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The double-edged sword of LMS in Basic Education Programmes: Teacher-Lived Experiences with KwaraLearn

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Abstract

This study explores the integration of KwaraLearn in basic schools to revolutionise teaching and administrative practices. A qualitative phenomenological approach was used for the study. Two research questions were raised to investigate the benefits and challenges faced by primary school teachers using KwaraLearn. Fourteen teachers were interviewed in person to elicit their views and lived experiences. Their responses were audio-taped and further validated with handwritten notes, and transcribed for thematic analysis. The research revealed that the platform offered significant advantages, including time optimisation through automated lesson tracking, a structured schedule that enhanced lesson organisation, and measurable academic progress with standardised assessment. However, these benefits are counterbalanced by persistent challenges, as mentioned by the teachers such as rushed teaching pace due to rigid digital timelines, resource deficits, particularly shortages of textbooks and supplementary materials for learners, and recurring technical issues that disrupted administrative tasks. While participants acknowledged KwaraLearn's potential to enhance teaching, learning, and administrative tasks; concerns were raised on the technology-driven education platform and the classroom realities. This study concludes that the platform should be iterative and designed to prioritize teacher input and local realities to balance innovation with practicability.

Keywords: *KwaraLearn, benefits, challenges, basic education, Nigeria*

INTRODUCTION

Nigeria, the most populous country in Africa, has a diverse and evolving educational landscape. Historically, education in Nigeria has been influenced by various factors, including colonial legacies, cultural diversity, and socio-economic challenges. The legacy of colonialism initially set the framework for the educational system, which has evolved to address the needs of Nigeria's diverse population (Aguolu, 1979; Omenka, 2023). Cultural factors, such as religious beliefs and ethnic diversity, play a significant role in shaping educational practices and access in Nigeria. Government's efforts to resolve issues confronting education birthed the introduction of various policies and reforms toward addressing various challenges and improving the quality and reach of education nationwide. The 9-3-4 formal system of education with various levels of schooling is structured into nine years of basic education (six years of primary education and three years of junior secondary education), three years of secondary education, and four years of tertiary education (Federal Government of Nigeria, 2013). The free and compulsory basic education programme launched in the year 1999 was aimed at improving access to, and quality of education at the primary and junior secondary levels has had its unique challenges that have limited the effectiveness of the educational programmes. Some of the challenges range from shortage of learning materials such as textbooks and teaching resources to low levels of teacher motivation and effectiveness.

Despite the undeniable importance of textbooks in the teaching and learning process, it has been observed by Achuba (2025) that quality textbooks appear not to have been accorded the required place in effective learning in Nigeria. This could be attributed to poor school management, weak regulations and counter-productive educational politics. Notwithstanding, disparities in educational opportunities in Nigeria is another challenge bedeviling the basic education. Valetsianos (2021), in a study on the value of open education resources for inclusion and equity, reported how financial barriers towards accessing textbooks had severely impacted students' educational experiences and outcomes even in the United States. The low-income students and historically underserved students tend to feel this hardship more than others. This problem also prevails in Nigeria due to factors such as geographical location, gender, socio-economic status, all militating against access to quality education. For instance, enrolment rates in primary education are significantly lower in the Northern States than in the Southern States, and there are also variations between urban and within rural areas (UNESCO, 2021). Despite significant hurdles that continue to widen the gaps in education opportunities, Nigeria's educational landscape shows a commitment to progress, aiming to equip citizens with the needed knowledge and skills for national development.

The administrative processes within the school encompass a wide range of tasks which include resource allocation, curriculum planning, implementation and management, effective communication, financial management, and facilities maintenance (Bada, Tengku Ariffin & Nordin, 2024; Usman, 2016). Administrators play a crucial role in ensuring the smooth operation of educational institutions such as managing staff, learners, and resources effectively. To this end, a well-organised and streamlined administrative system is crucial for ensuring that school operations run smoothly and education goals are achieved. However, traditional administrative methods in Nigerian schools often struggle to keep pace with the demands of a rapidly evolving educational landscape. Given the importance of efficient school administration in enhancing the quality of education in Nigeria, Babajide and Smith (2022) reflect on the need to explore innovative solutions such as Learning Management System (LMS) platforms and Computer-Based Instructional Management System (CBIMS) to streamline administrative processes, overcome existing challenges, improve operational efficiency and create a more conducive environment for teaching and learning. Moreover, efficient school administration that is technology-driven can foster accountability and

transparency, which are essential for combating corruption and mismanagement in the education sector. Integrating a robust technologically driven system can help administrators track school progress, identify challenges, and make data-driven and evidence-based decisions.

Technology is a present reality and one of the biggest scientific breakthroughs of the 21st century transforming every aspect of Nigerian lives. According to Chaudhry and Kazim (2022) and Ifenthaler et al. (2024), key technologies driving AI include machine learning, natural language processing, computer vision, intelligent tutoring, predictive analytics, generative AI, and voice recognition. In education, technology is more than just a high-tech buzzword. It is a transformative tool that could overhaul the way our education institutions function. The potential is particularly compelling to revolutionise the way teachers teach, pupils learn, and administrators manage educational institutions and administrative processes by streamlining operations toward enhancing various aspects of school effectiveness, such as personalising learning experiences for learners' individual needs, creating a learning path that addresses each learners' strengths and weaknesses, among other quality enhancing strategies.

There is no gainsaying that the implementation of KwaraLearn LMS in basic education programmes in Kwara State embodies a double-edged sword, presenting both opportunities for improved educational delivery and challenges that can adversely affect teachers' professional commitment. Teachers are central in instructional delivery and are basically responsible for implementation of the curriculum. Gruijters and Behrman (2020) have noted that teachers and schools are held accountable for learning but ironically, have limited resources to improve students' performance. Consequently, certain irregularities have been observed in recent time by concerned stakeholders in Kwara State in the areas of coverage of syllabus, punctuality and dedication among teachers leading to ineffectiveness in their instructional strategies. This is manifested in the study of Gruyters and Behrman (2020) who reported high rates of absenteeism in seven African countries where teachers were absent from class 44 percent of times and students were taught for less than three hours a day. Studies have been conducted on how integration of technology in schools has led to digitalisation and more effective management of instructional delivery (Bradley, 2021; Dendy, 2023; Frehywot et al., 2013; Ghazal et al., 2018; Marmoah, 2024; Nurbekova, 2023). Similarly, Zainuddin et al. (2022) suggest technology will not only help student to better engage in learning, it will also create innovative activities that will enhance teacher involvement to support learning. By providing the content on the LMS platforms before the actual class hours, some students who needed more time to master the content would not be left behind. This however means that some students might not learn the same content as the others. In spite of this, little or no study has been conducted specifically in the context of Kwara State to investigate the challenges faced by teachers while technology fits into their teaching particularly at the primary school level. It is against this background that this study investigates the benefits and challenges of integrating LMS in basic education through the digital platform 'KwaraLearn' from the primary school teachers' experiences, with a view to addressing part of the knowledge gap identified.

OBJECTIVES OF THE STUDY

This study investigated the lived experiences of teachers using the KwaraLearn platform, focusing on the interplay between the benefits and challenges of its integration in basic education. Understanding the dynamics is crucial for informing future practices and policies aimed at optimising the use of LMS in similar educational contexts. This research therefore explored the nuanced implications of LMS integration in basic education, focusing on how the system serves paradoxically as both facilitator

and obstacle in the teaching and learning process of basic schools in Kwara State, Nigeria. Specifically, to achieve the objectives, the research was directed towards the following core questions:

i. What has been the experience of teachers regarding changes in teaching since the implementation of KwaraLearn?
ii. In what ways do teachers perceive and make sense of the difficulties they face in applying the KwaraLearn reform in their classrooms?

LITERATURE REVIEW

This study provides insights into the benefits of KwaraLearn reform and the challenges that may hinder its success, ultimately contributing to evidence-based improvements in the programme. Computer-Based Instructional Management System (CBIMS) and Learning Management System (LMS) constitute two clusters of literature underpinning this study. Although, the first application of a digital computer to the task of instruction was first reported by Rath et al. (1959), the evolution of CBIMS can be traced back to Stanford University in the year 1967, with various developments more prominent in higher education during the early 1990s. Since then, a number of researchers have been leveraging technology to revolutionise the delivery and management of learning content through various LMS platforms, which have become integral in enhancing the accessibility and efficiency of education globally (Baker, 1971). Computer-Aided Instruction generally allows for exploration and manipulation of simulated environments, including virtual lab experiments that might be too costly or dangerous to conduct in educational settings (Abdulazeez et al., 2024)

Undoubtedly, basic education in Kwara State, Nigeria is on the brink of a new era where technology-powered features are incorporated into LMS tools to ensure teachers are more efficient and responsive to learners' needs towards enhancing learning. Integration of technology in Nigerian basic schools has greatly enhanced administrative tasks performed by school heads and teachers and further improved overall education quality. Almasri (2024) specifies that technology has significant potential to revolutionise Nigeria's education system with certain tools that can complement teachers' work to provide support in their routine tasks and administrative duties. Based on the findings of Ani, Onoh, Akpor and Ukpai (2020), the use of computers in education is essential for both services and applications. Their study highlights that incorporating computers into education not only facilitates access to vast information resources but also improves the quality and efficiency of instruction. Besides, when students are engaged with computer software, their progress can be effectively monitored, recording their performance on various tests and identifying their strengths and weaknesses, which in turn offers valuable feedback to teachers.

Benefits of LMS in Education

Teachers now use technology to execute most of their routine tasks, such as attendance tracking, learner grading, timetable scheduling, resource allocation, curriculum development, and learners' enrolment records without the need for manual roll calls (Bendar, 2022; Hung et al., 2022). Given this, it is reasonable to conclude that technology has repositioned some of these tasks performed in schools. For instance, consider the registration process where stacks of forms are given to learners to fill out while teachers and administrators spend hours in data entry. Technology has simplified the registration process, automatically inputting learner information into databases and even analysing data to assist in class placement. This results in a more efficient registration process, freeing up space to store hard copies of learner information records and time for administrators to focus on other essential tasks.

Teachers spend a significant part of their time and resources ensuring smooth daily operations with lots of paper work. They have a diverse set of tasks beyond teaching, including lesson development and planning, instructional delivery, assessment and evaluation, managing learner data and record, time-table schedule, attendance tracking and learner grades and many others. Some of these afore-mentioned instructional and administrative tasks are conventionally labour-intensive, quite overwhelming and prone to human error (Bryant et al., 2020). Remarkably, Rosenberg-Kima et al. (2022) submit that LMS that exemplifies a CBIMS has significantly reduced some of these burdens on teachers by handling these tasks efficiently and with less errors due to its ability to process and analyse vast amounts of data swiftly and accurately. More so, AI can uncover patterns and insights that human administrators will overlook, leading to more informed decision-making. It can facilitate the automation of tasks such as grading systems and time-table scheduling, thereby increasing efficiency and reducing costs and time. This, according to Al-Naymat and Al-Betar (2024), can help forecast trends in learner attendance and enrolment, assisting institutions to plan better and be proactive for timely interventions when the need arises.

LMS platforms such as KwaraLearn offer primary school teachers tools to create, distribute and assess learning resources efficiently while it enhances collaborative teaching and support for teachers and learners. This advancement aligns with the global educational trends towards ensuring a digital learning environment that foster engagement for an improved educational outcome. With this, learning is more engaging and dynamic, leading to heightened enthusiasm and interest in the subject (Ahmed, 2023). Integrating LMS in public primary schools is a transformative endeavour that marked a significant milestone in the educational landscape of basic education in Nigeria. As stated by Alutu (2024), integrating technology into primary education presents revolutionary teaching and learning as LMS platforms can be customised to meet the developmental needs of young learners, offering interactive and engaging educational experiences (Adekunle et al., 2020). Additionally, this offer support to teachers as they have insights into the progress of their students; allowing them to track learners' performance and identify potential issues that may lead to failure (Shin et al., 2022). The KwaraLearn initiative which represents a significant step towards digitalizing education was aimed at enhancing teaching and learning experiences. It offers numerous benefits that provide a centralized system for managing educational content, facilitating communication, and tracking student progress. The system can therefore enhance accessibility to learning materials, support diverse learning styles, and foster a more interactive and engaging classroom environment.

Challenges of LMS in Education

Although, the atmosphere of current educational system has changed as a result of technology advancements and better facilities; institutions, from basic to higher education, have now turned to the e-learning model to interchange and update their knowledge using all communication-related technology such as computer, tablets, cell phones and many others with the aid of internet. This advancement has made LMS central to modern education, offering a unified platform where students, teachers and administrators can interact simultaneously. However, this centralisation and increased reliance on digital infrastructure such as KwaraLearn present some significant challenges which should not be overlooked. According to Chatterjee et al. (2023), the risks associated with the complete LMS system are numerous and are significantly rising. The LMS developer must provide a user-friendly, human-centric browsing experience to alleviate user concerns. The insights from the qualitative study of Racmadhany et al. (2021) support this notion, revealing that teachers' positive perceptions of e-learning coexist with challenges that necessitate ongoing support and professional development. While many teachers appreciate the flexibility and accessibility that LMS provides, they also encounter frustrations related to usability and the need for adequate training (Shishah, 2021; Acala, 2023).

One of the primary obstacles to LMS in education, especially at the basic level, is the technological infrastructure. Technical support remains a serious threat to the successful integration of technology into teaching. While teachers may encounter technical issues during their lessons, it could disrupt the teaching and learning process if immediate help is not available to them. In a study by Martin et al. (2024), it was highlighted that unreliable internet infrastructure, especially at rural schools, can impede the effective use of technology leading to unequal access to teaching and learning. Carvalho, Areal and Silva (2011) delve into students' perceptions and experiences with two prominent Learning Management Systems (LMS), Blackboard and Moodle. The findings of the study was contrary to earlier research that often favored Moodle, the study revealed that a larger proportion of students expressed a preference for Blackboard, while few others preferred LMS platform such as Moodle. This finding calls for the need for educational institutions to evaluate LMS options carefully, taking into account student feedback to enhance engagement and learning outcomes.

Furthermore, certain irregularities in punctuality, differences in course content covered at various schools and non-completion of course content were reported among teachers in Kwara state, suggesting ineffectiveness in their performance (Abdulazeez et al., 2024). The observed irregularities among teachers shows that many arrive at school late which further reduces instructional time and class schedule. Also there is a notable discrepancy in subject content covered across schools as some teachers fail to complete their subject content within the stipulated academic term, leading to unequal educational experiences among learners.

Therefore, instructional delivery at this level could be enhanced through the strategic adoption of technology. This approach goes beyond mere access to technology; it involves thoughtful integration and alignment of technology with educational goals, pedagogical strategies, and the specific needs of learners. By transitioning from traditional methods to a digital platform such as KwaraLearn for all school operations, especially classroom instruction, the problem of irregularities could be addressed among primary school teachers. Therefore, this study explores the actual experience of teachers with KwaraLearn, highlighting the invaluable insights into the practical benefits and obstacles encountered during implementation.

METHODOLOGY

Research Design

This section sheds light on the research strategy, sampling of participants, data collection and ethics. Interpretative phenomenological Analysis (IPA) was useful for this study since it enabled us to learn from the lived experiences and sense-making of the particular group of teachers utilising the KwaraLearn tool for teaching and other administrative tasks. A qualitative approach was used in this study to provide in-depth data about the impact of KwaraLearn initiatives on effective school administration in Kwara State. This approach has rarely been adapted, using semi-structured interviews that allow researchers to employ an open interview guide, with follow-up questions tailored to participants' responses, allowing them to create knowledge through an interviewee.

Study participants

Researcher Description

The research team consists of two members with complementary research assistants who are teachers working in schools and also undergoing postgraduate studies in educational management. Their backgrounds inevitably shaped the study's research process. The lead researchers are academic staff in the University of Ilorin who had previously investigated the state of Basic education system in Nigerian public schools. This prior work revealed systemic challenges that initially framed their

expectations about KwaraLearn's implementation. One research assistant is a postgraduate student in the Department of Educational Management and a principal in public school in the State, who brought first-hand experience in evaluating the integration of the LMS in Kwara State basic schools with insights into the dynamics affecting LMS deployment. Meanwhile, the other two research assistants, are active primary school teachers in the State who had direct experience using the KwaraLearn platform, providing ground-level understanding of its day-to-day operational realities. Given these prior engagements, the team recognised the need to actively manage potential biases. To mitigate this, peer debriefing sessions that allowed for critical scrutiny of interpretations was organised for the research assistants. Also, through continuous reflection and methodological rigour, the team ensured that these prior understandings enriched the research rather than constrained it.

Participants or Other Data Sources

Choosing the research participants is a vital step in better comprehending the subject under study. This study was carried out on teachers of public primary schools participating in the KwaraLearn programme in Kwara State, Nigeria. Some head teachers had varying levels of experience with KwaraLearn (2-3 years). The suggestion of Merriam (1998) was valued while selecting the research participants to consider the perspectives and know-how of the respondents was pertinent to the objectives of the research. As this study focused on the experience of teachers on KwaraLearn tools, a purposive sampling was carried out. The study identified and selected teachers who meet the sampling criteria as observed:

i. The participants must be public primary school teachers
ii. Must have taught for more than 10 years
iii. Must be from schools where KwaraLearn reform was being implemented
iv. Be willing to participate in this study.

The criteria allowed for in-depth exploration and nuanced understanding of teachers' experiences, providing rich, contextualised insights into the KwaraLearn programme's effectiveness where successes, challenges, and areas of improvement would be highlighted.

Participant Recruitment

For participant selection, a stratified sampling technique was employed based on the three geo-political zones of Kwara State. From each stratum, a representative sample of teachers was selected to ensure that diverse perspectives from different geographical and socio-cultural contexts within the state were captured. This stratified approach enhanced the representativeness of the sample and allowed for a more comprehensive understanding of the variations in teachers' experiences across the zones. Prioritising ethical concerns at the outset of the study meant making sure that the consent of all participants was secured. This study therefore adhered to research ethics in ensuring the integrity and confidentiality of participants. A letter of consent was sent to all participating schools to ensure that teachers were well informed of the purpose of the research and their willingness to participate in the interview without any coercion. Approvals were obtained from school heads before conducting the interview.

DATA COLLECTION AND DATA ANALYSIS

Data Collection

The primary instrument used for data collection in this study was a semi-structured interview guide developed specifically to explore the benefits and challenges experienced by primary school teachers using the KwaraLearn Tab. The interview guide consisted of open-ended questions designed to elicit detailed, reflective responses about teachers' lived experiences with the KwaraLearn reform. Data were collected from fourteen

basic school teachers and leaders who had been using KwaraLearn for at least two years, using semi-structured interviews as the primary instrument. Face-to-face interviews are normally considered the most efficient way to know the opinions and reactions of participants on any specific issue presented to them. The interview focused on their experiences and perceptions of the technology integration in their teaching practices and classroom management. This gives the respondents ample room to freely express their views (Thomas, 2017). The comprehensive data collection occurred between September and October 2024, presenting a study timeline. An open-ended interview protocol was conducted with three questions that lasted for about 18 - 35 minutes at every interview session. This is considered appropriate for this study because it enabled the researchers to engage with teachers to probe and prompt them to share their experiences and perceptions in reasonable depth, hence, the interviews were phenomenological, making participants give their first-hand experience on the use of LMS and AI-powered tools in classrooms and beyond.

Although the participants were interviewed individually, the approach here was to draw mutually enriching data from their ideographic experiences to provide a holistic picture of their experience using KwaraLearn tools in basic schools. Participants were asked questions on how their teaching practices changed since the implementation of KwaraLearn and further probed by asking them to provide examples and how these changes had affected their teaching style. Interview questions were also raised to ask them about the difficulties they had encountered while using the platform and further questions on the particular activity that they found challenging and how they were able to overcome it. The last question was on their teaching experience in spite of the benefits and challenges with the aim of getting feedback from them on the usage especially on tasks that had worked well for them. A tape recorder was used to record the conversations and used as an additional resource at different stages of the data analysis. With the help of the recordings, the researcher could easily revisit and review the process for the sake of refining the data analysis continually (Cresswell, 2012). The recordings were done with the prior approval of all the participants. The interviews were therefore audio-recorded and transcribed verbatim to create textual record of the narratives after which the researchers used immersion to get familiar with the contents before identifying emergent themes that captured the participants' experiences.

Data Analysis

Data-Analytic Strategies

Interpretative phenomenological data analysis focuses on describing and interpreting participants' lived experiences, perceptions and meanings as shaping their consciousness. For the study, thematic analysis was employed to analyse the qualitative data collected from the interviews. This method involves systematic analysis based on the lived experiences of the participants as they expressed themselves in the context of the research questions raised to identify patterns and themes from their responses. The demographic profile in Table 1 reveals a varied selection of school heads and teachers from primary schools in rural, semi-urban and urban cities in Kwara State.

Methodological Integrity

The participants offered a wide range of viewpoints on the benefit of the KwaraLearn programme. Some of the participants in the rural areas were interviewed in their native languages to complement the English Language and to further ensure open and confident communication about their experiences with the use of KwaraLearn. Some of the interviews in local dialects were later translated to the English language before analysis. The audio recordings were managed, and listened to repeatedly to gain a deep understanding of the content. With the help of two research assistants, the researchers transcribed the audio tapes verbatim, and read them multiple times for validation by participants.

Notes were made during the initial readings on the significant statements and recurring ideas related to each research question. The exploratory coding, which involved getting acquainted with the data, generating preliminary codes and assigning codes to meaningful segments, identifying patterns and relationships between the codes and developing initial themes and categories was conducted by highlighting phrases and sentences that represented key ideas and concepts. This deepened familiarity with each transcript and allowed for the identification of emergent themes to establish links and patterns among them. Such codes as 'improved teacher engagement', challenges in adapting teaching methods, classroom management improvements, technical issues emerged were clustered around the research questions.

RESEARCH ETHICS

While the identities and personal information of participants were kept confidential, it was made clear to participants that should they find themselves sharing experiences they would prefer to keep private, they should feel free to do so by withdrawing from the interview session at any time. It is important to clarify that the names used for the narratives in the result sessions are pseudonyms that are used to ensure the anonymity of the research participants and schools. The pseudonyms were chosen after consulting the SUBEB directory for all primary schools to ensure that no school bears such names.

FINDINGS

Data Preparation and Familiarisation

Getting acquainted with the data is the first step in thematic analysis. This entails that researchers immerse themselves in the data to understand its content, context, and variation to identify patterns of responses and data intricacies. This step requires careful examination of the qualitative data by thoroughly reading and re-reading the interview transcript to become acquainted with highlights of the repeated phrases and concepts while noticing the overall positive tone of the data. This is to ensure that the analysis is grounded in a thorough understanding of the content and intricacies of the data to lay the groundwork for coding and analysis. The analysis shaped the lived experiences of teachers and head teachers into four main themes that respond to the research questions. The themes and sub-themes are summarized in Table 2.

Table 1
Participants Characteristics

Respondent	Gender	Local Government	Location	Teaching Experience	Level
P1	F	Asa	Rural	13	12
P2	F	Asa	Rural	16	12
P3	M	Asa	Rural	12	10
P4	F	Offa	Urban	13	12
P5	F	Offa	Urban	16	13
P6	M	Offa	Urban	14	12
P7	M	Edu	Semi-Urban	19	14
P8	F	Edu	Semi-Urban	16	12
P9	M	Edu	Semi-Urban	15	12
P10	F	Ekiti	Rural	10	9
P11	F	Ekiti	Rural	13	12
P12	M	Ilorin East	Urban	12	10
P13	F	Ilorin East	Urban	13	12
P14	M	Ilorin East	Urban	11	9

The analysis categorises the lived experiences of the primary school teachers into two main themes and three sub-themes each which respond to the research questions raised. The theme and sub-themes were summarised in Table 2.

Impactful Changes Observed in Teaching After the Introduction of KwaraLearn

Participants reported a significant increase in their engagement as KwaraLearn had positively impacted teachers' instructional and administrative tasks, enhancing their overall teaching experience. The features embedded in the LMS device supported efficient lesson planning, attendance tracking, register management, and ultimately contributed to improved teaching quality and learner experience. All of these have made their lessons more interactive and dynamic, fostering greater enthusiasm in their teaching practices. Participants emphasized the importance of adhering to a strict daily schedule, where dedicated time slots were allocated for each subject, emphasizing the imperative of attendance during these designated periods to ensure academic compliance. The academic engagement of the fourteen teachers strongly revealed a significant change in their work schedule. Interestingly, their responses revealed a striking degree of convergence with many expressing similar thoughts and experiences. The consistency in their response lent credence to the notion that the reported findings are reflective of a broader phenomenon.

Time Optimization

Teachers' accounts of their engagement in teaching described how the KwaraLearn tool had influenced their instructional delivery and lesson period. They described significant improvements in their instructional practices since adopting KwaraLearn tools. Notably, they reported enhanced time management, improved classroom control and exposure to new topics from the curriculum. P2 described how the tool has made her maximize her time to cover her lessons: "I make use of my lesson time effectively because they have scheduled all subjects, lesson periods and time on the Tab." For P3, he perceived himself as an ardent lover of positive change: "I am inspired by the changes I have experienced in my time management through KwaraLearn tool, it has helped me prioritise tasks and stay focused".

Table 2
Theme and Sub-Theme

RQ	Research Questions	Main Themes	Sub-Themes
RQ1	Are there any impactful changes in teaching and learning since the introduction of the KwaraLearn reform?	Benefits	Time Optimization Structured Schedule Academic Progress
RQ2	What were the difficulties encountered in implementing KwaraLearn reform?	Challenges	Rushed Teaching Pace Resources Deficits Technical Issues

P8 meanwhile perceived that the KwaraLearn platform had changed her work habit. She attributed her improved punctuality and timely arrival at work to the implementation of the policy. She said:

> For me, before the advent of this KwaraLearn, I can come to work late and leave anytime I want; but now, I have to come early and be punctual. I cannot leave the school unless its closing hour and I have to attend to all my lessons… [P8]

Participant 1 described the changes she had experienced since the advent of this reform: "KwaraLearn has strengthened my approach to teaching. The new tool has made me more involved in lesson delivery. We were given time and period which has been scheduled everyday for all subjects, we must not miss our lesson time". Teachers perceived the standardized schedule of lessons as a facilitator of effective time management, allowing them to maximise their time for instructional purposes. The allocated 35 minutes per subject was seen as sufficient to cover key concepts, promoting sense of productivity and efficiency in the classroom. This enabled teacher to prioritize their tasks, manage classroom time effectively and maintain a productive learning environment. All this suggests that the KwaraLearn LMS has had a positive impact on teachers work habits, leading them to take responsibilities and demonstrate professionalism.

Structured Schedule

KwaraLearn had positively impacted teachers' instructional and administrative tasks, enhancing their overall teaching experience. The features supported efficient lesson planning, attendance tracking, register management, and ultimately contributing to improved teaching quality and learner experience. Participants highlighted the significant impact of KwaraLearn on their teaching. They emphasized the transitioning from manual methods for lesson preparation to a comprehensive digital platform. This shifts had assured consistency in lessons and instruction, enabling every child in the State Primary schools to learn the same content simultaneously, ensuring uniformity and equity in education. Three teachers in our study reported that they had expanded their knowledge through KwaraLearn as it introduced them to new teaching approaches due to the enriched curriculum.

As P3 opined: "Teaching has gone beyond talk and chalk, with KwaraLearn, my lesson delivery has advanced." P6 meanwhile expressed his perception on how the KwaraLearn has influenced his teaching by linking him to global trends.

He said:

> Before now, I have been using the manual scheme of work, from which I draw my lesson plan and notes of lessons. Right now, there is nothing like that in Kwara State primary schools anymore. The KwaraLearn Tab comprise of everything, from the curriculum to the scheme of work, to register and time-tables. We have no time for other things than our pupils. If you are a teacher in Primary Three, you will teach the same thing in all schools at the same time. This gives our pupils' equal participation in the class which means every child counts.

Academic Progress

Teachers noted significant improvements and steady progress in their pupils especially among those who struggled with reading and writing. Their focus now shifted to enhancing reading and writing speed to optimise lesson time and minimize disruptions. To build on this progress, teachers then prioritise developing learners' speed and fluency to ensure efficient lesson delivery and minimise time constraint. For P5, she thought the KwaraLearn platform was doing a great job as it encouraged her to teach the pupils with all enthusiasm.

One of the Participants – P5 said:

> I teach in Primary four and pupils who are slow in writing have picked up significantly. All lessons have been scheduled and we have to abide by the time and teach them strictly. Since we cannot exceed the lesson time, we have to ensure that pupils are fast in writing and reading so that it does not affect the other subjects' schedule.

As P8 rightly remarked: The KwaraLearn platform has made our pupils concentrate more on class with words like 'eyes on the teacher, 'sit up', which are suggested by the LMS at intervals". Therefore, The LMS platform had had a profound impact on the learners' enthusiasm and class participation as the system intermittently suggested words to energise them and keep them focused and more attentive during lessons. For P12, "KwaraLearn platform has been instrumental in enhancing learners' skills in mathematics through repetitive tasks, which enabled them to develop problem-solving skills and actively participate in the lessons with cheering words suggested on the platform." Although preliminary observations suggested that the KwaraLearn LMS intermittent prompts might have contributed to learners' engagement and motivation, further exploration is needed to understand the mechanisms underlying this phenomenon and its potential implications for teaching practices.

Challenges in Implementing KwaraLearn and How They Were Addressed

Rushed Teaching Pace

It is worth noting and highlighting that eleven participants expressed frustration with the LMS's-lesson duration due to inadequate time for thorough lesson coverage and insufficient opportunity for learners' engagement. Teachers identified the burden of rushed teaching pace which had hindered their ability to deliver comprehensive instruction, resulting in incomplete coverage of the lessons before transitioning to the next lesson. This is in a way compromising effective lesson delivery to the

learners especially the lower classes who are just coming up. As P7 who is a head teacher and had been teaching for over 19 years and still taught in class recounted: "The lesson duration is too short and I cannot cover the contents of the lesson within the period before the next lesson time. It is difficult for me to achieve the learning outcomes sometimes".

P6 had this to tell us following the experiences from his classes:

> Whenever I am teaching, before I realize, my time has gone. I have pupils who are slow learners and I may have to wait for them to complete their tasks. The waiting period can affect my next lesson if I am not careful. I may end up ignoring the slow learners to pick up so as to meet up with the next lesson as it comes up on the Tab as scheduled.

For P4, a level 12 teacher from Offa Local Government Area of the State who had been teaching in the primary school for 13 years noted that "I do not have time to pick up the slow learners and mark pupils' work because of the time schedule. I ended up marking few and leaving others to meet up with the next lesson." P11 expressed his concerns regarding the rapid introduction of new topics without adequate preparatory time. To him, it has hindered his ability to effectively demonstrate his teaching skills as he did not have enough time to showcase his teaching abilities because new topics are introduced without giving him time to prepare.

Resource Deficits

Participants highlight significant concerns regarding educational resource availability, distribution and its impact on learners' enrolment fluctuations which may affect teaching quality, learning outcomes and overall educational equity. Also, the LMS platform's reliance on some textbooks may exacerbate existing resource inequalities and curriculum-resource gaps. Pointing towards these challenges the teachers faced in class using KwaraLearn LMS, one of the participants (P12) provided a description that captured his expression:

> We were given instructional materials that is not enough for our pupils. The KwaraLearn LMS consistently directs us to rely on instructional texts which are often unavailable or insufficient. There are certain subjects that lack the recommended textbooks, hindering effective teaching and learning. For Yoruba and mathematics, only the teacher's copy is provided, no textbooks for the learners, the materials are not just enough. Moreover, the reading component on the digital platform was observed to be weak. Sentences are memorized with little recognition and formation, especially for the lower basic levels between primary 1 and 3.

For Participant 14, 'When I start teaching from morning till afternoon, I will continue to teach and the pupils will not write much because there is no enough time for learners to copy notes, especially English and mathematics**.'**

Technical Issues

Three participants expressed their concerns over the assessment process hindered by technical limitations. The platform's constraints restricted them from providing timely feedback on learner work due to limited time for their lessons. This did not allow them to mark learners' work as some complained of their inability to access submissions after the lesson timeframe has expired. Some complain that they could only provide feedback on lessons for a small sample of learners. The majority remain unassessed due to the extremely large classes and the time scheduled for other lessons. As P6 shared:

> "Learners' assessment is a struggle for me. After finishing a lesson, I am overwhelmed with marking learners' work, but I do not have time to do so. New lessons keep popping up, leaving me with no window to evaluate and provide feedback."

According to two participants from the rural area, limited Internet connectivity and access sometimes impacted their operations, causing delays and inaccurate arrival and departure tracking. P11 experienced challenges with charging the device when she ran out of battery. Although the school provided power banks, they were inadequate to meet their demands.

DISCUSSION

The LMS platform no doubt had a profound impact on the overall teaching experience, allowing teachers to focus more on instructional activities with less paperwork (Bradley, 2021). However, in Nigeria, the LMS platform for teaching in public primary schools is a new phenomenon and is largely under-researched. This study has explored the lived experiences of fourteen teachers serving in government-established lower basic schools in Kwara State, Nigeria, analysing their on-the-job experience in the use of KwaraLearn LMS platform to drive change in the classroom, particularly in understanding the main benefits and challenges they experienced in using the KwaraLearn LMS platform.

The first aim of this study was to have an understanding of the impactful changes that have been observed in teaching since the introduction of KwaraLearn digital platform. In this research, time optimisation, structured schedule and academic progress were the overarching sub-themes among primary school teachers in Kwara State. Previous literature has shown that the adoption of LMS in the classroom offers a multitude of advantages to both teachers and learners as the process presents paradigm shifts towards a tech-driven and transformative teaching and learning experience. The integration of Learning Management Systems (LMS) in Kwara State public primary schools, particularly through such platforms as KwaraLearn, has yielded significant benefits for teachers. This study synthesises findings from other literature to elucidate the impacts of LMS on teaching practices, specifically focusing on time optimization, structured lesson scheduling, and academic progress. One of the primary benefits of using LMS in education is the optimisation of time for teachers. According to Răducu and Stănculescu (2021), the adaptability of teachers to online teaching environments can significantly enhance their efficiency in lesson delivery and classroom management.

This study found that the interface of KwaraLearn has automated the scheduling of lessons, assignments, and assessments to enable all teachers of public primary schools in Kwara State access the entire lesson schedule at the start of the day, thereby making educational content readily available and accessible to them and facilitating a meaningful engagement that enhances their teaching. This finding is consistent with the study of Marmoah (2024) who reported that structured lesson schedules

facilitated by LMS platforms enable teachers to plan and execute lessons more effectively, which is crucial in primary education where foundational skills are developed. It also resonates with an earlier observation by Bradley (2021) that LMS platforms allow teachers to adhere to the planned schedule and structured lesson format. Furthermore, Araiza and Leal (2021) and Zanjani (2017) emphasise that there are numerous evidence-based LMS platforms like Canvas, Moodle, D2L Brightspace Edmodo, and others that have been a central platform for educational institutions to deliver instruction which have transformed the teaching experience of teachers and further enhanced learning outcomes. The implication is that school administrators should ensure that consideration is given to only the LMS platform that is easy for teachers to use without much difficulty or need for advanced training, irrespective of their level of conformity with the technology.

With respect to other benefits of KwaraLearn to teachers, one of the interesting themes that emerged from this study was significant improvements and steady progress in the learning outcomes. As P8 rightly explained the LMS platform had had a profound impact on the learners' enthusiasm and class participation as the system intermittently suggested words such as: 'sit up, you can do better' to energise the learners, keep them focused and more attentive during lessons. This supports the earlier conclusion of Dendy (2023), who submitted that utilisation of LMS can support the learning process and enhance learner engagement in primary schools. Evidence from the study further showed that teacher adoption of LMS allowed for continuous assessment and feedback, which are vital for monitoring learner progress and adapting teaching strategies accordingly. Another scholar, Marmoah (2024) discusses how the adoption of LMS can lead to improved content delivery and interactive learning experiences, which are essential for engaging young learners. Technology integration in primary schools therefore has the potential to improve content delivery. Buttressing this position, results of this study show that effective time optimisation, structured lesson schedule, and academic progress are the impact the KwaraLearn LMS platform had on the teaching. It enabled teachers to deliver their lesson content to learners through customised lesson schedule for all users of the platform for effective instructional delivery. This resonates with the position of existing literature and substantiate that the perspective that LMS platform enables teachers to deliver subject content to learners, monitor what learners are doing and how they are progressing through customised assessments and assignment completion, and use that information to grade learner performance. Hence, KwaraLearn had significantly helped with support for teachers and learners during lessons and beyond.

In spite of the enormous benefits that the KwaraLearn platform has brought to the classroom, it has equally presented some note-worthy challenges as most participants expressed their frustration with the KwaraLearn LMS platform due to inadequate time for thorough lesson coverage and insufficient opportunity for learners' engagement. Teachers identified the burden of rushed teaching pace which has hindered their ability to deliver comprehensive instruction, resulting in incomplete coverage of a lesson before transitioning to the next one. This is, in a way, compromising effective lesson delivery to the learners, especially the lower classes who are just coming up. The burden of a rushed teaching pace is echoed in the work of Frehywot et al. (2013) on how faculty perceptions of e-learning can significantly impact the quality of instruction delivered through LMS platforms. The study contends that if educators feel that their teaching quality is compromised by the constraints of an LMS, it can lead to dissatisfaction and ineffective teaching practices. A similar study by Zainuddin et. al (2019) aligns with the findings of this study where teachers felt pressured to move quickly through the curriculum compromising the depth of instruction. The study highlights that while LMS platforms can enhance the quality of teaching and learning by providing technological support and fostering interactivity, they can also lead to a hurried instructional pace, if not managed properly. Urgency in this regard can be superficial coverage of topics that does not allow for discussion and

delving deeply into concepts as they rush to keep up to the time assigned to them and utilise every feature of the KwaraLearn for teaching.

To corroborate this, Ghazal et al., 2018 align with the previous submission where pupils' attitudes toward LMS usage were significantly influenced by the perceived effectiveness of the platform in promoting engagement and satisfaction. This is particularly relevant in the context of primary education, where foundational skills are critical and require careful, paced instruction. Furthermore, the concept of learner engagement is crucial in this discussion because if teachers were unable to engage learners adequately due to time constraints as participants rightly expressed in this study, it may lead to lower student satisfaction and hinder their overall learning experience.

Ensuring that teachers have the necessary training, resources, and time to deliver comprehensive lessons is essential for maximising the potential of LMS platforms in enhancing teaching and learning outcomes. Educational resource availability is a well-documented factor influencing educational equity. Gruijters and Behrman (2020) highlight that socioeconomic disparities in access to educational resources, such as textbooks, can lead to significant differences in educational achievement between rich and poor children. This aligns with the concerns raised by participants in this study, who noted that variations in enrolment may result in unequal access to educational materials, which can hinder the quality of teaching and learning outcomes. Although participants affirmed that they were well trained before using the LMS platform for teaching, another frustration expressed by teachers using KwaraLearn LMS platform stemmed from a lack of sufficient resources to utilise the platform effectively for teaching which sometimes led to incomplete lesson coverage. This challenge, as identified by participants in this study, resonates with existing literature that emphasizes that the success of LMS implementation is contingent upon adequate support for teachers, as well as the alignment of the platform with pedagogical goals (Carvalho et al., 2011). The KwaraLearn LMS's reliance on specific textbooks which are sometimes unavailable to teachers and students may limit their ability to diversify their instructional resources. This is echoed by Nurbekova et al. (2023) who notes that a narrow focus on textbooks can restrict the educational resources available to learners, thereby impacting their engagement and learning outcomes. There is need for a broader range of educational materials that can enhance student learning and engagement.

The findings of this study further reveal significant issues related to limited access, which adversely affect the operational efficiency of these platforms. Beyond mere access; it can lead to operational delays and inaccuracies in tracking student engagement and attendance. Cao (2023), having had a similar experience, discussed how it hinders the effective implementation of LMS in blended learning environments. This is particularly relevant in contexts where timely feedback and interaction are essential for easy success. The delays caused by poor connectivity can result in inaccurate tracking of teacher arrival, learner attendance, academic engagement, and other crucial exercises needed for academic assessment and administrative purposes. Chatterjee et al. (2023) emphasise the importance of secure and reliable connections for remote users, suggesting that inadequate infrastructure can lead to significant usability challenges for LMS platforms. The implications of these findings are significant, particularly in the context of the ongoing shift towards digital learning environments. While the KwaraLearn LMS aims to provide a modern educational platform for teaching, its effectiveness is contingent upon the equitable distribution of relevant educational resources to teachers and learners. Veletsianos (2021) argues that without careful consideration of how open educational resources (OER) are implemented, such initiatives may inadvertently reinforce existing inequities rather than alleviate them. This highlights the necessity for educational stakeholders to critically assess the resources integrated into LMS platforms to ensure they do not exacerbate disparities and existing deficiencies in educational access and quality, particularly in underfunded schools.

Nevertheless, frustrations expressed by some participants in the use of the platform for lesson delivery as revealed in this study have identified gaps in the implementation of the KwaraLearn LMS platform, specifically the disconnect between this technology-driven initiatives and classroom realities. The study underscored the deficit in instructional textbooks and other materials as teachers grapple with shortage of materials in key subjects. While teachers in primary schools are expected to deliver technology-driven lessons, foundational tools like textbooks for learners remain missing, rendering learners without copies of textbook to be left at a great disadvantage. This finding is supported by Achuba (2025) whose study affirms that quality textbooks are very useful tools in learning especially in underdeveloped and developing countries as it enables learners to effectively comprehend the intended content of the subject. Although Nigeria has the textbook as the main source of referral for learners and teachers, it must not be eliminated at this point and at the expense of technology which is still confronted with challenges when incorporated in the classroom. The KwaraLearn LMS, while theoretically a tool for modernization, appears to exacerbate existing resource gaps and impose unrealistic demands on primary school teachers in Kwara State. Without addressing some foundational issues like resource deficit, age-appropriate digital content, and flexible pacing, the KwaraLearn platform risks becoming another well-intentioned but underutilised intervention, leaving educators to bridge the gaps with diminishing returns.

CONCLUSION

This study has contributed to our understanding of the benefits and challenges associated with the Kwara State Universal Basic Education Board (KWSUBEB) reform in primary schools through the lived experiences of teachers. The study has further shed more light on the complex realities in the course of implementation of the KwaraLearn LMS in Kwara State, Nigeria, specifically revealing its potentials and pitfalls through the voices of teachers who are the primary recipients of this initiative. Some of the significant findings of this study indicated that the KwaraLearn LMS platform offer substantial benefits in terms of time optimization, structured lesson planning, and academic progress.

It has also presented key challenges that must be addressed. Effective training and support for teachers are essential to maximise the potential of LMS in primary education. Most importantly, the pressure to cover content within limited hours while balancing digital and traditional instruction leaves little room for essential activities like note-taking. As the educational landscape continues to evolve, ongoing research and adaptation will be crucial in ensuring that both teachers and students can fully benefit from these technological advancements. The study underscored the importance of addressing the challenges associated with educational resource availability and the reliance on textbooks within the KwaraLearn LMS platform. This finding has contributed to broader conversations about integrating technology in low-resource educational settings, while also challenging the assumption that access to digital tools automatically translates to improved learning among students. To enhance teaching quality and learner outcomes, this study advocated the need to promote a more equitable distribution of resources among learners. To this end, policy makers are charged to incorporate and develop educational materials that reflect the varied contexts and needs of learners as pre-planned in the KwaraLearn platform. This approach will not only support improved educational equity but also foster a more inclusive and effective learning environment.

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