Integration of Learning Management System as Evolutionary Option for Tackling Physical Classroom Congestion in Nigerian Public Universities Today and Tomorrow

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Abstract		Conference Article

This study explored the integration of Learning Management System (LMS) as evolutionary option for tackling physical classroom congestion in Nigerian Universities today and tomorrow. The continuous increase in student enrollment in Nigerian universities has led to classroom congestion, which hinder effective teaching, limit student participation, compromise the quality of education delivery, and quality assurance standard in public University. This ugly situation has posed a serious challenge to most public universities in Nigeria, and the adoption of LMS can serve as a viable alternative to conventional face-to-face teaching by providing flexible teaching, technology-driven learning opportunities, promoting online teaching, and blended learning environments. The study position revealed that integration of LMS serve as evolution to enhances teaching flexibility, facilitates online course delivery, promotes student engagement beyond the physical classroom, strategically reduces lecturer teaching stress and workload on the available learning spaces. The study concluded that integrating LMS can bring innovative and sustainable approach by enabling virtual learning and reduce physical or traditional classroom congestion constraints in public universities. It was therefore recommended among others that, university management and policymaker should provide adequate ICT infrastructure, organise regular training for lecturers and students, and institutionalize LMS usage to improve the overall quality in Nigerian public University today and tomorrow.

Keywords: Evolution, Learning Management System, Online Teaching, and Physical Classroom.

Introduction

Today, the advancement of technology in education has revolutionized the way teaching and learning are conducted, particularly through the introduction of Learning Management Systems (LMS). In Nigerian universities, where physical infrastructure often fails to accommodate the growing number of students, the integration of LMS has emerged as a strategic response to classroom overcrowding. The system serves as a remarkable solution for tackling the inefficiencies of traditional teaching methods and provides innovative alternatives to address infrastructural and pedagogical challenges. Physical classroom congestion in Nigerian universities is a long-standing issue. As Ofojebe and Eze (2017) note, the continuous increase in student enrolment without corresponding infrastructural development has le

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d to overcrowded classrooms, poor ventilation, and inadequate teaching facilities. This congestion affects the quality of instruction, limits student engagement, and reduces the effectiveness of communication between lecturers and learners.

Recently, the increasing demand for university education in Nigeria has led to student large enrolment without a corresponding expansion in physical infrastructure, particularly in public universities. For a populous and urbanized state like Lagos, Kano and Rivers state, this democratization of enrollment access is essential for achieving the objectives of inclusive and quality education as outlined in the Sustainable Development Goal 4 (SDG 4). It is therefore note that, this contemporary situation has resulted in classroom congestion, lecturer excess workload, limited student engagement, strained teaching facilities, poor learning environments, reduced academic performance, and diminished quality assurance standard. In an effort to tackling this challenge, universities have embraced uses of technology as evolution to provide learning solutions such as the Learning Management System (LMS) which is a digital platform that facilitates the planning, delivery, and assessment of learning. An LMS allows academic staff to upload course materials, conduct online teaching, assign and grade assessments, and monitor student progress remotely. According to Shittu, Ola and Adedapo (2021), LMS has been introduced in many higher education institutions to connect lecturers and students online through internet facilities without the confines of physical traditional classroom. It is an academic online portal that uses digital software to connect classroom lecturers and students in order to achieve educational goals and objectives. During the COVID-19 pandemic, many Nigerian universities faced the reality of limited preparedness for online teaching. Adeoye, Adanikin, and Adanikin (2020) found that institutions without functional LMS platforms struggled to sustain academic activities during lockdowns, highlighting the urgent need for digital adoption. Conversely, universities that had implemented LMS technologies, such as Moodle and Google Classroom, were able to continue teaching seamlessly through virtual modes. This experience demonstrated that LMS adoption could effectively mitigate the challenges of physical classroom congestion by enabling students to learn remotely.

Concept of Learning Management System

Learning management system (LMS) is a computer software application used to plan, organise, coordinate, report and implement specific teaching and learning process through internet usage. LMS is a subset of online teaching. The LMS offers online dealing with assignments, course content management, chats, forums, lesson plans, quizzes, tests, assignments, surveys, file sharing and resources, not all of these features will work for an institution. According to Shittu, Idowu and Lawal (2020) online teaching is an application of electronic devices to impart knowledge and acquire skills through the internet, intranet/extranet, audio or video tape, satellite TV and CD-ROM, Web-based learning, computer-based learning, virtual classroom and digital collaboration. Therefore, LMS is a virtual academic learning environment by which management of courses and students take place for learning *per se*. A typical LMS has two major characteristics: In course management, it enables the management and delivery of learning. In organizing and managing students, it facilitates student admissions, registration, payment of fees and other administrative requirements (Willie in Shittu, Ola & Adedapo, 2021).

Integration of Learning Management System in Nigerian Public Universities

The integration of a Learning Management System (LMS) as evolutionary tool for tackling physical classroom congestion in Nigerian public universities represents a transformative strategy for addressing one of the most pressing classroom challenges in public universities. The integration of LMS into academic teaching not only provides an alternative platform for instruction, but also reveals underlying inefficiencies in traditional classroom management, infrastructural inadequacy, and policy implementation. However, to fully realize these benefits, universities must address infrastructural challenges, strengthen ICT capacity, and foster a culture of technological acceptance among educators

and students. Therefore, LMS enhances teaching and learning flexibility, improves institutional efficiency, promotes data-driven decision-making, and encourages policy reforms towards digital education. Ultimately, integration of LMS is not only mitigates classroom congestion but also, offers data-driven insights that inform effective decision-making, institutional reform and redefines the future of public university education Nigeria as a whole.

Furthermore, in today's technology driven communities, education institutions in Nigeria public higher education are utilizing Information and Communication Technologies (ICTs) and implementing learning management systems (LMS) for the assessment of student academic performance. The major qualities of learning management system are Content management; Assessment and testing, Curriculum planning; Reports generation, communication and collaboration, and Classroom and college announcements. The integration of LMS approach help lecturers to develop new teaching strategies, design educational materials and identify a learning management platform to teach the course, to have the equipment, internet connection, and access to facilities or space to offer the course (Pagán & Medina, 2021). As a web-based learning tool, the LMS promote "any time, any place, any pace" access to learning content and management. The new normal approach provides interactive features to the students. As such, threaded discussions, video conferencing, and forums for discussion are the main features of an LMS (Nor and Lee in Shittu, Ola & Adedapo, 2021). However, integration of Learning Management System offers tools that are quite productive in learning like: file sharing, discussion forums, lesson, syllabus, chat, and management of assignments, among others. LMS connect as a web-based study program, includes an eBook with quizzes and practice problems on every chapter, and interactive learning tools like audios and videos. Using Connect, instructors are able to create various assignments and projects and follow the students' progress through each assignment, and in the overall course (Khawlah & Mujo, 2019).

Evolution of Learning Management System as Veritable Tool for Tackling Physical Classroom Congestion in Nigerian Public University

The evolution of Learning Management System (LMS) was raced to 2nd of November, 1969 when the whole world has witnessed all manner of possibilities that the medium offers. LMS are ICT intervention that aids teaching and learning. It helps the instructor deliver material to the students, administer tests and other assignments, track student progress, and manage record-keeping (Chigozie-Okwum, Ezeanyeji & Odii, 2018). Moodle, Blackboard, Desire2Learn, WebCT, Olat, Sakai, Kewl, and others are examples of Learning Management Systems. Moodle is a well-known as Course Management System (CMS) or Learning Management System. Meanwhile, Module Object-Oriented Dynamic Learning Environment (Moodle) is a recognized open-source learning management system (LMS) was developed by Martin Dougiamas in 2002. Moodle has grown very popular among educators all around the world due to its ease of use and inexpensive cost. In the era of covid-19 pandemic, Information and Communication Technology (ICT) help academicians of public higher education in Nigeria to administer teaching, research and community service obligation. Meanwhile, many universities to integrate online teaching and virtual classroom which is widely adopted as the mode of lecture delivery, conduct of seminars and academic conferences. Online teaching is education that takes place through the Internet. It is a method of teaching that foster lectures delivery through internet facilities and computer software targeted towards accomplishment of educational goals and objectives. Online teaching is a subset of e-learning. It is also called web-based teaching through the use of computer networks like: the Internet, Intranet or LANs (Shittu, Idowu & Lawal, 2020). In this situation, the LMS serves as evolutionary tool that revealing the unsustainable dependence on physical learning spaces and signaling the need for digital transformation in higher education. The system exposes the weaknesses in Nigeria's traditional classroom system such as lack of space, poor accessibility, learning stress, teacher workload and offers viable digital alternatives. According to

Pappas (2019), LMS platforms "create an organized digital ecosystem that supports both face-to-face and online learning, thereby reducing the burden on physical classrooms." This suggests that the LMS is not merely a supplementary tool but a strategic innovation that promotes efficiency, flexibility, and scalability in instructional delivery.

In addition to reducing classroom pressure, the LMS enhances the quality of education by promoting blended learning which combination of physical and virtual instruction. Azeez (2021) explains that blended learning fosters greater flexibility and learner autonomy, allowing students to access course materials anytime and anywhere. It also facilitates interaction through discussion forums, online assessments, and feedback mechanisms, which are essential for effective pedagogy. Consequently, the LMS helps universities manage large student populations more efficiently while maintaining academic standards. Despite its benefits, several barriers hinder the widespread adoption of LMS in Nigerian universities. These include poor internet connectivity, unstable electricity supply, limited digital literacy, and inadequate institutional support (Abubakar & Bala, 2022). Many lecturers still prefer traditional teaching methods due to resistance to change or lack of technical competence. Physical classroom congestion is often a result of population growth, inadequate educational planning, and limited infrastructure development. Okebukola (2018) observes that the problem of overcrowding in Nigerian universities and secondary schools stems largely from "policy expansion without corresponding infrastructural development." The demand for higher education has continued to rise, but many institutions still rely on outdated facilities with limited capacity. This has led to situations where lecture halls designed for 150 students are used to accommodate over 300 learners, compromising comfort, visibility, and concentration during lectures.

To overcome these challenges, universities must invest in ICT infrastructure, provide continuous training, and create enabling policies that support digital learning. Moreover, the advent of the Internet, the World Wide Web came into existence and the web became valuable for teaching. Online teaching involves the use of educational software like: the Google Hangout, Skype, Zoom, WhatsApp, Google classroom, Envivo etc. for virtual classrooms, web-based teaching materials, teleconferencing and the use of electronic devices such as PDAs, GSM phones, digital cameras, multimedia in storage devices, educational animations and computer aided assessments, email, instant messaging (online chats), all digital interactive software. Typically, a learning management system appears to be an online teaching tool that allows a teacher to design and deliver curriculum, track student involvement, and evaluate student performance. Learning Management Systems (LMSs) are also described as internet-based software allowing instructors to manage materials distribution, assignments, communications and other aspects of instructions for their courses". Learning management systems help the instructor deliver material to the students, administer tests and other assignments, track student progress, and manage record-keeping. Using a learning management system, students employ interactive features such as threaded chats, video conferencing, and discussion boards ((Shittu, Idowu and Lawal, 2020).

Implication for Today and Tomorrow

In recent years, the rapid increase in student enrolment across Nigerian universities has resulted in overcrowded classrooms, strained facilities, and compromised instructional quality. Integrating LMS into the academic system not only provides an innovative solution to these challenges but also exposes institutional weaknesses and inefficiencies in traditional educational structures. In the context of Nigerian public universities, integration of LMS has the potential to transform the higher institution landscape. With growing student populations and paucity of physical facilities, it offers a sustainable solution to the challenge of classroom congestion and combat excess teaching workload. By leveraging LMS technology, universities can provide accessible, flexible, and high-quality education that meets the demands of 21st-century learning. This enhances pedagogical flexibility and allows lecturers to integrate blended learning methods, where physical and virtual interactions are combined for more effective teaching. In overcrowded public

universities, this reduces classroom pressure by enabling a proportion of teaching activities to take place online. This position supported with Azeez (2021) argues that blended learning facilitated through LMS improves students' autonomy and engagement, as learners can access materials at their convenience and pace. However, successful integration of LMS requires robust ICT infrastructure, reliable internet connectivity, and continuous technical support. This position corroborated with Abubakar and Bala (2022) that the success of LMS in Nigerian universities depends on sustained investment in digital infrastructure and institutional capacity building. Without these supports, the benefits of LMS may remain underutilized.

Conclusion

In conclusion, the integration of Learning Management System acts as contemporary solution for tackling overcrowded physical classrooms and advocates for a more digital, efficient, and inclusive learning environment. It exposes infrastructural inadequacies while offering a clear pathway to educational innovation and transparency. This transparency offered by LMS also promotes accountability among lecturers and students, helping to academic irregularities such as lateness, absenteeism, plagiarism, or underperformance. For public universities to remain competitive and effective in Nigeria, integration of LMS must move from being a today solution to becoming an integral part of universities strategy for future sustainable growth and development.

Recommendations

Based on the implications of this study, the following recommendations are made:
1. University policymakers should recognize LMS integration not only as evolution to technological innovation but as a strategic response to infrastructural inadequacy and quality assurance challenges.
2. The Federal Ministry of Education Through the National University Commissions should provide adequate ICT infrastructure, organise regular training for lecturers and students, and institutionalize LMS usage to improve the overall quality in Nigerian public university.
3. The Federal government, through the Ministry of Education, should provide financial support and grants to universities for ICT infrastructure development and LMS implementation.
4. Universities management should formally integrate the use of Learning Management Systems into their academic policies and curriculum delivery to ensure that blended learning becomes a permanent and sustainable practice.
5. Government should provide adequate fund for public university authority to invest in reliable internet connectivity, modern computer laboratories, and adequate power supply to support seamless LMS operations across faculties and departments.
6. University management should organise professional development programs for lecturers, students, and administrative staff to enhance their digital literacy and competence in using LMS tools effectively.

References

Abubakar, A., & Bala, M. (2022). Digital transformation and technology integration in Nigerian universities. *Journal of Educational Technology Studies, 7(*3), 45–57.

Adeoye, I. A., Adanikin, A. F., & Adanikin, A. (2020). COVID-19 and e-learning: Nigeria tertiary education system experience. *International Journal of Research and Innovation in Applied Science, 5*(4), 28–31.

Azeez, A. A. (2021). Blended learning and academic performance of undergraduates in Nigerian universities. *Lagos Journal of Educational Studies, 10*(2), 67–80.

Chigozie-Okwum, C. C., Ezeanyeji, P. C., & Odii, J. N. (2018). Adoption of Learning Management Systems in Nigerian Tertiary Institutions: Issues and Challenges. *International Journal of Computer Applications, 181*(30), 5-10.

Khawlah, A., & Mujo, M. (2019). Learning Management Systems and Student Performance. *International Journal of Sustainable Energy Development*, *7*(1), 582-591.

Ofojebe, W. N., & Eze, R. C. (2017). Managing university facilities for effective service delivery in Nigerian public universities. *Nigerian Journal of Educational Administration and Planning, 17*(1), 143–156.

Pagán, L. & Medina, A. (2021). The acceptance of moodle learning management system in higher institution during covid-19 pandemic, *Proceedings of INTED2021 Conference*, 8024-8034.

Shittu, T. O., Idowu, O. K., & Lawal, S. I. (2020). Implementation of online teaching in Nigerian Universities: The pros and cons. *Journal of Research in Educational Management and Business Studies, 5*(1), 46-56.

Shittu, T. O., Ola, B. A., & Adedapo, O. O. (2021). Implementation of learning management system in Nigerian public higher education in the new normal. *Journal of Sociology and Education in Africa, 18*, 25-30.