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Navigating Digital Accounting in Cape Coast Banks: Proficiency, Data-Security Concerns, and Training Gaps among Ghanaian Banking Professionals

Boafoh Emmanuel Nkyi [1] *Joe Appiah Akwasi Addai* ✉

[1] *School of Economics and Management, Chang'an University, China*
✉ *Department of Geography and Regional Planning, University of Cape Coast, Ghana*

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Corresponding author. Joe Appiah Akwasi Addai
✉ *jaappiah@stu.ucc.edu.gh*

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The author(s) declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

ABSTRACT

Purpose: The study examined how banking professionals navigate digital technology in accounting processes in Cape Coast, Ghana. It focused on technology proficiency and integration, the impact of data security, and the effects of training and collaboration on the banking sector.

Research Design and Methodology: Purposive sampling was employed to collect data through questionnaires from 50 banking employees in Cape Coast.

Findings and Discussion: The study showed that banking professionals in Cape Coast have largely embraced accounting technologies. While they are comfortable with digital tools and cloud-based systems, roughly one-third of staff have yet to adopt cloud solutions, and more than 40% remain unsure about automation. Data security emerged as a significant concern, with most participants expressing worry about safeguarding financial information from cyber threats. Confidence in current data management systems was reported by 48% of respondents, while 32% deemed them fair, and 6% considered them weak. Perceptions of training for new digital tools varied, with 40% rating it as fair and 42% rating it as good or very good.

Implications: Digital accounting training was generally well-received for professional development; however, areas for improvement in effectiveness were identified. Demographic factors were found to have no significant influence on digital accounting constructs. It is recommended that banking institutions implement comprehensive training programs for their accountants and invest in cybersecurity measures.

Introduction

Digital technology now touches every step of modern accounting, from cloud-ledgers to real-time dashboards. Around the world, banks have moved large volumes of paper files into fast, searchable systems, making accuracy and speed the new norm in financial reporting (Aparecido, 2020; Albuquerque Filho *et al.*, 2022). Fintech firms have raised the bar further by offering friction-free services; Capgemini estimates that almost two-thirds of bank clients also use at least one fintech platform, revealing the competitive pressure on traditional institutions (Nurjanah *et al.*, 2023). For accountants, this shift demands new skills in data analysis, cybersecurity, and systems integration, areas once viewed as the remit of IT staff (JieWei *et al.*, 2023). Technologies such as robotic process automation, blockchain, and big data analytics promise significant efficiency gains. However, they

also expose gaps in long-standing accounting rules and pose new risks if data are mishandled (Coman et al., 2022).

These global trends are keenly felt in Ghana, where banks are facing a sharp rise in digital transactions and a corresponding increase in cyber threats. Kolog and Mohammed (2023) demonstrate that legacy bookkeeping routines struggle to keep pace with the volume, velocity, and complexity of digital records, resulting in errors and security concerns. Compatibility issues between multiple banking apps and core accounting software slow down reconciliation and heighten the risk of breaches, thereby threatening customer trust. At the same time, studies report a cautious attitude toward advanced tools such as AI and blockchain; Gyimah *et al.,* (2023) link this reluctance to worries about cost, regulation, and staff readiness. The shortage of accountants trained in digital methods exacerbates the challenge and limits banks' ability to leverage new technology for growth and improved service quality (Anomah *et al.,* 2024; Gyekye & Amo, 2024).

These global developments are also significantly felt in Ghana, where banks are experiencing a surge in digital transactions and the concomitant increase in cyber vulnerabilities. Kolog & Mohammed, (2023) show that traditional bookkeeping processes do not effectively capture the volume, velocity, and variety of digital data, leading to inaccuracies and a lack of security. Reconciliation is slowed when two banking apps do not communicate with each other, and this also causes security issues that can jeopardize client trust. Meanwhile, examinations have revealed a guarded approach to cutting-edge technologies, such as AI and blockchain; Gyimah *et al.,* (2023) link this wariness to concerns about expense, regulation, and staff preparedness. The dearth of accountants with competence in digital means also compounds the problem and constrains banks from taking advantage of the new technology to enhance growth and quality of service (Anomah *et al.,* 2024; Gyekye & Amo, 2024).

With this background, this study focuses on the coping mechanisms used by banking professionals in Cape Coast regarding digital transformation in accounting processes. In particular, this study has three purposes: (1) to evaluate the level of accountants' skills and adoption of any new information technology into regular accounting activities, (2) to compare attitudes towards data security and management between groups of accountants using general digital tools, and (3) to assess the effect of training and collaborative initiatives on accountants' adaptation for the digital age. By linking these objectives directly to the identified gaps, the research aims to offer practical guidance for managers and policymakers seeking to steer Ghanaian banking safely through its digital evolution.

Literature Review

Digital technology now drives nearly every accounting function, and the banking sector has emerged as a testing ground for its advantages and disadvantages. Following the COVID-19 shock, banks worldwide have combined digital channels with face-to-face services, but this new model demands fresh skills and nimble regulation (Baskerville *et al.,* 2020). Across countries such as Indonesia and Ghana, accountants continue to struggle with transitioning from periodic, paper-based ledgers to continuous, real-time reporting—an Industry 4.0 expectation that many graduates have yet to meet (Damayanti, 2019). Cloud platforms can reduce that gap: most practitioners welcome them, provided employers invest in ongoing digital training (Conman *et al.,* 2022). Evidence from Azerbaijan and Jordan confirms that cloud finance, mobile banking, and FinTech competition now enhance performance, although success depends on a strong digital culture and staff who can quickly master new software (Abbasov *et al.,* 2019; Al-Okaily *et al.,* 2023).

Automation marks the next frontier. Robotic Process Automation already eliminates routine posting and reconciliation, yet Sudanese firms still face weak infrastructure and tight budgets that slow the wider rollout (Obaid, 2024). Romanian accountants share that caution—only 15% currently use AI, though 90% expect big-data tools to reshape their roles (Groșanu *et al.,* 2021). Nigeria offers a brighter picture: computerized accounting boosts profit and customer trust, but power cuts and malware expose banks to fresh risks (Akesinro & Adetoso, 2016). These mixed results help explain why Ghanaian staff report high digital proficiency yet only moderate confidence in automation. Real value, as JieWei *et al.,* (2023) note, appears only when new code is paired with integrated data warehouses, robust analytics, and steady upskilling.

As digital transactions increase, security concerns intensify. Jordanian auditors now juggle cloud logs, electronic evidence, and evolving privacy laws, which introduce novel audit risks at every step (Al-Khasawneh, 2022). Researchers, therefore, urge the implementation of layered safeguards, including strong encryption, frequent cyber-awareness sessions (Kafi & Akter, 2023), and clear cross-border data rules (Valentinetti & Muñoz, 2021). In Ghana, soaring transaction volumes already strain legacy systems, increasing the risk of breaches when skills and controls fail to keep pace (Kolog & Mohammed, 2023).

Training emerges as the decisive lever that links proficiency, automation, and security. Cloud projects thrive when firms embed microlearning into their daily operations (Popivniak, 2019), and collaboration software accelerates this learning by connecting dispersed teams in real time (Vera-Muñoz *et al.,* 2006). However, many Ghanaian accountants still hesitate to adopt AI because they doubt their capability (Gyimah *et al.,* 2023). This gap needs to be bridged through systemic professional development plans (Daraojimba *et al.,* 2023) and university courses that incorporate coding, analytics, and ethics into traditional audit syllabi (Ebirim *et al.,* 2024).

The review makes clear that digital accounting instruments can enhance efficiency and transparency — but only if employees have the abilities and self-confidence to use and/or understand them and establishments defend the data produced. The varying levels of cloud adoption, potential indecisiveness about automation, and increasing security complexities highlight an urgent need to understand accountants' experiences with this transition within Cape Coast banks. The current study aims to provide managers and educators with the practical understanding needed to safely navigate the digitization of Ghana banking by examining proficiency, data security concerns, and training gaps in a single environment.

Theoretical Overview

The study draws on the diffusion of innovation theory and institutional theory to guide its approach. The study first draws on the Diffusion of Innovation (DOI) theory, which explains how new ideas and technologies spread through a social system over time (Rogers, 2003). DOI is valuable because it offers explicit stages of knowledge, persuasion, decision, implementation, and confirmation, as well as sharp adopter categories, from innovators to laggards. These features help identify the stages that accountants go through as they learn about, test, and finally embed cloud-ledgers, robotic-process tools, or data analytics dashboards. In addition, the theory emphasizes the influence of peer networks and opinion leaders, reminding us that a single respected branch manager can significantly accelerate the adoption of an unfamiliar platform (Kaminski, 2011).

Nevertheless, DOI has its limitations, as its step-by-step path can obscure the messy loops, policy shocks, or budget cuts that often slow adoption in real-life settings (Bayer & Melone, 1989). It also focuses heavily on the attributes of a single technology rather than on wider economic or cultural barriers. Despite these weaknesses, DOI remains useful here because it enables the study to gauge where Cape Coast accountants stand on the adoption curve and which perceived advantages or fears motivate them to move forward or hold them back.

To balance that technology-centered lens, the research also turns to Institutional theory, which stresses that organizations conform to rules, norms, and peer pressures to win legitimacy (Powell & Colyvas, 2008). Banks do not adopt digital accounting tools in isolation: regulators demand secure audit trails, customers expect instant statements, and rival banks showcase sleek mobile apps. Institutional theory categorizes these forces into coercive, normative, and mimetic pressures, providing a rich understanding of why even reluctant firms may still upgrade their systems (Krell *et al.,* 2016). Its strength lies in revealing how regulation and professional standards push change, something DOI treats only lightly. However, critics note that the theory can overstate stability and overlook the creativity of individuals who bend or re-invent rules (Edwards, 2015). It also tends to zoom out at the macro level, leaving day-to-day skill gaps or software glitches underexplored.

Combining the two frameworks provides the present study with a more comprehensive view. DOI pinpoints the "how fast" and "why" of technology uptake among individual accountants, while Institutional theory explains the "who pushes" and "what pressures" that shape bank-wide decisions. Together, they reveal why Ghanaian accountants may admire cloud efficiency yet hesitate to adopt

automation until regulators endorse it, training becomes routine, and respected peers signal success. By weaving these perspectives, the research can trace both personal confidence levels and systemic forces, identify the precise obstacles that slow digital progress, and propose training or policy remedies matched to Cape Coast's banking context.

Research Design and Methodology

The study employs a quantitative research approach, focusing on collecting and analyzing data on digital technologies implemented in the banking sector in Cape Coast. The data was used to measure the extent of digital technology use and its impact on accountants and the accounting process in the banking sector. The study employed descriptive research design. In this study, descriptive research design enables the systematic gathering of information about digital technologies, describing their characteristics and impacts on accountants (Siedlecki, 2020). Participants in the study were accountants, managers, and banking staff in Cape Coast, Ghana. They were chosen because they are involved in accounting roles and use digital technologies in the banking sector. Their insights are invaluable to addressing the challenges of the digital accounting age and in developing practical solutions to these issues. A purposive sampling technique was employed to select the study sample. Purposive sampling allows for the selection of participants according to criteria appropriate to the study's aims (Rai & Thapa, 2015). The purposive sampling method is described as a strategic selection of individuals with expertise and direct involvement in using digital accounting technologies. This purposeful selection ensures that the data ordered is deeply relevant and rich in information, thereby providing the study with the most significant potential to address the research questions by focusing on those most informed about the phenomenon. Fifty (50) respondents were purposively recruited into the study and responded to the questions willingly.

The study's inclusion criteria focused on accountants, managers, and banking professionals in Cape Coast, Ghana, who actively engage in accounting processes and utilize digital technologies in the banking industry. This enables the participants to have first-hand experience of the digital accounting challenges under investigation. Conversely, non-banking workers, those unrelated to the accounting process, non-users of digital media at work, and those unwilling to participate in the research were excluded to maintain the focus and specificity of the research.

The data collection instrument used in the study was a questionnaire. The questionnaire consisted of 35 closed and open questions, which were used to collect information from the study participants. The questionnaire captured the demographic profile. It contained Likert scale questions designed to provide information on the proficiency and integration of technology, its effect on data security and management, its impact on training and collaboration among accountants, and the challenges it presents. The data collection began with obtaining informed consent and permission from the banks and respondents to carry out this research. The questionnaire link was shared with the banks and distributed to the participants for self-administration. It was expected that everyone would take no more than 20 minutes to complete the questionnaires. The study was

Reliability and Validity

Experts also reviewed the questionnaire and pilot-tested it in banks in Accra to ensure that the items represented all the dimensions of the constructs they measured. The relevance, clarity, and comprehensiveness of the items to the constructs were rated by the experts. The questionnaire was pre-tested by 30 bankers in Accra to help them assess their views on the questions and correct any deficiencies in the instrument. Additionally, the instrument's internal consistency was examined using Cronbach's alpha. The three factors of the scale were examined for reliability using the Likert scale, as reported in Table 1 below. Cronbach’s alpha coefficients for the three components of the questionnaire are acceptable. Also included in the excellent range were "Proficiency and Integration of Technology" (0.879) and "Data Security and Management" (0.894). Although the "Training and Collaboration" dimension remains at 0.786 (still satisfactory), it indicates that the items are homogeneous. Moreover, Cronbach's alpha coefficients, ranging from 0.786 to 0.894, were greater than 0.70 for all constructs, thus indicating that the constructs were reliable across the study (Pallan, 2020).

Table 1. Descriptive Statistics, reliability measure, validity indices for all latent variables, including mean, standard deviation, and Cronbach's alpha.

Variables	No. of Items	Cronbach Alpha	Mean	Standard Deviation
PI	5	0.879	3.940	0.999
DM	5	0.894	3.588	1.038
TC	6	0.786	3.73	0.915

Data Processing and Analysis

The survey data were reviewed for completeness and accuracy, and any discrepancies were addressed. The responses were coded and uploaded into SPSS for analysis. Descriptive analysis, including frequencies, mean, and standard deviation, was provided in tables. Inferential statistics, such as correlation and MANOVA, were performed on the data and presented in tables.

Ethical Consideration

Each of the bank's management granted ethical approval and permission before data collection commenced. All participants received clear information about the purpose of the study and how their answers would be used, and their involvement was voluntary. All participants provided informed consent prior to their participation, acknowledging that the data would be used for academic purposes. Anonymity was ensured by assigning a unique code to each questionnaire, thereby preventing the identification of any individual in the results.

Findings and Discussion

Findings

Demographic Information of Participants

Table 2 presents the demographic information of the study participants. Most participants were males (68%) and aged 18-27 (84%), with smaller groups aged 28-37 (8%) and 38– 47 (8%). In terms of educational level, 78% held a master's degree, 14% held a bachelor's degree, 8% held a diploma, and 4% held a PhD. For Job roles, 42% of the participants worked as accountants, 18% as risk and compliance officers, 14% as cashiers, 10% as auditors, and 8% as financial analysts and chief accountants.

Table 2. Demographic Information of the Participants

Variable	Frequency	Percentage
Gender		
Male	34	68.0
Female	16	32.0
Age Category		
18 - 27	42	84.0
28 - 37	4	8.0
38 - 47	4	8.0
Educational Level		
Diploma	4	8.0
Bachelor's Degree	7	14.0
Master's Degree	37	74.0
PhD	2	4.0
Job Position		
Accountant	21	42.0
Auditor	5	10.0
Cashier	7	14.0
Financial Analyst	4	8.0
Chief Accountant	4	8.0
Risk and Compliance Officer	9	18.0
Total	**50**	**100%**

Proficiency and Integration of Technology in Accounting Practices

The survey results in Table 3 presented a mixed perception among the participants regarding their proficiency and integration of technology in accounting practices. A significant portion of respondents (34% High, 12% Very High) expressed comfort with digital accounting software, although about 36%

reported moderate comfort. Adaptation to cloud-based accounting systems appears to be progressing, with 38% indicating moderate adaptation and 24% indicating high adaptation; however, 34% (18% Very Low and 16% Low) still report low levels of adaptation. Proficiency in data analytics tools for financial analysis is relatively strong, with 38% rating it as high and 24% as very high. However, confidence in implementing automation in the accounting process is more mixed, with 42% (14% Very Low, 28% Low) expressing lower confidence, compared to 30% high confidence. Finally, the integration of digital systems with existing accounting systems was perceived positively by a majority, with 40% rating it as high and 8% as very high.

Table 3. Perception of respondents on the proficiency and Integration of Technology in Accounting Practices

Statement	Very Low (%)	Low (%)	Moderate (%)	High (%)	Very High (%)
How comfortable are you with using digital accounting software?	0(0)	9(18.0)	18(36.0)	17(34.0)	6(12.0)
To what extent have you adapted to using a cloud-based accounting system?	9(18.0)	8(16.0)	19(38.0)	12(24.0)	2(4.0)
Please rate your proficiency in using data analytics tools for financial analysis.	2(4.0)	9(18.0)	8(16.0)	19(38.0)	12(24.0)
How confident do you feel in implementing automation in the accounting process?	7(14.0)	14(28.0)	10(20.0)	15(30.0)	4(8.0)
How well do digital systems integrate with existing accounting systems?	3(6.0)	8(16.0)	15(30.0)	20(40.0)	4(8.0)

Data Security and Management in the Digital Accounting Process

The results in Table 4 reveal a strong perception among the respondents regarding the importance and effectiveness of data security and management in the digital accounting process. Most of the participants expressed high concern about data security in accounting practices (38% high and 24% very high). Data management systems were perceived mainly as efficient in handling financial data securely (48% "High" and 14% "Very High"). Furthermore, there is a strong belief that data management strategies meet regulatory requirements (36% "High" and 22% "Very High"). Technology is widely seen as facilitating compliance with data privacy regulations (48% "High" and 18% "Very High"). Finally, the effectiveness of organizations' efforts in maintaining data privacy and security was highly rated by the participants (66% "High" and 12% "Very High").

Table 4. Perception of Respondents on the impact of data security and management in the Digital Accounting Process

Statement	Very Low (%)	Low (%)	Moderate (%)	High (%)	Very High (%)
How are you concerned about data security in digital accounting practices?	3(6.0)	0(0)	16(32.0)	19(38.0)	12(24.0)
How efficient are data management systems in handling financial data securely?	0(0)	3(6.0)	16(32.0)	24(48.0)	7(14.0)
To what extent does data management strategy align with regulatory requirements?	3(6.0)	2(4.0)	16(32.0)	18(36.0)	11(22.0)
To what extent does technology facilitate compliance with data privacy regulations?	3(6.0)	2(4.0)	12(24.0)	24(48.0)	9(18.0)
Rate the effectiveness of your organization's efforts in maintaining data privacy and security	0(0)	3(6.0)	8(16.0)	33(66.0)	6(12.0)

Training and Collaboration

The findings from Table 5 indicate a mixed but generally positive perception among participants on training and collaboration in the digital accounting process. While 40% rated ongoing training and support for new digital tools as "Moderate," a combined 42% (26% "High," 16% "Very High") viewed it positively, with only 18% reporting "Low" or "Very Low." The effectiveness of digital accounting training sessions for professional development was rated highly by most participants (44% "High" and 26% "Very High"). Digital tools are generally perceived as effective in facilitating communication with colleagues (32% "High" and 22% "Very High"), though 32% also reported "Moderate" effectiveness. Experience in

collaborating with cross-functional teams using digital platforms was largely positive (32% "High" and 34% "Very High"). Digital communication tools are seen to significantly impact efficiency in accounting processes (28% "High" impact and 30% "Very High" impact). Lastly, the contribution of communication technology to effective collaboration in accounting operations was highly rated (44% as "High" and 26% as "Very High"), showing a strong positive view.

Table 5. Perception of respondents on training and collaboration in the Digital Accounting Process

Statement	Very Low (%)	Low (%)	Moderate (%)	High (%)	Very High (%)
How do you rate the ongoing training and support for utilizing new digital tools in accounting?	3(6.0)	6(12.0)	20(40.0)	13(26.0)	8(16.0)
Rate the effectiveness of digital accounting training sessions in your professional development.	6(12.0)	5(10.0)	4(8.0)	22(44.0)	13(26.0)
How effectively do digital tools facilitate communication with colleagues in accounting tasks?	3(6.0)	4(8.0)	16(32.0)	16(32.0)	11(22.0)
Rate your experience in collaborating with cross-functional teams using digital platforms.	4(8.0)	7(14.0)	6(12.0)	16(32.0)	17(34.0)
To what extent do digital communication tools impact efficiency in accounting processes?	3(6.0)	2(4.0)	16(32.0)	14(28.0)	15(30.0)
Rate the contribution of communication technology to effective collaboration in accounting operations.	8(16.0)	3(6.0)	4(8.0)	22(44.0)	13(26.0)

Correlation Matrix of Key Digital Accounting Constructs

Table 6. Pearson correlations among proficiency and integration of Technology (PI), Data Security and management (DM), and Training and collaboration (TC)

		PI	DM	TC
PI	Pearson Correlation	1	.222	.737**
	Sig. (2-tailed)		.121	.000
	N	50	50	50
DM	Pearson Correlation	.222	1	.397**
	Sig. (2-tailed)	.121		.004
	N	50	50	50
TC	Pearson Correlation	.737**	.397**	1
	Sig. (2-tailed)	.000	.004	
	N	50	50	50

**. The correlation is significant at the 0.01 level (two-tailed).

The matrix in Table 6 reveals three distinct patterns from the study. First, PI and TC share a strong positive relationship, r = .74, p < .001, meaning that staff who feel more skilled with and better integrated into digital tools also tend to report better training opportunities and smoother collaboration. Second, TC is moderately correlated with DM, r = 0.40, p = 0.004; better training and teamwork are associated with stronger perceptions of data security practices. Third, PI and DM correlate only weakly and not significantly, $r = .22$, $p = .121$, indicating that personal digital proficiency alone does not guarantee improved data-management behavior

Combined Summary of Assumption Checks, MANOVA results, and key univariate follow-up

Table 7 shows a combined summary of assumption checks, univariate, and MANOVA results. The Box's M was not significant (M = 19.38, p =.507), confirming that the groups share similar covariance structures. The multivariate tests show no overall effect of any demographic factor on the combined technology proficiency (PE), data security (DM), and training collaboration (TC) scores. For example, age category yielded Wilks' Λ =.882, F(6, 60)=0.648, p =.691; education Λ =.720, F(9, 73.16)=1.177, p =.323; job position Λ =.487, F(21, 86.69)=1.176, p =.292; and gender Λ =.933, F(3, 30)=0.714, p =.552—all well above the .05 significant threshold. Levene's tests flagged unequal error variances for PE (p = 0.047) and TC (p = 0.018). The univariate Tests of Between-Subjects Effects echoed the multivariate

pattern: none of the scales differed significantly by age, education, or position, although the Position × Sex interaction did reach significance for data-security perceptions (F = 4.88, p = .034).

Table 7. Combined Summary of Assumption Checks, MANOVA results, and key univariate follow-up

Section	Variable / Effect	Test	Statistic	df_1	df_2	*p*-value	Interpretation
Assumption checks	Equality of covariance matrices	Box's M	19.38	—	—	.507	Assumption met (groups share similar covariance)
	Equality of error variances (PE)	Levene	—	—	—	.047	Assumption violated
	Equality of error variances (TC)	Levene	—	—	—	.018	Assumption violated
MANOVA (Wilks' Λ)	Age category	Wilks' Λ	.882	6	60	.691	Not significant
	Education level	Wilks' Λ	.720	9	73.16	.323	Not significant
	Job position	Wilks' Λ	.487	21	86.69	.292	Not significant
	Gender	Wilks' Λ	.933	3	30	.552	Not significant
Univariate follow-up	Data-security (DM) Position × Sex	F	4.88	5	40	.034	Significant interaction: scores vary by the combined effect of job role and gender

*NB: The MANOVA results are reported in the **Multivariate Tests** section; they appear here under the "MANOVA (Wilks' Λ)".*

Discussion

The findings provided valuable insights into the current rate of technology adoption in the accounting field. Regarding proficiency and integration of technology, the results showed a mixed but generally positive comfort level with digital accounting software. The participants expressed moderate to high comfort using accounting tools. This aligns with global studies showing a trend of increasing digital tool adoption and usage in finance, which report positive impacts on competitive advantage (Ahmad, 2022; Asamoah *et al.,* 2024). However, the findings showed that 34% still reported low adoption of cloud-based accounting systems as a point of concern. This suggests that there may be a lag in moving to complete cloud-based solutions because of the scalability and accessibility benefits (Atadoga *et al.,* 2024; Akpan, 2024). The finding reaffirms the study by Senyo and Addae (2015), which indicates a low adoption of cloud computing in Ghana, with software-as-a-service being an example. Boateng *et al.,* (2024) suggested that despite a reduction in operational costs through cloud adoption, the adoption is hindered by security concerns, skills gaps, and inflexibility. Gyau *et al.,* (2023) identified the advantages of cloud-based accounting to rural banks in Ghana as efficiency and access. However, they also observed obstacles, including high maintenance costs and network failures, that affect the transition and adoption of the system. The strong proficiency in data analytics tools observed in the study mirrors the increasing demand for data literacy in the accounting profession for strategic decision-making (Thanasas & Kampiotis, 2024; Richardson & Shan, 2019; Green *et al.,* 2018).

Mixed confidence in the implementation of automation reveals a gap in understanding the full impact of automation on the accounting process. The 42% of participants who feel unsure about automation mirrors wider evidence that many Ghanaian finance jobs remain "highly automatable," yet staff readiness lags behind the technology (Egana del Sol, 2020). Kokina and Blanchette (2019) found that robotic process automation now handles routine ledger and reconciliation work with great speed and accuracy; however, our findings suggest that frontline accountants have not fully understood the benefits and how their roles might change. The findings showed a positive perception of digital systems integration with existing accounting systems. However, the initial challenges of system compatibility might be less significant than anticipated by critics of digital transformation.

The results regarding data security and management showed high levels of concern and a perception of security measures being very effective. The high level of concern regarding data security is in line with the increased awareness of cyber threats and regulatory requirements in the financial sector (Umoga *et al.,* 2024; Guagliano & Harris, 2022). This shows that accounting professionals understand the risks that come with Shuffling Digital Data. This indicates that organizations have implemented security protocols strong enough to ensure their systems protect financial data. Additionally, organizations are effectively aligning their data management strategies with regulations that enhance their data handling reputation. This corresponds to research that shows the impact of

strong internal controls and compliance frameworks in reducing the risk of data breaches and maintaining integrity (da Silva Brum *et al.,* 2023; Duggineni, 2023). The perception that technology enhances compliance with data privacy regulation reveals the extent to which data protection laws frame the design of digital tools. The strong score for the measures implemented by an organization to prevent data privacy and security breaches indicates a proactive attitude by entities in protecting sensitive financial data, which helps cultivate trust and continuity of business.

The findings on training and collaboration paint a more complicated picture. While a large share of respondents view training and support for new digital tools as moderate, the perception that digital accounting training sessions for professional development are highly effective is a positive sign. That means training, once it is rolled out, is feasible. This discovery reinforces the notion that ongoing professional development is crucial for adapting to the advancements in accounting technology (Draz & Ahmad, 2017; Juniardi & Putra, 2024). The efficacy of digital tools in enhancing communication among colleagues, combined with the generally positive experience of collaborating with cross-functional teams, underscores the benefits of digital platforms in promoting cooperation and information sharing. The significant perceived influence of digital communication technologies on the effectiveness of accounting processes demonstrates their function in optimizing workflows and enhancing productivity. Similarly, the significant role of communication technology in promoting practical cooperation confirms the idea that technology catalyzes improved teamwork and coordination in intricate accounting processes (Tarigan, 2023; Schut, 2023).

Nevertheless, the correlation analysis provided more profound insights into the relationships between key digital accounting constructs. The strong positive correlation between "Proficiency & Integration of Technology" and "Training & Collaboration" indicates that professionals who are well-trained and engage in collaborative environments tend to be more proficient with digital tools and integrate them more effectively. This finding reinforces the importance of investment in human capital development and fostering a collaborative culture to drive technological adoption in accounting (Halim, 2023; Jackson & Allen, 2024). The moderate association between 'Training and collaboration' and'Data Security and management' indicates that adequate training and collaboration contribute to strong perceptions and practices of data security. It was interesting that the weak and non-significant correlation between "Proficiency & Integration of Technology" and "Data Security & Management implies that knowledge in technology-related matters does not automatically lead to improved data management behaviors. Finally, the MANOVA results showed that no overall difference was found based on demographic factors (age, education, gender, or job position) in the mean scores for technology proficiency, data security, and training collaboration. This suggests that the demographic variables may be similarly perceived and experienced through digital accounting processes in this sample.

While previous research sometimes points to generational differences in technology adoption (Berraies *et al.,* 2017; Burkoski *et al.,* 2019), our study indicates a more uniform landscape. One significant interaction was found for data security perceptions, where the "Position × Sex" interaction reached significance. This suggests that the perception of data security varies depending on the combined effect of an individual's job role and gender. This area needs further qualitative exploration to understand the underlying reasons. The non-significant Box's M test confirmed the homogeneity of covariance matrices, which is a desirable condition for MANOVA. However, Levene's tests, which flag unequal error variances for "Proficiency & Integration of Technology" and "Training & Collaboration," suggest that the variability of responses in these areas differs across groups, which could be considered in future, more granular analyses.

Conclusion

The study showed that banking professionals in Cape Coast have largely embraced accounting technologies. While they are comfortable with digital tools and cloud-based systems, roughly one-third of staff have yet to adopt cloud solutions, and more than 40% remain unsure about automation, revealing that technical readiness lags behind the available technology. The study also shows that intense training and a collaborative work culture go hand in hand with higher digital proficiency, yet individual skill alone does not automatically improve data-management behavior. Demographic

factors, such as age or education, were found not to shape these attitudes. However, perceptions of data security differed by the mix of job role and gender, hinting at subtle workplace dynamics.

Based on the conclusions, it is recommended that bank managers should provide in-depth training in cloud platforms and automation, pairing workshops with peer mentoring so that early adopters can guide colleagues who feel less confident. Because collaboration enhances both proficiency and security awareness, leaders should expand cross-functional projects that enable accountants, IT staff, and risk officers to work together to solve real-world problems. To close the cloud gap, banks can start with low-risk modules—such as backup or reporting—then scale up as staff gain trust and regulators issue more precise guidance. Regular cyber drills and refreshers will help sustain the high vigilance already evident. At the same time, targeted sessions for job-role and gender groups that view security differently can ensure that no team feels overlooked. Finally, management should track progress with simple metrics (such as cloud usage rates, automated task counts, and post-training skill tests) so that investments in people and technology translate into measurable gains in accuracy, speed, and customer trust.

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