

The Situation Analysis of LMS in Public TEIs/TTIs

Report of findings

Outline

- ❖ Introduction
- ❖ Objective
- ❖ Theoretical Foundation
- ❖ Scope
- ❖ Methodology
- ❖ Results
- ❖ Analysis
- ❖ Recommendation
- ❖ Conclusion

Introduction

- Provision of high-quality scalable education program including CSE
 - Effective through collaboration with public TTIs/TEIs (*UNESCO-IICBA, 2020*)
- Our rights, Our Lives, Our Future Programme (O³) under IICBA
 - Support for *Scalable education/training programs* including Comprehensive Sexuality Education (CSE)
- To enable a scalable provision of CSE;
 - Learning Management Systems (**LMSs**) from TTIs/TEIs may be used across Sub-Saharan Africa.
- A focus on countries under the O³ Programme
- *Which LMSs? From which Countries? What to consider and how?*

Objectives

1. Identify LMSs capable to support **Scalable** health education programs including CSE;
2. Inform collaboration in innovative practices for *scalable Teacher capacity development* to deliver quality CSE in Sub-Saharan Africa;
3. Generation of recommendation for regional, national and institution collaboration for implementing O³ Programme;
4. Inform technical advice provided by AU towards robust and scalable CSE and other related health education programmes.

Theoretical Foundation

- Use of ICT to deliver scalable online, blended and distance learning programmes.
- TTIs and TEIs across Africa consider technology for providing Pre-service and In-Service teacher training (*Farrell & Shafika, 2007; Ndlovu, & Mostert, 2018*)
- LMSs implementation in Sub-Saharan Africa have been supporting online learning (*Béché, 2018; Barteit et al., 2019*)
- Different implementation level of LMSs in Sub-Saharan Africa (*Tsegay, 2016 and Asongu&Odhiambo,2019*)
- Some LMSs support training for health and well-being related courses including CSE

Scope of the Work

- Work on the inception report
- Develop data collection tool, collect data, analyze and **produce a final report.**
- 24 Countries (O³ Programme)
 - Focus on Public Institutions that offer:
 - ✓ In-service teacher training
 - ✓ Pre-service teacher education at both secondary and tertiary

(Ghana, Cameroon, Botswana, Burkina Faso, Malawi, Eswatini, Tanzania, Zambia, Zimbabwe, DRC, Ethiopia, Ivory Coast, Kenya, Lesotho, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, South Africa, South Sudan and Uganda)

- ***Purposive Sampling & Snowball Sampling***
- Sample: 24 countries
- Maximum of **4** public institutions/LMSs in **each country**
 - A maximum of **96** institutions/LMSs and the best **Minimum will be 24**
 - However, the Minimum maybe less than 24 if in case of some countries ***without a single LMS***
 - Particular interest on LMSs that already offer CSE

Population

- 1. Managers of ODeL**
- 2. LMS administrators,**
- 3. e-learning officers /instructional designers,**
- 4. And in-service/Pre-service teachers**

Methodology (cont')

- Institutional sampling was based on **stratifying variables**:
 - ✓ **Public institutions**
 - ✓ **Providing in-service and/ or pre-service teacher education and training**
 - ✓ **Use of LMS for online and distance learning**
 - ✓ **Institution size (small, medium, large)**
 - ✓ **Institution type (mixed with male and female)**
 - ✓ **Institution that support special needs (learners with disability)**

Methodology (cont')

- **Techniques for data collection**
 1. **Desk Review**
 2. **Quantitative**
 - Online Survey Questionnaires
 3. **Qualitative**
 - Follow-up online interviews using video conference tools

Methodology (cont')

• Tools

1. Survey Questionnaire (English and French Versions)

- ❖ *Background Information*
- ❖ *Enabling Infrastructure*
- ❖ *LMS implementation*
- ❖ *Training, Facilitators, Barriers and Challenges to LMS*
- ❖ *Outcomes, Challenges and Impact*
- ❖ *Recommendation*

2. Interview Protocol (Same aspects as above)

3. Follow-up approaches

- *Email*
- *WhatsApp*
- *Internet search*

Methodology _ Analysis Framework _ Clustering

- 1. Respondent Information**
- 2. Institutional LMS**
 - Interoperability with other communication channels
 - Accessibility on mobile devices
- 3. People and their Functional Structure**
 - Timely support provision
 - Availability of LMS administrators
 - Availability of well-trained instructional designers
 - Availability of an ODeL unit
- 4. Technological Infrastructure**
 - Sufficient Internet bandwidth
 - LMS bandwidth subscription fee
 - LMS security
- 5. Experience, Impact, Challenges and risks associated with LMSs**
 - Previous LMS use in CSE delivery
 - LMS use in teacher training in the last 2 years
 - Level of satisfaction of previous teacher-trainee
 - Level of LMS-related challenges and risks

Results

Respondents Background

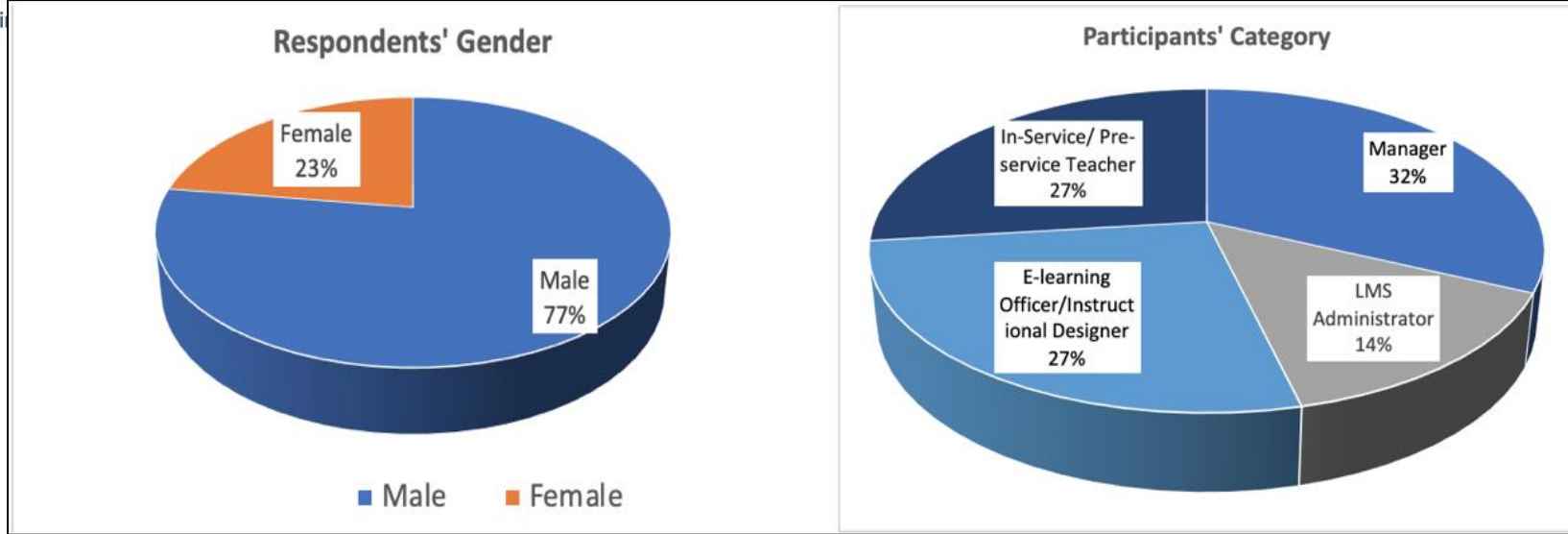


Figure 1. Participation in the study

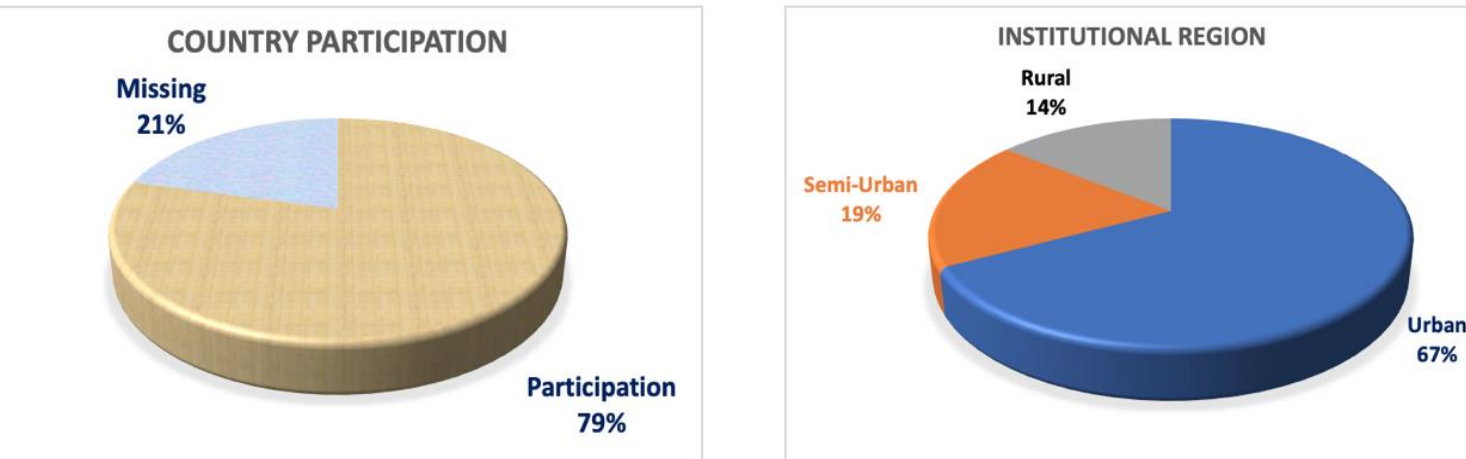


Figure 2. Country and institutional participation

English Speaking Countries



1. Zimbabwe	8. Rwanda
2. Mozambique	9. South Sudan
3. Zambia	10. Malawi
4. Botswana	11. Nigeria
5. Namibia	12. Uganda
6. Kenya	13. Tanzania
7. Lesotho	14. Eswatini

French Speaking Countries

1. Burkina Faso
2. Senegal
3. Mali
4. Ivory Coast
5. Niger

Results

Institutional LMS

- ✓ Interoperability with other communication channels
 - 17 institutions have LMSs, 5 are from French speaking countries whereas 12 are from 10 English speaking countries.
 - **2 LMSs:** Antenne de la Pédagogie et de la formation de Daoukro and the other for Inspection de l'enseignement préscolaire et primaire) are **proprietary**
 - Remaining **15 LMSs** are **open source** based on Moodle.
 - **LMSs from 11 countries** (3 French speaking countries and 8 English speaking countries) support users through SMS, phone call and WhatsApp
- ✓ Accessibility on mobile devices
 - **17 institutions** have their LMS accessible on mobile devices

S/N	Country	WEB	Institution	LMS
1	Burkinafaso	http://www.uv.bf	Université Virtuelle du Burkina Faso (UV-BF)	Moodle
2		https://ifoad-uo2.net/foad/	Institut de Formation Ouverte et à Distance (IFOAD)	Moodle
3	Mozambique	http://portal.ucm.ac.mz	Universidade Católica de Moçambique (UCM-IEd)	Moodle
4	Namibia	https://elearning.unam.edu.na/	University of Namibia	Moodle
5	Eswatini	https://moodle.elwatini.com/	William Pitcher College	Moodle
6		https://learn.uniswa.sz/login/index.php	University of Eswatini (UNESWA)	Moodle

Table 1. LMSs found through Internet search

Results

People and their functional structure

✓ **Timely pedagogical and technical support provision**

- The support is reported to be provided within 24 hours for 4 institutions,
- For the rest it is above 24hours

✓ **Availability of LMS administrators**

- In 17 institutions, 12 have LMS administrators

✓ **Availability of well-trained instructional designers**

- In 17 institutions, 13 have e-learning officers/instructional designers

✓ **Availability of an Open Distance eLearning (ODeL) unit**

- In 17 institutions, 13 have ODeL

Results

Technological Infrastructure

✓ Sufficient Internet bandwidth

- *5 institutions host in cloud*, with sufficient Internet bandwidth,
- *12 institutions host on the premises* with minimum internet bandwidth (50 Mbps), however, with a need to increase

✓ LMS bandwidth subscription fee

- *5 institutions host in cloud do not need to pay* for hosting Internet
- *3 premise-hosting institutions pays* above 3000 USD, others pay less than 3000 USD

✓ LMS security

- *SSL certificate, regular backup*, etc
- *2 institutions have no means* of security

Experience, impact, challenges and risks associated with the LMSs

✓ Previous LMS use in CSE delivery

- **10 institutions** have any online/distance courses/ programmes on CSE
- **7 institutions** have no any online/distance courses/ programmes on CSE

✓ LMS use in teacher training in the last 2 years

- **4 institutions** trained the highest number ranging from 10000 and 50000
- **12 institutions** trained less than 1000 teachers
- **7 institutions** did not reveal the number of trained teachers

✓ Level of satisfaction of previous teacher-trainee

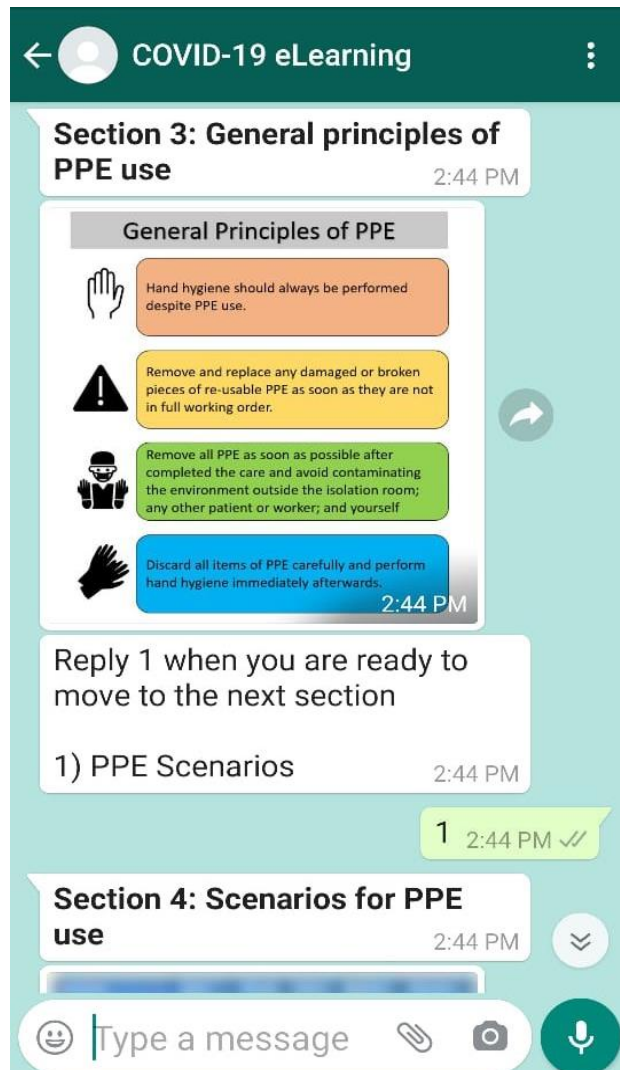
- **All 17 institutions** are somewhat satisfactory

✓ The level of LMS-related challenges and risks

- *ICT infrastructure*
- *Basic infrastructure*
- *LMS based challenges*
- *Institutional policy and structure*

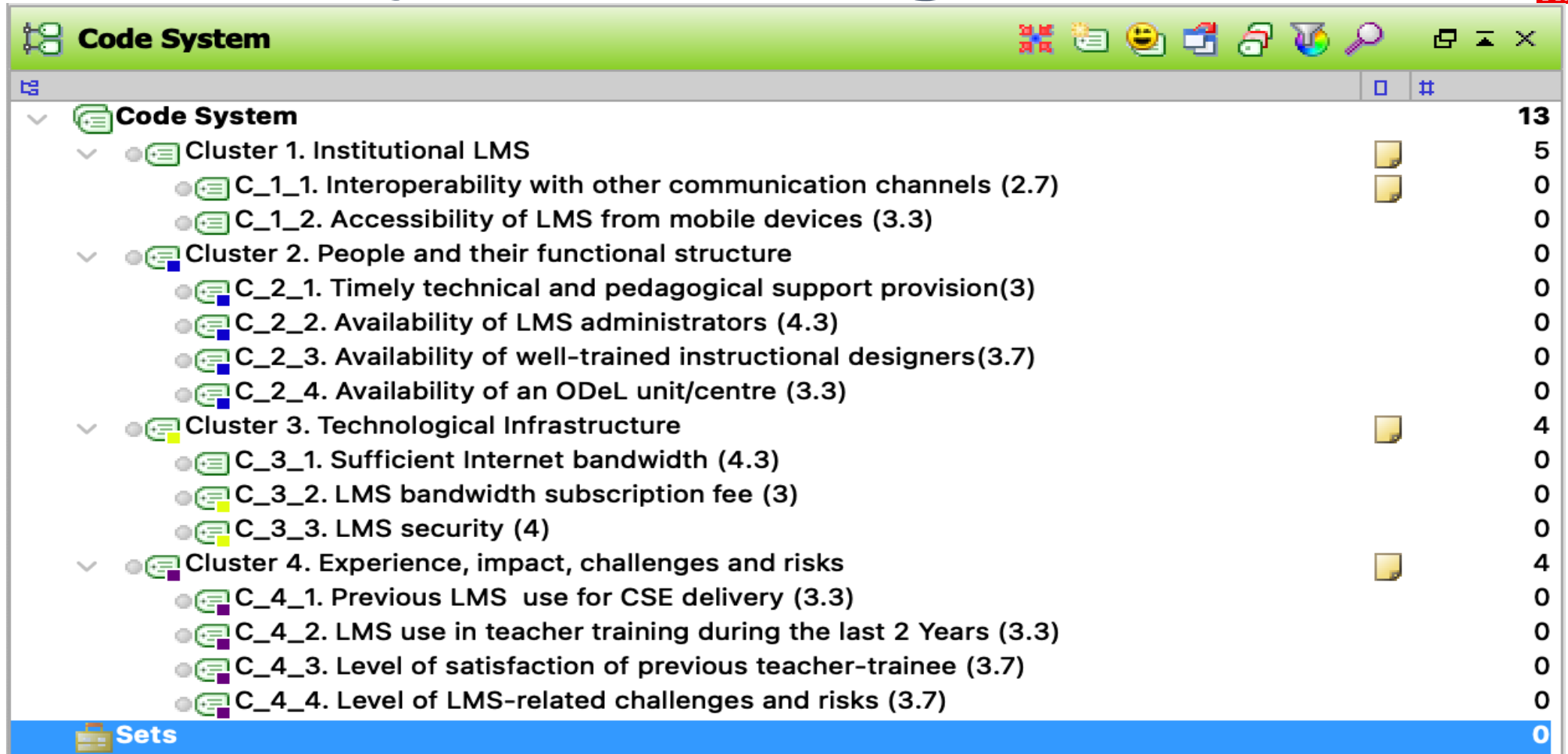
Results

WhatsApp platform



- ✓ Train health professional, this platform can be potential to train teachers on CSE as well
- ✓ Conducted PSI-Kenya
- ✓ Interoperable with LMS such as Moodle, etc.

Analysis of findings



Code System	Count
Code System	13
Cluster 1. Institutional LMS	5
C_1_1. Interoperability with other communication channels (2.7)	0
C_1_2. Accessibility of LMS from mobile devices (3.3)	0
Cluster 2. People and their functional structure	0
C_2_1. Timely technical and pedagogical support provision(3)	0
C_2_2. Availability of LMS administrators (4.3)	0
C_2_3. Availability of well-trained instructional designers(3.7)	0
C_2_4. Availability of an ODeL unit/centre (3.3)	0
Cluster 3. Technological Infrastructure	4
C_3_1. Sufficient Internet bandwidth (4.3)	0
C_3_2. LMS bandwidth subscription fee (3)	0
C_3_3. LMS security (4)	0
Cluster 4. Experience, impact, challenges and risks	4
C_4_1. Previous LMS use for CSE delivery (3.3)	0
C_4_2. LMS use in teacher training during the last 2 Years (3.3)	0
C_4_3. Level of satisfaction of previous teacher-trainee (3.7)	0
C_4_4. Level of LMS-related challenges and risks (3.7)	0
Sets	0

Figure 3. Enablers of successful provision of scalable education via LMSs

Analysis of findings

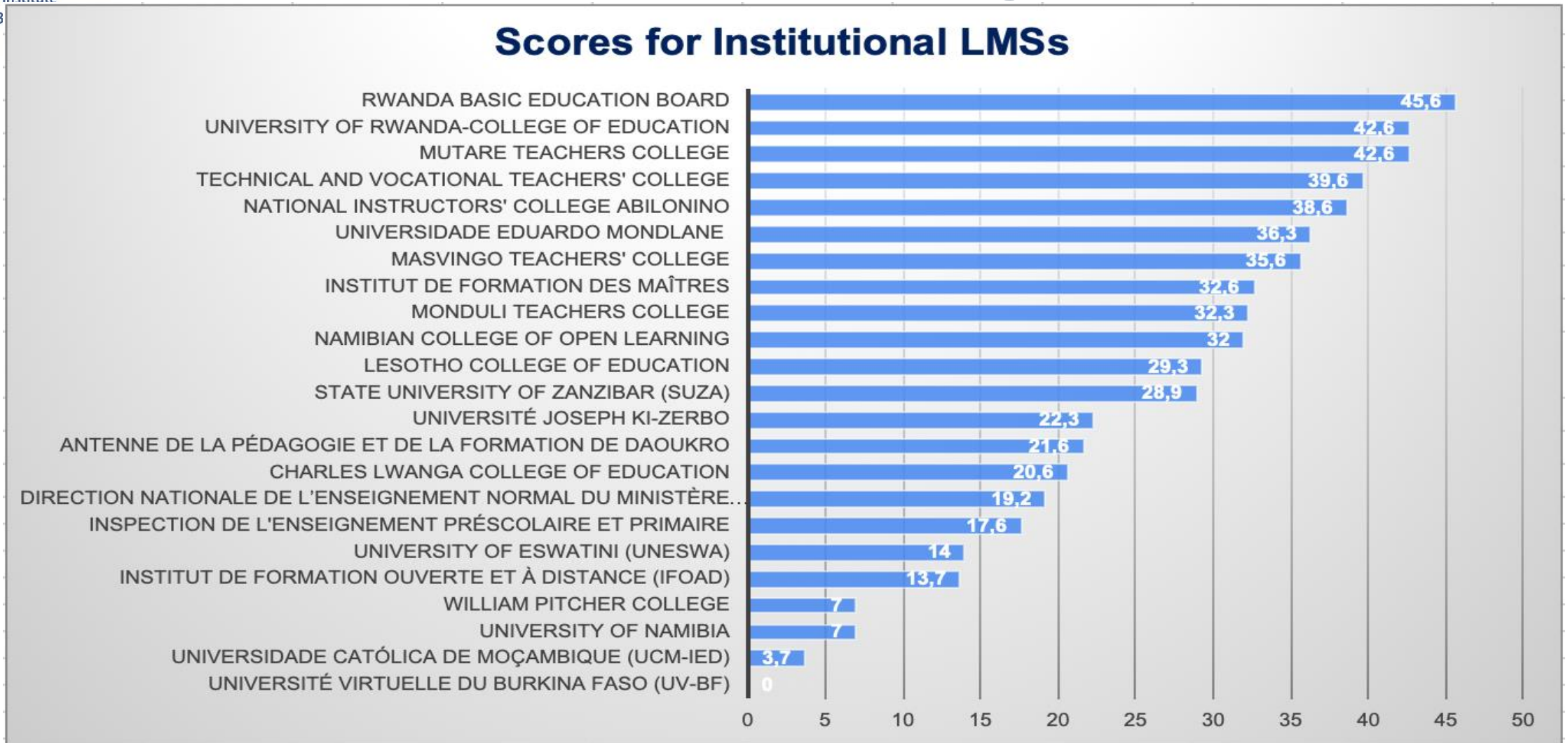


Figure 4. Institutional LMSs scores in line with enablers of scalable training

Recommendation

Rank	Country	Institution	LMS
English-Speaking Countries			
1	Zimbabwe	Mutare Teachers College	Moodle
2	Rwanda	Rwanda Basic Education Board	Moodle
3	Rwanda	University of Rwanda-college of Education	Moodle
4	Zambia	Technical and Vocational Teachers' College	Moodle
5	Namibia	Namibian College of Open Learning	Moodle
6	Mozambique	Universidade Eduardo Mondlane	Moodle
French-Speaking Countries			
1	Mali	Institut de Formation des Maîtres	Moodle
2	Burkinafaso	Universite Joseph KI-ZERBO	Moodle
3	Ivory Coast	Antenne de la pédagogie et de la formation de Daoukro	Plateforme de formation des chefs d'établissement
4	Mali	Direction Nationale de l'Enseignement Normal du Ministère de l'Education National	Moodle
5	Burkinafaso	Institut de Formation Ouverte et à Distance (IFOAD)	Moodle

Table 3. Ranking of recommended LMSs for collaboration on scalable CSE delivery

Study Limitations

- 1. **Web search** is limited
- 2. **Truthfulness** on some questions
- 3. **Physical investigations** due to Covid-19 restrictions
- 4. **Unavailability** of some respondents categories (In ***some institutions***)

Conclusion

- ✓ 11 public pre-service teacher education and teacher training institutions can host scalable education and teacher capacity development courses including CSE
 - ***6 from English speaking countries and 5 from French speaking***
- ✓ Each institution has its own limitations that both parties potentially involved in collaboration will need to consider
- ✓ **A robust plan** for managing high impact risks should be elaborated
- ✓ ***LMSs from the French speaking region need more improvement in ICT infrastructure, LMS upgrade and capacity development of both technical and pedagogical staff.***
- ✓ ***Integration of LMS*** with other tools like whatsapp, facebook, etc. is **highly recommended** for a ***scalable training program such as CSE***



unesco

International Institute
for Capacity Building
in Africa



Thank you!