

# Morocco E-Takwine Learning Management System (LMS) Study

## Support Needed to Realize MOE's Vision for Digital Learning

EVALUATION BRIEF | JUNE 2022

### STUDY OVERVIEW

The LMS Study examined the Moroccan Ministry of National Education, Preschool, and Sports' (MOE) e-Takwine digital platform. E-Takwine has been used to support pre-service teacher training at Moroccan Regional Centers of Education and Formation (CRMEFs) since 2016, and a second LMS (e-Takwine Tanmia) was launched in 2021. E-Takwine Tanmia supports the MOE's vision for expanding training for in-service teachers and MOE staff by offering distance learning alongside in-person training and coaching. The Study examined the current state of both platform iterations, in terms of technical capabilities and infrastructural capabilities, and human resources needed to fully realize the MOE vision for digital learning. The implications are significant as the Ministry's objective for e-Takwine Tanmia is to reach 120,000 individuals in year one, which represents 30 percent of their intended audience.

### STUDY QUESTIONS

1. What is the current state of the e-Takwine platform organization and usage?
2. What are the current technical capabilities and infrastructural capacities of e-Takwine and what steps are required to transition and align the platform with LMS best practices in the short- and medium/long-term?
3. To what extent do the human resources involved in running e-Takwine meet the technical and managerial needs to operate, use, and expand the platform; and what skills and resources will need to be further developed to meet the MOE's growing demand for distance learning training?

### PRIMARY AND SECONDARY STAKEHOLDERS IN E-TAKWINE MANAGEMENT

#### MOE National Center for Pedagogical Innovations and Experimentation (CNIPE)

- Referred to as "MOE" in the study recommendations, CNIPE manages distance learning for the MOE and should be involved in e-Takwine decision-making, implementing changes requires coordination with relevant MOE Secretary General divisions;

#### MOE – Division of Information Technology (MOE-IT)

- MOE-IT is the Direction of Information Systems, manages e-Takwine server, including back-up and maintenance;

#### Distance Education Division (DED)

- Five individuals at DED work directly with e-Takwine and should be involved in decision-making;

#### Regional Centers for the Professions of Education and Training (CRMEF) and Regional Academies of Education and Training (AREF)

- CRMEF and AREF regional centers, for pre-service, and in-service educators respectively, are instrumental to the implementation of e-Takwine among end users. Leadership and administrators in each institution, and at least 1-2 teacher trainers and staff who are involved in curricular decisions should be included in decision-making.

## KEY FINDINGS



### Current State of the Platform

- The current state of the e-Takwine platform meets many needs of pre-service teachers (PSTs), teacher trainers (TTs), and life-long learners. Nonetheless, there is room for optimization, which will become increasingly important to meet the MOE vision for in-service training and to bolster blended learning within CRMEFs.
- Meeting the ambition of the Ministry in training a large number of learners will require stakeholders to rethink the platform architecture in terms of automated registration, ease of use and role-based access, decentralized administration, and teacher empowerment in customization of courses.



### Technical Capabilities and Infrastructural Capacities

- E-Takwine back-end operations require collaboration between the MOE divisions, i.e., CNIPE, DED, and MOE-IT data center staff, from where maintenance and monitoring are managed.
- Architecture scalability, connectivity, and accessibility will be areas that need ongoing review and the revision of policy as new types of users are added to e-Takwine.



### Human Resources

- Scaling-up distance learning opportunities for in-service learners and ongoing demand for expanded blended learning for PSTs requires additional human resources and ongoing training and support for e-Takwine administrators and instructors.
- The MOE vision for digital learning is feasible only if there is an increased and sustained emphasis on building the necessary human resources.

## RECOMMENDATIONS

The recommendations are intended to be responsive to the MOE digital learning vision, which significantly expand the number and type of e-Takwine learners. In response to the MOE's request, the Study team prioritized short-term recommendations that require few additional resources, such as time and organization. If prioritized, these recommendations could be accomplished within one year, *with existing resources*. It should be noted that without any additional resources, it is unlikely that the MOE will be able to fulfill its vision for digital learning. However, all recommendations will advance towards the objectives therein.



## SHORT-TERM RECOMMENDATIONS

### Strategy & Planning

1. The MOE and DED, with input from the MOE-IT, CRMEFs, and AREFs should collaboratively clarify digital learning stakeholders' roles, responsibilities, and processes: Who's doing what? How and when?
2. The MOE and DED, with input from CRMEFs and AREFs should start implementing the existing legal framework to incentivize both digital learning staff (DED, CRMEF, AREF) involved in e-Takwine, and PSTs To increase their motivation and engagement.
3. The DED, CRMEF, AREFs, with input from MOE should conduct a needs assessment analysis for their centers (resources, training, challenges, PST connectivity, etc.). They should also develop and implement an e-Takwine implementation plan based on a centralized/ decentralized model (guidelines, requirements, access, motivation, and incentives, etc.).

## Development & Customization

4. The MOE-IT and DED should collaborate to automate user registration and course information through Lightweight Directory Access Protocol (LDAP) for both PST and in-service training.
5. The MOE-IT and DED should document and implement various LMS procedures: backup strategy, content recovery process and service level agreement (SLA), LDAP password policy change.
6. The DED, with inputs from the MOE, CRMEFs, AREFs, and MOE-IT should install Moodle plug-ins to (1) start tracking user activity and develop an analytics framework; (2) ensure content accessibility against Moodle accessibility toolkit; (3) Monitor performance and work with the IT department to adjust server requirements.
7. The MOE-IT and DED, with input from the MOE, CRMEFs, and AREFs should integrate offline access options (Mobile App and content download) to facilitate access in low connectivity areas.
8. The DED, CRMEFs, and AREFs, with input from the MOE-IT should begin leveraging Moodle features (enrollment modes, course categories, meta course, cohorts, separate groups, enrollment by user profile, etc.) to allow a centralized/decentralized access approach.
9. The MOE-IT and DED should collaboratively choose a cleaner theme with intuitive navigation and provide minimal information to users and avoid cognitive overload.

## Deployment & Change Management

10. The DED, CRMEFs, and AREFs should leverage CRMEF experts to (1) provide/record training opportunities on instructional design and blended learning strategies; (2) share their expertise on pedagogical models with more interactivity and gamification; and (3) highlight and showcase best practices and good examples of content and facilitation.
11. The DED, CRMEFs, and AREFs, with inputs from the MOE should setup an activity forum in Moodle to establish a learning community between different CRMEFs to facilitate exchange and sharing.

## STUDY METHODS

This study used a mixed methods approach, relying on five data collection methods:

A **desk review** to develop a customized direct observation rubric for the e-Takwine platform—which was applied in a participatory series of **rubric review sessions** with MOE e-Takwine and **key informant interviews** with individuals involved with overseeing and administering e-Takwine for pre-service teachers at CRMEFs. Additionally, a **user survey** was administered to CRMEF instructors and students (from the 2019-2020 academic year). The study also included **direct technical support** to the DED that aimed to resolve immediate technical challenges.

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