

Morocco

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Introduction

Morocco's 2011 constitution specifies that the State, public institutions, local authorities, and families should work toward facilitating citizens' and, in particular, children's equal access to education, vocational training, physical education, and art.¹ Since Morocco's independence (1956), its education system has undergone consecutive comprehensive reforms, including the National Charter for Education and Training (1999).² This reform stipulates that education and training should be a national priority, second only to territorial integrity. Significant progress toward reforming education and training has been made despite some challenges and delays. The strategic vision set by the Higher Council for Education, Training and Scientific Research (2015)³ and the framework law 51-17 reinforced this general consensus on education reform.ª However, substantial efforts still are needed to enhance teaching, learning and training quality, governance, and efficiency.

Overview of Education System

The Ministry of National Education, Preschool and Sports (MNEPS) oversees all areas related to the provision of public and private education. The MNEPS is presently Morocco's main official body responsible for providing education to all students at all levels of the public and private education systems. Following the recommendations in the National Charter for Education and Training, education delivery is decentralized, therefore increasing responsiveness to local needs and realities. Accordingly, since 2002, Academies for Education and Training in each of the 12 established administrative regions of Morocco have been charged with implementing the education policy adopted nationally, as well as the 2015–2030 strategic vision set by the Higher Council for Education, Training and Scientific Research (2015). More importantly, the MNEPS is responsible for implementing the various projects related to framework law 51-17 that was passed

Framework Law No. 51.17 is the first framework law to be adopted in the history of legislation in Morocco. See https://www.aneaq.ma/wp-content/uploads/2020/12/Loi-Cadre-51.17-Vr.Fr_.pdf



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by the parliament in 2017. An online monitoring system (RAED)^b is used to help partners oversee the advancements of such project indicators centrally and at the level of regional directorates and provincial directorates. Regional directorates also provide services for education in their respective territories and implement directives and standards set nationally or by the regional academies.

The framework law 51-17 and the 2015–2030 national strategic vision are the basis for the Ministry's array of projects related to education, including the pedagogical model (curricula, assessment, teacher education), and human resources and governance.^c The most influential directives stem from the 2015–2030 national strategic vision, which aims to:⁴

- Improve the teaching of languages and reading, especially at the first four grades
- Improve access to schooling in rural and underprivileged areas
- Support students with disabilities
- Support students with learning difficulties
- Improve learning by renewing standards for teacher education
- Encourage school life activities and school improvement plans
- Improve equity and equal opportunities in the national system of assessment and examinations
- Improve students' orientation/counseling and information systems (i.e., to help students choose different options/streams [science, technology, arts, etc.] by the end of lower secondary and upper secondary school)
- Establish good governance and mobilization around schools
- Build capacity of teachers, staff, and school leadership nationwide

Morocco's education system is divided into preprimary, primary, secondary, and tertiary education.⁵ The National Charter for Education and Training (1999) mandates that preprimary education be available to all children ages 4 to 6. The 2015–2030 national strategic vision stresses that the State should look forward to "generalizing, in the medium term, the access of all Moroccan children (girls and boys) to education and training, especially at the level of compulsory education" for children ages 6 to 15. Since 2017, the framework law has helped launch a project integrating children age 4 into preprimary school. Exhibit 1 details Morocco's levels of education.

For more information, see https://www.men.gov.ma/Ar/Documents/BILAN%20D%E2%80%99ACTIVITE%CC%81%20DU%20MINISTE%CC%80RE%202017-2021%20Vol.4%20-%20Mise%20en%20oeuvre%20de%20la%20Loi-Cadre%2051-17%20(1).pdf



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b RAED is not an acronym; rather, it is an arbitrary "transliteration" of the Arabic word براك , which means "pioneer or entrepreneur."



Exhibit 1: Moroccan Education System

Education	School/Level	Grades	Ages	Years	Notes
Preprimary	Kindergarten	K1–K2	4–6	2	 Prepares children for learning languages and mathematics and provides them with life/social skills Focuses on basic literacy and numeracy skills (to be generalized in the coming years)
Primary	Primary school	1–6	6–12	6	 Primary school education is compulsory; certificate of primary school awarded on completion (Grade 6)
Secondary	Lower secondary	7–9	12–15	3	 Certificate of secondary education awarded on completion (Grade 9)
	Higher secondary	10–12	15–18	3	 Baccalaureate diploma awarded on completion (Grade 12)
Tertiary (superior)	Bachelor's		18–21	3	 Bachelor's (license) degree awarded on completion of a 4-year program (since 2020–2021)
	Master's		21–24	2–3	■ Master's degree
	Doctorate			3–5	 Doctoral studies require at least 3 years of research. Medical and dental doctorates require more.
	Engineering schools		18–22	5	

Two nontertiary education options are offered in Morocco after the completion of higher secondary education (twelfth grade): (1) *Les classes préparatoires* to access the *grandes écoles* and (2) *Brevet de Technicien Supérieur* (BTS), which leads directly to the labor market. Access to schools that offer these two programs requires high grades in both mathematics and science, and students have to pass a high-stakes examination after a two-year study before entering engineering school or finding a job.

Use and Impact of PIRLS

The data that PIRLS provides about Moroccan student achievement in literacy and reading have been beneficial to education reforms in Morocco. PIRLS data also have informed corrective actions to improve the education environment where students learn to read. In addition, student results from PIRLS and other international assessments have allowed Moroccan professionals and reading specialists to gain deeper insights into ways to improve the reading skills of Moroccan students further.

As has become common practice since 2007 after the release of the results of PIRLS (also Trends in International Mathematics and Science Study [TIMSS]), the National Center for





Assessment and Examinations (CNEE), in collaboration with the regional Academies for Education and Training, organizes a number of national seminars to disseminate the results and identify areas and skills requiring particular attention in schools and classrooms. These seminars, attended by inspectors, coaches, teachers, and representatives of professional associations, focus on skills targeted by the PIRLS assessment. Therefore, the PIRLS framework is clarified and emphasis is placed on the various reading skills to be improved in students, such as inferring the meaning of words using immediate and wider context, expressing opinions, understanding the author's mood or intention, and evaluating texts in terms of genre and content.

To make the most of Morocco's participation in PIRLS (as well as TIMSS and the Programme for International Student Assessment [PISA]), an extensive capacity building program is being implemented under the aegis of the MNEPS in cooperation with The Millennium Challenge Corporation (MCC) and The Millennium Challenge Account-Morocco Agency (MCA-Morocco). The program, which has already been launched, started with the training of 13 national experts in analysis and report writing. A second group in the 12 regional academies and regional assessment and examination centers currently is benefiting from this program under the supervision of the Organisation for Economic Co-operation and Development (OECD) experts within the framework of a cooperative project with MCA-Morocco. The capacity building sessions will allow regions to look at their students' achievement and learning environments to inform regional and local plans for improvement.

The Language/Reading Curriculum in Primary Grades

Reading Policy

The current competency-based curriculum for primary schools draws upon the principles in the 1999 National Charter for Education and Training.⁶ This official curriculum document has been updated (2016–2018) to focus on helping children develop the competencies required to read different types of texts (such as informational and literary) fluently and confidently. Ministerial circulars, newly adapted textbooks, and guidelines synthesize the skills students should demonstrate by the end of fourth grade, with the purpose of helping them acquire those necessary for autonomous learning. These skills include the following:

- Recognize and understand rhyme and rhythm, letters, words, sentences, and punctuation marks
- Read written texts aloud and silently at a reasonable speed
- Recognize and understand the main and supporting ideas in texts
- Infer word meanings using contextual clues, word analysis, multiple meaning words, and word analogies
- Recognize fiction and nonfiction text structure





- Differentiate between fact and opinion
- Look up the spelling and definition of words in the dictionary

There is a general belief that the ability to read is key to learners' overall development inside and outside school. Reading is a part of the curriculum for language instruction yet is taught as a separate curriculum area. It also is integrated across the curriculum, though implicitly, as an essential tool to present other school subjects.

Summary of National Curriculum

The Ministry of National Education recently adapted and validated the official primary school curriculum document, which includes some of the content presented in the most recent PIRLS (and TIMSS) frameworks. Although there is still work to be done, the curriculum designers, with the help of the National Center for Assessment and Examinations, attempted to align the curriculum with the content and skills highlighted in the PIRLS and TIMSS frameworks. New and longer types of reading texts have been incorporated, and comprehension questions have become more diverse, including some that measure high-level thinking skills that characterize PIRLS and TIMSS.

Under the new curriculum, the percentage of total instruction time devoted to teaching reading in fourth grade is 30 percent of the time allotted to the teaching of Arabic.⁷ One hundred twenty minutes per week are focused on reading and are distributed in a balanced way among four weekly sessions. Each reading session lasts 30 minutes. Although homework might be a major source of anxiety for students and parents, teachers try to create opportunities for more reading practice and hence encourage students to develop good habits and attitudes. In fact, there is a growing belief that reading homework will make reading less stressful, more enjoyable, and more meaningful (e.g., short children's stories, comic strips).

The reading program, which is always part of the language teaching program, is assessed in many ways. For instance, regional education and training academies and provincial directorates regularly receive evaluation reports from supervisors and principals on teaching and learning reading. National and regional examinations also are used to assess proficiency in reading skills in addition to other language components. Further, the directorate of curricula, under the demand of certain regions or pedagogic actors, might send committees to observe the teaching and learning of reading. With all these sources of information available, schools usually are advised to build on students' results to improve reading (e.g., provide supplementary materials; provide remedial work; and set up reading clubs, reading corners, and contests).

To encourage teachers to find and develop language/reading materials other than those prescribed by the national curriculum and therefore focus on reading skills rather than on language components (grammar and vocabulary), supervisors can organize pedagogical meetings and demonstration lessons on different ways to teach reading. Teachers and students also are encouraged to use digital resources. Digital literacy has become a buzzword in Morocco, mainly





because of COVID-19. Digital literacy is the ability to use the internet or work offline reading texts, completing writing tasks, or using critical thinking skills. It is now perceived as a necessary skill for students to develop and a prerequisite for them to follow their studies and become autonomous readers. However, fostering digital literacy in schools requires a specific infrastructure, digital equipment, and specific in-service and preservice teacher education. Although this is difficult to implement, efforts are being made to meet the challenge.

To conclude, despite the curriculum document, the pedagogical guidelines for teachers, and the pedagogical meetings organized by inspectors that are geared toward implementing the new curriculum and the newly adopted reading methodology, the targeted underlying objectives have not yet been completely achieved in Morocco.⁸ The reading curriculum within the language component is focused largely on the following skills: retrieving explicitly stated information; making straightforward inferences; and examining and evaluating content, language, and some textual elements. Supervisors state that they are highly optimistic about teachers embracing the reading skills assessed in PIRLS, but there is still a need to emphasize some of the higher order skills such as interpreting and integrating ideas and information.

Professional Development Requirements and Programs

Developing the education system and achieving the intended results of its reform depend on the quality of teacher education and its compatibility with the developments in school curricula and the innovations triggered by results of education research. In fact, school innovation and achievement depend largely on the quality of educators' and other stakeholders' involvement. Their full engagement in improving teaching, their motivation, and their inquisitiveness as to how education systems in other spheres perform better is key to progress. In other words, education requires high-quality and effective preservice education, including self-development and institutionally triggered in-service education for all education professionals, including leadership.

Teacher Education Specific to Reading

The Regional Centers for Education and Training Professions (Centres régionaux des métiers de l'éducation et de la formation) provide full-time courses and a practicum leading to a professional graduate certificate in education. To be admitted to these teacher education centers, applicants must hold a bachelor's degree or equivalent qualification. They also must pass a written entrance examination and participate in an interview. The entrance examination assesses candidates' general knowledge of culture with a particular focus on reading and writing. The interview is used to evaluate candidates' motivation for the job, communication skills, rapport, and other personal qualities that will help them interact with students in different education levels and situations. Education for primary school, lower secondary school, and upper secondary school teachers consists of a one-year practice-based course for teacher trainees, which includes a practicum and





supervised class observations intended to provide hands-on experience in teaching. Upon completion of the training course, teacher trainees are appointed to primary, lower secondary, or upper secondary schools nationwide.

For language teacher trainees, the Regional Centers for Education and Training Professions provide courses and modules specific to the various teaching approaches of reading as a skill, coupled with reading theories. Lectures, workshops, and tasks related to teaching reading feature the major reading theories in educational literature such as behaviorism, cognitivism, constructivism, etc. Trainers, understanding that there is no single best way to teach reading, encourage teacher trainees to keep in mind that these theories, though very influential, have been neither proven nor unproven. They are simply alternative or complementary ways of teaching reading and the means to help students learn to read. In addition, teacher trainees are presented with insights into the reading skills that characterize international large-scale assessments, namely PIRLS and PISA.

Requirements for Ongoing Professional Development in Reading for Teachers

The National Charter for Education and Training prioritizes professional development for teachers and school administrators. Pedagogical inspectors play an important role in the education system in Morocco. Among other endeavors, they design teacher professional development programs, colloquia, and seminars, and they supervise teachers to further improve teaching and learning within the 12 regional Academies for Education and Training across the country. These practices ensure professional competencies' suitability and sustainability. International agencies like the United States Agency for International Development (USAID), UNICEF, and the Japan International Cooperation Agency (JICA) work with the Ministry of National Education and Vocational Training to help teachers and school staff learn about the requirements of new curricula and intervention plans. For instance, because of the priority now allotted to the first four years of primary education, a series of in-service training sessions has been offered to primary education teachers that assist them with implementing aspects of the newly revised curricula (e.g., languages, mathematics, science).

Professional development plays a vital role for teachers in developing their professional competencies, especially when they are exposed to diverse advances in education and best experiences and practices. Professional development also helps teachers surpass the boundaries of the classroom to become researchers, innovators, and leaders. Moroccan teachers have to pass a written professional examination (after six years of practice) to receive promotions. This encourages them to take advantage of all training opportunities available.

Moroccan education associations also contribute to teacher development after graduation. Professional forums, either face-to-face or virtual, provide useful information to teachers, deepening their knowledge of the profession and how to monitor their students' success. Novice teachers, once appointed (generally in remote areas), connect with senior colleagues. The latter are





very eager to provide necessary help and encouragement. In many schools, coaches are appointed to support novice teachers as they plan, teach, assess, etc. With the help of supervisors, novice teachers discover the curriculum intricacies in practice, learn to seek their colleagues' support, and gradually get to know their students' needs and the best way to support them.

Monitoring Student Progress in Reading

One way to track student progress in reading is through tests and examinations at each level of education in order for students to progress from one grade to the next or to obtain a graduation certificate. Reading comprehension is one of the main components in tests and examinations. Students are promoted automatically (i.e., it is very rare for a student to repeat a grade) from one grade to the next in primary school, resulting in declining dropout rates over the past 15 years. Nevertheless, some critics are concerned that automatic promotion is detrimental to the quality of learning. To bridge this gap, the MNEPS is working on a series of projects to overcome repetition and dropouts by institutionalizing formative assessment and remedial work in the classroom. Pedagogical guides are being developed to help teachers focus on formative assessment and differentiation. In fact, formative assessment is another important source of feedback for teachers and is geared toward helping them gauge the effectiveness of their teaching strategies in relation to the curriculum, as well as to adapt their teaching style to student learning styles. Teachers use formative assessment aligned with ministerial circulars and pedagogical guidelines to gain information about student progress and ability. Formative assessments are curriculum-based tests of student competencies that provide opportunities for remediation.

Moreover, in collaboration with the Higher Council for Education, Training and Scientific Research (HCETSR), the National Center for Assessment and Examinations launched the National Program for Assessment of Acquired Skills (PNEA) in 2008. The PNEA, which is still managed by the HCETSR, aims to set up periodic national assessments targeting the most important skills, namely mathematics, science, and languages. The PNEA assesses whether learning outcomes have been achieved and sets a benchmark against which to systematically assess the quality of the education provided. The results of the PNEA attract the attention of professionals and practitioners and fuel discussions on what needs to be done to improve learning and the different variables that impact it (schools, teacher profiles, etc.).

Special Reading Initiatives

Lessons from Morocco's participation in PIRLS, TIMSS, and PISA have triggered deep reflection about how to improve students' basic skills and knowledge, particularly in reading, writing, mathematics, and science. The HCETSR has identified a disparity in student performance between urban and rural areas. A comprehensive education reform is underway to tackle this issue, in accordance with the Strategic Vision of Reform (2015–2030) and the framework law 51-17.





Many ways to improve student skills and knowledge have been considered. Among the most important measures taken to improve the quality of education in Morocco is the revision and improvement of the national curriculum in the first four years of primary school, introducing greater emphasis on reading, writing, scientific awareness, and mathematics. The PIRLS and TIMSS frameworks have inspired updates to the contents, tasks, and competencies in the national curriculum. A clear impact of PIRLS, for example, was the overall awareness that reading is the key competency to foster in primary school for autonomous and lifelong learning. In addition, thanks to the importance of preprimary education as unveiled by TIMSS and PIRLS results, a national project is devoted to generalizing two-year preprimary education for children ages 4 to 6.

Response to COVID-19 Pandemic

Teaching and Learning During the COVID-19 Pandemic

The beginning of the COVID-19 pandemic caused many school closures and disruptions. In 2020, even schools with only a small number of cases were closed, and teachers were told to work with their students remotely. Later, the situation worsened, cases rose, and COVID-19 spread across the country, consequently causing a national lockdown. The lockdown lasted for almost two months starting at the end of February 2020. The Ministry of National Education mobilized supervisors and encouraged teachers to deliver their lessons via all means available to them and to their students (e.g., social media, WhatsApp, the internet). Moroccan TV channels also played an important role by recording and broadcasting lessons to students of all levels, including those in university and higher education institutions. In many cases, especially in rural areas where not all students have access to the internet, schools and teachers sent printed material to read and use. Later in 2020, a clearer action plan was adopted by the MNEPS that specified instruction methods and established which to choose depending on the pandemic situation nationally, regionally, and locally.

Faced with the difficulty of predicting the evolution of the epidemiological situation and regarding the disparity and inconsistency of its indicators between the different regions, provinces, and municipalities, the Ministry of National Education prepared an integrated action plan to manage school enrollment and entry (circular 039/20, August 28, 2020). This action plan stated that schools could choose the most appropriate instruction method based on the development of the epidemiological situation throughout the entire school year. This plan considers "face-to-face" instruction preferable and distance learning as an exception. However, in case of difficult epidemiological conditions that may pose imminent risks to public health, the preferred method of instruction changes. Therefore, distance education becomes essential as an alternative method

^d See https://www.men.gov.ma/Ar/Documents/note3920.pdf#page=1&zoom=auto,-107,310 for more information.



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of instruction, especially when authorities consider the capabilities of rural areas and what would benefit children most in those areas.

The responsibility for suggesting the most appropriate instruction method for each school is entrusted to the regional directorates under the supervision of the regional academies. In coordination with the territorial authorities and health services at the regional and provincial levels, they ensure that schools implement the specified instruction pattern (circular 039/20 - August 28, 2020). During the COVID-19 pandemic, certain decisions were made at the national level by the Ministry of Interior on the basis of reports issued by the national scientific commission.

Impact of the Pandemic on Student Learning

The impact of the pandemic on Morocco's education has been wide-reaching: Associations, teacher unions, "pedagogues" (i.e., anyone concerned with teaching and pedagogy, such as teachers, supervisors, principals, and those responsible for orienting/guiding students in their choice of streams or options), and parents indicated how much financial support has been invested, yet more efforts need to be made to help children catch up. Education professionals (teacher trainers, advisors, coaches) also feel unsatisfied with remote learning, e-learning, and lessons on TV. Supervisors nationwide have been mobilized since 2020 to reduce the impact of COVID-19 on student learning and close the learning gap caused by prolonged closures and limited digital resources, especially in rural areas. Generally, teachers and supervisors feel that there is a loss of learning as teaching time was very limited and unbalanced, and the instruction methods described earlier were not enough for efficacious teaching, effective learning, and assessment.

The impact of the pandemic on student learning differed depending on students' circumstances:

- Students in private schools attended classes more regularly than students in public schools.
- Students in urban areas had more opportunities to learn than students in rural areas.
- Students from advantaged families were more equipped to learn better than students from disadvantaged families.

In general, most reports from teachers, parents, principals, and supervisors admit that quality teaching and learning was impeded by the pandemic. In most schools, teachers could not reach more than 60 percent of the objectives set in the curriculum.

Policy and Practice Changes

The pandemic has prompted the Ministry and all educational institutions to change their way of offering instruction. Some of the main changes that are now adopted and being promoted include:

• Encouraging teachers and supervisors to produce lessons to be used in distance teaching/learning





- Acquiring a number of programs, lessons, and workshops in digital formats
- Strengthening the infrastructure of schools and equipping them with necessary tools to cope with any emergency situation
- Offering instruction in three forms: (1) in-school instruction when students are safe enough to be present, (2) group instruction when students are offered some instruction in school and some through distance learning, and (3) distance learning for all students when the health situation deteriorates

Impact of the Pandemic on PIRLS 2021

The COVID-19 pandemic caused an immense disruption to the PIRLS 2021 work agenda, and its implementation was almost impossible. Fortunately, before the pandemic started, many tasks were completed, namely sampling, translation, and translation verification, and the instruments and guides were close to being finalized. Furthermore, the booklets were also ready to be printed and schools were informed about the prerequisites and the period proposed for data collection. However, while preparing for PIRLS 2021 field test administration, all preprimary, primary, lower secondary, and upper secondary schools were closed officially and fully, and students were dismissed until September 2020. This caused great frustration and impacted the rest of the agenda for the year: The regional and central staff were sent home for self-confinement for more than three months, and the training of the regional coordinators and test administrators was delayed because of the pandemic. The 2020-2021 academic year also saw closures of many schools throughout Morocco; consequently, with the consent of the International Association for the Evaluation of Educational Achievement (IEA) and Boston College, PIRLS 2021 was administered during the following school year (November to December 2021). Although the experience was very challenging, Morocco managed to adapt the questionnaires, print all the materials, and administer the study in full compliance with the deadline proposed by the IEA and PIRLS standards.

Suggested Readings

The Higher Council for Education, Training and Scientific Research. (2015). *Pour une école de l'equité, la qualité et de la promotion: Vision strategique de la réforme 2015–2030* [For a school with equity, quality and promotion: The strategic vision of reform (2015–2030)]. Retrieved from https://www.csefrs.ma/wp-content/uploads/2017/09/Vision_VF_Fr.pdf

Ministry of National Education, Higher Education, Staff Training and Scientific Research. (2009). *Le rapport de synthèse du programme d'urgence 2009–2012* [The synthesis report of the education emergency support program 2009–2012]. Bab Rouah: Author.

Ministry of National Education and Vocational Training. (2015). الأولوية ذات والتدابير الاستراتيجية التوجهات [Strategic directives and priority measures]. Retrieved from https://www.men.gov.ma/Ar/Pages/Accueil.aspx





References

- Kingdom of Morocco. (2011). Moroccan Constitution 2011, Articles 31–32. Retrieved from https://www.constituteproject.org/constitution/Morocco_2011.pdf
- ² Commission Spéciale Education Formation Maroc. (1999). *Charte nationale D'éducation et de formation* [The national charter for education and training "lever 15"]. Retrieved from https://www.mcinet.gov.ma/sites/default/files/documentation%20iscae%20rabat%202018.pdf
- The Higher Council for Education, Training and Scientific Research. (2015). *Pour une ecole de l'equité, la qualité et de la promotion: Vision stratégique de la réforme 2015–2030* [For a school with equity, quality and promotion: The strategic vision of reform 2015–2030] (p. 18). Retrieved from https://www.csefrs.ma/wp-content/uploads/2017/09/Vision_VF_Fr.pdf
- Ministry of National Education and Vocational Training. (2015). التوجهات الاستراتيجية والتدابير ذات الأولوية [Strategic directives and priority measures]. Retrieved from https://www.men.gov.ma/Ar/Pages/Accueil.aspx
- Ministry of National Education, Higher Education, Staff Training and Scientific Research. (2002). *Le livre blanc* [The white paper]. Retrieved from https://www.men.gov.ma/Ar/Pages/Accueil.aspx
- ⁶ Ministry of National Education, Higher Education, Staff Training and Scientific Research. (2009). [Primary school competencies guide (1st edition)] (pp. 2–15). Bab Rouah.
- Ministry of National Education, Higher Education, Staff Training and Scientific Research. (2009). [Primary school pedagogical guide (2nd edition)] (pp. 120–121). Bab Rouah.
- Ministry of National Education, Higher Education, Staff Training and Scientific Research. (2009). [Primary school pedagogical guide (2nd edition)] (pp. 114–119). Bab Rouah.
- Ministry of National Education, Higher Education, Staff Training and Scientific Research. Organizing and monitoring the implementation of continuous assessment-Ministerial circular number 179. Retrieved from https://www.men.gov.ma/Ar/Pages/Accueil.aspx

