understand and make oral and written expressions in Arabic."

It seems that the choice of MSA as language of instruction in educational programs stems firstly from the fact that teachers in primary education were trained in this language. Secondly, choosing the classical Arabic as the teaching language is less controversial, because generalizing it and making it accessible to everyone has been proved to be the best choice from a national unifying perspective. However, this choice misses the opportunity to build on all the rich knowledge of children, including phonological awareness and vocabulary and undervalue the entire existential richness since the first day in school. Consequently, it inhibits the

⁵⁶ Young, A. and C. Helot, 2003. 'Language Awareness and / or Language Learning in French Primary Schools Today', *Language Awareness*, Vol. 12, No. 3&4

⁵⁷ Dahbi, M. 2007. "Les arts de la langue: ce que toute langue scolaire doit enseigner", *Attarbiya wa ttakwin*, n° 3, pp. 40-50

children's ability to express themselves and hinders the understanding of the school world from their own world.

This is despite the fact that the National Charter (1999:25) has confirmed in its article 61 that local languages and dialects can be used in the beginning - if necessary - to facilitate the initiation to reading and writing in Arabic for pupils who start preschool after the age of 4.

"The preschool stage during these two years (5 and 6 years old) aims to acquire the knowledge and skills that enable pupils to understand Arabic and express themselves orally with the possibility to use local languages and dialects - if necessary - to facilitate the initiation to reading and writing in Arabic."

Public schools do not provide preschool education and therefore the goals envisaged in article 65 for primary education between 6 and 8 years cannot be achieved on the grounds that learning objectives cannot be reached in primary education as emphasized in article 61 of the National Charter. In the absence of institutional and compulsory preschool education for all children, the objectives set by the National Charter for Preschool Education will not be achievable. Furthermore, the absence of preschool education subsequently undermines the objectives of primary education which in turn creates a kind of chaos in determining the uses and contexts of both the dialect and the language in school.

Based on field research on primary schools, Tamer (2003) has distinguished between the activities related to oral expression and speaking, and those related to reading and writing.⁵⁸ Activities related to oral expression and speaking consist of the observations and directives that motivate pupils to participate in classroom activities, the interaction between the teacher and the pupils which allow them to interact freely in the classroom. The pupils react by remaining silent or by oral expressions after they hear the comments and observations made by the teacher. Based on classroom activities, Tamer (2003) considers that sentences and phrases related to the context of reading and writing are performed in classical Arabic while explanations are given in Moroccan Arabic, Darija.

Interviews conducted with teachers under components 1 and 2 of the USAID research program (2014) found that attitudes towards the mother tongue differ between pre-service teachers and those who have been practicing. For example, the study found that half of practicing teachers agree that "Learning to read in mother tongue helps pupils master standard Arabic" while only 14% of pre-service teachers agree. Similarly, 27% of practicing teachers agree that "Pupils learn to read fast in standard Arabic when we teach using the mother tongue", while only 5% of pre-service teachers do. Finally, half of practicing teachers recognize that: "A child cannot learn when teaching is conducted in a language which he/she does not know," while only 14% of pre-service teachers do. The study also found that 61% of teachers consider that developing pedagogical materials in the Moroccan dialect is not difficult, and 57% of teachers believe that a

⁵⁸ Tamer, Y. (2003). *Code-Switching In Classroom Discourse, Moroccan Elementary Schools as a Case Study*. AIDA Proceedings, Cadiz, pp. 1-16.

qualified teacher who has adequate educational materials will find it easy to teach reading in the mother tongue.⁵⁹ The report concludes, on this subject, that:

“while preservice teachers tend to comply with the curriculum, in-service teachers adapt to children’s’ reality with mixed methods. The analysis of individual interviews, focus groups, and classroom observations enable us to assert that both teachers and students frequently utilize the native language in the teaching of reading in Arabic, notably in the first year. We observed that first-year teachers tend to agree more with the utilization of the mother tongue than the second and third year teachers, and use it more, whenever necessary, in the classroom. (p. 23).”

This smooth natural transition between classical Arabic and Darija in classrooms and in varied doses depending on every subject indicates that using the dialectal Arabic in the first years of primary school meets the needs of pupils.

Moreover, experience has shown that dialectal Arabic values the rich knowledge of children and allows them to express themselves in their mother tongue and to actively participate in the world of school based on their own understanding of the world. Practically speaking, children can understand and develop concepts of phonemic awareness and alphabetic principle faster when it is linked to the language they know and understand. This skill is transferred to reading ability in additional languages.⁶⁰ We conclude in this part of the study that it is necessary to create concrete and functional bridges between the oral vocabulary used in the daily life of pupils, and the Arabic words used in texts which are most similar to those used in Darija. If the reading curriculum is carefully designed, it can capitalize on childrens’ knowledge of Darija as a bridge to learning to decode symbols, to understand the link between print and speech, and to develop the capacity of phonemic awareness. This approach, which has a pragmatic dimension, will demonstrate for children that their Arabic mother tongue can be an asset for their understanding and a tool for their effective participation in the school world.

School should also set the example by showing that using Darija in formal or informal situations at home is only complementary to classical Arabic used in school. Consequently, both languages are interconnected. This connection is supported in other fields. For instance, the audiovisual sector has started to expand the use of Darija in its programs, including those programs where only classical Arabic was used such as children's programs, cartoons, and dubbed movies.

The transition phase to school. Starting primary school is often an important and difficult event for parents and children alike. Knowing what teachers hope for at the primary level, and what they expect from pupils will help both parents and professionals to prepare children for the early learning of basic skills and for acquiring the prerequisite knowledge to qualify them for success in school and life in general. Primary school welcomes a large group of pupils from different

⁵⁹ RTI International (2014). Research on reading in Morocco: Analysis of teachers’ perceptions and practices. Final report: Component 3. Report prepared for USAID under EdData II.

⁶⁰ RTI International, MTB-MLE Network (2011). Improving Learning Outcomes through Mother Tongue-based education. <https://www.eddataglobal.org/documents/index.cfm?fuseaction=pubDetail&ID=326>

linguistic and knowledge backgrounds. Some pupils have been to monolingual or bilingual preschool kindergartens, but there are others who have never been to such institutions. The latter category is divided into two groups:

1. Pupils who have never studied before (speakers of Tamazight or Darija)
2. Pupils who do not speak Darija as their mother tongue (speakers of Tamazight or other languages (such as the languages spoken by children of immigrants from Arab countries or other countries).

This unequal situation facing teachers and the school system at the same time at the beginning stage of schooling creates multiple levels and unbalanced classification within in the first grade. It also leads to unequal education from the first day at school. As stated in the third component of the USAID studies (Teacher Perceptions) regarding the results of questioning teachers about this group of pupils who suffer from reading difficulties, 34% of respondents consider that "even the most experienced teachers are unable to help some pupils learn to read."

5. Conclusions and recommendations

5.1 General conclusions

We conclude from this study that the curriculum, as stated in the specifications, is characterized by a kind of ambiguity and a lack of strategic vision. The educational goals intended are not clear, therefore, they will not be able to draw a clear roadmap for authors to produce the adequate educational materials. We also found out that:

- there is a predominance of general ideas that lack adaptation to the linguistic needs of early learners;
- the time allocated to reading classes is not sufficient to develop pupils' reading skills; in fact, there is no 'reading' lesson or textbook, rather an 'Arabic language' class for which the objectives are much more broad and therefore lacking in effectiveness;
- the curriculum has not given much importance to how to teach Arabic reading to children in a multilingual environment.

As for textbooks, the study showed that while they succeed to some extent at the cultural level, they lack, at the pedagogical level:

- the key elements that help to learn reading skills, such as phonemic awareness and alphabetic principle, and gradually increasing text difficulty that encourages children to become independent readers;
- a strategy to address the concept of fluency with regards to speed, accuracy and comprehension in aloud and silent reading;
- the necessary tools to easily read new words in order to understand a text;

- a clear strategy on the most frequent and functional vocabulary in the first grades of primary education;
- texts that are classified according to level and gradual complexity from letters to syllables then to words, which makes decoding words easier;
- investment in prior knowledge as a basis to develop the relationship between the sound and the letter, and between phonological awareness and vocabulary;
- a clear strategy to support pupils who have not received a preschool education to bridge the gap between the levels of pupils in the first grade;
- standards that define the level of difficulty of children's stories in the new editions of textbook
- gradually increasing complexity through all levels of primary education (from grade 1 to 6);
- accurate and frequent assessment of pupils' reading skills.

Importantly, textbook effectiveness has not been formally evaluated, nor is textbook content reviewed and updated in accordance with the evolution of society or research on reading. Textbooks have never been revised since the publication of the first edition in 2002 until 2015. Reviewing conditions that oblige authors to update educational materials before reprinting textbook—even at the most basic level like typesetting or correcting spelling and punctuation errors—are not mentioned in the specifications. Updating the textbooks on a more frequent basis would also provide the opportunity to encourage use of new technologies for teachers and learners, such as complementary exercises and readings on the websites associated with textbooks, and of how to teach reading skills.

5.2 Observations concerning the improvement of the textbooks

These findings raise a number of issues concerning the textbook and its relationship to teaching Arabic in the first grades:

Textbooks are not developed in a manner consistent with the latest evidence in early grade reading methods

1. Teaching Arabic in the early grades in Morocco espouses adopting a whole language methodology, although some practicing teachers tend to adapt the textbook methodology on their own to incorporate elements of a syllabic approach.⁶¹ With the whole language approach, pupils remain unable to independently decode words that they encounter for the first time. Thus, they resort to rely on the general shape and on guesswork when they are unable to identify the word. In such a situation, pupils do not recognize the letters and their pronunciation, and are not trained to join letters in syllables and then in words.

⁶¹ RTI (2014)

2. The development of reading in the early stages depends on basic linguistic and cognitive capabilities and skills such as: phonological awareness, knowledge of letters, decoding and rapid word recognition. These capabilities form an important foundation for reading comprehension. They enable pupils to acquire an automatic decoding capability and therefore use their cognitive resources to focus on meaning and understanding. Reading comprehension cannot be achievable unless these capabilities become automatic, and unless linguistic knowledge is transformed into a skill through exercise and practice. This approach shift from the whole to the specific has also led to a change in the method used to teach reading from the analytical to the synthetic method. It has been shown that phonetic synthesis is one of the most important skills to turn a beginner reader into an experienced one, in any alphabetic language, including Arabic.⁶²⁶³

3. Direct instruction is based on a set of regular and clear steps that monitor the progress of pupils towards mastering the targeted skills and consolidate the interactions between the instructor and pupils. This interaction can be summed up in these three steps, also known as “gradual release”:

- “I do”: Instructor provides a model of the skill
- “We do”: Guided practice (doing it together)
- “You do”: Independent practice by the child

Explicit and direct instruction provides greater opportunities to engage pupils in learning activities. The deeper the pupils are involved in learning activities, the better learning they can achieve.⁶⁴

4. Strategies are the methods we use when we read or listen to a text. They are not skills acquired through repetition, but they are complex procedure to perform a task. In order for pupils to effectively use these strategies, they need to develop an awareness and understanding of the same process. Then, instructors should encourage pupils to use these strategies so that they can assimilate and use them when reading, listening and doing other activities that pupils need to learn as well, such as predicting, verifying these predictions, asking questions and linking what they read with their daily life.⁶⁵⁶⁶

⁶² Tibi, Sana. (2006). Early intervention procedures for the prevention of reading failure.

، *المجلة العربية للتربية الخاصة*، إجراءات التدخل المبكر في الوقاية من الفشل في القراءة، طيبي، سناء عورتاني (2006)

⁶³ Boyle, H., Al Ajjawi, S., & Xiang, Y. (2014). *Topical analysis of early grade reading instruction* (Project report for EdData II Task Order 15: Data for Education Programming in Asia and Middle East). Research Triangle Park, NC: RTI International. Retrieved at: <https://www.eddataglobal.org/documents/index.cfm?fuseaction=pubDetail&ID=707>

⁶⁴ Archer, A. and Hughes, C. (2011). *Explicit Instruction: Effective and Efficient Teaching (What Works for Special-Needs Learners)*. New York: The Guilford Press.

⁶⁵ Thompson, 2011

⁶⁶ Younes, M., 2006. “Integrating the Colloquial with Fusha in the Arabic-as-a-Foreign Language Classroom”, in *Handbook for Arabic Language Teaching Professionals in 21st Century*, K. M. Wahba, Z. A. Taha and L. England eds.

The content of early grade reading textbooks are not adapted to learners' needs

Reading programs should affect the way pupils choose to spend some time in reading. It is also desirable that pupils could come up to the conclusion that reading is something they want to do, not something they have to do. The essence of the issue is how to ensure the involvement of all pupils in the act of reading. After analyzing textbooks, it is clear they are not adequate to produce good and independent readers. Textbooks do not teach vocabulary, do not directly develop the skills of reading comprehension, do not aim to improve reading fluency. They do not offer children a choice of activities, reading materials or leveled text, which are elements proven to influence motivation for reading.⁶⁷ According to what was mentioned earlier, we can ask the following questions: what kind of textbooks do children need? And what are the particularities that must be considered?

Basic early reading content. Textbooks for Morocco must take into account the following:

- Provide explicit and direct opportunities to practice phonological awareness, alphabetic principle, fluency, vocabulary, and reading comprehension;
- Promote the understanding of the relationship between sound and symbol based on the most productive letters of the Arabic alphabet;⁶⁸
- Teach sounds independently of text at first, while building oral language competency in MSA. When children acquire the skill of phonemic awareness, they will know that a word like "kataba write" consists of a number of sounds "k, t, b" that can be assembled and put together to produce other words "kitab book, jaktubu writes, katib writer, etc., or some letters can be replaced to form other words. This skill will transfer to reading in print;
- Determine and use high-frequency words in reading materials to help develop automaticity and fluency;
- Use a natural and modern language that is close to the daily concerns of children;
- Use strategies like images and repetition to help learners build vocabulary and fluency (for example, The boy sits; the boy reads; the boy sleeps.)

Topics must be selected carefully and in full conformity with childrens' interests in order to promote motivation to read. Help children develop interest in reading and enjoy it by providing more variety in textbook and supplemental materials (content and reading levels), and give them opportunities to read independently. Some of the topics discussed by textbooks need to be evaluated and re-examined to assess the added value they bring to the learner at the linguistic and

⁶⁷ Independent choice of reading materials would usually be the purpose served by classroom, school or community libraries, which are not widely available or used.

⁶⁸ "Productive" letters might be the most frequent, but by definition it would be the letters that enable more words to be read.

cultural level. For instance, in *Al-Mufiid*, the textbook presents a topic in the second unit for third graders entitled "This is how I was circumcised." The topic is part of "A Tale of our Neighborhood" by Najeeb Mahfouz (p. 47). The curricular focus on themes and values is distracting from creating texts that incorporate the above-mentioned fundamentals of early reading. This does not mean that the emphasis on values and themes needs to disappear, but a more explicit focus needs to be on developing decodable text that gradually increases in difficulty.

Vocabulary and sentence complexity. Specifications need to be more accurate with respect to vocabulary in terms of number, frequency, proportion of abstract and concrete words, and number of syllables. Perhaps the discrepancy between texts in terms of type, length and number of words and sentences is due to the fact that specifications do not discuss this matter thoroughly. New vocabulary should be added carefully and in consistency with pupils' development levels,⁶⁹ although the White Book explains that "the reading activity in the first year should consist of a limited number of words taken from the functional textbooks studied. In the second year, it should consist of simple sentences and words associated with the topic of oral communication." However, specifications do not mention anything about the number of vocabulary, nor the number of sentences, their kind or their number of words. This does not help authors to develop textbook materials that are commensurate with the aspirations of pupils, teachers and the society. Either the specifications need to be more detailed, or authors need training on effective approaches to teaching reading in the early grades.

There are not clearly articulated learning outcomes specified in the curriculum or textbooks

The national education system needs to develop a matrix to track learning outcomes targeted in the early years. The pedagogical guide could be thus improved by developing a working group composed of experts in curricula, Arabic language teaching methods, educational psychology and linguistics in order to:

1. formulate learning standards in the early grades that outline what the learner should know and be able to achieve at the end of each grade;
2. take advantage of regional expertise and evidence of what works in Arabic language reading and multilingual situations;
3. determine the common vocabulary used in both Arabic and Darija to identify the most frequent vocabulary and employ them in teaching Arabic in the first years.
4. support reading materials depending on the results of the study on the most frequent functional vocabulary.

⁶⁹ Madkur, A. (1991). *Teaching Arabic Language Arts*. Cairo: Ishawwaaf Publishers.

كتاب لمحتوى تحليلية ومؤشراتها دراسة الجودة الشاملة معايير ضوء في القراءة كتاب محتوى العدوي، غسان ياسين (2009) "تحليل المجلد - دمشق جامعة الأساسي"، مجلة التعليم مرحلة الخامس من للصف القراءة

5. develop reading learning benchmarks based on fluency and comprehension for each of the first three levels in the light of Moroccan reality, future vision, and global and regional trends.

These standards would then be used to help improve the textbook specifications so that they focus not only on technical, artistic and thematic aspects, but also characteristics to develop textbooks and teacher's guide in a detailed and accurate fashion. The specifications should:

1. provide criteria relative to learning standards and indicators in the first years.
2. oblige authors to respect these indicators and their sequence from one year to another, as well as defend their methodological approach to show how it demonstrates evidence of how children learn to read in Arabic.
3. take into account the repetition and sequence of each textbook of the first grades so that each publisher produces a coherent set of materials that cover three grades in a logical, sequenced manner.

5.3 Summary of recommendations

Textbooks are only one part of a successful reading program. The recommendations below go somewhat beyond recommendations for improving curriculum and textbooks, but are necessary to state in order to ensure that it is clear that textbooks should not try to do everything at once, but instead focus on the skill of learning to read, which will be more effective when complemented by other strategies.

Short-term recommendations

- Identify the most common and functional 250 words (used in both Arabic and Darija) that reflect the needs and aspirations of the learner.
- Produce additional materials (stories, illustrated books, etc.), where the vocabulary used is concrete and functional.
- Make use of the learner's preschool knowledge and home language to facilitate the transition to MSA.
- Produce a teacher's guide, which explains how to use and simplify the existing teaching materials and make them more effective through alternative activities, while waiting for the new textbooks to be published.
- Provide a regular reading remediation to bridge the gap between the levels of first graders who have been to preschool institutions and those who have never received a preschool education.

Medium-term recommendations

- Develop guidelines that determine the level of children's stories.

- Establish class libraries that integrate a variety of reading types, levels and topics, including multimedia.
- Produce easy to understand comics or other formats that are proven to be interesting and engaging for Moroccan children based on local research.
- Incorporate into teaching one to one support and continuous assessment of progress between the teacher and pupils. This kind of meeting that should take between 3 and 10 minutes. While one of the pupils is having this meeting, the other pupils should be occupied choosing new books and reading them at their own pace.
- Develop the relationship between children and the library and invest library activities (inside and outside educational institutions) to read stories.
- Involve parents and guardians associations and civil society organizations in school activities to support reading and suggest new ideas.
- Arrange for teachers to have direct contact with pupils' parents and guardians regarding the progress of their children.
- Develop a pedagogical guide in line with current trends in the teaching of reading.
- Adjust specifications so that they accurately identify the general and technical conditions to develop textbooks in accordance with standards and recent trends in language teaching and textbooks development.

Long-term recommendations

- Develop learning objectives for each level and set measurable standards at the end of each level.
- Train teachers in reading skills and in developing reading materials.
- Republish textbooks on the basis of the findings of scientific research in the field of reading, as a series that get gradually more complex.
- Use technological means to support language lessons.
- Develop pupils' assessments so that teachers can use evaluation data to follow the progression of pupils' performance.
- Set benchmarks for reading in the Arabic language in the light of the Moroccan reality, the future vision and the available data.

Annex 1: Textbook names and references

List of textbooks approved by the Moroccan Ministry of National Education

1. كتابي في اللغة العربية، كتاب التلميذ للسنة الأولى الابتدائية، 2002، المكتبة الوطنية.
1. *Kitaabii fii llugha al'arabiyya*, Primary Education, Grade 1 Student Book, 2002. *Almaktaba alwaTaniyya*.
2. المفيد في اللغة العربية، كتاب التلميذ للسنة الأولى من التعليم الابتدائي، 2013، دار الثقافة للنشر والتوزيع.
2. *Almufiid fii llugha al'arabiyya*, Primary Education, Grade 1 Student Book, 2013. *Daar atthaaafa li nnašri wa ttawzii'*.
3. في رحاب اللغة العربية، كتاب التلميذ للسنة الثانية من التعليم الابتدائي، 2013، مكتبة السلام الجديدة.
3. *Fii riHaab llugha al'arabiyya*, Primary Education, Grade 2 Student Book, (2013), *Maktabat assalaam aljadiida*.
4. كتابي في اللغة العربية، كتاب التلميذ للسنة الثانية من التعليم الابتدائي، 2003، المكتبة الوطنية.
4. *Kitaabi fii llugha al'arabiyya*, Primary Education, Grade 2 Student Book, 2003, *Almaktaba alwaTaniyya*.
5. مرشدي في اللغة العربية، كتاب التلميذ للسنة الثانية من التعليم الابتدائي، 2013، أفريقيا الشرق.
5. *Muršidi fii llugha al'arabiyya*, Primary Education, Grade 2 Student Book, 2013, *Ifriqiyaa ššarq*.
6. المفيد في اللغة العربية، كتاب التلميذ للسنة الثالثة من التعليم الابتدائي، 2013، دار الثقافة للنشر والتوزيع.
6. *Almufiid fii llugha al'arabiyya*, Primary Education, Grade 3 Student Book, 2013, *Daar atthaqaafa linnašri wa-ttawzii'*.
7. مرشدي في اللغة العربية، كتاب التلميذ للسنة الثالثة من التعليم الابتدائي، 2013، أفريقيا الشرق.
7. *Muršidi fii llugha al'arabiyya*, Primary Education, Grade 3 Student Book, 2013, *Ifriqiyaa aššarq*.
8. دليل الأستاذ المصادق عليه من لدن وزارة التربية الوطنية بالمغرب
8. Teacher's Guide Approved by the Moroccan Ministry of National Education
9. كتابي في اللغة العربية، دليل الأستاذ للسنة الأولى الابتدائية، 2002، المكتبة الوطنية.
9. *Kitaabii fii llugha al'arabiyya*, Primary Education, Grade 1 Teacher's Book, 2002, *Almaktaba alwaTaniyya*.

10. المفيد في اللغة العربية، دليل الأستاذ للسنة الأولى من التعليم الابتدائي، 2013، دار الثقافة للنشر والتوزيع.
10. *Almufiid fii llugha al'arabiyya*, Primary Education, Grade 1 Teacher's Book, 2013, *Daar atthaqaafa li nnašri wa ttawzii'*.
11. في رحاب اللغة العربية، دليل الأستاذ للسنة الثانية من التعليم الابتدائي، 2013، مكتبة السلام الجديدة.
11. *Fii riHaab llugha al'arabiyya*, Primary Education, Grade 2 Teacher's Book, 2013, *Maktabat assalaam ajjadiida*.
12. كتابي في اللغة العربية، دليل الأستاذ للسنة الثانية من التعليم الابتدائي، 2003، المكتبة الوطنية.
12. *Kitaabi fii llugha al'arabiyya*, Primary Education, Grade 2 Teacher's Book, 2003, *Almaktabat alwaTaniyya*.
13. مرشدي في اللغة العربية، دليل الأستاذ للسنة الثانية من التعليم الابتدائي، 2013، أفريقيا الشرق.
13. *Murchidi fii llugha al'arabiyya*, Primary Education, Grade 2 Teacher's Book, 2013, *Ifriqiyyaa aššarq*.
14. المفيد في اللغة العربية، دليل الأستاذ للسنة الثالثة من التعليم الابتدائي، 2013، دار الثقافة للنشر والتوزيع.
14. *Almufiid fii llugha al'arabiyya*, Primary Education, Grade 3 Teacher's Book, 2013, *Daar atthaqaafa li nnašri wa ttawzii'*.
15. مرشدي في اللغة العربية، دليل الأستاذ للسنة الثالثة من التعليم الابتدائي، 2013، أفريقيا الشرق.
15. *Muršidi fii llugha al'arabiyya*, Primary Education, Grade 3 Teacher's Book, 2013, *Ifriqiyyaa aššarq*.

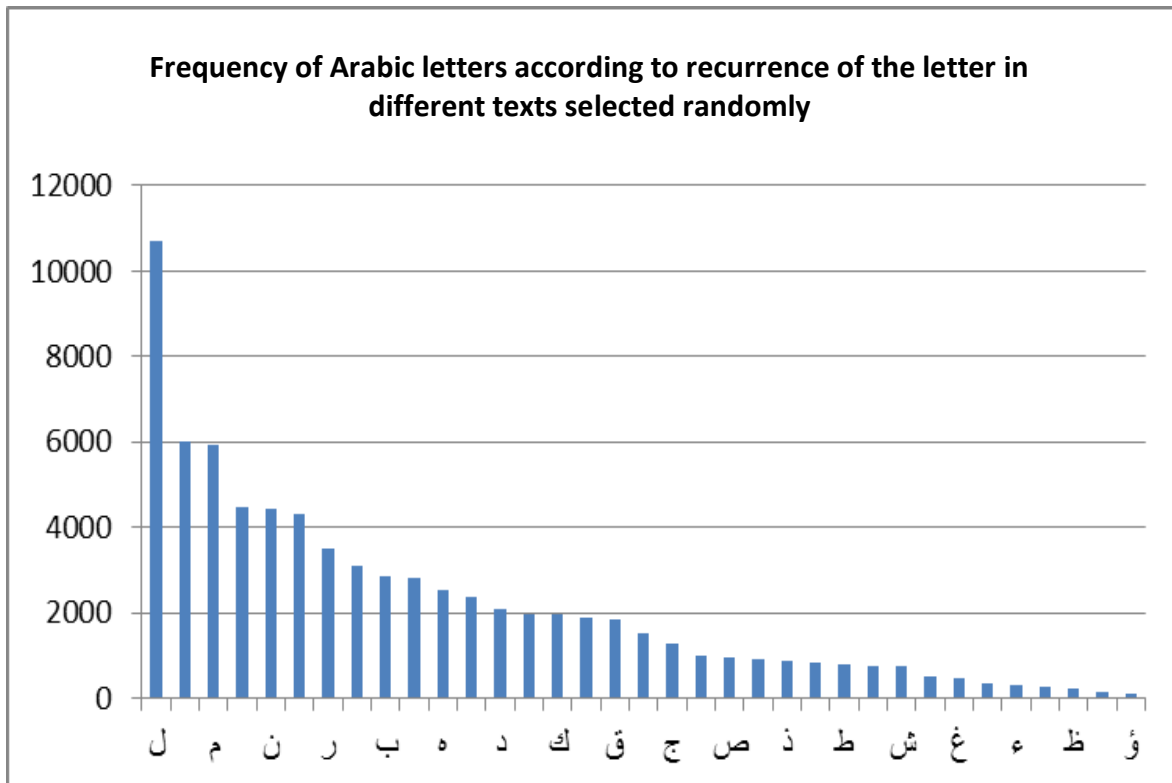
Annex 2: Frequency analysis of Arabic language

A study of Arabic language by intellare.com presented the frequency of letters arranged in a descending order according to the letter's frequency of use in the Holy Qur'an, as is shown in the following table:

Order	Letter	Frequency	%		Order	Letter	Frequency	%
1	ا	43,542	13.17		19	ذ	4,932	1.49
2	ل	38,191	11.55		20	ح	4,140	1.25
3	ن	27,270	8.25		21	ج	3,317	1.00
4	م	26,735	8.08		22	ى	2,592	0.78
5	و	24,813	7.50		23	خ	2,497	0.76
6	ي	21,973	6.64		24	ة	2,344	0.71
7	ه	14,850	4.49		25	ش	2,124	0.64
8	ر	12,403	3.75		26	ص	2,072	0.63
9	ب	11,491	3.47		27	ض	1,686	0.51
10	ت	10,520	3.18		28	ز	1,599	0.48
11	ك	10,497	3.17		29	ء	1,578	0.48
12	ع	9,405	2.84		30	آ	1,511	0.46
13	أ	9,119	2.76		31	ث	1,414	0.43
14	ف	8,747	2.64		32	ط	1,273	0.38
15	ق	7,034	2.13		33	غ	1,221	0.37
16	س	6,012	1.82		34	ئ	1,182	0.36
17	د	5,991	1.81		35	ظ	853	0.26
18	إ	5,108	1.54		36	ؤ	673	0.20

This study concludes that the frequency order in the text of the Qur'an is as follows: Alif, Lam, Noon, Mim, Waw, Yaâ, Haâ, Raâ, Baâ, Taâ, Kaf, Ayn, etc. However, and regardless of the nature of the text, this study will not be considered complete without including statistics about the frequency of letters from sources other than the Holy Qur'an.

During work on the project of analyzing the curriculum and the textbook, a tool for electronically counting the frequency of letters was developed to count the letters in the textbooks of the first three years of primary education in Morocco. This tool was also applied to a number of texts randomly taken from outside the curriculum for the purpose of comparison. The study showed the following order for letter frequency:



The descending order of frequency of letters in different texts randomly selected.

1. ا	7. و	13. ف	19. ح	25. خ
2. ل	8. ر	14. د	20. ج	26. ط
3. ي	9. ع	15. أ	21. ض	27. ى
4. م	10. ب	16. ك	22. ص	28. ث
5. ت	11. ة	17. س	23. إ	29. ث
6. ن	12. هـ	18. ق	24. ذ	