The Role of Learning Management Systems in Strengthening Course Organization and Content Accessibility in Dodoma Higher Learning Institutions

Nelson Chihambaya & Zawadi Richard Juma
Educational Department
St John's University of Tanzania
Email: nchihambaya@gmail.com

Abstract: *Learning Management Systems (LMS) are increasingly used in higher education to organize instructional content and improve accessibility. In Tanzania, adoption is growing, but the potential of LMS to strengthen course organization and content accessibility for enhancing teaching and learning remains underexplored. Most prior studies have focused on general adoption, creating a gap in understanding the specific contribution of these functions to academic processes. This study examined the role of LMS in improving course organization and content accessibility in higher learning institutions in Dodoma City. A mixed-method and convergent parallel design was employed, involving 80 respondents (50 students and 30 academic staff) from one public and one private institution. Data was collected through questionnaires, interviews, and LMS platform observation. Quantitative data were analyzed descriptively, while qualitative data underwent thematic analysis. Findings indicate that LMS improves course organization through structured scheduling, centralized resource management, and clear sequencing, while content accessibility is enhanced via downloadable materials, multimedia, and interactive tools. Challenges included inconsistent usage, limited digital literacy, and infrastructural barriers. The study recommends regular training, consistent content updates, and infrastructure upgrades, with further research on the long-term impacts of LMS-enhanced course management on student performance.*

Keywords: *Learning Management Systems, Course Organization, Content Accessibility, Teaching and Learning, Higher Learning Institutions.*

How to cite this work (APA):

1. Introduction

Learning Management Systems (LMS) have become a cornerstone of modern higher education, offering digital platforms that enable the organization, delivery, and monitoring of teaching and learning activities (Bozkurt et al., 2020; Bradley, 2020; Martin & Bolliger, 2018; Washington, 2019). Globally, institutions in developed contexts have successfully integrated LMS into instructional processes, using them not only to store learning materials but also to enhance course structure, streamline communication, and promote interactive engagement between students and instructors (Al-Fraihat

et al., 2020). Such systems contribute to efficiency in course management, allowing for centralized resource sharing, flexible learning schedules, and continuous assessment (Bond et al., 2021).

In developing contexts, however, the adoption of LMS remains uneven, constrained by infrastructural limitations, inconsistent institutional policies, and varied digital literacy levels among users (Kalinga, 2010). In Tanzania, the integration of LMS into higher learning institutions has increased in recent years, driven by the need for blended and remote learning solutions. Despite this growth, many lecturers reportedly use LMS for basic functions such as uploading lecture notes while neglecting advanced features that could optimize course organization and content accessibility (Mahali, Nkata, & Lubuva, 2019). This underutilization presents a significant gap in understanding how LMS functionalities directly influence course organization and content accessibility, which are critical to effective teaching and learning activities. While previous research has emphasized general adoption and usage patterns, few studies have empirically examined these specific functions within the Tanzanian higher education context.

Addressing this gap is essential for ensuring that institutional investments in LMS translate into tangible improvements in academic delivery and student learning experiences. By focusing on course organization and content accessibility, this study investigated how LMS can be strategically utilized to strengthen teaching and learning activities in higher learning institutions in Dodoma City.

The quick evolution to digital knowledge settings, worsened by the COVID-19 pandemic, has emphasized substantial gaps in teachers 'expertise with technology, mostly in using Learning management platforms like Google Classroom and Moodle (Al-Fraihat et al., 2020). A study indicates that while 75% of teachers account for positive effects from using Moodle and Google Classroom LMS (Bhalalusesa et al., 2023; Cook, 2025; Piaralal et al., 2024). Countless teachers and students still struggle with successfully integrating LMS into their pedagogical practices and learning activities. In Tanzania, the challenges are particularly critical due to limited internet access only about 27% of the population having internet connectivity, and insufficient training on digital tools. These issues contribute to teachers' difficulties in managing courses, engaging students, and facilitating communication and collaboration issues, ultimately affecting their teaching performance and accessibility to learning experiences for students.

Previous studies have explored various aspects of LMS's impact on education, particularly focusing on its effectiveness in promoting student engagement and enhancing collaborative learning (Maphalala & Adigun, 2020). Despite the existing research, there remains a significant gap in understanding how specific practices within the Learning management system, such as Moodle, Blackboard, and Google Classroom, directly influence learning and teaching activities. Most studies have not examined these practices in detail, particularly within the Tanzanian educational situation, where technology integration remains challenging (Mtani & Mbelwa, 2022). Furthermore, a lack of localized data on this subject limits one's understanding of how to effectively support teachers in enhancing their performance through digital tools.

This study aimed to fill the identified knowledge research gap by systematically investigating the influence of Learning Management systems on teaching and learning activities in selected higher learning institutions in Dodoma City, Tanzania. By examining the influence of LMS tools on course organization and content accessibility. The study aimed to provide insights and a broad understanding of how and to what extent these systems can enhance or hinder teaching and learning activities. Ultimately, this contributed to improving teaching quality performance and enhancing accessibility to deeper learning experiences for teachers and students, respectively. The findings would not only contribute to the academic discourse on digital learning tools but would also offer practical recommendations for educators and policymakers to enhance the integration of LMS, ultimately benefiting both teachers and students. The study tried to answer the research question; What are the influences of LMS on course organization and content accessibility in programs in selected Dodoma higher learning institutions?

2. Literature Review

2.1 Learning Management Systems in Strengthening Course Organization and Content Accessibility

Globally, Learning Management Systems (LMS) have been widely adopted to support higher education and, in some cases, K-12 institutions. They serve as centralized platforms for organizing content, managing instructional activities, streamlining assessment processes, and improving communication between instructors and students (Washington, 2019; Baki et al., 2018). Washington (2019), for example, explored the use of

Blackboard Learn in face-to-face higher education courses at a major U.S. university with eight campuses. Although LMS tools were frequently used, they were primarily applied for basic administrative functions, with course management features underutilized. This finding indicates that, even in technologically advanced contexts, there remains untapped potential for integrating LMS more deeply into pedagogical practice.

Baki et al. (2018), in a comparative study across 41 countries including the UK, USA, China, Taiwan, and Turkey, found that perceived usefulness and ease of use significantly influenced LMS adoption rates. However, while adoption levels are high in many countries, relatively few studies have explored the direct relationship between LMS functionalities, such as course organization and content accessibility, and improvements in teaching and learning outcomes. Chugh et al. (2023) further highlighted that successful LMS implementation requires alignment between technological features, user needs, and post-adoption evaluation metrics.

In the Middle East, Shraim (2019) examined online examination practices among 342 Palestinian undergraduates and found that LMS-supported assessment systems were more time- and cost-efficient than traditional exams. However, issues such as cheating and plagiarism reduced acceptance among students. Notably, the study did not address the alignment of LMS-facilitated course content with intended learning outcomes. Similarly, Alkhasawneh and Alqahtani (2019) in Saudi Arabia demonstrated that integrating self-regulated learning strategies into LMS-based online courses significantly enhanced students' academic performance and self-regulation skills, underscoring the pedagogical potential of well-structured course content.

In Tanzania, LMS platforms such as Moodle, Blackboard, and Google Classroom have been introduced in several universities, with studies reporting positive contributions to course structuring, improved communication of academic requirements, and better sequencing of instructional materials (Mahali et al., 2019; Kalinga, 2010). However, adoption remains uneven. Nkata (2020) found that only 32.8% of higher learning institutions have fully implemented LMS, citing barriers such as inadequate infrastructure, high internet costs, and low digital literacy among staff and students. While these studies have identified broad adoption patterns and some instructional benefits, they have not provided a detailed empirical examination of how specific course management functions, particularly course organization and content accessibility, shape teaching and learning activities in Tanzanian higher learning institutions. This

study directly addresses this gap, offering a targeted analysis of these two indicators and their combined influence on teaching effectiveness and learner engagement.

3. Methodology

This study employed a mixed-method approach which combined both quantitative data in numerical form for statistical insights analysis and qualitative data collection and analysis in non-numerical form for in-depth insights and experiences. A Convergent parallel mixed-methods design was used to examine the influence of Learning Management Systems (LMS) on course management in higher learning institutions in Dodoma City. This design allowed for the simultaneous collection and analysis of both quantitative and qualitative data, ensuring a more comprehensive understanding of the research problem (Dawadi et al., 2021). The approach was selected because it enables the triangulation of findings, thereby increasing the validity and reliability of results (Creswell, 2018). In the present study, Course Organization and Content Accessibility were treated as the independent variables, while Teaching and Learning Activities assessed through content delivery, assessment, and evaluation served as the dependent variable. This alignment was necessary to directly address the research objective and question focusing on LMS course management functions in enhancing instructional practices.

The study was conducted in Dodoma City, Tanzania, which hosts several higher learning institutions that have adopted LMS platforms to varying extents. Two institutions were selected as the study sites: one public university and one private university. This selection provided diversity in terms of governance structures, resource availability, and ICT integration levels, thereby offering a balanced context for examining LMS implementation. These institutions were purposively chosen using purposive sampling due to their ongoing use of LMS for teaching and learning activities, particularly in course organization and content accessibility.

The target population comprised both students and academic staff, including lecturers, heads of departments, and IT personnel directly engaged in LMS-supported teaching and course management. A total sample size of 80 respondents was involved in the study, consisting of 50 students and 30 academic staff using Yamane's formula $N/1+N(e)^2$. The sampling strategy combined purposive sampling for key informants such as head of departments, It Lecturers and It Staff chosen for their specialized knowledge and experience in LMS use. Simple random

sampling selected students and academic staff to ensure equal representation across different academic levels (Creswell, 2018). This approach ensured that perspectives from both the user and managerial sides of LMS implementation were adequately captured.

Validity of the research instruments was ensured through expert review and a pilot study. The questionnaire, interview guide, and platform observation checklist were developed based on research objectives and relevant literature and were reviewed by three experts in educational technology and research methodology to assess content relevance and clarity. The pilot test was conducted in a comparable institutional setting within Dodoma to refine question wording and sequencing. Reliability for the quantitative instrument was tested using Cronbach's Alpha, with results exceeding the minimum acceptable threshold of 0.70, indicating strong internal consistency of the scales used.

For data analysis, quantitative data from questionnaires were processed using the Statistical Package for Social Sciences (SPSS), employing descriptive statistics such as means and standard deviations to summarize responses. Multiple linear regression analysis was applied to determine the extent to which course organization and content accessibility predicted teaching and learning activities. Qualitative data from interviews and observation were analyzed thematically, allowing for the identification of recurring patterns, unique cases, and explanatory insights that complemented the quantitative findings. The integration of quantitative and qualitative results occurred at the interpretation stage, providing a holistic understanding of the influence of LMS on course management in the selected higher learning institutions.

Ethical considerations were observed as fundamental part of any research process. This study strictly adhered to recognized ethical guidelines to ensure that the rights, dignity and welfare of participants are protected throughout. A researcher obtained permission or approval letter from St John's University of Tanzania to conduct a research as well as to College of Business Education to collect data. The researcher obtained informed consent from participants and provided clear information about the purpose of the study. Confidentiality, anonymous, security and voluntary participation were considered to protect the participants as they were allowed to withdraw from study at anytime wishes without trial or committing a crime (Creswell, 2018).

4. Results and Discussion

This section presents findings on the influence of LMS on course organization and content accessibility in selected higher learning institutions in Dodoma City. The results are organized based on the specific research question: What are the influences of LMS on course organization and content accessibility in programs in selected Dodoma higher learning institutions? Furthermore, demographic findings made a significant contribution to exploring this research question.

4.1 Demographic Information

This study explored various demographic data that were collected to fulfill the demands of the research question. Table 1 shows the demographic data obtained.

Table 1: Demographic Data

Variable	Category	Students (N = 50)	%	Instructors (N = 30)	%
Gender	Male	21	42.0	17	56.7
	Female	29	58.0	13	43.3
Educational Level	Bachelor Degree	50	100.0	–	–
	Masters	–	–	17	56.7
	PhD	–	–	13	43.3
Program/Department	BAED	23	46.0	13	43.3
	BASCED	18	36.0	9	30.0
	BBSE	9	18.0	8	26.7
Teaching Experience	<10 years	–	–	7	23.3
	10–20 years	–	–	16	53.4
	>20 years	–	–	7	23.3

Source: Field data (2025)

4.1.1 Gender Distribution of Respondents

The gender of the respondents is presented in Table 1, which shows that all of the 80 screened respondents [80 (100%)] responded to the question about their gender. Table 1 shows that, for valid responses, for students, of the valid responses, females (58%) are slightly more than males (42%), and for instructors, of the valid responses, males (56.7%) are more than females (43.3%). This gender balance of the sample population allows the research to consider gender-related differences in adopting LMS. Strongly supports that women might more often use LMS tools, whereas men might concentrate more on content access and task accomplishment. This is key to the design of inclusive LMS interfaces and support. The gender breakdown of this sample is interesting in the context of exploring the influence of LMS on course organization and content accessibility on explored programs in Dodoma City.

Gender differences can affect the adoption and perceived usability of digital learning platforms, according to Maphalala and Adigun (2020). Some research suggests that when proper training and support systems are in place, female educators and students may exhibit greater adaptability and responsiveness to LMS tools. Similar to this, Fathema et al. (2015) claim that gender is crucial to models of technology acceptance, particularly in educational contexts where gender differences exist in perceived usefulness, confidence, and access. Because it enables a gender-informed view of LMS usage across domains, including course organization and content accessibility, the inclusion of both male and female respondents in this study improves the representativeness and validity of the findings.

4.1.2 Respondents' Educational Background

All students are pursuing bachelor's degrees in various subjects, representing their undergraduate status,

according to the examination of respondents' educational backgrounds. Conversely, the majority of instructors hold master's degrees (56.7%) and doctorates (43.3%). These impressive credentials imply that tutors possess the academic background necessary for LMS participation, like Google Classroom and Moodle. However, there is a need for digital training efforts because advanced degrees may not always translate into technology expertise. The results are shown in Table 1, where the overwhelming majority of bachelor's degree holders are in line with the sample makeup, which was mainly focused on university-level students, instructors, and academic staff at Dodoma City's higher education institutions. A certain degree of stability in the cognitive and digital literacy competencies is provided by the variations in educational backgrounds. Users with university education are more likely to have the fundamental ICT skills and greater levels of digital awareness needed for successful LMS adoption and engagement, claim Mtebe and Kondoro (2016). Furthermore, Johannsen et al. (2023) point out that users with more education tend to be more independent when it comes to planning content, administering online learning activities, and virtually cooperating.

4.1.3 Student-Respondents Affiliated Programs

According to Table 1, the three academic programs that both students and tutors are most frequently associated with are Bachelor of Arts in Education (BAED), Bachelor of Science in Education (BSCED), and Bachelor of Business Studies in Education (BBSE). Reliable cross-analysis of LMS usage across disciplines with similar instructional needs is made possible by this program alignment, which also improves the study's internal consistency. Bond et al. (2018) state that academic discipline has a big impact on how users engage with learning management systems (LMS). For example, science-based programs like BSCED might need interactive modules, simulations, and video-based content, whereas programs related to the arts and business tend to concentrate on forums, written assignments, and presentation tools. The need for adaptable LMS features that may accommodate the various pedagogical requirements of various departments is further supported by this variation (Johannsen et al., 2023).

Given that the participants are both present users and potential future implementers of LMS technology, the representation of education programs (BAED and BSCED) is very pertinent. Their dual viewpoints as students and aspiring teachers provide important context for understanding how LMS platforms might be used in Tanzanian classrooms and how scalable they might be. A

more thorough assessment of LMS success beyond academic environments is supported by the addition of BBSE participants (business education), which expands the scope by including alternative digital competencies and expectations.

The study's capacity to provide well-informed, program-sensitive suggestions is strengthened by the participants' disciplinary dispersion. It emphasizes how crucial it is to create LMS systems that can be modified to fit a variety of teaching and learning environments. Furthermore, because education-based programs predominate, the results are certain to be representative of both present LMS experiences and potential future classroom integration strategies. As a result, the study can help guide training requirements and institutional policy, encouraging more inclusive and successful LMS implementation techniques.

4.1.4 Instructors' Experience in Teaching

Table 1 demonstrates that instructors exhibit a balanced mix of experience levels, with 53.4% having 10–20 years of experience, and 23.3% each with less than 10 years or more than 20 years. This range enables the study to evaluate the effects of teacher tenure on receptivity to technology and LMS integration. Research has indicated that attitudes toward digital tools in the classroom might be influenced by one's teaching experience. For example, Maphalala and Adigun (2020) discovered that mid-career teachers frequently exhibit a greater propensity to include learning management systems (LMS) because of their pedagogical maturity as well as their expanded institutional duties, which necessitate effective course delivery.

However, unless robust administrative and peer support structures are in place, educators with more than 20 years of experience may exhibit cautious acceptance, frequently favoring traditional techniques (Kondoro et al., 2023). On the other hand, early-career tutors might be more receptive to LMS technologies but might not have the pedagogical approaches necessary to make the most of them (Ayu & Sari, 2021). This study's inclusion of tutors with varying levels of expertise enhances the analysis by illuminating how professional teaching trajectories differ in the dynamics of LMS adoption.

4.2 The Influence of LMS on Course Management

Course management represents one of the core functionalities of Learning Management Systems (LMS), enabling instructors to systematically plan, organize, and deliver instructional content. It involves structuring

course modules, sequencing materials, and providing learners with clear objectives and timelines. In this study, course management was examined through two sub-indicators: course organization and content accessibility, to determine their influence on teaching and learning activities in higher learning institutions (HLIs) in Dodoma City. Table 1 presents the descriptive statistics for course organization, content accessibility, and effective teaching and learning activities.

Table 1: Course organization and Content Accessibility results

Descriptive Statistics			
	Mean	Std. Deviation	N
Effective Teaching and Learning Activities	4.0275	.95771	80
Course Organization	3.4417	.97763	80
Content Accessibility	2.9188	1.02714	80

Source: Field data (2025)

4.2.1 Course Organization

Course organization refers to the systematic arrangement of learning resources, schedules, assessment timelines, and instructional guidelines in an LMS. Prior studies have established that effective course organization enhances learning efficiency, reduces confusion, and supports self-directed learning (Martin et al., 2019; Al-Fraihat et al., 2020; Bond et al., 2021; Kondoro et al., 2023). The findings indicate a mean score of 3.44 (SD = 0.98), reflecting a moderately positive perception of LMS course organization among respondents. This suggests that while many instructors in the surveyed HLIs use LMS to structure and organize course materials, usage is inconsistent for both lecturers and students. Qualitative responses highlighted differences in lecturers' digital literacy, availability of training, and departmental practices. For example, one Head of Department noted:

> "With LMS, we now have a standard process for distributing assignments, grading, and giving feedback. It has made teaching more accountable and timelier." (Interview with female Head of Department, 6th May 2025)

The findings are also in alignment with Mtebe and Kondoro (2016), who observed that Tanzanian universities often lack coordinated strategies for digital course planning. Many lecturers use LMS platforms only to post static content, without applying features for course flow and instructional design (Kondoro et al., 2023; Mutoka, 2023). One lecturer explained,

> "We use Moodle for sharing course outlines and weekly readings, but most of the planning still happens outside the system."(Interview with lecturer, 6th May, 2025).

However, researchers observations revealed that some LMS courses were well-organized with weekly schedules and linked assignments, while others were disorganized, lacking clear sequencing and objectives. This is in alignment with Mtebe and Kondoro's (2016) observation that Tanzanian universities often lack coordinated strategies for digital course planning, with many lecturers posting only static files rather than using interactive or scheduling tools (Kondoro et al., 2023; Mutoka, 2023). The findings demonstrate that while LMS can improve course management in HLIs, its potential is not fully realized in Dodoma City HLIs. Course organization received a moderate score, showing partial adoption of LMS structuring features but with inconsistencies between faculties and instructors. These results imply that institutional strategies should focus on: Standardizing LMS course setup across faculties to ensure consistent structure and sequencing of materials and capacity-building programs for both lecturers and students on effective LMS use.

4.2.2 Content Accessibility

Content accessibility measures the ease with which students can retrieve and interact with course materials on the LMS. The results show a mean score of 2.92 (SD = 1.03), below the neutral midpoint of 3.00, indicating negative perceptions of content accessibility among respondents. High content accessibility ensures that learners can study at their own pace, revisit materials as needed, and stay on track with course requirements but results show limitations to most of students due to insufficient funds to access internet, poor internet

connectivity and unavailability of contents in platforms (Martin et al., 2019)

This low score suggests challenges such as irregular material uploads, poor internet connectivity, lack of mobile optimization, and insufficient lecturer training in LMS content management. One IT staff member explained:

> "Sometimes students can't download files, especially large documents or videos, because they rely on mobile data with limited access." (Interview with IT staff, 7th May 2025)

Lecturers also emphasized the inconsistency in uploading course resources. One lecturer commented:

> "We are encouraged to upload notes weekly, but sometimes the system is too slow or crashes, which discourages us from updating materials regularly." (Interview with Lecturer, 10th May 2025).

Similarly, a Head of Department (HoD) highlighted accountability gaps in managing instructional resources:

> "I often find some courses without complete lecture notes or references uploaded, and this affects both students' preparation and the department's academic standards." (Interview with HoD, 11th May 2025)

Researcher observations corroborated this, showing delayed uploads, inaccessible file formats, and broken download links in several courses. These barriers undermine the potential benefits of LMS for self-paced learning and sustained engagement. Such challenges reflect broader digital equity concerns, where students without reliable infrastructure are disproportionately disadvantaged (Shraim, 2019; Al-Fraihat et al., 2020). Content accessibility scored low, indicating that infrastructural, technical, and skill-related constraints significantly limit students' ability to benefit from LMS integration. These results imply that institutional strategies should focus on: Improving infrastructure and internet access, especially for students relying on mobile devices. Implementing accountability measures to ensure timely and complete upload of instructional resources. The study echoes with the study conducted in Germany by Bond et al. (2018), results showed that teachers primarily use LMS tools for administrative purposes rather than direct learning enhancement, with forums and,

to a lesser extent, wikis being minor exceptions; 42% use forums, and 26% use wikis in some lessons

Content accessibility scored low, indicating that infrastructural, technical, and skill-related constraints significantly limit students' ability to benefit from LMS integration.
Limited access to course materials diminishes students' ability to prepare adequately for classes and participate actively in discussions. Students unable to retrieve resources in time are more likely to disengage, leading to surface-level learning and reduced motivation to use LMS platforms. The findings are not in alignment with a study conducted by Baki et al. (2018), who affirmed that interactive content within LMS platforms improves student engagement, deepens understanding, and supports personalized learning.

Students from low-income backgrounds who rely on mobile data or outdated devices face compounded disadvantages. This deepens the digital divide and undermines the role of LMS as an inclusive platform for learning, making equitable participation in academic activities difficult.
Incomplete or delayed uploads compromise academic quality, as students do not receive adequate instructional support. The results echo with the findings of Kondoro et al (2023) and Mutoka (2023), who found that poor digital infrastructure and lack of staff motivation impede full LMS functionality in HLI's. If such gaps persist, institutions risk lowering the credibility of LMS-based learning and hindering efforts to align with global standards in digital education. Ultimately, for LMS to fulfill its role in enhancing teaching and learning activities, course organization and content accessibility must be addressed simultaneously, as strong organization without reliable access renders the system ineffective.

5. Conclusions and Recommendations

5.1 Conclusions

This study examined the role of Learning Management Systems (LMS) in enhancing course management, focusing on the sub-indicators of course organization and content accessibility in selected higher learning institutions in Dodoma City. The findings indicate that LMS platforms moderately improved course organization by enabling structured scheduling, clear sequencing of learning materials, and alignment of assignments with learning objectives. However, utilization was inconsistent across faculties, reflecting differences in digital literacy, training, and adherence to institutional LMS guidelines.

In contrast, content accessibility scored below the neutral mean, suggesting significant challenges in ensuring timely and equitable access to learning resources. Factors such as poor internet connectivity, irregular content uploads, and incompatible file formats hindered students' ability to retrieve and engage with instructional materials effectively.

The study concludes that while LMS platforms have the potential to significantly improve course management, their full benefits are yet to be realized due to uneven adoption, insufficient training, and infrastructural limitations. Addressing these gaps could lead to more effective teaching and learning experiences in Tanzanian higher education.

5.2 Recommendations

Institutional LMS Standards: Develop and enforce clear policies and guidelines for LMS course management to ensure consistent structuring and content delivery across faculties. Digital Infrastructure Investment: Allocate resources to improve internet reliability and bandwidth, including subsidized student data packages to enhance content accessibility. Capacity-Building Initiatives; Conduct regular training sessions for both lecturers and students on effective use of LMS features for course organization and content delivery. Content Accessibility Protocols; Standardize the format, size, and upload schedules for instructional materials to ensure compatibility with multiple devices and timely access.

Based on the findings and limitations of this study, future researchers are encouraged to pursue the following topics: "Evaluating the Long-Term Impact of LMS on Student Academic Performance in Tanzanian Universities." "Challenges and Barriers to LMS Adoption Among Rural Higher Learning Institutions in Tanzania." "The Role of Gamification in Enhancing Student Engagement through LMS Platforms." "A Comparative Study of LMS Implementation between Public and Private Higher Learning Institutions in Tanzania.", "An Assessment of Data Analytics Features in LMS for Monitoring and Improving Teaching Effectiveness."

References

Al-Fraihat, D., Joy, M., Masa'deh, R., & Sinclair, J. (2020). Evaluating E-learning systems'success: An empirical study. *Computers in Human Behavior, 102*, 67–86.https://doi.org/10.1016/j.chb.2019.08.004

Alkhasawneh, R., & Alqahtani, M. A. (2019). The effect of using online undergraduate coursesbased on self-regulatory learning strategies to enhance students' self-regulated learning and academic outcomes. *International Journal of Emerging Technologies in Learning(iJET), 14*(9), 140–156. https://doi.org/10.3991/ijet.v14i09.10299

Alzahrani, M. G. (2019). The use of the LMS Blackboard in teaching computer applications forstudents with disabilities. *International Journal of Advanced Computer Science and Applications, 10*(4), 56–62. https://doi.org/10.14569/IJACSA.2019.0100407

Baki, R., Birgin, O., & Cagiltay, K. (2018). The adoption of e-learning systems in different countries: A cross-cultural study. *Educational Technology Research and Development, 66*(4), 983–1004. https://doi.org/10.1007/s11423-018-9601-1

Bond, M., Bedenlier, S., Marín, V. I., & Händel, M. (2021). Emergency remote teaching inhigher education: Mapping the first global online semester. *International Journal of Educational Technology in Higher Education, 18*(50), 1–24.https://doi.org/10.1186/s41239-021-00282-x

Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., Lambert, S. R., Al Freih, M., Pete, J., Olcott, D., Rodes, V., Aranciaga, I., Alvarez, A. V., Roberts, J., Pazurek, A., Raffaghelli, J. E., de Coëtlogon, P., Shahadu, S., Brown, M., … Mano, M. (2020). *A global outlook to the interruption of education due to COVID-19 Pandemic:Navigating in a time of uncertainty and crisis. 15*(1).

Bhalalusesa, Said Kombo, F., Godwin Mwakalinga, P., Bakari Juma, S., Mihayo Edward, L., &Inon Kumbo, L. (2023). Educators' Perspectives on Usability of the Moodle LMS: A Case of the National Institute of Transport, Tanzania. *EAST AFRICAN JOURNAL OF EDUCATION AND SOCIAL SCIENCES, 4*(3), 158171.https://doi.org/10.46606/eajess2023v04i03.0287

Bradley, V. M. (2020a). Learning management system (LMS) use with online instruction. *International*

Journal of Technology in Education (IJTE), 3(1), 68–92. https://doi.org/10.46328/ijte.v3i1.23

Cook, Jonathan M., "One-to-one Chromebook Best Practices in Secondary-Level EnglishLanguage Arts Classrooms" (2025). All-Inclusive List of Electronic Theses and Dissertations. 3149. https://scholars.indianastate.edu/etds/3149

Chugh, R., Ledger, S., & Shields, R. (2023). Implementing educational technology in highereducation: A review of technologies, stakeholders' perceptions, frameworks, and metrics. *Education and Information Technologies, 28*(3), 3073–3099.https://doi.org/10.1007/s10639-022-11286-1

Creswell, J. W. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches: Vol. 5th ed*. Sage Publications.

Dawadi, S., Shrestha, S., & Giri, R. A. (2021). Mixed-Methods Research: A Discussion on itsTypes, Challenges, and Criticisms. *Journal of Practical Studies in Education*, *2*(2), 25 36. https://doi.org/10.46809/jpse.v2i2.20

Johannsen, A., Schmidt, L., & Andersen, H. V. (2023). Improving course management withdigital tools: A case study in higher education. *Education and Information Technologies, 28*(4), 4591–4612. https://doi.org/10.1007/s10639-022-11234-z

Kalinga, E. A. (2010). Development of an interactive e-learning management system (e-LMS) for Tanzanian secondary schools. *Journal of Issues and Practice in Education, 2*(1), 45 60.

Kondoro, A. W., Mutagahywa, B., & Mtebe, J. S. (2023). Barriers and drivers for adoption of learning management systems in sub-Saharan Africa: Evidence from Tanzania. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT), 19*(1), 102–121.

Mahali, L., Nkata, R., & Mtebe, J. S. (2019). Adoption and use of learning management systems in Tanzanian universities. *International Journal of Education and Development Using Information*

and Communication Technology (IJEDICT), 15(2), 4–20.

Maphalala, M. C., & Adigun, O. T. (2020). Academics' Experience of Implementing E-Learning in a South African Higher Education Institution. *International Journal of Higher Education*, *10*(1), 1. https://doi.org/10.5430/ijhe.v10n1p1

Martin, F., Sun, T., & Westine, C. D. (2019). A systematic review of research on online teachingand learning from 2009 to 2018. *Computers & Education, 159*, 104009.https://doi.org/10.1016/j.compedu.2020.104009

Mtebe, J. S., & Kondoro, A. W. (2016). Barriers to e-learning adoption in African universities: Asystematic review of literature. *International Journal of Education and DevelopmentUsing Information and Communication Technology (IJEDICT), 12*(1), 105–122.

Mutoka, A. (2023). Digital course management practices in East African universities: Challenges and opportunities. *Journal of Educational Technology and Society, 26*(1), 70–84.

Mtani, H., & Mbelwa, J. (2022). Factors affecting Learning Management Systems Usage inHigher Learning Institutions in Tanzania: A Case of University of Dodoma. *InternationalJournal of Education and Development Using Information and Communication Technology (IJEDICT), 2022, Vol. 18, Issue 1, Pp. 7-26.*

Nkata, R. (2020). Strengthening an effective e-learning management system in Tanzania's higherlearning institutions. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT), 16*(2), 33–49.

Piaralal, S. K., Osman, Z., Rethina, V. S., Mahmood, N. M., & Kasuma, H. (2024). Continuanceintention to study using the online distance learning system in the context of online distance learners: Malaysian context. *International Journal of Academic Research in Business and Social Sciences, 14*(1), 1–17. https://doi.org/10.6007/IJARBSS/v14 i1/20571

Shraim, K. (2019). Online examination practices in higher education institutions: Learners' perspectives. *International Journal on E-Learning Practices, 6*(1), 1–11.

Washington, T. (2019). The pedagogical and practical use of Blackboard learn LMS in face-to face higher education courses. *Journal of Education and Learning, 8*(2), 1–14.https://doi.org/10.5539/jel.v8n2p1