



Digital Competence and Sustainable Service Delivery of Employees in Commercial Banks

¹Adelu, Esther Modupe¹ & ²Akintelu, Lola Oluwatoyin

Department of Office Technology and Management, Management Information System Unit²,
 The Federal Polytechnic, Ilaro, Ogun State, Nigeria.

esther.akintola@federalpolyilaro.edu.ng; lola.akintelu@federalpolyilaro.edu.ng

Abstract

This study examined digital competence and sustainable service delivery of employees in commercial banks. The study population comprised of all employees in the commercial banks in Ilaro, Ogun State. Fifty (50) employees were selected from five different banks in Ilaro as sample. A structured questionnaire was formulated and further administered on the respondents. The questionnaire consists of items adopted from previous studies. Data obtained were analysed with descriptive statistics while the hypotheses were tested with the use of linear regression at 0.05 level of significance. Findings revealed that there is a strong positive relationship between service delivery of employees in banks and their digital competence (information and data literacy, communication and collaboration abilities and ICT usage safety skill). The study concluded that as technology advances, building a digital competence is essential for employees in the banking industry for effective service delivery. This is because digital technology significantly impacts the way banks operate. It was therefore recommended that employees in the banking industry should be ready and receptive to learning new skills and competencies, keeping in mind that their chosen careers are constantly changing and that they should not be left behind in the use of evolving technologies in this digital era.

Keywords: Digital Competence, Information and data literacy, Communication and collaboration abilities, ICT usage safety skill, Service Delivery

Citation

Adelu, E. M. & Akintelu, L. O. (2026). Digital Competence and Sustainable Service Delivery of Employees in Commercial Banks. *International Journal of Women in Technical Education and Employment*, 7(1), 39 – 46.

ARTICLE HISTORY

Received: May 13, 2026
 Revised: May 28, 2026
 Accepted: June 4, 2026

Introduction

Over the past few decades, technology has undoubtedly altered the way financial services are provided. Particularly in the banking sector, technological advancements have completely changed the way services are provided. A growing number of banks throughout the world are expanding their service delivery capabilities and connecting with their clients by providing inexpensive, self-service options automated channels consequently upon the advancement of safe transaction systems. Information and communication technology advancements have wholly reformed how services are rendered in modern banking industry. Innovative methods of

providing services have been made possible by information systems derived from new and advanced technology. “Emerging technologies such as artificial intelligence (AI), robotics, cloud computing, blockchain, virtual and augmented reality, mobile platforms, and big data analytics are redefining how knowledge is created, stored, retrieved, and disseminated” (Tshabalala & Dube, 2024; Oladokun et al., 2023). According to Malgwi & Orumah (2025), these innovations hold enormous promise for enhancing service delivery, improving efficiency, and fostering new models of scholarly communication.

Chavira (2023) defines service as a means of delivering value to customers by facilitating the

outcome customers want to achieve without ownership by customer of the specific process roles and risks. Service delivery has the potential of enhancing organization's well-being and competitive performance which may further enhance service quality (Huang, et. al 2020). According to Amusan (2020), service delivery is a measure of how well an employee meets the job's requirements. Positive service delivery of employees is crucial in any service organization as it connects the organization with its customers, thereby representing a critical factor towards the development of effective customer working relationships (Olayiwola et. al, 2024).

Burnes (2024) opines that service delivery as a set of processes that provide the architecture on how the service will be rendered. Information technology and telecommunications capabilities must be integrated in order to deliver exceptional and unparalleled services. Service delivery is an approach that places pressure on bank employees' sense of responsibility and commitment in attending to the needs of individuals (Obi, 2022). The banking sector continuously embrace advances in IT and has extensively utilized information and communication networks to deliver numerous number of value-added services in an effort to keep up with trends, enhance the quality of service render, and lower operation costs. By using new communication technology, the majority of banks are progressively reducing employees in their branches. In order to guarantee efficiency and preserve market share, the commercial banking sectors have become more competitive, which has forced the use of advanced channels that are economical in providing financial services.

Work becomes more digital: computer technology substitutes workers in performing routine tasks that can be described with programmed rules, while also complementing workers in executing non-routine tasks demanding flexibility, creativity, generalized problem-solving capabilities and complex communications (Autor et al., 2023). As a result, the demand for digital competences of commercial bank employees seems to grow even faster. Digital competency is defined as competency related to current skills that describe

skills related to ICT (Lee & Meng, 2021). The term "digital competence" refers to the abilities needed to use technology, and it evolves, renews, and changes as technology advances. It can be viewed as a border notion that can be applied in a variety of situations, but it is always connected to the abilities and methods needed to make effective use of new technology (Ilomaki, 2016). However, the development of technologies and their application in the community and work environments go hand in hand with the notion of comprehending and using them.

Digital Competence in the opinion of Ononye et al. (2024) refers to an employee's ability to make use of digital/modern technologies in the utmost effective and resourceful way. It entails a series of expertise, behaviours and idea which allows employees to navigate, collaborate and carry out their work duties in an extremely competitive, dynamic and digitalized work environment. The main components of digital competence are digital literacy, information literacy, communication and collaboration, digital content creation, digital citizenship, digital safety and security and critical thinking and problem solving (Stellmann & Song, 2024). Information and data literacy, teamwork and communication, and ICT use safety skills will be used in this study. Information and data literacy in this study refers to finding and retrieving information. Collaboration and communication entail using digital tools to engage and work together while taking cultural diversity into consideration. Safety in digital contexts refers to safeguarding gadgets, private information, and confidentiality.

Commercial banks are customer-oriented service industry. In today's technologically driven banking industry, digital competency among employees plays a vital role in ensuring efficient and effective service delivery. The banking industry's digital transition has put unprecedented responsibilities on workers to have sufficient digital skills. However, there is a continuous and widespread disconnect between employees' actual digital expertise and the deployment of technological advances in many service sectors, especially commercial banks. Data input mistakes, security lapses, and client

dissatisfaction with commercial bank services are all examples of this gap. There is still a great deal to learn about how digital competence directly affects the quality of services provided in commercial bank environments, despite the fact that existing literature has examined digital competence in educational and library settings. As banks increasingly adopt digital solutions and platforms, it is of utmost importance to classify the specific digital skillset required for different roles within the banking sector. This is due to the fact that employees' capacity to respond to consumer inquiries, deliver precise information, and promptly address problems using digital tools is crucial. Hence, this study focuses on digital competence and sustainable service delivery of employees in commercial banks.

The study sought to ascertain the impact of information and data literacy, communication and collaboration abilities and ICT usage safety skill on service delivery of employees in commercial banks in Ilaro.

Hypotheses

The following hypotheses were tested

H₀₁: Information and data literacy does not have any significant impact on service delivery of employees in commercial banks in Ilaro.

H₀₂: Communication and collaboration abilities does not have any significant impact on service delivery of employees in

commercial banks in Ilaro.

H₀₃: ICT usage safety skill does not have any significant influence on service delivery of employees in commercial banks in Ilaro.

Materials and Method

For this study, a descriptive research design was used. In this study, the population covered all employees in commercial banks in Ilaro. The selected are UBA Bank Plc, Wema Bank Plc, Polaris Bank Ltd, Access Bank Plc and Union Bank Plc. Fifty (50) staff were randomly selected from the different bank to form the sample. A structured and self-administered questionnaire was the main instrument used to collect data from the respondents and items from questionnaire were adapted from existing literatures. Out of fifty (50) copies of the questionnaire administered, forty-two (42) copies were duly filled and returned. Data gathered were shown in tables and analyzed using descriptive statistics while the hypotheses were tested using linear regression at the 0.05 level of significance.

Results

Ho1: Information and digital literacy does not have any significant impact on the service delivery of employees in commercial banks in Ilaro ogun state.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.248 ^a	.061	.038	2.66051

a. Predictors: (Constant), IDL
Source: SPSS Result (2026)

The Model Summary Table 1 shows the R-value of 0.248. This means that there is a strong relationship between the independent variable (information and digital literacy) and the dependent variable (service

delivery of employees). The result also indicates that about 61% of the total variation in the service delivery of employees could be attributed to the information and digital literacy of employees in

commercial banks in Ilaro.

Table 2: ANOVA^a

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	50.381	1	50.381	16.885	.004 ^b
	Residual	470.631	83	5.670		
	Total	521.012	84			

a. Dependent Variable: SD

b. Predictors: (Constant), IDL

Source: SPSS Result (2026)

The F-statics value of 16.885 and P-value of 0.04, which is less than the 0.05 level of significance, are displayed in the Anova Table 2. This indicates that the relationship between the independent variable

(information and digital literacy) and the dependent variable (employee service delivery) is theoretically acceptable and adequate.

Table 3: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.500	3.032		3.133	.003
	IDL	.394	.244	.248	1.617	.004

a. Dependent Variable: SD

Source: SPSS Result (2026)

The Regression table 3 shows the impact of information and digital literacy on the service delivery of employees. From the result, the significant value of 0.04, which is less than 0.05 indicates that information and digital literacy has significant impact on the service delivery of employees. From the result, it is revealed that units increase in information and digital literacy will lead to about 39% increase in the service delivery of employees. Hence at T-value 1.617 and P-value

$0.04 < 0.05$, we reject the null hypotheses and accept the alternative hypotheses that information and digital literacy has significant impact on the service delivery of employees of commercial banks in Ilaro.

Ho2: Collaboration and Communication Abilities do not have any significant impact on the service delivery of employees of commercial banks in Ilaro.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.596 ^a	.355	.339	2.20475

a. Predictors: (Constant), CCA

Source: SPSS Result (2026)

The Model Summary Table 4 shows the R-value of 0.596. This indicates that the dependent variable (employee service delivery) and the independent variable (collaboration and communication skills) have a strongly correlation. About 35% of the total

variation in the service delivery of employees could be attributed to the collaboration and communication abilities of employees in commercial banks in Ilaro according to the result.

Table 5: ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	107.207	1	107.207	22.055	.000 ^b
Residual	194.436	40	4.861		
Total	301.643	41			

a. Dependent Variable: SD

b. Predictors: (Constant), CCA

Source: SPSS Result (2026)

The F-statics value of 22.055 and P-value of 0.00, which is less than the 0.05 level of significance, are displayed in the Anova Table 5. This indicates that the relationship between the independent variable

(collaboration and communication skills) and the dependent variable (employee service delivery) is analytically sufficient and appropriate.

Table 6: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.467	1.923		2.842	.007
CCA	.523	.111	.596	4.696	.000

a. Dependent Variable: SD

Source: SPSS Result (2026)

The Regression table 6 shows the impact of collaboration and communication abilities on the service delivery of employees. From the result, the significant value of 0.00, which is less than 0.05 indicates that collaboration and communication

abilities has significant impact on the service delivery of employees. From the result, it is revealed that a unit increase in collaboration and communication abilities will lead to about 59% increase in the service delivery of employees.

Hence at T-value 4.696 and P-value $0.00 < 0.05$, we reject the null hypotheses and accept the alternative hypotheses that collaboration and communication abilities has significant impact on the service delivery of employees of commercial banks in

Ilaro.

H₀₃: ICT usage safety skill does not have any significant influence on the service delivery on employees in commercial banks in Ilaro.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.696 ^a	.485	.472	1.97137

a. Predictors: (Constant), SS

Source: SPSS Result (2026)

The Model Summary Table 7 shows the R-value of 0.696. This means that there is a strong relationship between the independent variable (ICT usage safety skills) and the dependent variable (service delivery

of employees). From the result, about 48% of the total difference in the service delivery of employees could be attributed to the ICT usage safety skills of employees in commercial banks in Ilaro.

Table 8: ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	146.191	1	146.191	37.617	.000 ^b
Residual	155.452	40	3.886		
Total	301.643	41			

a. Dependent Variable: SD

b. Predictors: (Constant), SS

Source: SPSS Result (2026)

The F-statics value of 37.617 and P-value of 0.00, which is less than the 0.05 level of significance, are displayed in the Anova Table 8. This indicates that the model's relationship between the independent

variable (ICT usage safety skills) and the dependent variable (employee service delivery) is statistically appropriate and sufficient.

Table 9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	6.482	1.320		4.913	.000
SS	.471	.077	.696	6.133	.000

a. Dependent Variable: SD

Source: SPSS Result (2026)

The Regression table 9 shows the impact of ICT usage safety skills on service delivery. The notable

value of 0.00, which is not up to 0.05 from the result, specifies that ICT usage safety skills has

significant impact on service delivery of employees in commercial banks. From the result, it is revealed that a unit increase in ICT usage safety skills will lead to about 69% increase in service delivery of employees in commercial banks. Hence at T-value 6.133 and P-value $0.00 < 0.05$, the alternative hypotheses were accepted that ICT usage safety skills has significant impact on service delivery of employees in commercial bank in Ilaro, Ogun State.

Discussions

Hypotheses one shows the effect of information and data literacy on service delivery of employees. From the result, it was revealed that information and data literacy contribute to the service delivery of employees with a p-value of 004 which is less than 005. The outcome signifies that employee competence to search, filter data and information through digital technologies, manage data and information to team members different them from others. The aforementioned revealed that information and data literacy has significant impact on service delivery of employees in commercial banks in Ilaro, Ogun State. Association of College & Research Libraries (2016) opine that, information and data literacy empower employees to analyze and interpret data accurately and that employee can leverage on data-driven insights to identify patterns, trends, and areas for improvement in their services.

Hypotheses two shows the effect of collaboration and communication abilities on service delivery of employees. From the result, it was revealed that collaboration and communication abilities contribute to the service delivery of employees with a p-value of 000 which is less than 005. The outcome indicates that employee confidence and ability to collaborate with team member in sharing information, managing data, interacting with customer through digital technology makes them unique. The aforementioned revealed that collaboration and communication abilities have significant impact on service delivery of employees in commercial banks in Ilaro, Ogun State. However, according to Project Management Institute (2017) communication plays critical roles

in project success, emphasizing that poor communication can lead to project failure and that when employees possess strong communication skills, they can articulate ideas, expectations, and requirements clearly, minimizing the likelihood of misunderstandings and errors in service delivery.

Hypotheses three posit the effect of ICT usage safety skill on service delivery of employees. From the result, it was revealed that ICT usage safety skill contribute to the service delivery of employees with a p-value of 004 which is less than 005. This posits that the often use of secured and encrypted internet connection when assessing website in order to protect personal and workplace information and the frequent backup of important files to prevent loss. The aforementioned revealed that ICT usage safety skill have significant impact on service delivery of employees in commercial banks in Ilaro, Ogun State. However, Accenture (2021) emphasizes the need for a proactive approach to cyber security, with well-trained employees being a key component of a robust defense strategy that When an employee's possess ICT safety skills, they can identify and respond to potential threats, minimizing the impact on service delivery.

Conclusion

Based on the study's results, the study concluded that because digital competence is always evolving, it is a highly sought-after skill in the workplace. Digital competency is required as technology becomes more prevalent in both the banking sector and daily life. Nonetheless, there are still certain workers in the banking sector who lack digital competency and whose abilities need to be strengthened for efficient service delivery. As technology advances, building a digital competence is essential for employees in the banking industry for effective service delivery. This is because digital technology significantly impacts the way banks operate.

Recommendations

- i. Employees in the banking industry should be ready and receptive to learning new skills and competencies, keeping in mind

that their chosen careers are constantly changing and that they should not be left behind in the use of evolving technologies in this digital era.

- ii. Every employee should learn fundamental digital competencies to improve their service delivery. Employers should also encourage employees to acquire these skills/competencies by providing incentives and support.
- iii. To enable employees to be digitally competent and improve their service delivery, employers in the bank should provide necessary training opportunities to acquire new skills created by digital technologies.

References

- Autor, D. H., Levy, F., Murnane, R. J. (2003): The skill content of recent technological change: An empirical exploration. *The Quarterly Journal of Economics*, 118, 1279–1333.
- Burnes, B. (2004). *Managing Change: A Strategic Approach to Organizational Dynamics*. New Jersey: Prentice Hall.
- Ilomäki, L., Paavola, S., Lakkala, M., Kantosalo, A. (2016): Digital competence – an emergent boundary concept for policy and educational research. *Education and Information Technologies* 21, 655–679.
- Lee, J. J., & Meng, J. (2021). Digital competencies in communication management: A conceptual framework of Readiness for Industry 4.0 for communication professionals in the workplace. *Journal of Communication Management*, 25(4), 417–436. <https://doi.org/10.1108/JCOM-10-2020-0116>.
- Malgwi, P. G. & Orumah, G. O. (2025). Digital Technology Adoption in Library and Information Services: A Comparative Position on Challenges Facing Early-Career LIS Professionals. *Niger Delta Journal of Library and Information Science*. 6(2), 97 – 103. DOI: <https://doi.org/10.5281/zenodo.18606927>
- Milu Andi. (2020). Pengaruh kompetensi digital (e-skills) terhadap kinerja pustakawan di UPT Perpustakaan Universitas Hasanuddin. *JUPITER*, 17(2), 104-117.
- Muizu, W. O. Z., & Budiarti, L. (2017). Dampak program pelatihan terhadap kompetensi digital karyawan PT. Belant Persada di Bandung. 35, 733–740. Retrieved from https://www.unisbank.ac.id/ojs/index.php/scndi_u/article/view/509
- Nursehah I, Chaerudin. (2022). The effect of competence and emotional intelligence on the performance of Pawon Nusantara Coffee employees on the Island of Java. *PRIMANOMICS: Journal of Economic and Business*, 20(3), 1-71.
- Oladokun, B. D., Owolabi, A. K., Aboyade, M. A., Wiche, H. I., & Aboyade, W. A. (2023). Emergence of robotic technologies: Implications for Nigerian academic libraries. *Library Hi-Tech News*. <https://doi.org/10.1108/LHTN-02-2023-0031>
- Ononye, U., Ighoroje, J. & Agbogun, O. (2024). "Digital transformation and firm performance nexus: A study of commercial banks in Delta State, Nigeria. St," *St. Theresa Journal of Humanities and Social Sciences*, 10(2), 122-138. <https://doi.org/10.1007/s42413-024-00123-4>
- Stellmann, E. & Song, L. (2024). "Essential elements of digital citizenship: Insights from the literature," *TechTrends*, 68(4), 749-760.
- Tshabalala, N., & Dube, L. (2024). Emerging technologies and skills to improve service delivery in digital libraries. *South African Journal of Libraries and Information Science*. <https://doi.org/10.7553/90-2->