

Digitalization in Educational Management: Implications for Teachers' Digital Literacy in Secondary Schools in Kogi State

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doi: <https://doi.org/10.37745/ijeld.2013/vol13n6114122>

Published December 24, 2025

Citation: Elejo H.J., Ohunene O.F., and Tolorunleke E.A. (2025) Digitalization in Educational Management: Implications for Teachers' Digital Literacy in Secondary Schools in Kogi State, *International Journal of Education, Learning and Development*, 13 (6), 114-122

Abstract: *The digitalization of educational management, implications for teachers' digital literacy in secondary schools have become very necessary in this era of technology. Relevant literature on digitalization was reviewed. The study has two objectives, among which is to evaluate the digital literacy level among teachers in secondary schools in Kogi State. The research questions were in line with the objectives. A Descriptive Survey research design was employed for the study, a total of 180 teachers and 60 principals were randomly selected across Secondary Schools in Kogi using stratified Sampling. A structured questionnaire tagged 'Digital Teacher Literacy (DTIQ)' was used to collect the data. The instrument was subjected to a reliability test using test- retest reliability coefficient of 0.76. Mean was used to answer the research questions. The finding shows that the digital literacy of teachers on the use of digital resources in the classroom is at low level and their knowledge on how to use videos and online resources to facilitate learning is at a minimal level. The study concludes that digital literacy on digital resources in the classroom is at a low level. The study recommends adequate training, retraining, seminars and workshops for teachers on digital literacy.*

Keywords: digitization, educational management, teachers, digital literacy

INTRODUCTION

Digital technologies are an appropriate means to improve educational management by helping teachers to improve on basic literacy and numeracy skills. Albert (2024) opines that using digital literacy in the classroom by teachers will help in effective strategies for finding credible information. This can be done by teachers helping the students identify when websites contained biased or misinformed materials, so they can avoid that information and find reliable content from relevant sources. However, teachers combining the systems of education and technology by implementing digital literacy will help in effective delivery and interactive lesson delivery. Digital literacy focuses on the ability to find, assess and use information with

the aid of digital tools such as social media, web browsers and online discussion boards. Henry (2024). Educational Manager or Educational administrators need to reinforce teachers and encourage them to imbibe digital literacy because of the benefits for students and teachers as it promote academic growth and teach students on how to effectively use digital tools in different areas.

Owolabi (2024) stresses that digitalization is a process that involves the integration of digital technologies into all areas leading to fundamental changes in the development and growth of education. A study carried out by Obi and Nwosu (2023) shows that digital learning technology for teaching and learning will help teachers and students digital literacy and also in navigating through different platforms for collaborative online and communicate effectively.

Digitalization in educational management to improve teachers' digital literacy is an opportunity to develop a cognitive resource based mechanisms in learners, improve the skills, lifelong learning and continuous education. (Abdullahi & Tijani, 2019). However, Educational Management means managing and harnessing human resources, financial resources and materials resources in achieving the set objectives and goals of the educational institution.

Several studies have been carried out on Digitalization of Educational Management, Falasteen (2018) conducted the implementation of digitalization system in education in Palestine, also Colombo (2016) investigated and focused in the digitalization of educational practices: How much and what kind. Olga (2017) conducted digitalization of education as a trend of its modernization and reforming and management of education that are not yet covered by scholars, such area include teachers' digital literacy in secondary schools in Kogi State.

Digitalization of educational management involves the integration & management of digital technologies, into teaching and learning processes that will enhance teachers' digital literacy. In the modern day, digital technologies have become part of our daily lives which make it necessary for teachers to embrace technology for easy transmission of knowledge. Digitalization in Educational Management will not improve teaching practices but will enhance teachers digital literacy and also prepare students for success in an increasingly digital world (Klopov et al, 2023). Herbert, (2023) sees teacher digital literacy as ability of teachers' to effectively use digital technologies and tools to enhance teaching and learning including administrative processes. In addition, teacher digital literacy is necessary in the modern world to enhance education landscape through supportive innovative teaching practices, prepare students for a technology-driven world and ensures inclusive and effective learning experiences.

More so, Herbet (2023) explains that teacher digital literacy involves different skills such as:

1. Technical proficiency: Understanding how to use hard wares and soft wares.
2. Information literacy: The ability to find, evaluate and use digital resources and information critically and responsibly.
3. Instructional design: Integrating digital tools into lesson planning and delivery in ways that engage students and support diverse learning needs.
4. Communication skills: Using digital platforms e.g email, messaging apps and video conferencing to interact with students.

5. Content creation: Creating digital such as presentation, videos and online courses to facilitate learning.
6. Digital citizenship: Promoting responsible and ethical use of technology including understanding online safety, privacy and copyright laws.
7. Adaptability: Staying updates on emerging technologies and being flexible in incorporating them into the classroom.

In addition, Faisal (2024) opines that teacher can promote digital literacy and creating activities where students analyze articles, social media posts or websites to determine their reliability. Also use digital literacy for problem-solving through the use of digital tools and resources to solve real-world problems.

Teacher digital literacy have several advantages to education and educational management in general (Bello, 2023). Some of the advantages are explains as follows:

1. Enhanced Teaching Methods: Teachers can use digital tools to create engaging interactive and multimedia – rich lessons.
2. Access to vast resources: Digital literacy enables teachers to explore online libraries, educational platforms, open source materials, enhancing lesson content and providing up-to-date information.
3. Improved communication: Teachers can use digital platforms for seamless communication with students, parents and colleagues through emails and message app and virtual meeting tools.
4. Personalized learning: Digital tools allow teachers to adapt learning experiences that will meet the individual needs of students.
5. Efficient Classroom Management: Tools like Learning Management Systems (LMS) streamline administrative tasks such as attendance, grading and distributing assignments to save time for instructional activities.
6. Professional Development Opportunities: Teachers with digital skills can participate in online training, webinars and courses to continually enhance their knowledge and teaching practices.
7. Increased collaboration: Teachers can collaborate with peers worldwide sharing resources, ideas and best practices through online communities and network.
8. Enhanced student engagement: digital tools and interactive platform capture students attractive and make learning more enjoyable, improving participation and retention.

Digitalization is a driving force in transforming education system all over the world not only reshaping pedagogical practices but also reconfiguring the administrative and managerial functions of the educational institutions (Klopov et al 2023).

Klopov et al (2023) sees digitalization in context of educational management as the integration of digital technologies into institutional administrative, managerial and governance processes. It encompasses a broad array of functions, enrollment, record keeping, assessment management, data dashboards, learning management system. However, transformation is a part of a broader institutional digital transformation of educational institutions evolve into Smart or connected entities where digital systems support not only pedagogical delivery but also decision making, planning and resource allocation. According to Albert (2014), he urge for digitalization has become a global unnecessary due to pandemic of COVID-19 which forced

rapid adoption of remote platforms. Also policy shifts emphasizing data driven decision making in schools, accountability and performance metrics. As educational management becomes more digital, the roles of teachers' increase. In such a way that they no longer defend pedagogical technology but also participants in institutional data production.

Digital literacy refers to the ability to use, evaluate, create and communicate with digital technologies in meaningful way. Falasteen (2018) opines that there are many theoretical frameworks that have been developed to conceptualize teacher digital competence. Therefore, the frameworks help define what "digital literate teacher is", which means in practice and provide structure for measurement, assessment and professional development. Among the theoretical framework on digitalization is DigComPEdu developed by the joint Research centre of the European Commission, it is one of the most applied frameworks for teacher digital competence. It outlines six competence areas such as:-

- a) Professional Engagement
- b) Digital Resources
- c) Teaching and Learning
- d) Assessment
- e) Empowering Learners
- f) Facilitating Learner's Digital Competence

The Technological Pedagogical Content Knowledge (TPACK) which is a model that enhance effective technology integration by teachers requires the interplay of three domains that involve content knowledge, pedagogical knowledge, and technological knowledge. Falasteen (2018) concludes that frameworks provide both conceptual clarity and operational utility. Digitalization of educational management does not affect teachers' digital literacy in the classroom but also reconfigures institutional structures, relationships, and power dynamics. Henry (2024) asserts that institutional leadership plays a major role in driving digitalization transformation. This is also in line with Bello (2023) that argue that leadership must participate in a participatory process of competence development which includes:-

- a) Vision building
- b) Participating design which involve teachers in designing digital systems.
- c) Continuous technical and Pedagogical Support.
- d) Institutionalizing diagnostic tools and feedback.

There are many empirical studies that have been carved out and the results of the findings shows that many teachers are not digital competence. An empirical studies carried out by Basilota-Gomezetal (2022) Found out that there are many teachers who are not digital competence, same as Fernandez (2021) that reported many teaching staff are not sufficiently qualified in digital competences and called for more training in both technology and pedagogical dimension. However for a successful digitalization of educational management, there is need for adequate provision of reliable infrastructure and sustained technical support, in addition inadequate infrastructure becomes a constraints that affect teacher digital literacy.

Based on literature, there are several implications that can be drawn a policy-making:-

- a) Policy makers, especially in education and institutional leaders should include digital competence framework into national teacher standard, this will ensure digital literacy.
- b) Professional Development:- There should be constant professional development for teachers to make them competent in digital literacy.
- c) Institutional Strategy:- Institutions should adopt strategy that will drive digital transformation as a holistic change process.
- d) Infrastructure Investment:- Institutions should provide adequate infrastructure that will make digitalization to work.

In Summary, the intersection of educational management digitalization and teacher digital literacy creates both opportunities and demands for greater efficiency, data driven decision making and pedagogical innovation frameworks like DigComPEDU, Tpacks are models that provide valuable mirror to understand and assess teacher digital competence.

However, the digitalization in educational management and teachers' digital literacy in Secondary Schools in Kogi State is inadequate despite the current trend in technology. Many are yet to embrace technology in their method of teaching and lesson delivery which has made the students not to brace up with their other counterparts in other state in Nigeria. Student are not allowed to make use of their phones while in school to avoid distraction this is so because the teachers have no knowledge of digital literacy despite the fact that they have the phone. It was at this point that the researchers came up with the idea to work on "Digitalization in Educational Management": Implication for Teachers' Digital Literacy in Secondary Schools in Kogi State

Research Objectives

The following objectives guide the study:

1. Evaluate the digital literacy level among teachers in secondary schools in Kogi State.
2. Examine how improving teachers' digital literacy promotes sustainable teaching methods and practices.

Research Questions

The following research questions guide the study:

1. What are the digital literacy level among teachers in secondary school in Kogi State.
2. How does improvement in teachers' digital literacy promote sustainable teaching methods and practices?

Methodology

A survey design was adopted for the study. A total of 180 teachers and 60 principals were randomly selected from sixty (60) secondary schools across Kogi State using stratified random sampling. A question tagged 'Digital Teacher literacy' (DTIQ) was used to collect the data. The instrument was test using test-rest reliability coefficient of 0.76. Mean was used to answer the research questions.

Results**Research Question one:**

What are the digital literacy level among teachers in secondary schools in Kogi State?

S/N	ITEM STATEMENT	MEAN	STD	DECISION
1.	Teachers have knowledge of digital tools like emails, messaging app	3.8	1.10	Accepted
2.	Teachers use these digital resources in the classroom	2.00	1.45	Rejected
3.	Teachers have good knowledge in the use of hard wares (computers) and soft wares learning management system)	3.02	2.21	Accepted
4.	Teachers have knowledge on how to use videos and online to facilitate learning	1.75	0.64	Rejected
5.	Teacher are leveraging on digital literacy to explore online educational platforms	3.86	1.88	Accepted
6.	Teachers are happy using technology to navigate their lesson delivery	3.50	0.85	Accepted

Table 2: How does improvement in teacher's digital literacy promote sustainable teaching methods and practices?

S/N	ITEM STATEMENT	MEAN	STD	DECISION
7.	Integrating digital tools into lesson delivery and methods of teaching has sustain teaching practice.	3.48	1.45	Accepted
8.	Use of digital technology in teaching methods has promote sustainability in education	3.20	1.20	Accepted
9.	Blended method combined with traditional improved sustainability in Education	3.76	1.67	Accepted
10.	Improvement on teacher digital literacy helps teachers in their teaching methods that can be adopted during emergency that will aid sustainability in teaching practices and method	3.91	1.43	Accepted
11.	Improvement on teachers digital literacy help in capturing students attention and making learning more enjoyable through innovative teaching methods	3.39	1.93	Accepted
12.	Improvement on teachers' digital literacy enables collaboration with peers and colleagues on modern teaching methods that sustain teaching methods and practices.	3.93	1.93	Accepted

DISCUSSION OF FINDINGS

The findings of research question one reveals that all item questions except items No.2 and 4 with mean values of 2.00 and 1.75 shows that digital literacy of teachers on use of digital resources in the classroom are at low level and their knowledge on how to use videos and online to facilitate learning in secondary schools in Kogi State. This findings is in an agreement with (Yunusa, 2021) who opines that inadequate training, workshop attendance and exposure to digital learning contribute to adherence of traditional teaching methods by many teachers. The findings from research question 4 shows that item 1,3,5, and 6 indicates that teachers have knowledge of digital tools, like email, messaging app. In the finding, it was shown that teachers have good knowledge on how to use computer both hardware and software. This is in line with Albert (2024) opines that digital literacy of the teachers will help in effective teaching and learning process, in the same vein Faisal (2024) opines that adequate knowledge of teachers on computer will fast forward digital literacy among teachers for effective and efficiency classroom management and lesson delivery.

Findings on research question 2 shows that from item 7 – 12 which has mean of 3.48, 3.20, 3.76, 3.91, 3.39 and 3.93 shows that integrating digital tool into lesson delivery with enhance sustainable teaching methods, while blended combined with traditional method has contribute to sustainability of teaching method. Also in the finding shows that improvement on teacher digital literacy will help them in teaching methods that can be adopted especially during emergency. While teacher digital literacy help in innovative driven methods use to capture students and making learning impactful. The study found out that teachers' digital literacy provide opportunity for teachers to collaborate with peers and colleagues on teaching methods for sustainability in education. All these findings are in line with Owolabi (2024) who posit that teacher digital literacy will help teachers to integrate technologies into all areas leading to fundamental changes in the development and growth of education. Also Abdullahi and Tijjani (2019) view digitalization in educational management as a process to improve teachers' digital literacy to develop a cognitive resource based mechanism in learners, improve the skills, methods and lifelong learning and continuous education. The finding shows that teachers possess low level of digital literacy through some still have significant moderate level of digital literacy, nevertheless teachers demonstrated competence in basic ICT operations such as using word processing tools, browsing internet and mobile device utilization. This is an accordance with Fernandez (2021) that many teachers are not sufficiently qualified in digital competence and called for more training in both technology and pedagogical dimensions. Other significant findings shows that teachers possess low level of digital literacy though some still have significant knowledge of digital literacy. Findings showed that teachers have high proficiency in everyday digital practices such as sending emails, using WhatsApp and accessing online materials but have low level of advanced digital skills such as data analysis, multimedia production, learning management systems(LMS) and digital content creation. This shows that teacher digital skill is still largely low and this made them struggle to integrate digital technology effectively into teaching and learning. This agree with assertion of Nwosu (2023) who argue that digital literacy goes beyond technical skills to include the ability to critically evaluate information, design digital learning materials and use technology innovatively to improve students learning. The rapid integration of digital technologies into education has made teachers to acquire knowledge on digital technologies which becomes necessary to

achieve sustainable teaching methods and practices. Digital literacy is not only to operate mobile devices but capacity to evaluate information, use digital tools for pedagogy, engage students through technology and implement long term innovative strategies that will enhance learning efficiency. This is in line with Faisal (2024) that says teachers acquiring strong digital skills possess positive and sustainable transformation that occur during the teacher learning process.

Conclusion

The success of every teaching and learning process lies on the quality and in-dept knowledge of the teacher, hence teachers' digital literacy becomes imperative in this 21st century where the world has gone global and as such teachers are to embrace the trend off event in technology and innovative teaching methods and teaching practices that will enhance effectiveness and efficiency in teachers method of teaching that will advance sustainability in educational practices.

Recommendations

The following recommendations are suggested by the researchers.

1. Adequate provision of teachers for training, retraining, conferences, workshops and seminars should be provided for. So that the teachers will be well groom in digital literacy.
2. Adequate provision should be made available for a good network in the school environment to make digitalization in education effective.

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