

# INFLUENCE OF DIGITAL LITERACY SKILLS ON DIGITAL CHRISTIAN EDUCATION PRACTICES IN SELECTED CHURCHES, IBADAN METROPOLIS, NIGERIA

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## ABSTRACT

The expansion of digital technology has transformed global educational systems, while digital tool adoption is well-documented in secular education, an empirical gap exists regarding how religious institutions in developing urban contexts navigate digital transitions. This study fills this gap by examining the intersection of digital literacy skills and digital Christian education adoption among churches in Ibadan Metropolis, Nigeria. This study examined digital literacy skills and digital Christian education adoption among churches in Ibadan Metropolis, Nigeria. Using a mixed-methods design, quantitative data were collected via Google Forms from a sample of 344 church leaders, educators, and members, supplemented by 8 qualitative key informant interviews. Results show widespread adoption of blended learning. WhatsApp emerged as the dominant platform due to accessibility and low data requirements. While 76% of respondents rated their personal digital literacy as moderate (43%) or high (33%), an overwhelming 86.8% agreed that a lack of digital skills among the broader membership hinders effective platform utilization. Additional critical systemic barriers identified include high internet data costs, unstable network connectivity, and challenges regarding doctrinal control. The study establishes that digital literacy is a critical determinant of effectiveness in digital Christian education; however, individual proficiency is bottlenecked by community skill gaps and infrastructure costs, necessitating targeted institutional support.

**Keywords:** Christian education, Digital Christian education, Digital literacy skills, Ibadan Metropolis

## Introduction

Christian education is a foundational pillar of ecclesiastical mission, serving as the primary vehicle for transmitting biblical doctrines, spiritual disciplines, and moral values across generations (Anthony & Benson, 2011). Historically, this process has relied on physical proximity through Sunday schools, catechism, and discipleship programs conducted within the confines of church buildings (Clark, 2012). However, the traditional reliance on physical attendance is being challenged by a global shift toward digital mediation in all forms of learning. This technological evolution necessitates a critical re-evaluation of how religious instruction is delivered in the 21st century.

The rapid proliferation of digital technologies has fundamentally altered global educational systems, moving knowledge acquisition from physical classrooms to virtual platforms (Campbell, 2013). Christian education has not been immune to this shift, as churches increasingly adopt digital tools to extend their reach beyond geographical and physical limitations (Campbell & Evolvi, 2020). While these platforms offer unprecedented flexibility for spiritual formation, their adoption varies significantly based on regional infrastructure and cultural readiness. In the Global South, and specifically within Nigeria, this digital transition is shaped by a unique set of socio-technical dynamics.

In Nigeria, the surge in smartphone penetration and social media usage has catalyzed the rise of digital Christian education, with platforms like WhatsApp, Facebook, and Zoom becoming central to Bible studies and leadership training (Afolaranmi, 2021). The COVID-19 pandemic further accelerated this trend, forcing a rapid, often involuntary, migration to online spiritual engagement. Despite this widespread adoption, the mere presence of technology does not guarantee educational effectiveness. The transition to digital platforms has exposed significant disparities in how different demographics within the church interact with technology.

The effectiveness of digital Christian education is frequently hampered by systemic challenges, including unstable power supply, high data costs, and a lack of technological infrastructure (Olorunnisola & Douai, 2013). Beyond these material barriers lies a more complex human factor: the disparity in digital literacy levels among church members and leaders (UNESCO, 2018). While younger congregants may navigate these tools with ease, older members and those in economically disadvantaged urban areas often face digital exclusion. This "digital divide" creates a critical bottleneck, where the potential benefits of digital discipleship are undermined by the limited digital competencies of the participants.

Currently, there is a significant empirical gap in understanding the precise relationship between digital literacy levels and the successful implementation of Christian education within the Nigerian ecclesiastical context. Most existing research focuses on secular higher education or general social media usage, leaving the specific challenges of religious institutions in urban centres like Ibadan largely unaddressed. Consequently, this study seeks to examine how digital literacy skills influence the adoption and effectiveness of digital Christian education among selected churches in Ibadan Metropolis. By identifying these skill-based barriers, the study provides a framework for developing more inclusive and effective strategies for digital theological instruction.

## Statement of the Problem

The rapid migration of religious instruction to digital platforms has created a critical paradox within contemporary ecclesiastical management: while technology expands geographical outreach, it introduces systemic barriers to entry. In Nigeria, despite widespread smartphone penetration, the efficacy of digital Christian education is severely bottlenecked by stratified digital literacy levels among church leaders, educators, and congregants.

While younger, digitally native members adapt effortlessly to virtual learning environments, older congregants and socio-economically disadvantaged demographics face

severe digital exclusion. This digital divide is further compounded by structural deficits, including erratic electricity supply, unstable network bandwidth, high data subscription tariffs, and a lack of formalized institutional framework support from church administrations.

Crucially, while existing literature extensively explores online learning within formal secular institutions, it largely neglects non-formal religious structures in developing urban contexts like Ibadan. Without empirical clarity on how digital literacy deficits interact with these structural constraints, churches risk inadvertently marginalizing vulnerable demographics, and wasting capital on unsustainable digital infrastructure. This study directly addresses this empirical gap by evaluating how varying dimensions of digital literacy skills dictate the implementation, accessibility, and institutional sustainability of digital Christian education within the Ibadan Metropolis.

### **Objectives of the Study**

The main objective of this study is to assess the influence of digital literacy skills on the adoption, participation, and effectiveness of digital Christian education among selected churches in Ibadan Metropolis, Nigeria.

The specific objectives are to:

- Identify the structural forms of digital Christian education currently adopted by selected churches in Ibadan Metropolis;
- Examine the specific digital platforms utilized for Christian education delivery and content sharing;
- Determine the baseline level of digital literacy skills among church leaders, Christian educators, and church members;
- Assess the level of organizational and institutional support provided by church administrations for digital transitions; and
- Isolate the primary technological, structural, and literacy-based challenges hindering the effective implementation of digital Christian education.

### **Research Questions**

To achieve the objectives of this study, the following research questions were formulated which guided the investigation:

1. What structural forms of digital Christian education are currently adopted by selected churches in Ibadan Metropolis?
2. What specific digital platforms are utilized for Christian education delivery and content sharing among the churches?
3. What is the baseline level of digital literacy skills among church leaders, Christian educators, and church members?
4. What level of organizational and institutional support is provided by church administrations to facilitate digital transitions?
5. What are the primary technological, structural, and literacy-based challenges hindering the effective implementation of digital Christian education?

### **Literature Review**

#### **Conceptualizing Christian Education in the Digital Age**

Christian education is an intentional, holistic process designed to shape individuals spiritually, morally, and socially according to biblical mandates (Anthony & Benson, 2011). While traditionally rooted in the physical "Great Commission" mandate of mentoring and teaching (Matthew 28:19–20), the modern era has forced a transition toward "digital religion." Campbell (2013) argues that digital religion is not a replacement for physical gathering but a "blended" existence where online and offline religious experiences coexist. However, much of this foundational literature assumes a Western infrastructure. In the African context, Kgatele (2018) contends that digital religion often serves as a survival strategy for churches to remain

relevant in a rapidly globalizing society, though this relevance is often hindered by socio-economic disparities.

### **Digital Literacy: Beyond Technical Proficiency**

Digital literacy is often oversimplified as mere technical skill. However, UNESCO (2018) redefines it as a multidimensional construct involving critical thinking, ethical awareness, and information management. In the context of Christian education, Oduro-Frimpong (2020) suggests that digital literacy in African churches also involves "digital discernment", which is the ability to navigate a saturated online market of diverse and sometimes conflicting theological content. This study builds on this by arguing that literacy is the primary gatekeeper for digital discipleship; without it, the "interconnected spaces" described by Campbell (2013) become exclusionary zones for the digitally illiterate.

### **Technological Mediation in the Nigerian Church**

The rapid expansion of smartphone penetration in Nigeria has catalyzed a shift toward mobile-centric Christian education. Olorunnisola and Douai (2013) observe that African religious communities are remarkably resilient, utilizing platforms like WhatsApp and Facebook to bypass infrastructural deficits. Yet, a tension exists: while Anderson and Elloumi (2004) found that online platforms increase access for adult learners, Hutchings (2017) counters that "meaningful" participation is entirely dependent on a user's internal confidence. This suggests that even if a church provides the platform (WhatsApp/Zoom), the lack of internal digital literacy creates a "psychological barrier" that infrastructure alone cannot fix.

### **Theoretical Framework: Technology Acceptance Model (TAM)**

This study is grounded in the Technology Acceptance Model (TAM), originally proposed by Davis (1989). TAM is one of the most influential theories in information systems, asserting that an individual's adoption of a new technology is determined by two primary factors:

1. **Perceived Usefulness (PU):** The degree to which a person believes that using a particular system would enhance their spiritual or educational experience.
2. **Perceived Ease of Use (PEOU):** The degree to which a person believes that using the technology will be free of effort.

**Application to the Study:** In the context of churches in Ibadan, Digital Literacy directly correlates with Perceived Ease of Use. If a church leader or member possesses low digital literacy, their PEOU is low, leading to resistance or ineffective participation in digital Bible studies, regardless of how "useful" (PU) the program is.

Furthermore, this study incorporates the Digital Divide Theory to augment TAM. While TAM focuses on individual psychology, the Digital Divide Theory accounts for the systemic "High Data Costs" and "Unstable Power" mentioned in your findings. Together, these theories provide a dual lens: TAM explains the *internal* literacy barriers, while the Digital Divide explains the *external* structural barriers.

### **Methodology**

#### **Research Design**

This study adopted a convergent parallel mixed-methods research design (QUAN + qual). This approach involved the simultaneous collection and independent analysis of quantitative and qualitative data, which were later integrated during the interpretation phase. This strategy facilitated the triangulation of findings, ensuring that the broad trends identified in the survey were contextualized by the nuanced insights from the interviews.

#### **Target Population and Sampling Procedure**

The target population comprised church leaders, educators, and members within the Ibadan Metropolis. A three-stage sampling procedure was executed to ensure both breadth and depth:

1. **Stage 1 (Stratified Selection):** The study stratified churches across major denominational blocs in Ibadan to capture diverse organizational structures. Selected

denominations included Pentecostal, Baptist, Anglican, Methodist, Deeper Life, and Catholic churches.

2. **Stage 2 (Quantitative Survey Sampling):** A total of 400 digital survey links were distributed via Google Forms across the selected denominations. From this pool, 344 valid responses were recovered, representing an 86% response rate.
3. **Stage 3 (Qualitative Purposive Sampling):** Concurrently, 8 key informants (including senior clergy and digital ministry coordinators) were purposively selected for semi-structured interviews based on their direct involvement in church administration and educational oversight.

### Research Instruments

**Structured Questionnaire:** A 6-section instrument administered via Google Forms, covering demographics, platform utilization, and self-assessed digital literacy levels.

**Interview Guide:** A semi-structured protocol used for face-to-face and telephone interviews to explore institutional challenges and doctrinal concerns.

### Validity and Reliability

To ensure Content Validity, the research instruments were reviewed by two senior academic experts in the fields of Education and Religious Studies. Their feedback was used to refine the clarity of questions and ensure alignment with the study's objectives. For Reliability, the questionnaire underwent a pilot test with 20 respondents in a similar urban setting outside the main study area. This process ensured that the questions were consistently understood by participants. Since the study utilized descriptive statistics rather than weighted scales, reliability was further established through the internal consistency of responses across the various denominational strata.

### Data Analysis Plan

Quantitative data were analyzed using descriptive statistics, specifically frequencies and simple percentages, to identify dominant trends in platform use and literacy levels. Qualitative data from the 8 interviews were transcribed and subjected to thematic analysis, where recurring narratives regarding infrastructure and skill gaps were coded to provide a deeper explanation of the quantitative results.

### Ethical Considerations

Ethical clearance was obtained through administrative permission from the participating church leaderships. All participants were provided with an informed consent disclosure, emphasizing that participation was voluntary and that data would be treated with strict confidentiality. No identifying personal information was published, ensuring the anonymity of both individuals and specific local congregations.

### Results and Discussion

#### Demographic Profile of Respondents

The demographic distribution of the survey respondents (N = 344) establishes a multi-generational sample, which is vital for assessing technology adoption within a communal setting.

Demographic Variable	Category	Frequency (f)	Percentage (%)
Age Group	18–25 (Digital Natives)	120	34.9
	26–45 (Young Professionals)	88	25.6
	46–55 (Mid-Adults / Largest Group)	136	39.5
Denomination	Pentecostal / Charismatic	115	33.4
	Mainline (Anglican/Methodist/Baptist)	145	42.2
	Catholic	84	24.4

### Objective 1: Forms of Digital Christian Education Adopted

The study identified that Christian education in the Ibadan Metropolis has moved into a hybrid space. Rather than abandoning traditional practices, churches are using technology to create blended educational models. The primary forms adopted include asynchronous digital devotional sharing, livestreamed sermon broadcasts, and synchronous virtual discipleship/leadership training blocks. This transition indicates that religious instruction is no longer bound by church walls, turning spiritual formation into a continuous, daily process.

### Objective 2: Digital Platforms Utilized for Christian Education

To understand where this education occurs, platform utilization was tracked across the sample. WhatsApp emerged as the undisputed cornerstone of digital ministry in this region.

Ran k	Digital Platform	Primary Ecclesiastical Use Case	Utilization Rate (%)
1	WhatsApp	Bible study text groups, daily devotionals, announcements	92.4
2	Facebook / YouTube	Livestreaming Sunday sermons, recorded video teachings	68.2
3	Zoom / Google Meet	Structured interactive discipleship classes, leadership training	41.5

The clear dominance of WhatsApp aligns with Campbell's (2013) conceptualization of "digital religion," where online tools do not replace offline spaces but merge with them seamlessly. Because WhatsApp requires low data bandwidth and is already a part of daily life in Nigeria, it acts as a low-barrier entry point for religious communication. Conversely, platforms like Zoom and Google Meet require higher data costs and stable connections. As a result, their use is limited to structured leadership tracks. This supports the argument made by Garrison and Kanuka (2004) that blended learning environments require institutional capacity; churches with better funding and technical infrastructure are naturally more likely to adopt these formal, high-bandwidth platforms.

### Objective 3: Baseline Digital Literacy Levels

The survey required respondents to self-assess their operational digital literacy (DL) capacities to determine their readiness for online instruction.

Self-Assessed Literacy Level	Sample Frequency (f)	Sample Percentage (%)
High Digital Literacy	114	33.10%
Moderate Digital Literacy	151	43.90%
Low / Unspecified Literacy	79	23.00%
<b>Total</b>	<b>344</b>	<b>100.00%</b>

While a combined 77% of respondents claim moderate-to-high personal literacy, a clear generational divide splits the congregation. This finding confirms Traxler's (2018) mobile learning assertions: younger digital natives (ages 18–25) adapt instantly to virtual platforms, whereas older church leaders and members (often sitting within the dominant 46–55 age bracket) experience steep learning curves.

This creates an internal organizational paradox. The institutional decision-makers (older leaders) often possess the lowest PEOU (Perceived Ease of Use), while the target audience (youth) possesses the highest. This supports UNESCO's (2018) wider claim that digital literacy is a complex social element rather than just a technical skill; inside a church, a lack of shared literacy across generations slows down group learning.

### Objectives 4 & 5: Institutional Support and Structural Challenges

Despite positive individual literacy self-assessments, the actual implementation of digital Christian education faces severe structural roadblocks. An overwhelming 86.8% of respondents explicitly agreed (59.7% Agree, 27.1% Strongly Agree) that a lack of digital literacy across the *broader* membership directly hinders the success of church platforms. This shows that individual skill does not matter if the rest of the community cannot access the system.

Furthermore, qualitative interviews highlighted several recurring systemic challenges: **High Cost of Internet Data & Infrastructure:** High data costs act as an economic tariff on spiritual participation.

**Socio-Technical Limitations:** Unstable power grids and fluctuating cellular network connections interrupt virtual meetings.

**Doctrinal Disruption:** Church leaders expressed concerns over the loss of face-to-face pastoral oversight and difficulties regulating doctrinal purity online.

### Discussion

These constraints illustrate the realities of the digital divide in the Global South. As Olorunnisola and Douai (2013) observed, African digital participation is always shaped by local infrastructure limitations. When applied to Davis's (1989) Technology Acceptance Model (TAM), even if a church member views digital Bible study as highly useful (High Perceived Usefulness), structural issues like high data costs and constant power drops drag down its Perceived Ease of Use (PEOU) to zero. Consequently, the digital transition within Nigerian churches remains vulnerable. Individual interest is high, but the lack of institutional data subsidies and baseline training models keeps digital discipleship out of reach for a significant portion of the congregation.

### Qualitative Synthesis of Key Informant Interviews (KII)

To contextualize the survey data, a qualitative cross-case analysis was conducted with eight (N=8) key informants, including Senior Clergy, Chaplains, and Media Heads. The interviews revealed that digital platforms operate as structural extensions of established ecclesiastical frameworks rather than disruptive replacements, resulting in a resilient hybrid ministry model. While seven of the eight cases identified the COVID-19 pandemic as the immediate "disruptive trigger" that accelerated digital diffusion (Rogers, 1995), platform selection was strictly dictated by communicative utility. WhatsApp was universally prioritized to foster community intimacy and asynchronous small-group discipleship, whereas Facebook and YouTube served as tools for broadcasting and archival sustainability.

However, the qualitative narratives expose a critical sustainability gap between pastoral vision and structural reality. Informants highlighted that systemic constraints, specifically erratic electricity supply, fluctuating cellular network coverage, and high data costs, act as severe anchors on digital participation. Furthermore, only one participating church maintained a structured digital budget; the remaining seven relied on reactive funding models.

Finally, a central organizational tension emerged regarding the evaluation of online spiritual formation. Because churches rely on informal, superficial indicators such as view counts, comments, and anecdotal testimonies, a significant formative assessment gap exists. The expansion of digital reach has not been matched with measurable, structured discipleship metrics, leaving digital Christian education in the Ibadan Metropolis evangelistically expansive but pedagogically under-assessed.

### Conclusion

This study examined the critical intersection of digital literacy skills and digital Christian education among selected churches in the Ibadan Metropolis, Nigeria. Using a convergent parallel mixed-methods design, the study demonstrated that while ecclesiastical institutions are rapidly adopting blended and hybrid learning models, specifically leveraging

accessible, low-bandwidth platforms like WhatsApp, the effectiveness of this digital transition is fundamentally governed by the digital literacy levels of the congregation. Crucially, this study contributes to the literature on digital religion in the Global South by demonstrating that the digital divide within non-formal religious institutions is not merely infrastructural, but deeply generational. Individual digital proficiency is heavily bottlenecked by community skill gaps, leaving older church members and socio-economically disadvantaged demographics at risk of systematic exclusion from digital discipleship in the absence of targeted support structures. Ultimately, in an increasingly virtual religious landscape, digital literacy is no longer an optional skill but an indispensable prerequisite for effective spiritual and theological instruction.

### **Limitations of the Study**

The findings of this study must be considered in light of certain limitations. First, the evaluation of digital literacy relied on self-reported assessment metrics, which may introduce response bias. Second, the distribution of quantitative surveys via Google Forms naturally favours individuals who already possess a baseline level of internet connectivity. Consequently, caution should be exercised when generalizing these findings beyond urban, digitally emerging ecclesiastical contexts like the Ibadan Metropolis.

### **Recommendations**

Based on the empirical findings of this study, the following actions are recommended:

1. Based on the finding that WhatsApp is the most widely utilized platform (92.4%) due to low data requirements, it is recommended that church administrations formalize their digital ministries by designing structured, curriculum-aligned, text-based discipleship tracks specifically optimized for WhatsApp, rather than relying on high-bandwidth video platforms that cause financial strain.
2. Based on the finding that a significant portion of the sample (43.9%) possesses only moderate digital literacy and 23% possess low/undefined literacy, it is recommended that Christian education boards organize targeted digital literacy workshops. These workshops should feature separate, slowed-paced instructional tracks for church educators and administrators to improve their Perceived Ease of Use (PEOU) of digital teaching tools.
3. Based on the finding that a distinct generational divide exists between digital native youth (34.9%) and older adults (39.5%), it is recommended that churches establish structured intergenerational mentorship programs. These programs should pair technologically skilled youth with older church leaders and members to provide hands-on, peer-to-peer technical support.
4. Based on the finding that an overwhelming 86.8% of participants agree that a lack of digital skills and high infrastructure costs hinder effective platform implementation, it is recommended that church leadership prioritize institutional capital allocation toward community-level digital infrastructure. This should include providing localized Wi-Fi zones within church premises during educational hours and offering data-subscription stipends for catechists and small-group facilitators.
5. Based on the finding that infrastructural limitations like unstable electricity and data tariffs restrict access, it is recommended that churches firmly reject a purely virtual model and instead intentionally maintain a structured, blended learning framework. This guarantees that members experiencing acute digital exclusion can still achieve full spiritual and educational engagement through face-to-face alternatives.

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