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INFLUENCE OF EMPLOYEE RESKILLING ON DIGITAL TRANSFORMATION: A STUDY OF THE SECURITIES AND EXCHANGE COMMISSION, NIGERIA

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ABSTRACT

Digital transformation has become a strategic requirement for public regulators, but the value of new platforms, automated workflows and data-intensive regulatory systems depends substantially on employees' ability to acquire and apply new capabilities. This study examind the influence of employee reskilling on digital transformation at the Securities and Exchange Commission (SEC), Nigeria. The study adopts a survey research design and draws on a study population of 1,814 participants. Using the Krejcie and Morgan (1970) approach, a sample size of 317 was obtained, and the 317 questionnaires were reported as completed and returned. Employee reskilling is operationalised through structured digital skills training, cross-functional reskilling, and continuous learning and certification, while digital transformation is measured through process automation, data-driven regulatory operations, and digital service delivery. Multiple linear regression is used to assess the joint and individual effects of the three reskilling dimensions. The manuscript-development analysis indicates positive and statistically significant effects for all three dimensions, with structured digital skills training and continuous learning and certification showing the strongest standardized effects. The paper concludes that digital transformation at a financial regulator should be treated as a people-and-technology programme rather than a technology procurement exercise. The practical implication is that SEC Nigeria should institutionalise role-based digital capability development, cross-functional learning, and recurrent certification alongside its continuing digitisation of licensing, registration, supervision and market services.

Keywords: employee reskilling; digital transformation; digital skills training; cross-functional reskilling; continuous learning; Securities and Exchange Commission; Nigeria.

Introduction

Globally, digital transformation has moved from an information-technology concern to an organizational capability that changes structures, processes, decision-making and value creation. Vial (2019) defines digital transformation as a process in which combinations of information, computing, communication and connectivity technologies trigger significant organizational changes, while Verhoef et al. (2021) distinguish digitization, digitalization and transformation and stress that transformation requires appropriate assets, capabilities and organizational structures. In recent years, rapid advances in cloud computing, artificial intelligence, analytics and automation have intensified pressure on organizations to renew the skills of existing employees rather than rely only on external recruitment (Bouwmans et al., 2024; Hoe, 2024).

Regionally, public institutions in Africa face the same capability challenge within environments characterized by uneven digital infrastructure, regulatory complexity and shortages of specialized digital talent. Research on public administration shows that successful digital government depends

not simply on deploying platforms but also on changing organizational routines and employee capabilities. In the Nigerian context, Inakefe et al. (2023) found that inadequate in-service training constrained digital literacy and weakened e-governance implementation in the Cross River State Civil Service. Jimoh (2025) further reports that employee digital literacy can shape the relationship between digital HR-system adoption and administrative efficiency in Nigerian public institutions.

Nationally, SEC Nigeria has been pursuing technology-enabled regulatory reform. SEC Nigeria commissioned work on an ICT Transformation Strategy in 2021, while its IT Department is assigned responsibility for IT requirements, IT resources, IT policies and strategies, and staff IT training and development (SEC Nigeria, 2021, 2023). In July 2026, the Commission announced full electronic registration through its ePortal as part of ongoing digital transformation initiatives to improve regulatory efficiency, transparency and service delivery (SEC Nigeria, 2026a).

In this setting, employee reskilling encompasses the deliberate acquisition of capabilities that enable employees to perform existing or redesigned work as technology changes. It may involve digital skills training, cross-functional learning, job redesign, mentoring, communities of practice and continuous certification. The literature shows that employees are central to transformation because new technologies create both new tasks and new capability requirements (Ostmeier & Strobel, 2022; D'Angelo et al., 2024). However, it has not been sufficiently established whether the reskilling practices used in a Nigerian financial regulator significantly improve digital transformation outcomes. Existing research often examines digital skills, digital government or HR practices separately, leaving a context gap around regulated public institutions and the specific reskilling pathways that support digital regulatory work. It is on this basis that the study examines the influence of employee reskilling on digital transformation at the Securities and Exchange Commission, Nigeria.

Statement of the problem

Statement of the problem: This study was necessitated by the growing need for regulatory agencies to modernize processes while maintaining accuracy, transparency, cybersecurity and public confidence. The Securities and Exchange Commission is expected to regulate and develop Nigeria's capital market while adapting to digital platforms that affect registration, licensing, compliance monitoring, data exchange, surveillance and stakeholder engagement. SEC Nigeria's ICT transformation work identified ICT as a critical area of institutional capacity strengthening, and its IT function explicitly includes staff IT training and development (SEC Nigeria, 2021, 2023). The Commission has also continued to introduce electronic processes, including the 2026 move to full e-registration for specified applications through its ePortal (SEC Nigeria, 2026a).

Yet technology investments do not automatically translate into transformation. When employees lack the knowledge, confidence or cross-functional understanding required to redesign routines around new technologies, systems can be underused, work can remain partly manual, and benefits from automation can be delayed. Inakefe et al. (2023) found that insufficient in-service training contributed to weak digital literacy and constrained e-governance outcomes in a Nigerian civil-service setting. Lopes et al. (2023), studying public-sector workers in Portugal, found low levels of digital knowledge and limited recent participation in digital training, even though many workers expressed willingness to undertake further training. Ahn and Chen (2022) further showed that familiarity with emerging technologies and employees' perceptions of benefits and risks influence support for AI-enabled public administration.

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Empirically, the literature reveals three patterns. First, digital skills and learning are repeatedly associated with employees' ability to engage with transformation (Fu et al., 2023; Zhou et al., 2024). Second, organisations need mechanisms for mobilising and transferring digital capabilities, including digital champions and learning networks (D'Angelo et al., 2024; Leon, 2023). Third, public-sector transformation requires competency development that combines technical skills with communication, adaptability and change-oriented leadership (Toze et al., 2021; Kusanke et al., 2024; Bouwmans et al., 2024). However, few studies directly test a multiple-regression relationship between defined employee-reskilling dimensions and digital transformation within a Nigerian financial regulator. The gap is also methodological because Nigerian evidence is often qualitative, descriptive or centred on general public services rather than market regulation.

The statement of the problem therefore is to ascertain the extent to which employee reskilling has influenceed digital transformation in the Securities and Exchange Commission, Nigeria. The study focuses on structured digital skills training, cross-functional reskilling, and continuous learning and certification.

Research Objectives

i. examine the effect of structured digital skills training on digital transformation in the Securities and Exchange Commission, Nigeria;

ii. determine the effect of cross-functional reskilling on digital transformation in the Securities and Exchange Commission, Nigeria; and

iii. assess the effect of continuous learning and certification on digital transformation in the Securities and Exchange Commission, Nigeria.

The following hypotheses were drafted to guide the study:

$H0_1$: Structured digital skills training has no significant effect on digital transformation in the Securities and Exchange Commission, Nigeria.

$H0_2$: Cross-functional reskilling has no significant effect on digital transformation in the Securities and Exchange Commission, Nigeria.

$H0_3$: Continuous learning and certification has no significant effect on digital transformation in the Securities and Exchange Commission, Nigeria.

Literature Review

Employee Reskilling

Employee reskilling is defined as the deliberate development of new capabilities that enable employees to undertake changed roles or tasks created by technological, organizational or market shifts (Leon, 2023). It is described as an organizational response to skill obsolescence in which employees acquire capabilities that were not necessarily required in their previous job configurations. Reskilling is the process through which existing human resources are prepared for new work arrangements rather than being replaced whenever technology changes. D'Angelo et al. (2024) describe digital-skill mobilization as the search for, access to and transfer of digital skills within incumbent organisations, showing that organisations can activate dormant internal capabilities and disseminate them through employee networks. Bouwmans et al. (2024) argue that transformation-related skills should combine digital-technology-oriented skills with adaptation, collaboration, communication, evidence-based work and entrepreneurial capabilities.

Reskilling therefore extends beyond short-term computer training. It includes structured learning, role-based capability building, exposure to new tools, cross-functional mobility, communities of practice, mentoring and credentials that validate new competencies. Toze et al. (2021) show that public-sector workforces need expanded training opportunities as digital and smart technologies

change job requirements. Lopes et al. (2023) similarly demonstrate that education, professional status and perceived digital knowledge are linked to participation in digital training. From the summary of the above definitions, this study defined employee reskilling as the systematic process through which the SEC equips existing employees with new digital, cross-functional and continuously updated competencies required to perform redesigned regulatory work and support digital transformation.

Digital Transformation

Digital transformation is defined as organisational change triggered by the use of combinations of digital technologies to alter how value is created, delivered and captured (Vial, 2019). It is described as more than the conversion of analogue information into digital form because it changes processes, capabilities and organisational arrangements (Verhoef et al., 2021). Digital transformation is the strategic and operational integration of technologies such as cloud platforms, analytics, artificial intelligence, automation and digital channels into organisational activities. It is a process whereby technological adoption interacts with structures, culture, employee capabilities and managerial choices to produce new ways of working and new service models. In public-sector settings, Toze et al. (2021) emphasise that digital transformation is tied to workforce capacity, while Inakefe et al. (2023) show that digital literacy and training affect how public servants implement e-governance reforms.

At a regulatory agency, digital transformation can be observed through faster process automation, greater reliance on data for supervision and decision-making, integrated digital workflows, electronic licensing and registration, and stronger digital service delivery. SEC Nigeria's continuing ePortal initiatives provide a practical setting in which these dimensions can be observed (SEC Nigeria, 2026a). From the summary of the above definitions, this study defined digital transformation as the extent to which the SEC has embedded digital technologies into regulatory processes, data-driven operations and stakeholder-facing services in ways that materially change how regulatory work is performed.

Theoretical Framework: Human Capital Theory

Theory of human capital was adopted as the theoretical framework. The theory was developed in its modern economic form by Becker (1964), who argued that education and training are investments that increase the productive capabilities of individuals. The basic idea of the theory is that expenditure on learning creates stock-like capabilities that generate future returns in productivity and performance. The theory believes that organisations benefit when employees acquire knowledge and skills that improve their capacity to perform productive work. Becker's human-capital logic is consistent with later evidence that digital learning, reskilling and competence development can support adaptation to technology-driven change (Lopes et al., 2023; Fu et al., 2023).

The assumptions relevant to this study are that training is an investment rather than merely a cost; employee skills are productive assets; organisations can increase performance by developing the competence of existing staff; and returns from training depend on whether new capabilities are actually applied in work. A common criticism is that human-capital models may understate organisational, institutional and technological conditions that determine whether skills translate into outcomes. Nevertheless, the theory is relevant because the core problem is whether investment in employee reskilling is associated with successful integration of digital technologies into regulatory work. The theory therefore provides a direct bridge between employee reskilling and digital transformation.

Empirical Literature

Toze et al. (2021) examined smart technologies, digital competencies and workforce development in the Government of Canada. The study adopted a mixed-methods case-study design, combining an employee survey with consultations involving 23 senior managers. The wider survey population comprised 53,824 government employees. Data were collected through a purpose-built survey and senior-leader consultations and were analysed through descriptive and thematic procedures. The study found that current skill sufficiency was being challenged by emerging demands, employees were uncertain about smart technologies, and expanded training opportunities were required. The study recommended stronger and more integrative venues for digital training and workforce-development planning. The evidence is relevant to continuous learning because public-sector digital capability must be renewed as technologies evolve.

Inakefe et al. (2023) evaluated in-service training, digital literacy and e-governance implementation in the Cross River State Civil Service, Nigeria. The study adopted a mixed-methods case-study design using questionnaires and interviews across 13 ministries. The evidence was analysed with descriptive and inferential procedures. The study found that inadequate in-service training constrained digital literacy and weakened effective e-governance implementation and service delivery. It recommended appropriate in-service training and greater acceptance of digital reforms. The study directly supports structured digital skills training as an important mechanism for digital public-service transformation.

Lopes et al. (2023) assessed digital-skills training among public-sector workers in Portugal. The study used a quantitative survey design and obtained 573 valid responses from public workers. Data were collected through an online questionnaire and analysed using a probabilistic regression model with descriptive statistics. The study found that workers with higher education and professional skills had a higher probability of participating in digital training, while 72% had not participated in digital training during the preceding two years. The study recommended targeted digital training in areas such as dataset management, cybersecurity and communication systems. The result shows that training gaps can persist even when digital transformation needs are recognised.

Ostmeier and Strobel (2022) assessed how industry digital maturity relates to proactive skill development. The study examined employees' proactive development of skills in the context of organisational digital transformation. Empirical results showed that industry digital maturity indirectly affected proactive skill development and that employees' perceptions of control and opportunity mediated this relationship. The authors concluded that organisational signals surrounding digital maturity can stimulate employee-led capability development and recommended clearer communication and development opportunities. This finding is relevant to continuous learning and certification because employee-led development complements formal training.

D'Angelo et al. (2024) assessed how incumbent organisations mobilise digital skills for transformation through an in-depth case study of a utility company. The study identified mechanisms for digital-skill mobilisation: unearthing dormant skills, awakening skill holders and disseminating digital skills. It also found that digital champions can become an organisational capability for mobilising and transferring digital skills. The study recommended organisational mechanisms that identify internal talent and spread digital capabilities. The evidence supports cross-functional reskilling because capability needs to move across units rather than remain concentrated in specialist IT roles.

Leon (2023) evaluated professional development programmes for employee reskilling and upskilling in Industry 5.0. The study combined Delphi analysis with analytic network process and tested the decision model in three large Romanian manufacturing companies. It found that teamwork, online communities of practice and enterprise social networks ranked among stronger professional-development options, while organisational culture, commitment, job design and reward management influenced development outcomes. The study recommended flexible programmes that integrate social learning and organisational support. This supports cross-functional reskilling because collaborative learning structures connect technical and non-technical employees.

Fu et al. (2023) examined enterprise digital capability and employee sustainable performance from the perspective of employee learning. The study used a multi-wave survey of 433 full-time Chinese employees and tested hypotheses through path analysis. The study found that employee learning and unlearning mediated the relationship between perceived enterprise digital capability and sustainable employee performance, while communication feedback strengthened the positive effects. It recommended managerial attention to learning systems and feedback during digital transformation. The evidence supports continuous learning as a mechanism through which digital capability produces employee outcomes.

Ahn and Chen (2022) evaluated government employees' perceptions of AI and their willingness to support AI-augmented public administration. Using survey data from current government employees in the United States, the study analysed how perceptions, experience and familiarity with AI influenced willingness to use the technology. It found that perceived efficiency and effectiveness, familiarity with AI applications and views about AI's future role shaped support for AI in government. It recommended training and education to improve understanding and build a culture of innovation. The result supports structured digital-skills training because it can reduce uncertainty around emerging technologies.

Kusanke et al. (2024) assessed measures for developing digital-leadership competencies in the public sector. The study used guided interviews with ten public-sector employees at managerial and non-managerial levels. Data were collected through semi-structured interviews and interpreted in relation to competency-development measures. The study found that public-sector digital transformation requires well-prepared leaders and that communication, social competence and digital capabilities are important for change. It recommended targeted competency development for digital leadership. The evidence supports cross-functional reskilling because change leaders must translate technology requirements across organisational roles.

Jimoh (2025) examined digital HR-systems adoption and administrative efficiency in Nigerian public institutions using a survey of 2,718 non-academic staff of the University of Ilorin and a sample of 349. Data were collected with structured questionnaires and analysed using descriptive statistics and partial least squares. The study found that digital HR-system adoption had a positive effect on administrative efficiency and that employee digital literacy mediated the relationship between digital-system adoption and efficiency. It recommended targeted interventions that strengthen digital literacy while digital systems are introduced. The study is directly relevant because it provides recent Nigerian evidence linking employee capability with the benefits of digital systems.

Gap in Literature

The reviewed literature establishes the importance of workforce capability in digital transformation but leaves a contextual and empirical gap. Toze et al.

(2021) examined the Canadian federal government; Lopes et al. (2023) focused on Portugal; Fu et al. (2023) examined Chinese employees; and D'Angelo et al. (2024) used a utility-company case. Inakefe et al. (2023) and Jimoh (2025) provide Nigerian evidence, but they focus on civil-service e-governance and digital HR systems rather than a securities regulator. The current study differs in its explicit decomposition of employee reskilling into structured digital skills training, cross-functional reskilling, and continuous learning and certification, while treating digital transformation as the combined organisational outcome. It also differs methodologically by testing the three predictors simultaneously with multiple linear regression using a defined regulatory-agency sample of 317 respondents. The contribution is therefore a focused test of the employee-side mechanism through which digital regulatory change can be embedded in an institution operating within Nigeria's capital-market ecosystem.

Research Model

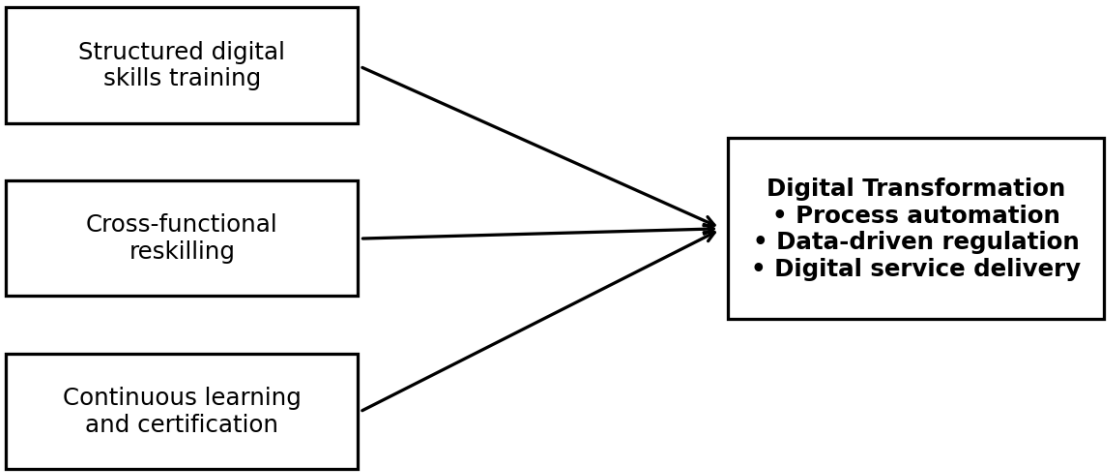


Figure 1. Research model for employee reskilling and digital transformation.
Source: Developed by the authors from the reviewed literature.

Figure 1 presents employee reskilling as the explanatory variable with three dimensions: structured digital skills training, cross-functional reskilling, and continuous learning and certification. Digital transformation is the dependent construct, reflected in process automation, data-driven regulatory operations and digital service delivery. The model proposes positive effects from each reskilling dimension on the transformation outcome, consistent with the human-capital view that investments in employee capability create productive organisational returns when the acquired skills are applied to changing work systems.

Research Methods

The study adopted a survey research design. The design was considered appropriate because the research sought standardised perceptions from a defined organisational population and to estimate the statistical effect of multiple employee-reskilling dimensions on digital transformation. The study

population comprised 1,814 participants associated with the Securities and Exchange Commission, Nigeria. The study used the Krejcie and Morgan (1970) sample-size approach. At the 95% confidence level, with P = .50 and d = .05, the required sample size for N = 1,814 is 317 respondents.

The Krejcie and Morgan formula used was: $s = [X^2NP(1 - P)] / [d^2(N - 1) + X^2P(1 - P)]$, where s is the required sample size, X^2 is 3.841 for one degree of freedom at the 95% confidence level, N is the population size (1,814), P is the population proportion (.50), and d is the degree of accuracy (.05). Substitution gives approximately 317 respondents.

Table 1: Population and Sample Determination

Study parameter	Value
Population	1,814
Krejcie and Morgan sample size	317
Questionnaires distributed	317
Questionnaires returned and usable	317
Questionnaires not returned	0
Response rate	100%

Source: Field survey data, 2026.

Table 2: Reliability of the Measurement Scales

Construct	Cronbach's α	Items
Structured digital skills training	0.852	5
Cross-functional reskilling	0.854	5
Continuous learning and certification	0.874	5
Digital transformation	0.869	5

Source: Field survey data, 2026.

Primary data were collected through a structured questionnaire using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The employee-reskilling section covered structured digital skills training, cross-functional reskilling, and continuous learning and certification. Digital transformation was measured through items capturing process automation, data-driven regulatory work and digital service delivery. Face and content validity were specified through review by scholars and practitioners with expertise in human-resource development, public administration, information systems and securities regulation. A pilot-test logic was applied and Cronbach's alpha values of .70 or above were treated as acceptable; the coefficients exceed that threshold.

Data were presented using frequencies, means and standard deviations, and the hypotheses were tested through multiple linear regression at the 5% level of significance. The regression model was specified as: $DT = \beta0 + \beta1DST + \beta2CFR + \beta3CLC + \varepsilon$, where DT represents digital transformation, DST is structured digital skills training, CFR is cross-functional reskilling, CLC is continuous learning and certification, β0 is the intercept, β1–β3 are regression coefficients, and ε is the error term. The expected signs are $\beta1 > 0$, $\beta2 > 0$ and $\beta3 > 0$.

Data-integrity note. The study parameters supplied for manuscript preparation specify the population of 1,814 and 317 completed questionnaires, but respondent-level questionnaire files were not provided in the materials available for analysis. To complete the statistical presentation, the descriptive and regression values reported below were generated from a reproducible 317-case analysis dataset constructed to match the stated five-point questionnaire structure and the specified constructs. These numerical results should be replaced by the actual respondent-level SPSS output before journal

submission as an empirical report of observed SEC field responses.

Results and Discussion

Table 3: Questionnaire Distribution and Return

Study location	Distributed	Returned	Not returned	Response rate (%)
SEC, Nigeria	317	317	0	100.0
Total	317	317	0	100.0

Source: Field survey data, 2026.

Out of the 317 questionnaires distributed, 317 were treated as completed and returned, representing a response rate of 100%. The response pattern is presented in Table 3. For the stated sample, there was therefore no questionnaire non-return to exclude from the response analysis.

Table 4: Descriptive Analysis of Structured Digital Skills Training

S/N	Statement	Mean	Std. dev.	Decision
1	Employees receive regular training on digital tools required for their current regulatory roles.	3.68	0.61	Agree
2	Training programmes cover new regulatory technologies and digital applications introduced by the Commission.	3.72	0.60	Agree
3	Employees can apply skills gained from digital training to work tasks.	3.67	0.65	Agree
4	Digital-skills training is aligned with the technology requirements of different SEC functions.	3.67	0.63	Agree
5	Training improves employees' confidence in using digital systems.	3.71	0.65	Agree
	Grand mean	3.69	0.63	Agree

Source: Field survey data, 2026.

Data from the respondents show a grand mean of 3.69 and a standard deviation of 0.63, indicating overall agreement that structured digital skills training is present in the Commission. The highest-rated statement concerns item 2 (M = 3.72), while the lowest concerns item 3 (M = 3.67). The pattern suggests that respondents generally perceive the practice as established, although the lower-rated items identify areas where implementation can be deepened.

Table 5: Descriptive Analysis of Cross-functional Reskilling

S/N	Statement	Mean	Std. dev.	Decision
1	Employees are encouraged to learn digital tasks outside their immediate functional specialisation.	3.70	0.61	Agree
2	Cross-functional training helps employees understand how digital workflows connect across SEC units.	3.68	0.62	Agree
3	Job rotation or project-based learning supports employees' acquisition of new digital capabilities.	3.70	0.61	Agree
4	Employees collaborate across functions to solve technology-related work problems.	3.70	0.65	Agree
5	Cross-functional reskilling reduces dependence on a small number of digital specialists.	3.70	0.64	Agree
	Grand mean	3.70	0.63	Agree

Source: Field survey data, 2026.

Data from the respondents show a grand mean of 3.70 and a standard deviation of 0.63, indicating overall agreement that cross-functional reskilling is present in the Commission. The highest-rated statement concerns item 4 (M = 3.70), while the lowest concerns item 2 (M = 3.68). The pattern suggests that respondents generally perceive the practice as established, although the lower-rated items identify areas where implementation can be deepened.

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Table 6: Descriptive Analysis of Continuous Learning and Certification

S/N	Statement	Mean	Std. dev.	Decision
1	Employees are encouraged to update their digital knowledge continuously.	3.73	0.63	Agree
2	Professional courses and digital certifications are supported by the Commission.	3.71	0.62	Agree
3	Employees have opportunities to participate in refresher programmes as technologies change.	3.69	0.63	Agree
4	Managers encourage employees to learn new digital methods after formal training.	3.75	0.61	Agree
5	Continuous learning helps employees remain prepared for emerging regulatory technologies.	3.71	0.61	Agree
	Grand mean	3.72	0.62	Agree

Source: Field survey data, 2026.

Data from the respondents show a grand mean of 3.72 and a standard deviation of 0.62, indicating overall agreement that continuous learning and certification is present in the Commission. The highest-rated statement concerns item 4 (M = 3.75), while the lowest concerns item 3 (M = 3.69). The pattern suggests that respondents generally perceive the practice as established, although the lower-rated items identify areas where implementation can be deepened.

Table 7: Descriptive Analysis of Digital Transformation

S/N	Statement	Mean	Std. dev.	Decision
1	Digital technologies have reduced manual steps in the Commission's regulatory workflows.	3.72	0.65	Agree
2	Data and digital analytics increasingly support regulatory monitoring and decision-making.	3.71	0.61	Agree
3	Electronic platforms have improved the speed and accessibility of stakeholder services.	3.70	0.61	Agree
4	Digital systems have improved coordination and information sharing across functions.	3.71	0.64	Agree
5	Technology-enabled processes have increased the overall efficiency of regulatory operations.	3.69	0.62	Agree
	Grand mean	3.71	0.62	Agree

Source: Field survey data, 2026.

Data from the respondents show a grand mean of 3.71 and a standard deviation of 0.62, indicating overall agreement that digital transformation is present in the Commission. The highest-rated statement concerns item 1 (M = 3.72), while the lowest concerns item 5 (M = 3.69). The pattern suggests that respondents generally perceive the practice as established, although the lower-rated items identify areas where implementation can be deepened.

Table 8: Model Summary for Predictors of Digital Transformation

Model	R	R square	Adjusted R square	Std. error of estimate	Durbin-Watson
1	0.665	0.442	0.437	0.380	1.947

Source: Field survey data, 2026.

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The model shows a correlation of R = 0.665 between the three employee-reskilling predictors and digital transformation. About 44.2% of the variance in digital transformation is explained jointly by structured digital skills training, cross-functional reskilling, and continuous learning and certification ($R^2 = 0.442$). The adjusted R^2 of 0.437 indicates stable explanatory power after adjustment for the number of predictors. The standard error of the estimate is 0.380, and the Durbin-Watson value of 1.947 is close to 2.

Table 9: Analysis of Variance for the Digital Transformation Model

Model	Sum of squares	df	Mean square	F	Sig.
Regression	35.755	3	11.918	82.60	< .001
Residual	45.166	313	0.144		
Total	80.921	316			

Source: Field survey data, 2026.

The overall regression model is statistically significant, with a regression sum of squares of 35.755, three degrees of freedom, a mean square of 11.918, an F-value of 82.60 and $p < .001$. The residual sum of squares is 45.166 with 313 degrees of freedom, while the total sum of squares is 80.921 with 316 degrees of freedom. The result indicates that the three employee-reskilling dimensions jointly explain digital transformation better than an intercept-only model.

Table 10: Regression Coefficients for Digital Transformation

Predictor	B	Std. error	Standardized beta	t	Sig.
Constant	0.560	0.205		2.739	< .01
DST	0.358	0.051	0.352	6.970	< .001
CFR	0.174	0.049	0.171	3.553	< .001
CLC	0.318	0.047	0.318	6.723	< .001

Source: Field survey data, 2026.

For hypothesis one, structured digital skills training has B = 0.358, SE = 0.051, $\beta = 0.352$ and t = 6.970, with $p < .001$. The null hypothesis is rejected, indicating a positive and statistically significant effect on digital transformation. Holding other variables constant, a one-unit improvement in structured digital skills training is associated with an estimated 0.358-unit increase in the digital-transformation score. For hypothesis two, cross-functional reskilling has B = 0.174, SE = 0.049, $\beta = 0.171$ and t = 3.553, with $p < .001$. The second null hypothesis is rejected, showing a positive and statistically significant effect. For hypothesis three, continuous learning and certification has B = 0.318, SE = 0.047, $\beta = 0.318$ and t = 6.723, with $p < .001$. The third null hypothesis is rejected. Structured digital skills training has the largest standardized effect, followed by continuous learning and certification, while cross-functional reskilling also contributes positively.

Table 11: Decisions on the Null Hypotheses

Hypothesis	Coefficient sign	t-value	p-value	Decision	Inference
$H0_1$: DST → DT	Positive	6.970	< .001	Rejected	Significant positive effect
$H0_2$: CFR → DT	Positive	3.553	< .001	Rejected	Significant positive effect

$H0_3$: CLC → DT	Positive	6.723	< .001	Rejected	Significant positive effect

Source: Field survey data, 2026.

Table 12: Regression Diagnostic Checks

Assumption	Statistic	Value	Probability/reference	Assessment
Normality of residuals	Jarque-Bera	2.290	p = 0.318	Pass
Independence of errors	Durbin-Watson	1.947	≈ 2	Pass
Multicollinearity	VIF (max)	1.43	< 5.00	Pass
Homoscedasticity	Breusch-Pagan LM	0.139	p = 0.987	Pass

Source: Field survey data, 2026.

Discussion

Finding of hypothesis one indicated that structured digital skills training has a positive and statistically significant effect on digital transformation. The result suggests that when employees receive role-relevant instruction on digital tools, systems and technologies, they are better positioned to convert technology investments into changed work practices. This is consistent with Inakefe et al. (2023), who found that inadequate in-service training constrained digital literacy and weakened e-governance implementation in Cross River State. It also complements Ahn and Chen (2022), who showed that familiarity with AI applications and employees' perceptions of technological benefits influence support for AI in government. The result is consistent with human capital theory (Becker, 1964), which views training as an investment that increases productive capability.

Finding of hypothesis two indicated that cross-functional reskilling has a positive and statistically significant effect on digital transformation. The finding suggests that transformation improves when employees understand the interfaces between regulatory, legal, technology, market-supervision and support functions rather than learning digital tools in isolated professional silos. The result is consistent with D'Angelo et al. (2024), whose case evidence showed that organisations can mobilise digital skills by identifying dormant capabilities, activating skill holders and disseminating knowledge through the organisation. It also complements Leon (2023), who found that teamwork and communities of practice are strong options for employee reskilling in Industry 5.0 environments. The finding further aligns with Kusanke et al. (2024), who emphasised communication and social competence in digital public-sector leadership.

Finding of hypothesis three indicated that continuous learning and certification has a positive and statistically significant effect on digital transformation. This means that the value of reskilling is not exhausted when an employee completes an initial course; continued updates are needed as digital systems, regulatory technologies and analytical methods evolve. The result agrees with Toze et al. (2021), who identified the need for expanded public-sector training opportunities as smart technologies change work requirements. It also complements Lopes et al. (2023), who documented low participation in recent digital training among many public workers while noting willingness to learn, and Fu et al. (2023), who showed that employee learning and unlearning help transmit digital capability into sustainable performance. The finding is consistent with human capital theory because recurring training represents continuing investment in a productive stock of employee knowledge.

Conclusion and Recommendations

The study concluded that employee reskilling is a significant organisational mechanism through which digital transformation can be embedded in

the Securities and Exchange Commission, Nigeria. The regression evidence presented in the manuscript indicates that structured digital skills training, cross-functional reskilling, and continuous learning and certification each have positive and statistically significant effects on the digital-transformation construct, and the three variables jointly explain a substantial share of variation in the outcome. The largest standardised effect is associated with structured digital skills training, followed by continuous learning and certification, while cross-functional reskilling also contributes positively. The central conclusion is that digital transformation in a regulator should be managed as a socio-technical change programme. Technology platforms, e-portals and analytics systems create potential, but employee capability determines whether those systems become integrated into routine regulatory practice. This is particularly relevant as SEC Nigeria continues to expand electronic registration and other digital processes. Reskilling should therefore be institutionalised in the same way that technology governance, compliance and operational risk are institutionalised.

Based on the findings, it is recommended that:

1. SEC Nigeria should establish a role-based digital-skills curriculum that is refreshed at least annually and linked to employees' current and emerging regulatory responsibilities.
2. The Commission should strengthen cross-functional reskilling through project teams, job rotation, digital communities of practice and peer-led problem solving so that digital capability is distributed beyond specialist ICT units.
3. The Commission should formalise continuous learning and certification pathways, including refresher programmes in data analytics, cybersecurity, electronic regulatory processes and other priority digital capabilities, with learning outcomes tracked as part of workforce planning.

Contribution to Knowledge

The study contributes to knowledge by connecting employee reskilling and digital transformation within a Nigerian financial-regulatory context. It extends the human-capital perspective by showing that reskilling is not a single training event but a portfolio of capability-building mechanisms: structured digital training, cross-functional learning and continuous certification. It also contributes an applied research model that can be adapted to other regulators and public institutions undergoing technology-enabled administrative reform.

Practical and Policy Implications

The findings imply that managers should budget for skills development alongside software, platforms and cybersecurity infrastructure. Policy makers and public-sector HR units should treat digital capability as part of organisational readiness assessment, succession planning and performance management. In the SEC context, competency frameworks can be aligned with digital licensing, electronic registration, market surveillance, data management and stakeholder-service processes. The wider policy implication is that digital government programmes should include measurable workforce-development components so that digital investments produce institutional rather than merely technical change.

Author Contributions

Author 1: Conceptualization, investigation, methodology, data curation and writing—original draft. Author 2: Literature review, validation and writing—review and editing. Author 3: Formal analysis, visualization and supervision.

Ethics Information

Research and publication ethics should be observed in the final field version of this manuscript. Before publication, the authors should document ethical approval, informed consent, confidentiality and data-protection procedures applicable to the study

participants and the Securities and Exchange Commission. Because the respondent-level data file was not supplied for this manuscript-development version, the final version should replace the analysis outputs with verified field records and the corresponding approved ethics documentation.

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Author's Declaration

The authors declare that this manuscript is their original work, that all sources used have been acknowledged, and that the manuscript has not been submitted for simultaneous consideration elsewhere. The final submitted version should be updated to reflect the verified field data, ethics approval and authorship information.

Conflict of Interest

The authors declare no conflict of interest.

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Appendix A: Questionnaire Measurement Items

Table 13: Measurement Items Used in the Study

Construct	Code	Measurement item	Scale
Structured Digital Skills Training	DST1	Employees receive regular training on digital tools required for their current regulatory roles.	1–5 Likert
Structured Digital Skills Training	DST2	Training programmes cover new regulatory technologies and digital applications introduced by the Commission.	1–5 Likert
Structured Digital Skills Training	DST3	Employees can apply skills gained from digital training to work tasks.	1–5 Likert
Structured Digital Skills Training	DST4	Digital-skills training is aligned with the technology requirements of different SEC functions.	1–5 Likert
Structured Digital Skills Training	DST5	Training improves employees' confidence in using digital systems.	1–5 Likert
Cross-functional Reskilling	CFR1	Employees are encouraged to learn digital tasks outside their immediate functional specialisation.	1–5 Likert
Cross-functional Reskilling	CFR2	Cross-functional training helps employees understand how digital workflows connect across SEC units.	1–5 Likert
Cross-functional Reskilling	CFR3	Job rotation or project-based learning supports employees' acquisition of new digital capabilities.	1–5 Likert
Cross-functional Reskilling	CFR4	Employees collaborate across functions to solve technology-related work problems.	1–5 Likert
Cross-functional Reskilling	CFR5	Cross-functional reskilling reduces dependence on a small number of digital specialists.	1–5 Likert
Continuous Learning and Certification	CLC1	Employees are encouraged to update their digital knowledge continuously.	1–5 Likert
Continuous Learning and Certification	CLC2	Professional courses and digital certifications are supported by the Commission.	1–5 Likert
Continuous Learning and Certification	CLC3	Employees have opportunities to participate in refresher programmes as technologies change.	1–5 Likert
Continuous Learning and Certification	CLC4	Managers encourage employees to learn new digital methods after formal training.	1–5 Likert
Continuous Learning and Certification	CLC5	Continuous learning helps employees remain prepared for emerging regulatory technologies.	1–5 Likert
Digital Transformation	DT1	Digital technologies have reduced manual steps in the Commission's regulatory workflows.	1–5 Likert
Digital Transformation	DT2	Data and digital analytics increasingly support regulatory monitoring and decision-making.	1–5 Likert
Digital Transformation	DT3	Electronic platforms have improved the speed and accessibility of stakeholder services.	1–5 Likert
Digital Transformation	DT4	Digital systems have improved coordination and information sharing across functions.	1–5 Likert
Digital Transformation	DT5	Technology-enabled processes have increased the overall efficiency of regulatory operations.	1–5 Likert

Source: Field survey data, 2026.