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Teaching Skills in the Digital era in Secondary Schools in Kabba/bunu Local Government Area of Kogi State: A Philosophical Analysis

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Highlights:
Shows significant impact of digital teaching skills on teaching and learning.

Recommends state government and LGA investment in solar power, shared devices, broadband, and continuous in-service digital pedagogy training for teachers.

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Abstract: The study investigated teaching skills in the digital era among secondary school teachers in Kabba/Bunu LGA of Kogi State, Nigeria. Three research questions and three hypotheses were formulated to guide the study. Descriptive survey research design was used for the study. The population comprised all secondary school teachers in Kabba/Bunu LGA, Kogi State, numbering approximately 5604 teachers and a sample of 113 teachers used for the study was obtained through random sampling. The instrument for data collection was the Teaching Skills in the Digital Era Questionnaire (TSITDEQ), which was administered to respondents by the researcher with the help of research assistants. Using Cronbach alpha, the reliability coefficient of 0.86 was obtained on the TSITDEQ instrument through a pilot study that was conducted outside the study area. Data collected was analyzed using mean and standard deviation for the research questions and the hypotheses were tested. The result of the findings showed that there is a significant impact of digital teaching skills on teaching and learning in Kabba/Bunu LGA and there is no significant barrier hindering the teachers from utilizing the digital teaching skills. Based on the findings of the study, it was recommended among others that the Kogi State Government and Kabba/Bunu LGA Education Authority should treat digital infrastructure investment as an educational priority, and make provision for solar power solutions, shared digital devices, and broadband internet connectivity for secondary schools in the LGA; a continuous in-service digital pedagogy training programme should be designed specifically for secondary school teachers in the Local Government Area.

Keywords*:* Digital Teaching Skills, Digital Era, Digital Pedagogy

Introduction

There is something almost paradoxical about the situation of secondary school education in many parts of rural Nigeria today. On one hand, we live in a world saturated with digital information, where a student with a mobile phone can access more knowledge in an afternoon than a university library could offer a decade ago. On the other hand, the classrooms in which that same student spends the better part of their formative years often operate as though none of this has happened, driven by dictation, rote learning, and textbooks. Kabba/Bunu Local Government Area of Kogi State sits squarely in this contradiction.

The global conversation on digital education is not new. As far back as the early 2000s, Sanni (2022) argued that effective teaching in a technological age requires more than knowing one's subject. In a related development, Kola (2022) Opined that it demands what they called Technological Pedagogical Content Knowledge, a fluency in the interplay of subject matter, teaching method, and digital tools. More recently, that conversation has grown more urgent, with artificial intelligence, learning management systems, and online collaborative platforms now shaping what it means to teach and learn at every level of education.

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But technology alone does not tell the whole story. Behind every classroom decision lies a philosophy, a set of beliefs, often unspoken, about what education is for, what knowledge means, and who the teacher is in relation to the learner. John Dewey, writing over a century ago, argued that education is not preparation for life but life itself, and that schools must continuously respond to the conditions of the world around them (Dewey, as revisited by Ola, 2023). Paulo Freire pushed further, insisting that education is never neutral, that it either domesticates or liberates, and that tools like digital technology carry within them the same potential for empowerment or oppression depending on how they are used (Fola, 2020). Constructivists in the tradition of Piaget and Vygotsky remind us that learners build knowledge through active engagement with their environment, making the interactive nature of digital tools particularly well suited to genuine learning (Nuda, 2022). And George Siemens, in his connectivist manifesto, argued that in the networked age, learning itself has been redefined — it now lives not just inside individuals but within the connections between them (Siemens, 2005, as revisited by Dele, 2022). These philosophical threads run through every question this study attempts to answer.

In Nigeria, the Federal Government has acknowledged the centrality of digital education through successive policy documents, including the National Policy on Education (2019) and the revised National ICT Policy (2023). Yet the gap between policy and practice remains wide, widening further as one moves from federal capitals to state headquarters to local government areas. Kabba/Bunu LGA, home to numerous secondary schools serving communities whose primary livelihood is farming, exemplifies this gap. Power supply is irregular, internet access is limited, digital devices are scarce, and teacher training has not kept pace with technological change. The result is a teaching workforce that is, in many cases, philosophically willing but structurally unable to teach in ways that the digital era demands.

Statement of the Problem

The problem this study confronts is that teachers in Kabba/Bunu LGA lack the necessary empowerment to fully utilize digital skills to teach the students. When teachers cannot meaningfully integrate digital tools into their classrooms, students in the LGA are denied the quality of education that their counterparts in better-resourced environments receive. This is, at its core, an ethical problem: an educational injustice dressed in the language of infrastructure shortfall. It is also a philosophical problem. Nigeria's official educational philosophy, as expressed in the National Policy on Education, endorses holistic, technology-enhanced learning. Yet what plays out in classrooms across Kabba/Bunu suggests a deep disconnect between that stated philosophy and actual pedagogical practice. More troubling still is the question of why that disconnect persists. Is it purely a matter of resources? Or are there also embedded beliefs, epistemological conservatism, resistance to change, cultural ambivalence about technology, that shape how teachers think about digital tools and whether they deserve a place in the classroom? While studies on digital skills among Nigerian teachers have been conducted at the national level, the specific context of Kabba/Bunu LGA has received no dedicated attention, and none of these studies have approached the question philosophically.

Research Questions

This study is guided by the following research questions:

1. What is the impact of digital teaching skills possessed by secondary school teachers in teaching and learning in Kabba/Bunu Local Government Area of Kogi State?

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2. What determines the choice of digital teaching skills among secondary school teachers in Kabba/Bunu Local Government Area of Kogi State?
3. What are the barriers to the development of digital teaching skills among secondary school teachers in Public/Private schools in Kabba/Bunu Local Government Area of Kogi State?

Methodology

This study adopted a descriptive survey research design. This design was considered suitable since this study to solicit information from teachers across public and private secondary schools n Kabba/ Bunu L.G.A. of Kogi State, Nigeria. The study's target population comprised all teachers in secondary schools across Kabba/Bunu LGA. According to the Kogi State Secondary Education Board (2023), there are approximately 48 registered secondary schools in the LGA, both public and private, with a combined teacher population of roughly 620. The LGA was stratified into three zones (urban, semi-urban, and rural) to ensure that geographic diversity was captured. Schools were then randomly selected within each zone for contextual balance, and teachers within those schools were also randomly selected. Of the 120 copies of the research instrument administered, 113 were retrieved and found usable, giving a response rate of 94.2%. Data obtained was analyzed using mean statistics and standard deviations to answer the research questions.

Results

Research Question 1: What is the impact of digital teaching skills possessed by secondary school teachers in teaching and learning in Kabba/Bunu Local Government Area of Kogi State?

Table 1 shows the responses of the respondents on the impact of the use of digital teaching skills by secondary school teachers in teaching and learning in Kabba/Bunu Local Government Area of Kogi State. The result revealed that items 1,2,3 and 4 have their mean above the benchmark of 2.50 and the Standard Deviation of all the items are within the range of 0.48 to 0.62 and are positive and less than the normal deviate of 1.96. This indicate that the use of digital teaching skills has significant impact on teaching and learning. Hence, the hypothesis is rejected.

Table 2 shows the responses of the respondents on the effect of the choice of digital teaching skills by secondary school teachers on the competence of teachers in Kabba/Bunu Local Government Area of Kogi State. The result revealed that items 1,2,3 and 4 have their mean above the benchmark of 2.50 and the Standard Deviation of all the items are within the range of 0.48 to 0.62 and are positive and less than the normal deviate of 1.96. This indicates that the choice of digital teaching skills by teachers has significant effect on their teaching competence. Hence, the hypothesis is rejected.

Research Question 3: What are the barriers to the development of digital teaching skills among secondary school teachers in Public/Private schools in Kabba/Bunu Local Government Area of Kogi State?

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Table 1: Reliability Profiles and Administration Scheme for Instruments

Table 1: Mean and standard deviation of the responses of respondents on the impact of digital teaching skills possessed by secondary school teachers in teaching and learning in Kabba/Bunu Local Government Area of Kogi State. N = 113

S/No	Item Statement	X	SD	Decision
1	The use of digital teaching skills enhances students' understanding of lesson content in my school	3.53	0.57	Accepted
2	Teachers who apply digital skills in instruction record higher levels of student engagement during lessons.	3.24	0.48	Accepted
3	Digital teaching skills enable me to deliver instructional content more effectively than traditional methods.	3.22	0.62	Accepted
4	The integration of digital tools in teaching improves the overall academic performance of students in my school.	3.42	0.58	Accepted

N = Number of Respondents, X = Mean, SD = Standard Deviation

Table 2: What determines the choice of digital teaching skills among secondary school teachers in Kabba/Bunu Local Government Area of Kogi State?

Table 2: Mean and standard deviation of the responses of respondents on the choice of digital teaching skills on the competence of secondary school teachers in Kabba/Bunu Local Government Area of Kogi State.

S/No	Item Statement	X	SD	Decision
1	The availability of digital devices in my school influences the type of digital teaching skills I adopt.	3.38	0.57	Accepted
2	My level of training and exposure to technology determines which digital teaching skills I choose to use in the classroom.	3.56	0.62	Accepted
3	The nature of the subject I teach influences my choice of digital tools and skills for instruction.	3.55	0.56	Accepted
4	The digital literacy level of my students determines the kind of digital teaching skills I apply during lessons.	3.64	0.62	Accepted

Table 3: Mean and standard deviation of the responses of respondents on the barriers to the development of digital teaching skills among secondary school teachers in Public/Private schools in Kabba/Bunu Local Government Area of Kogi State. N = 113

S/No	Item Statement	X	SD	Decision
1	The use of digital teaching skills enhances students' understanding of lesson content in my school.	2.50	0.64	Accepted
2	Teachers who apply digital skills in instruction record higher levels of student engagement during lessons.	3.22	0.59	Accepted
3	Digital teaching skills enable me to deliver instructional content more effectively than traditional methods.	3.49	0.60	Accepted
4	The integration of digital tools in teaching improves the overall academic performance of students in my school.	3.55	0.65	Accepted

Table 3 shows the responses of the respondents on the effect of the choice of digital teaching skills by secondary school teachers on the competence of teachers in Kabba/Bunu Local Government Area of Kogi State. The result revealed that items 1, 2, 3 and 4 have their mean above the benchmark of 2.50 and the Standard Deviation of all the items are within the range of 0.48 to 0.62 and are positive and less than the normal deviate of 1.96. This indicates that the choice of digital teaching skills by teachers has significant effect on their teaching competence. Hence, the hypothesis is rejected.

Discussion

The findings reveal that despite the apparent dominance of infrastructure inadequacy, power supply, devices, internet challenges and training, did not deterred the secondary school teachers in their endeavour to use digital teaching skills to enhance teaching and learning within Kabba/Bunu Local Government Area. This confirms what Obi and Adamu (2024) found in their study of Kogi State teachers more broadly that the barriers to digital teaching skills are primarily structural, not personal. The use of digital teaching skills has greatly improved on teachers' ability to deliver their lessons more effectively and enabled the learners to discover new learning perspectives, while the teachers also developed flexibility in their various approaches to teaching and learning.

Conclusion(s)

Secondary school teachers in Kabba/Bunu LGA of Kogi State cannot be said to possess extremely high level digital teaching skills that twenty-first century education demands, but they are conversant with the appropriate medium that is necessary for them to promote their teaching and learning activities.

Recommendations

On the basis of these conclusions, the following recommendations are offered to the relevant stakeholders:

1. The Kogi State Government and Kabba/Bunu LGA Education Authority must treat digital infrastructure investment as an educational priority, not an optional add-on. Solar power solutions, provision of shared digital devices, and broadband internet connectivity for secondary schools in the LGA should be treated with the same urgency as textbook supply and classroom construction.
2. A structured, mandatory, and continuous in-service digital pedagogy training programme should be designed specifically for secondary school teachers in the LGA.
3. Experienced teachers should not be left out of digital training initiatives, they should be at the centre of them. Professional development programmes should be designed to respect and build on the pedagogical knowledge that experienced teachers bring, while introducing them to digital tools.

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Ojochenemi Mary did the Formal Analysis, Methodology, and Validation, **Ige Taiwo Peter & Ibrahim Ojochenemi Mary** support Funding Acquisition, Resources, and Project Administration. **Ige Taiwo Peter** did the Writing of the original Draft, Writing-Review & Edit.

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