

LITERACY OF INFORMATION, COMMUNICATION AND TECHNOLOGY ON EFFECTIVE LOCAL GOVERNMENT PERSONNEL SERVICE DELIVERY IN KUBAU LOCAL GOVERNMENT, KADUNA STATE

Hamza Muhammad Buhari

Department of Public Administration
Ahmadu Bello University, Zaria (ABU)
hamzabuhari@ymail.com
+2349133144497.

Abubakar Tafida Jibril PhD

Department of Public Administration
Ahmadu Bello University, Zaria (ABU)
sadeegsipikin@yahoo.com
+2348036073989

Bashir Yusuf PhD

Department of Public Administration,
Ahmadu Bello University, Zaria (ABU)
Bashiryusif86@gmail.com
+2348032613492

Sani Margaret Ojoagefu

Department of Public Administration
Ahmadu Bello University, Zaria (ABU)
sanimargaretojoagefu@gmail.com

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ABSTRACT

The 21st century is characterized by rapid advancement in Information and Communication Technology (ICT), which has transformed public administration and service delivery globally. ICT literacy has become a critical competence for public sector personnel to ensure efficiency, transparency, and accountability. In Nigeria, local government as the tier closest to the grassroots is mandated to deliver essential services, yet the effectiveness of these services increasingly depends on personnel capacity to utilize ICT tools for record keeping, planning, budgeting, communication, and citizen engagement. Despite federal and state digitalization efforts, many local government staff in rural areas lacks adequate ICT literacy skills, undermining e-governance initiatives. The study assessed the influence of ICT literacy on effective personnel service delivery in Kubau Local Government Area of Kaduna State. The study was anchored on technology acceptance model and human capital theories. A qualitative research design was adopted using self-administered questionnaires to source data from Kubau LGA personnel. The study population comprised 1,500 personnel, with a sample size of 412 determined using the Israeli formula. The study found that ICT literacy

has a significant and positive impact on personnel service delivery in Kubau Local Government Area with (0.000) p-value. The study concludes that digital competence is a major determinant of administrative effectiveness at the grassroots level. It recommends that Kubau Local Government authorities prioritize continuous ICT literacy improvement through regular digital skills training, workshops, and refresher programs to enhance personnel competence, improve efficiency in service delivery, and ensure adaptability to technological advancements in public administration.

Keywords: Information, Communication, Technology, Literacy, Personnel, Service Delivery, Local Government.

INTRODUCTION

The 21st century has witnessed rapid advancements in Information and Communication Technology (ICT), fundamentally altering the operational landscape of public administration and service delivery worldwide. Within this context, ICT literacy, defined as the capacity to access, evaluate, utilize, and communicate information via digital technologies, has emerged as an indispensable competency for public sector personnel, directly influencing organizational efficiency, transparency, and accountability (UNESCO, 2018). The strategic importance of this competency is further underscored by the United Nations (2022), which identifies ICT as a critical enabler for the realization of Sustainable Development Goal 16, particularly in fostering effective, accountable, and inclusive governance institutions.

At the national level, Nigeria's local government system is constitutionally enshrined as the third tier of government and functions as the primary administrative unit closest to the citizenry. Its statutory responsibilities encompass the delivery of essential social and infrastructural services, including primary healthcare, basic education, environmental sanitation, rural road construction, and

community development. The efficacy of these service mandates is increasingly contingent upon the digital proficiency of local government staff, particularly in domains such as data record-keeping, financial planning, budgetary execution, inter-departmental communication, and citizen engagement mechanisms.

Nevertheless, extant evidence indicates a pervasive deficit in ICT literacy among local government personnel, especially those stationed in rural and peri-urban councils. This skills gap poses a significant impediment to the successful implementation of e-governance frameworks and substantially constrains the institutional capacity of local councils to meet the evolving administrative demands of a digitally oriented public sector.

Kubau Local Government Area of Kaduna State is a rural LGA in Northern Nigeria, characterized by a diverse population and substantial developmental challenges. Like many similar LGAs, it operates within a context marked by limited infrastructure, inadequate training opportunities, and low exposure to digital systems. Although federal and state governments have introduced digitalization initiatives, such as the National e-Government Master Plan and the Kaduna State Digital Economy Policy, the extent to which Kubau LGA

personnel possess the requisite ICT literacy to effectively utilize these platforms remains unclear. This gap raises critical concerns regarding the efficiency of service delivery and administrative effectiveness at the grassroots level. Against this background, this study aims to ascertain the influence of ICT literacy on effective personnel service delivery in Kubau Local Government Area, Kaduna State.

STATEMENT OF THE PROBLEM

The integration of Information and Communication Technology (ICT) into public administration is widely anticipated to improve decision-making, reduce bureaucratic inefficiencies, enhance data management, and foster greater transparency in local governance. However, the extent to which these benefits are realized depends significantly on the ICT literacy levels of the personnel tasked with operating these systems.

Despite the growing dependence on ICT for effective public service delivery, a substantial number of local government staff in rural areas continue to exhibit low ICT proficiency, thereby constraining the ability of councils to meet contemporary administrative standards. Research conducted between 2020 and 2025 has consistently shown that ICT literacy contributes positively to operational efficiency, transparency, service continuity, data-informed decision-making, and citizen engagement at the local government level (Adebayo & Ojo, 2022; Okoro, 2023; Musa & Bello, 2024; Nwosu, 2021; Ibrahim et al., 2025). Nevertheless, in Kubau Local Government Area of Kaduna State, there remains a noticeable dependence on manual record-

keeping, frequent delays in document processing, and limited use of digital tools, pointing to a likely deficit in ICT competence among staff.

While existing scholarship has predominantly concentrated on state-level ministries and urban local councils, empirical research examining the specific ICT literacy levels, the actual usage patterns, the obstacles encountered, and the relationship between ICT competence and service delivery among personnel in Kubau LGA is notably scarce. This knowledge gap impedes the design of effective capacity-building programmes and weakens the implementation of e-governance initiatives at the grassroots level. It is against this backdrop that the present study aims to assess ICT literacy among Kubau Local Government personnel and examine its implications for service delivery.

The primary objective of this research is to evaluate the level of ICT literacy among employees of Kubau Local Government Area, Kaduna State. To achieve this, the study will address the question of how ICT literacy affects effective service delivery among personnel in the area. Hypotheses were formulated both in null and alternative to ascertain empirical evidence regarding the influence of ICT literacy on service delivery outcomes

H₀: Information and Communication Technology (ICT) literacy has no significant effect on personnel service delivery in Kubau Local Government Area of Kaduna State.

H₁: Information and Communication Technology (ICT) literacy has a significant positive effect on personnel service

delivery in Kubau Local Government Area of Kaduna State.

This study holds substantial value across multiple dimensions. Academically, it contributes to the growing body of literature on ICT literacy and public administration, specifically within rural local government contexts, an area that remains critically under-researched in Kaduna State and northern Nigeria. By filling this empirical gap, the study offers a foundational reference for future scholarly inquiry into technology adoption and governance at the grassroots level. Practically and policy-wise, the findings will provide actionable empirical insights for key stakeholders, including the management of Kubau LGA, the Kaduna State Government, and the Federal Ministry of Communications and Digital Economy. These insights can inform the design of evidence-based capacity-building programs, targeted ICT training modules, and robust policy frameworks aimed at enhancing staff competencies. Furthermore, by systematically identifying the challenges and opportunities associated with ICT literacy, the study will support improvements in administrative efficiency, operational transparency, and overall service delivery. Ultimately, these outcomes are expected to strengthen democratic governance, foster institutional accountability, and bolster citizen trust in local government institutions—critical elements for sustainable development at the grassroots level.

CONCEPT OF ICT LITERACY

Information, communication, and technology (ICT) literacy generally refers to the technical proficiency required to utilise technological devices for data

storage and the translation of governmental policies into effective public service delivery. However, scholars have offered divergent perspectives on this concept. Lamke (2022) defines ICT literacy as the use of digital technology, communication tools, and networks to access, manage, integrate, evaluate, and create information, thereby enabling effective participation in a knowledge society. This perspective suggests that local government personnel equipped with technical competencies are better positioned to facilitate efficient service delivery, enhance transparency, and promote accountability through accessible systems that encourage community participation.

Similarly, the Australian Curriculum, Assessment and Reporting Authority (2020) conceptualizes ICT literacy as the capacity of individuals to appropriately employ ICT to access, manage, and evaluate information, develop new understandings, and communicate with others for effective societal participation. Possessing digital technology skills is thus expected to significantly improve the performance of local government staff, enabling them to efficiently fulfil their duties in meeting the needs of local populations. Fraillon et al. (2013) further affirm that computer and information literacy (CIL) denotes an individual's ability to use computers for investigation, creation, and communication, facilitating effective engagement at home, in school, the workplace, and society at large.

Consequently, ICT literacy encompasses technical skills, information literacy, and communication abilities (Binkley et al., 2011). Moreover, it is considered essential for meaningful participation in both social

and economic spheres (Kozma, 2025). In this context, the influence of digital technology on the performance of local government personnel in Kubau Local Government Area of Kaduna State is of critical importance, as it holds the potential to enhance productivity and efficiency among public sector employees through the automation of routine tasks, improved communication channels, and expanded access to information

CONCEPT OF PERSONNEL

Personnel refer to the human resources employed within an organization to execute its functions and achieve institutional objectives. In the context of local governments such as Kubau Local Government Area (LGA), personnel form the operational workforce that translates policy into grassroots service delivery. Armstrong and Taylor (2020) define personnel as the total workforce engaged under a contract of service, contributing skills and effort toward organizational goals. Similarly, Boxall and Purcell (2021) view personnel as strategic assets whose competencies influence productivity, particularly critical in resource-constrained settings like Kubau LGA, where staff competence underpins primary healthcare, education, and infrastructure delivery. Dessler (2022) and Noe et al. (2022) emphasize personnel's dual role in routine and specialized tasks, and the necessity of training as human capital investment to enable adaptation to e-governance reforms. Aguinis and Kraiger (2021) link performance to ability, motivation, and opportunity, noting that digital literacy now defines ability in modern workplaces, an imperative for Kubau LGA, where low ICT proficiency hampers service continuity. Bratton and Gold (2023) and

Mathis, Jackson, and Valentine (2024) highlight the reliance on ICT-literate staff, warning that bottlenecks occur when such staff are unavailable. Mondy and Martocchio (2023) and Schermerhorn (2024) stress that ICT capacity enhances communication, data management, and digital readiness, directly affecting information flow between rural wards, LGA headquarters, and state ministries. Torrington, Hall, and Taylor (2025) conclude that public sector effectiveness now hinges on integrating ICT into administrative functions. Collectively, these definitions affirm that personnel constitute strategic human capital whose ICT competence determines organizational performance. For Kubau LGA, a rural council with high service demands and limited staff, workforce digital literacy is essential for delivering timely, transparent, and accountable services to communities.

CONCEPT OF LOCAL GOVERNMENT

Local government is constitutionally recognized as the third tier of governance in Nigeria, established under Section 8(3) of the 1999 Constitution to facilitate grassroots development and bring governmental administration closer to the citizenry. Its primary mandate encompasses the improvement of living standards through the provision of essential services, including the construction and maintenance of rural roads, primary healthcare delivery, basic education, sanitation, water supply, and street naming. Given its spatial proximity to the populace, local government constitutes the most accessible level of governance for rural communities, such as Kubau Local Government Area (LGA) in Kaduna State.

Local governments have been articulated from both institutional and functional standpoints. Bojanic (2023) conceptualizes local government as an institution of representative and participatory governance, characterized by democratic decision-making, robust accountability mechanisms, and active citizen engagement aimed at serving grassroots populations. Oyedele and Ayooluwa (2025) view it as local-level governance encompassing both formal institutions and informal collective action, wherein diverse groups collaborate toward common community objectives. Thapa (2025) emphasizes structural autonomy, defining local government as a multipurpose, relatively self-governing entity vested with service delivery mandates, taxation powers, and democratically elected leadership. John and Alan (2022) further posit that local government comprises the structures, processes, and institutions responsible for local policy formulation and service provision to citizens.

Within the Nigerian context, Buhari (2025) notes that the country operates 774 constitutionally recognized LGAs, whose headquarters are typically sited in urban centers, even as they serve predominantly rural populations with limited access to social amenities. Although Pandey (2022) focuses on India's federal structure, his comparative insight, that local governments globally require enhanced status and capacity to function effectively within larger federal systems, holds direct relevance for Kubau LGA. This locality operates within Kaduna State's federal architecture yet faces structural and capacity constraints emblematic of rural LGAs in Nigeria.

Present scholarship reflects an evolution in local government studies. Avellaneda et al. (2024) observe that current research emphasizes internationalization, theoretical refinement, and pressing policy challenges, including sustainability, climate change, digital technology adoption, and urban-rural resilience. Pill (2024) adds that modern local government must adopt a plural, participatory conception of the local state, underpinned by constructive partnerships between councils and constituent communities.

Therefore, for Kubau LGA, these conceptual perspectives underscore three critical realities. First, the mandate for direct service delivery renders personnel competence central to community welfare. Second, democratic and participatory governance necessitates personnel capable of engaging citizens through contemporary channels. Third, emerging policy challenges, particularly digital technology adoption, demand new skill sets among council staff. Given Kubau's rural setting and limited infrastructural endowments, the council's effectiveness in fulfilling its constitutional responsibilities hinges significantly on the capacity of its personnel to utilize information and communication technology (ICT) tools for planning, record keeping, communication, and service delivery. Consequently, examining ICT literacy among Kubau LGA personnel is not only academically imperative but also practically urgent for enhancing grassroots governance and fostering local stability.

CONCEPT OF SERVICE DELIVERY

Service delivery is the process through which public organizations provide tangible and intangible services to citizens

to enhance welfare and meet community needs. For Kubau Local Government Area (LGA), this entails fulfilling constitutional mandates across health, education, infrastructure, water, and administration at the grassroots level. Afonso and Fernandes (2020) define it as the capacity to transform inputs into outputs that satisfy citizen needs efficiently, equitably, and transparently, an imperative for Kubau LGA, where limited budgets must yield functional boreholes, schools, and rural roads. Osborne, Powell, and Cui (2021) emphasize co-production between government and citizens, suggesting personnel in dispersed rural settlements should leverage ICT to capture feedback and align services with local priorities. Denhardt and Denhardt (2022) view service delivery as a public service core guided by democratic values, responsiveness, and accountability, aligning with Kubau LGA's obligation to maintain transparent records and timely service through ICT-literate staff. Andrews and Boyne (2023) measure it by access, quality, and responsiveness, requiring digital systems to track requests and reduce delays. Meijer and Bekkers (2023) highlight technology-mediated channels that enhance speed and convenience, underscoring the need for ICT literacy to implement Kaduna State's e-governance platforms. Van der Wal and Huberts (2024) link service delivery to public values, where personnel competence and ethics foster citizen trust, critical for transparent financial records and visible projects. Bryson, Sancino, and Crosby (2024) frame it as strategic resource management for public value, necessitating data analysis skills for health and education planning. Peters and Pierre (2024) define it as governance output, where local autonomy

succeeds only with personnel capacity to implement policies without state over-reliance. Teisman and Klijn (2025) view it as networked coordination, requiring digital competence to engage state agencies and NGOs, while George, Walker, and Monster (2025) equate it with citizen satisfaction regarding timeliness, reliability, and fairness, increasingly ICT-dependent in document processing, health response, and facility maintenance. Across these definitions, scholars converge on service delivery as efficient, transparent, data-driven, and citizen-centered, driven by personnel competence. For Kubau LGA, a rural council with high demand and scarce resources, ICT literacy of staff is thus a direct determinant of effective service delivery and grassroots expectation fulfillment.

INFORMATION, COMMUNICATION AND TECHNOLOGY LITERACY ON PERSONNEL SERVICE DELIVERY

Empirical studies on ICT literacy and personnel service delivery in local governments provide useful context for understanding Kubau LGA. Six relevant studies from 2020-2025 are reviewed below with emphasis on their objectives, methodologies, findings, recommendations, and gaps relative to this study.

Adebayo & Ojo (2021) examined the effect of ICT literacy on administrative efficiency of personnel in selected local governments in Oyo State. Their objective was to determine whether ICT skills improved speed and accuracy of service delivery. They adopted a quantitative survey design and used structured questionnaires to collect data from 240 personnel across 6 LGAs. Findings

revealed a significant positive relationship between ICT literacy and efficiency in record management, financial reporting, and communication, with 72% of respondents reporting reduced bureaucratic delays after ICT training. They recommended mandatory ICT training and provision of functional computer systems in all LGAs. The study focused on southwestern Nigeria and used only quantitative data, leaving room for qualitative insights into personnel experiences. This current study fills that gap by adopting a qualitative design with questionnaires to capture deeper perceptions of Kubau LGA personnel.

Okoro (2022) investigated ICT literacy levels and transparency in revenue collection among local government personnel in Enugu State. The objective was to assess how ICT skills affected accountability and reduction of leakages. A mixed-method design was used with questionnaires administered to 180 revenue and accounts staff, supplemented by 10 key informant interviews. Findings showed that personnel with intermediate to advanced ICT skills recorded 40% fewer revenue leakages and produced more accurate financial reports. The study recommended regular digital audits and capacity building on financial software. However, it concentrated on revenue departments only and was conducted in an urbanized state. This study aligns by focusing on all categories of Kubau LGA personnel and filling the rural LGA gap.

Musa & Bello (2023) explored the role of ICT literacy in ensuring service continuity during COVID-19 lockdowns among local government staff in Kano State. Their objective was to establish whether ICT-literate personnel-maintained service

delivery when physical offices were closed. Using a quantitative cross-sectional survey with 320 respondents, they found that LGAs with higher ICT-literate staff maintained 65% of essential services online, while those with low literacy dropped to 28%. Recommendations included embedding ICT modules in staff induction and creating LGA ICT support units. The study used only descriptive statistics and did not explore personnel challenges in depth. This study addresses that gap by using qualitative questionnaire items to understand specific ICT challenges faced by Kubau LGA personnel.

Nwosu (2024) assessed the influence of ICT literacy on data-driven decision making among administrative staff of local governments in Imo State. The objective was to determine whether ICT skills improved planning and policy formulation. A survey design with 210 questionnaires was adopted. Findings indicated that 58% of personnel lacked basic data analysis skills, leading to reliance on manual estimates for project planning, which reduced accuracy and community impact. The study recommended targeted training on Excel and GIS tools for planning officers. While insightful, it was limited to administrative staff in one southeastern state. This study extends the scope by covering all personnel categories in Kubau LGA, Kaduna State, and fills the northern Nigeria rural context gap.

Ibrahim et al. (2025) examined ICT literacy and citizen engagement through digital platforms in selected LGAs of Kaduna State. Their objective was to test whether personnel ICT skills improved interaction with citizens via social media and LGA portals. A quantitative survey of

195 personnel and 300 citizens was conducted. Findings revealed that only 34% of personnel could manage digital engagement platforms effectively, resulting in poor citizen feedback and low trust in LGA activities. Recommendations included training personnel on e-participation tools and improving internet access. Though located in Kaduna State, the study was quantitative and covered multiple LGAs without depth on Kubau specifically. This study fills that gap by focusing exclusively on Kubau LGA and adopting a qualitative approach to capture nuanced personnel perspectives through questionnaire responses.

Yakubu & Suleiman (2025) studied challenges of ICT literacy among rural local government personnel in Niger State. Their objective was to identify barriers preventing effective ICT use for service delivery. A mixed-method approach with 160 questionnaires and 8 focus group discussions was used. Findings identified poor power supply, limited training, fear of technology, and outdated equipment as major barriers, with 67% of personnel reporting low confidence in using ICT for daily tasks. Recommendations emphasized solar power for ICT facilities and continuous peer mentoring. The study was strong on challenges but did not link ICT literacy directly to specific service delivery outcomes. This current study builds on it by focusing on Kubau LGA and explicitly linking personnel ICT literacy levels to service delivery performance, using qualitative questionnaire data to identify both gaps and performance implications.

GAPS AND ALIGNMENT TO CURRENT STUDY

Collectively, these studies confirm that ICT literacy improves efficiency, transparency, continuity, decision-making, engagement, and reduces barriers in local government service delivery. However, most adopted quantitative or mixed methods, focused on urban LGAs or other geopolitical zones, and none provided in-depth qualitative insights specific to Kubau LGA, Kaduna State. This study fills those gaps by adopting a qualitative research design and using questionnaires to source detailed data from Kubau LGA personnel, thereby generating context-specific evidence on their ICT literacy levels, extent of use, challenges, and implications for service delivery.

THEORETICAL FRAMEWORK

This study is anchored on “Technology Acceptance Model (TAM) by Davis, 1989” and “Human Capital Theory by Becker, 1964”. Both theories provide explanatory power for understanding how ICT literacy influences personnel service delivery in Kubau Local Government Area.

TECHNOLOGY ACCEPTANCE MODEL (TAM)

TAM posits that the actual use of technology is determined by two key beliefs: Perceived Usefulness, defined as the degree to which a person believes that using a system will enhance job performance, and Perceived Ease of Use, defined as the degree to which a person believes that using a system will be free of effort. Davis argued that when personnel perceive ICT tools as useful and easy to use, their attitude toward adoption

becomes positive, leading to higher utilization and improved performance.

The relevance for this theory on Kubau LGA personnel, and service delivery outcomes will depend on whether they perceive ICT tools such as computers, internet, and e-governance platforms as useful for speeding up record management, revenue collection, and communication, and whether they find these tools easy to operate despite limited training. If personnel view ICT as difficult or irrelevant, resistance will occur and service delivery will remain manual and slow. Thus, TAM explains the behavioral link between ICT literacy, attitude, and actual use of technology for service delivery.

HUMAN CAPITAL THEORY (HCT)

HCT, developed by Becker (1964), contends that knowledge, skills, and competencies acquired through education and training are forms of capital that increase productivity and economic output of individuals and organizations. The theory emphasizes that investment in human capital through training enhances efficiency, innovation, and performance. Employees with higher skills can adapt faster to technological changes and contribute more effectively to organizational goals.

The assumptions of this theory emphasize that Kubau LGA personnel represent the human capital of the council. Their ICT literacy is a form of skill investment that determines the council's capacity to deliver essential services such as healthcare, education, and rural infrastructure. Where personnel lack ICT skills, the council's human capital is underutilized, leading to inefficiency,

delays, and poor service outcomes. Conversely, investment in ICT training increases personnel productivity and strengthens Kubau LGA's ability to meet Kaduna State's digital governance expectations. HCT therefore explains why ICT literacy is not just a technical issue but a strategic investment for improving grassroots service delivery.

Therefore, Integration of the Two Theories for this Study as theoretical framework: TAM explains the "behavioral process" by which Kubau LGA personnel decide to use or reject ICT tools based on perceived usefulness and ease of use. HCT explains the "performance outcome" by which ICT skills as human capital translate into higher productivity and better service delivery. Together, they provide a framework for this study: personnel ICT literacy level shapes perception and usage of technology, and this usage, as a form of human capital, directly influences the quality, speed, and transparency of service delivery in Kubau LGA.

Therefore, the theoretical framework guides this study to examine not only the level of ICT literacy among Kubau LGA personnel, but also how their perception and skills translate into actual service delivery performance at the grassroots level.

METHODOLOGY

The study adopted quantitative research design; data was sourced primarily through self-administered survey questionnaire. Therefore, the study covers entire population Kubau local governments' personnel, totaling 1,500. Sample size of 343 was determined using Israeli formula, to avoid inconsistency as a result of

outliers, damage and non return or non-response questionnaires. 20% is increased which is additional number of 69 as opines by Smith, (2005), making the final sample size, 412 respondents.

Stratified sampling technique was adopted, where personnel of different departments were selected from nomenclature strata.

The selection was aimed at to explore on the impact of ICT literacy level of the personnel for the purpose of their improved performance.

The study analyzed the quantitative data, using regression analysis, a statistical analysis, featuring table figure and percentage.

DATA ANALYSIS

Rate of Return of Questionnaires

Questionnaire Status	Frequency	Percentage (%)
Administered	412	100%
Returned	356	86.4%
Not Returned	56	13.6%
Rejected	12	3.4%
Valid for Analysis	344	83.5%

Source: Field Survey, 2026

Table 1 shows that 412 questionnaires were administered, out of which 356 were returned, representing a high return rate of 86.4 percent. This demonstrates strong participation by the respondents and suggests good field follow-up by the researchers. Only 13.6 percent were not returned, which is relatively low for survey-based studies. Out of the returned questionnaires, 12 were rejected due to errors or incomplete information,

representing 3.4 percent of total administered. The final valid questionnaires were 344, representing 83.5 percent, which is sufficiently large for statistical analysis. The high validity rate strengthens the reliability of the study findings. The high return and validity rates enhance the credibility of the study, allowing the researcher to draw reliable conclusions and generalize findings to the wider population.

ICT Literacy Enhances Personnel Service Delivery

Response	Frequency	Percentage (%)
Strongly Disagree	36	10.5%
Disagree	35	10.2%
Undecided	10	2.9%
Agree	96	27.9%
Strongly Agree	67	48.5%
Total	344	100%

Source: Field Survey, 2026

Table 2 reveal that a large majority of respondents (76.4 percent) either agreed or

strongly agreed that ICT literacy enhances personnel ser delivery in Kobau local

government. This indicates a strong belief among staff that digital competence contributes significantly to effective job delivery. Only 20.7 percent disagreed, showing that opposition to ICT skill relevance is relatively low. The very small undecided group suggests that respondents have clear opinions based on their workplace experiences. The high ranking of ICT literacy reflects strong awareness of modern administrative requirements. It also shows that digital skill gaps may

hinder productivity if not addressed. Local governments must expand ICT literacy programs to support digital competence, reduce performance gaps, and improve service delivery.

TEST OF HYPOTHESES

Hypothesis One:

H₀₁: ICT literacy has no significant impact on personnel service delivery at Kubau local government in Kaduna State.

Descriptive Statistics of ICT Literacy and Personnel service delivery

Variable	Mean	Standard Deviation	N
ICT Literacy	4.12	0.84	344
Service Delivery	4.26	0.79	344

Source: SPSS Output (2026)

Table 6.1 shows that ICT literacy has a high mean score of 4.12, indicating that respondents generally possess substantial digital competence. Personnel performance also recorded a high mean of 4.26, suggesting strong task execution and efficiency among staff. The relatively low standard deviation values indicate consistency in respondents' perceptions across the local governments. This implies

that ICT literacy is uniformly experienced and linked to performance outcomes. The closeness of the mean values suggests a positive association between digital skills and personnel effectiveness. Overall, the table provides preliminary evidence that ICT literacy may influence service delivery in Kubau local government administration.

Model Summary of ICT Literacy and Personnel service delivery

R	R Square	Adjusted R Square	Standard Error
0.681	0.464	0.462	0.581

Source: SPSS Output (2026)

Table 4 indicates a strong positive correlation between ICT literacy and personnel service delivery, with an R value of 0.681. The R Square value of 0.464 shows that ICT literacy explains approximately 46.4 percent of the variation in personnel performance. This demonstrates that digital competence is a

substantial predictor of performance outcomes. The adjusted R Square further confirms the stability of the model after adjusting for sample size. The relatively low standard error suggests good model fit. This table establishes that ICT literacy plays a meaningful role in explaining performance differences among personnel.

Regression Coefficients for ICT Literacy

Variable	Beta	Standard Error	t-value	Significance
Constant	1.214	0.214	5.67	0.000
ICT Literacy	0.583	0.041	14.22	0.000

Source: SPSS Output (2026)

Table 5 reveals that ICT literacy has a positive and statistically significant effect on personnel service delivery with a beta coefficient of 0.583. The significance value of 0.000 is less than the 0.05 threshold, indicating strong statistical significance. This means that an increase in ICT literacy leads to a corresponding increase in personnel performance. The high t-value further confirms the strength of this relationship. These results clearly demonstrate that digital competence enhances efficiency, accuracy, and service delivery in local government operations.

Decision Rule: Reject the null hypothesis if the significance value is less than 0.05. Since the significance value is less than 0.05, the null hypothesis is rejected. ICT literacy has a significant positive impact on personnel service delivery at Kubau local government in Kaduna State.

MAJOR FINDINGS

In line with the analysis of data above, the following finding was made;

The study found that Information and Communication Technology literacy has a significant and positive impact on personnel performance and effective service delivery at Kubau local government in Kaduna State. The study showed that personnel with higher digital competence perform their duties more efficiently, accurately, and promptly, indicating that Information and Communication Technology skills are

critical for effective service delivery in modern local government administration.

Discussion Of Finding.

The central finding of this study, that Information and Communication Technology (ICT) literacy has a significant and positive impact on personnel performance and effective service delivery in Kubau Local Government, provides empirical support for the ongoing digital transformation agenda within Nigeria's public sector. The positive correlation between digital competence and administrative efficiency aligns with the broader body of literature on technology adoption in organizations, as scholars such as Davis (1989) and Venkatesh et al. (2003) have long argued that perceived usefulness and ease of use are critical determinants of technology acceptance and subsequent performance. In the context of Kubau LGA, the finding that personnel with higher ICT literacy perform duties with greater accuracy, efficiency, and speed suggests that these theoretical models hold in the Nigerian sub-national public sector, where the ability to utilize modern administrative tools, such as electronic record keeping, financial management software, and communication platforms, reduces manual errors, accelerates workflow, and shortens response times to citizen inquiries. Consequently, ICT literacy emerges not merely as an auxiliary skill but as a foundational competency for

contemporary public administration. From a public administration perspective, this finding underscores the role of human capital in achieving e-governance objectives, as the Nigerian government has championed digitalization as a means to curb corruption, enhance transparency, and improve citizen satisfaction (National Information Technology Development Agency (NITDA) 2019). However, policy success hinges on the frontline workforce's ability to operationalize these technologies, and the findings from Kubau LGA suggest that investment in infrastructure alone is insufficient; without commensurate investment in personnel digital skills, technological assets remain underutilized. The significant effect observed in this study implies that strengthening ICT literacy is a direct pathway to achieving the Sustainable Development Goals (SDGs), particularly Goal 16 (Peace, Justice, and Strong Institutions) and Goal 9 (Industry, Innovation, and Infrastructure), by fostering more responsive and accountable governance at the grassroots level. The results of this study corroborate the findings of earlier empirical works, such as Oyediran and Omoare (2018), who reported that ICT adoption significantly improves work output among administrative staff in Nigerian universities, and Adebayo and Oluwatobi (2020), who observed a similar trend in selected Lagos State ministries. The consistency of these findings across different tiers and sectors of Nigerian administration suggests that the relationship is robust and generalizable; however, this study extends the literature by focusing specifically on a rural local government area, an often, overlooked

context where infrastructural deficits and resource constraints are more pronounced, and the fact that a significant positive relationship was still detected in this setting reinforces the argument that digital competency is a high leverage intervention even in resource constrained environments. Theoretically, this study validates the human capital theory applied to public sector technology adoption, confirming that the knowledge and skills embedded in employees are critical assets that directly influence organizational productivity, while practically, the findings provide local government authorities with evidence based justification for prioritizing continuous professional development in digital skills. The recommendation to implement regular training, workshops, and refresher programs is grounded in the observed data, as sustained competency development ensures that personnel not only acquire initial skills but also remain adaptable to evolving technological tools and platforms, thereby future proofing administrative capacity. While the findings are instructive, they should be interpreted in light of certain limitations, including the exclusive focus on Kubau LGA, which may limit generalizability to other local governments with vastly different socio economic profiles or infrastructural endowments; the cross sectional design, which captures data at a single point in time and cannot establish causation definitively, though the strong positive association is indicative; and the reliance on self reported measures of performance and ICT literacy, which are susceptible to social desirability bias. Future research could address these limitations by employing longitudinal designs, incorporating objective performance metrics such as transaction processing

times or error rates, and expanding the geographical scope to include multiple LGAs for comparative analysis. In summary, the findings of this study provide compelling evidence that ICT literacy is a critical driver of personnel performance and service delivery effectiveness in Kubau LGA, and by affirming the positive and significant impact of digital competence, this research contributes to the growing body of knowledge advocating for human centric approaches to e-governance, with the clear implication that strategic investment in digital skills development is indispensable for achieving administrative excellence and responsive local governance in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The study concludes that digital transformation is a critical determinant of personnel performance towards effective service delivery in Kubau local government. The findings clearly show that ICT literacy significantly enhances accuracy, productivity, and responsiveness among employees, making digital competence a major driver of administrative effectiveness.

Local government authorities in Kubau local government of Kaduna State should prioritize the continuous improvement of Information and Communication Technology literacy among personnel by organizing regular digital skills training, workshops, and refresher programs. This will enhance employees' competence in using modern administrative tools, improve efficiency in service delivery, and ensure that personnel remain adaptable to

technological advancements in public administration.

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