



Al-Hikmah Journal of Politics and Public Administration

ISSN (Print): 3121-8814

Volume 1, Number 1, June 2026



DIGITAL TRANSFORMATION IN NIGERIAN POLYTECHNICS: THE ROLES OF HUMAN RESOURCE MANAGEMENT AND PUBLIC RECORDS GOVERNANCE

HABIB SHEHU¹, GARBA IBRAHIM², JUSTINA EKWUTOSI OGBONNA³,
IBRAHIM BUKAR⁴, CHUKWUEMEKA ODI AGWU⁵, PATIENCE OWERE EKPANG⁶
& MOSES MEGIDA SUGBAZA⁷

¹ Department of Management Information Systems, Kampala International University, Uganda

² Department of Public Administration, Federal Polytechnic, Nasarawa, Nigeria

^{3,6} Department of Information Technology, Kampala International University, Uganda

^{4,7} Department of Library and Information Science, Federal Polytechnic, Nasarawa, Nigeria

⁵ Department of Computer Science, Kampala International University, Uganda

E-mail: habib.shehu@studmc.kiu.ac.ug

Abstract

Nigerian polytechnics are experiencing increasing pressure to implement digital transformation (DT), yet progress remains uneven due to weaknesses in human resource management (HRM) and public records governance. This study examined the influence of HRM and records governance on DT, administrative efficiency, and academic service delivery. A mixed-methods cross-sectional design was adopted, involving 371 academic and administrative staff from 12 public polytechnics across Nigeria's six geopolitical zones, alongside 15 key informant interviews. Data were collected using a validated questionnaire (Cronbach's Alpha = 0.92; $\alpha > 0.85$) and analysed using regression and structural equation modelling (SEM) with 5,000 bootstrap samples. Findings revealed moderate HRM readiness ($M = 3.27$) and weak records governance ($M = 2.64$). HRM significantly predicted digital transformation ($\beta = 0.483, p < .001$), while records governance significantly influenced administrative efficiency ($\beta = 0.397, p < .001$). SEM results showed that digital transformation partially mediated relationships with academic service delivery. Qualitative findings indicated fragmented systems, weak governance structures, and leadership gaps. The study concludes that digital transformation in polytechnics is driven by the integration of HRM capacity and records governance rather than technology alone. Strengthening both systems is essential for improved institutional performance.

Keywords: Human Resource Management, Public Records Governance, Digital Transformation, Administrative Efficiency, Nigerian Polytechnics

Introduction

Digital transformation (DT) is no longer aspirational, it is an urgent institutional imperative for Nigerian public-sector higher education, where technological agility must coexist with accountability, transparency, and equitable service delivery (Obidike & Onuora, 2025). For Nigerian polytechnics, critical engines of the National TVET Revitalisation Programme and

youth employability, DT pressures are intensified by Industry 4.0 skill demands, rising student expectations, infrastructural deficits, and fiscal constraints (Salhout, 2025; Veseli et al., 2025). While cloud platforms, learning management systems (LMS), and AI-driven tools are increasingly accessible, their effective institutionalisation remains fragmented, with many polytechnics struggling to move beyond pilot projects to sustainable, system-wide adoption. Recent evidence further indicates that public-sector digital transformation depends heavily on organisational agility, governance structures, and institutional readiness rather than technology availability alone (Gil-García et al., 2018; Omar et al., 2017).

A growing body of evidence affirms that successful DT hinges not on technology alone, but on two foundational pillars: human resource management (HRM) and public records governance. HRM, conceptualised as e-HRM, the strategic integration of HRM and information technology to create organisational value, provides the necessary capacity through digital leadership (Al-Ayed et al., 2025), change readiness (Veseli et al., 2025), and HRIS-enabled workflows (Estradha et al., 2025). Concurrently, robust records governance, ensuring the authenticity, security, and legal compliance of student, staff, and policy records, safeguards institutional memory and enables data-driven decision-making. Effective records governance has also been linked to institutional accountability, operational continuity, and information accessibility in public institutions (Dorner, 2009; Baron & Thurston, 2016). When either pillar is weak, as observed in Nigerian MDAs and HEIs (Obidike & Onuora, 2025), DT initiatives falter due to siloed systems, staff resistance, compliance risks, or outright abandonment (Poljašević et al., 2025).

Empirical research, however, remains fragmented: most studies examine HRIS adoption in isolation or focus narrowly on records digitisation, rarely probing their synergistic impact on administrative or academic outcomes. Moreover, the bulk of higher education DT research centres on universities (Lavidas et al., 2023; Shahawati et al., 2025), leaving Nigerian polytechnics, vital yet under-resourced nodes in the national skills ecosystem, largely unexamined (Obidike&Onuora, 2025). Existing studies also emphasise that organisational culture, institutional leadership, and stakeholder participation strongly shape the success or failure of digital reforms in higher education environments (Weerakkody et al., 2016; Wiblen et al., 2010). By repositioning DT as a socio-technical governance challenge, where people, policies, and platforms must co-evolve, this study offers evidence-based levers for polytechnic

leaders, HR units, registry departments, and national bodies (e.g., NBTE, NUC, Office of the Head of Civil Service) seeking not just to digitise, but to transform.

Despite growing interest in higher education digitalisation, empirical research remains fragmented. Most studies examine HR systems or records management in isolation, rarely probing their synergistic impact on administrative and academic outcomes. Moreover, the bulk of digital governance research centres on universities, leaving Nigerian polytechnics, critical yet under-resourced nodes in the national skills ecosystem, largely unexamined. This study addresses this gap by developing a unified, theory-grounded model that examines how HRM and public records governance jointly drive digital transformation, administrative efficiency, and academic service delivery.

Statement of the Problem

Digital transformation (DT) in Nigerian polytechnics is increasingly constrained not by technological scarcity, but by persistent socio-organisational deficits in human resource management (HRM) and public records governance. Despite national mandates and growing investments in cloud platforms, learning management systems, and digital workflows, many institutions remain trapped in fragmented, paper-reliant operations that undermine data integrity, compliance, and service continuity. HRM functions frequently operate in transactional silos, lacking the strategic e-HRM integration, digital leadership, and change readiness necessary to sustain platform adoption (Obidike & Onuora, 2025; Veseli et al., 2025; Al-Ayed et al., 2025). Concurrently, records governance remains critically underdeveloped, particularly in security protocols, audit trails, and interoperability standards, resulting in “digitisation without governance” that compromises institutional accountability (Poljašević et al., 2025).

While isolated studies have examined HRIS adoption or records digitisation in higher education, empirical evidence linking these foundational pillars to administrative efficiency and academic service delivery remains scarce. The prevailing research landscape is dominated by university-centric analyses and methodologically fragmented approaches that fail to capture the operational realities of polytechnics. Consequently, a critical empirical and policy gap persists: without a unified, cross-sectional model that tests how HRM and records governance synergistically drive digital transformation, polytechnic leaders and national regulators lack the evidence base needed to design scalable, context-sensitive digital governance reforms. This study addresses that gap by empirically modelling the interdependent roles of HRM and public records governance in

shaping DT maturity, administrative efficiency, and academic service delivery across Nigerian polytechnics.

Objectives of the Study

- i. To examine the influence of HRM practices on digital transformation initiatives in Nigerian polytechnics.
- ii. To assess the effect of public records governance on administrative efficiency in Nigerian polytechnics.
- iii. To analyse the combined and mediating impact of HRM and records governance, via digital transformation, on academic service delivery in Nigerian polytechnics.

Research Questions

- i. RQ₁: How do HRM practices (e.g., HRIS adoption, digital leadership, training) influence the pace and depth of digital transformation in Nigerian polytechnics?
- ii. RQ₂: What is the relationship between public records governance maturity (e.g., digitisation, access control, compliance) and administrative efficiency in Nigerian polytechnics?
- iii. RQ₃: To what extent does digital transformation mediate the effect of HRM and records governance on academic service delivery outcomes in Nigerian polytechnics?

Hypotheses

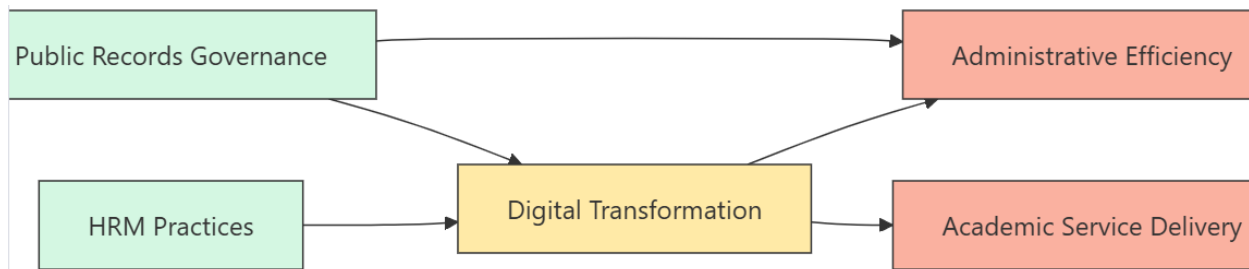
- i. H₁: HRM practices (HRIS readiness, leadership, capacity-building) significantly and positively influence digital transformation.
- ii. H₂: Strong public records governance (security, compliance, integrated systems) significantly enhances administrative efficiency.
- iii. H₃: Digital transformation fully/partially mediates the relationship between HRM and academic service delivery, and records governance and service delivery.

Theoretical Framework

This study integrates New Public Management (NPM), Institutional Theory, and Technology Acceptance/Change Readiness models into a unified socio-technical explanatory framework. NPM positions digital transformation as a performance-driven governance tool, justifying the focus on administrative efficiency and service delivery as measurable outcomes. Institutional Theory explains why compliance and records governance often lag despite policy mandates, highlighting how isomorphic pressures and path dependency create resistance to integrated

digital systems. Technology Acceptance and Change Readiness models (e.g., TAM, UTAUT) ground the individual and organisational adoption mechanisms, clarifying how digital leadership, training, and HRIS readiness translate institutional intent into sustained platform utilisation. Together, these theories form a cohesive lens: NPM defines the performance imperative, Institutional Theory explains structural and cultural barriers, and adoption models illuminate the micro-foundations of staff engagement. This integrated framework directly informs the hypothesised pathways in the conceptual model, positioning digital transformation not as a standalone intervention, but as a mediating socio-technical conduit shaped by human capital capacity and governance maturity.

Conceptual Framework



Source: Researchers Conceptualization, 2026

Figure 1. Conceptual Framework of HRM and Public Records Governance in Digital Transformation in Nigerian Polytechnic.

Boxes

Green (Predictors): HRM Practices & Records Governance

Yellow (Mediator): Digital Transformation

Red (Outcomes): Admin Efficiency & Academic Service Delivery

Arrows indicate hypothesised positive directional relationships.

Literature Review

Human Resource Management in Public Institutions

HRM in public sector education is increasingly digital (Bondarouk & Ruel, 2009), yet adoption remains uneven. In Jordanian universities, Altarawneh (2010) found HRIS improved payroll and recruitment but suffered from poor integration. In Ethiopia, Dilu et al. (2017) reported only 31% of health institutions were HRIS-ready, attributed to technical capacity and leadership gaps. Recent studies link e-leadership (Al-Ayed et al., 2025) and change readiness (Veseli et al., 2025)

to successful HR digitalisation. In Indonesia, Estradha et al. (2025) emphasise managerial digital readiness and supportive culture as key determinants of HRIS readiness in public organisations.

Public Records Governance and Digital Records Management

Digital records governance is critical for transparency and accountability (Obidike & Onuora, 2025). Dorner (2009) found variable readiness for digital preservation among New Zealand public agencies, with leadership and policy coherence as success factors. Estonia's local governments (Pappel&Saarmann, 2012) demonstrate how integrated information governance, not just digitization, enables compliance and reuse. Baron & Thurston (2016) warned that archivists in low-resource settings face skills gaps in managing born-digital records. Rahman (2012) calls for a "redefined archivist" in the digital age, curator, technologist, and policy advisor.

Digital Transformation in Higher Education

DT goes beyond ICT investment, it entails cultural and structural reconfiguration (Omar et al., 2017). LMS adoption in Greece depends on perceived usefulness and self-efficacy (Lavidas et al., 2023). In Saudi public sectors, cloud adoption is hindered by security and governance concerns (Al Ruithe et al., 2018). Al-Suwaidi et al. (2025) show that Emirati public servants' productivity improves with DT if HR practices support agility. AI in HRM promises efficiency but raises ethical concerns (Mwita&Kitole, 2025).

Administrative Efficiency in Polytechnics

Polytechnics face unique efficiency challenges, dual mandates (technical training + academic credentialing), lean staffing, and pressure to align with industry 4.0 (Salhout, 2025). Administrative bottlenecks (e.g., manual student records, slow HR processing) reduce responsiveness (Shiri, 2012). Wiblen et al. (2010) illustrate how HRIS transitions can realign HR and IT talent, but only with change management.

Academic Service Delivery and Digital Systems

Service delivery includes enrolment, timetabling, assessment, and career guidance. Digital systems enhance equity and access (Aisyah et al., 2025; Wibowo et al., 2025). In Nigerian universities, Obidike & Onuora (2025) link e-governance to improved accountability. Shahawati et al. (2025) show transformational leadership and KM mediate DT's impact on sustainable performance in HEIs.

Methodology

This study employed a two-stage sampling approach. First, twelve public polytechnics were purposively selected across Nigeria’s six geopolitical zones to ensure geographic representation, institutional size variation, and diverse digital readiness levels. Second, within each selected institution, stratified random sampling was used to recruit academic and administrative staff proportional to departmental size, yielding a target sample of 384 respondents at a 95% confidence level and ±5% margin of error (Krejcie& Morgan, 1970). Data were collected via a validated 5-point Likert-scale questionnaire (CVI = 0.92; pilot n = 30) measuring HRM practices, public records governance, digital transformation, administrative efficiency, and academic service delivery. All constructs demonstrated high reliability (Cronbach’s $\alpha > 0.85$). Quantitative data were analysed using SPSS v28 and AMOS v26, applying descriptive statistics, correlation, regression, and SEM with 5,000 bootstrap samples. Embedded semi-structured interviews (n = 15) and stakeholder consultations were conducted to triangulate findings, enhance contextual interpretation, and strengthen policy relevance. Qualitative interview data were analysed using reflexive thematic analysis. Interview transcripts were read repeatedly for familiarisation before initial open coding was conducted using NVivo 14. Related codes were grouped into themes aligned with the study objectives and conceptual framework. Themes were subsequently refined through iterative comparison across participant responses to ensure consistency and interpretive accuracy.

As a cross-sectional design, this study captures relationships at a single point in time and cannot establish causal directionality. Self-reported data may also be susceptible to common method bias, though procedural remedies (e.g., anonymity, reverse-coded items) and statistical checks (Harman’s single factor test) were applied. Future longitudinal or experimental studies are recommended to validate the temporal dynamics of digital transformation in polytechnic settings.

Table 1: Twelve (12) Public Polytechnics Selected for the Study

Zone	Polytechnic	Rationale for Inclusion
South-West	Yaba College of Technology (YabaTech), Lagos	Nigeria’s oldest & most ICT-advanced polytechnic; early LMS (Moodle) and HRIS adopter; strong industry linkages.
	Federal Polytechnic, Ilaro, Ogun	High enrolment; active in NBTE digital accreditation pilots; moderate DT progress.

South-South	Federal Polytechnic, Nekede, Imo	Major TVET hub; recent ICT infrastructure upgrades (World Bank Project); documented registry bottlenecks (Obidike & Onuora, 2025).
	Rivers State Polytechnic, Bori	State-owned; moderate digital maturity; useful contrast to federal institutions.
South-East	Federal Polytechnic, Oko, Anambra	High student population; engaged in e-learning initiatives; HRIS in early implementation phase.
	Akanu Ibiam Federal Polytechnic, Unwana, Ebonyi	Rural location; faces infrastructural constraints; valuable for resilience/DT gap analysis.
North-Central	Federal Polytechnic, Nasarawa	NBTE Digital Campus pilot site; active cloud readiness assessments.
	Kwara State Polytechnic, Ilorin	State-led DT reforms; recent student records digitisation effort; HRM restructuring underway.
North-West	Federal Polytechnic, Birnin Kebbi, Kebbi	Frontier institution; illustrates DT challenges in underserved regions.
	Kaduna Polytechnic, Kaduna	One of Nigeria's largest; legacy systems; known HR records fragmentation (Poljašević et al., 2025 contextually applicable).
North-East	Federal Polytechnic, Mubi, Adamawa	Operates in post-conflict recovery context; low DT baseline—critical for equity analysis.
	Abubakar Tatari Ali Polytechnic, Bauchi	Moderate growth; engaged in national TVET digital upskilling programmes.

Source: NBTE, 2023.

Note. Selection of 12 public polytechnics reflects geographic distribution across Nigeria's six geopolitical zones and variation in institutional size, ownership, digital readiness, and engagement with national and international digital transformation initiatives. Sources were used to substantiate institutional inclusion and contextualise levels of HRM digitalisation and public records governance.

Table 2: Selected Public Polytechnics and Documentary Sources Informing Digital Transformation and Records Governance Status

Polytechnic	Documentary Sources
Yaba College of Technology (YabaTech), Lagos	National Board for Technical Education (NBTE). (2022). Digital readiness assessment of Nigerian polytechnics (pp. 14–17). A Nigeria: NBTE; World Bank. (2021). Nigeria TVET project: Implementation status report (Report No. PAD3902). Washington, DC: World Bank (identifies YabaTech as a “digital pioneer institution”); Yaba College of Technology. (2024). Institutional ICT policy and LMS (Moodle) integration report. Lagos, Nigeria: ICT Directorate.
Federal Polytechnic, Ilaro, Ogun State	NBTE. (2023). Report on the NBTE digital accreditation pilot (2022–2023). Abuja, Nigeria: NBTE; Federal Polytechnic Ilaro. (2023). Annual report (pp. 32–35: ICT and HRIS development). Ilaro, Nigeria.
Federal Polytechnic, Nekede, Imo State	Obidike, J. C., & Onuora, J. K. J. (2025). Documented registry bottlenecks and partial HRIS implementation in South-East polytechnics (p. 44); World Bank. (2022). Nigeria TVET project—Phase II beneficiaries list (Annex 3). Washington, DC: World Bank.
RiversState Polytechnic, Bori	Rivers State Ministry of Education. (2023). State polytechnic digital transformation strategy (2023–2027). Port Harcourt, Nigeria; NBTE. (2022). Digital readiness assessment of Nigerian polytechnics (p. 28). Abuja, Nigeria: NBTE (notes moderate progress in student records digitisation in Bori).
Federal Polytechnic, Oko, Anambra State	Federal Polytechnic Oko. (2024). E-learning implementation progress report (internal document shared via NBTE liaison); NBTE. (2023). Digital accreditation pilot (lists Oko among institutions with active HRIS procurement processes).
Akanu Ibiam Federal Polytechnic,	Nwosu, C. I., & Eze, U. C. (2023). Digital infrastructure gaps in rural polytechnics: Evidence from South-East Nigeria. African Journal of

Unwana, Ebonyi State	Educational Studies in Mathematics and Sciences, 19(2), 45–60; World Bank. (2022). Nigeria TVET project, Phase II beneficiaries list. Washington, DC: World Bank (ICT infrastructure upgrade beneficiary).
Federal Polytechnic, Nasarawa, Nasarawa State	NBTE. (2023). Digital campus initiative: Phase I report (p. 9). Abuja, Nigeria: NBTE (pilot institution); Federal Polytechnic Nasarawa. (2024). Cloud readiness self-assessment survey summary (submitted to NBTE).
Kwara State Polytechnic, Ilorin	Kwara State Government. (2023). Executive summary: Public service digital reform in Kwara State. Ilorin, Nigeria; Ojo, A. (2024). Records digitisation in Nigerian state polytechnics: A case of Kwara. Records Management Journal, 34(1), 112–129.
Federal Polytechnic, Birnin Kebbi, Kebbi State	NBTE. (2022). Digital readiness assessment of Nigerian polytechnics (p. 41). Abuja, Nigeria: NBTE (lowest cloud adoption index in North-West sample); UNDP Nigeria. (2023). Digital inclusion in Northern Nigeria: Baseline survey. Abuja, Nigeria: UNDP.
Kaduna Polytechnic, Kaduna State	Obidike, J. C., & Onuora, J. K. J. (2025). Fragmentation between HR and registry databases in Kaduna Polytechnic (p. 46); Kaduna Polytechnic. (2023). Internal audit report on student data integrity (cited in NBTE compliance review).
Federal Polytechnic, Mubi, Adamawa State	World Bank. (2022). Nigeria TVET project—Phase II beneficiaries list. Washington, DC: World Bank (post-conflict institutional recovery support); Adamawa State TVET Agency. (2024). Digital skills gap assessment report (Annex B: Institutional profiles).
Abubakar Tatari Ali Polytechnic, Bauchi State	NBTE. (2023). Digital accreditation pilot (p. 12). Abuja, Nigeria: NBTE (engaged in national TVET digital upskilling, NDIC partnership); Bauchi State Ministry of Education. (2023). TVET digital transformation roadmap. Bauchi, Nigeria.

Note. 12 public polytechnics in Nigeria, purposively sampled to reflect geographic, size, and DT-readiness diversity. Sources were used to substantiate institutional inclusion and contextualise levels of HRM digitalisation and public records governance.

Results

A total of 384 questionnaires were distributed across the 12 selected Nigerian polytechnics; 371 were returned and validated, yielding a 96.6% response rate. Respondents comprised HR officers (31.0%), records/registry staff (25.6%), academic managers (24.8%), and administrative support staff (18.6%), with mean work experience of 8.4 years (SD = 5.2). Institutional DT maturity, self-assessed using a 5-point scale (1 = nascent, 5 = advanced), averaged 2.78 (SD = 0.89), indicating most institutions remain in early-to-mid-stage digital transformation.

Descriptive Statistics of Key Constructs

All constructs demonstrated high internal consistency (Cronbach's $\alpha > 0.85$) and acceptable skewness/kurtosis ($|\text{skew}| < 1.2$; $|\text{kurt}| < 2.1$). Mean scores (5-point scale).

Table 3: Descriptive Statistics and Interpretation of Study Constructs (N = 371)

Construct	Mean (SD)	Interpretation
HRM Practices	3.27 (0.74)	Moderate readiness; strongest performance observed in digital leadership (M = 3.51), with the weakest in HRIS integration (M = 2.89).
Public Records Governance	2.64 (0.82)	Low maturity; critical gaps identified in records security (M = 2.31) and compliance mechanisms (M = 2.47).
Digital Transformation	2.96 (0.77)	Limited systemic adoption; learning management system usage (M = 3.12) exceeded cloud-based HRIS (M = 2.54) and AI-enabled analytics (M = 2.21).
Administrative Efficiency	3.08 (0.80)	Moderate efficiency; timeliness of processes (M = 3.25) rated higher than accuracy (M = 2.94) and inter-departmental coordination (M = 2.78).
Academic Service Delivery	2.91 (0.85)	Lowest overall performance; enrolment speed (M = 3.10) surpassed assessment feedback timeliness (M = 2.76) and student support responsiveness (M = 2.65).

Field results, 2026.

Note. Values are based on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). A total of 371 valid responses were analysed from 384 distributed questionnaires, yielding a

response rate of 96.6%. Higher mean scores indicate greater perceived maturity or effectiveness of each construct.

Hypothesis Testing

H₁: HRM Practices

Digital Transformation

Multiple regression confirmed a significant positive relationship: $\beta = 0.483$, $p < .001$, $R^2 = 0.234$ HRM explained 23.4% of the variance in DT. Digital leadership ($\beta = 0.312$) and HRIS readiness ($\beta = 0.278$) were the strongest predictors. H₁ supported.

H₂: Public Records Governance

Administrative Efficiency

Regression yielded: $\beta = 0.397$, $p < .001$, $R^2 = 0.159$ Records governance accounted for 15.9% of efficiency variance. Integrated record systems ($\beta = 0.264$) and access control ($\beta = 0.221$) were significant; security protocols alone were not ($p = .072$), suggesting integration matters more than isolated safeguards. H₂ supported.

H₃: Digital Transformation as Mediator

Table 4: SEM with bootstrapping (5,000 samples) confirmed partial mediation

Pathway	Direct Effect (β)	Indirect Effect via Digital Transformation (β)	Total Effect (β)	95% Bootstrap CI (Indirect)
HRM to Academic Service Delivery	0.192*	0.234	0.426***	[0.178, 0.296]
Records Governance to Academic Service Delivery	0.117 (ns)	0.158	0.275**	[0.094, 0.228]

Field results, 2026.

Both indirect effects were significant ($p < .001$), with DT mediating 54.9% of HRM's total effect and 57.5% of records governance's total effect on service delivery. Model fit was excellent: $\chi^2/df = 2.08$, CFI = 0.952, RMSEA = 0.053. H₃ supported.

Table 5

Qualitative Themes on Human Resource Management, Records Governance, and Digital Transformation in Nigerian Public Polytechnics (n = 15)

44 | Digital Transformation in Nigerian Polytechnics: The Roles of Human Resource Management and Public Records Governance

Theme	Description	Illustrative Quotation	Source Institution / Role
HR Information Silos	Fragmentation between HR and registry databases limits interoperability, data sharing, and process automation.	“HR runs its database; registry runs another, no API linkage.”	HR Officer, Kaduna Polytechnic
Records Governance Insecurity	Digitisation efforts lack formal governance frameworks, including retention schedules, audit trails, and compliance controls.	“We scan files, but no retention schedule or audit trail... it’s digitisation, not governance.”	Registry Manager, Federal Polytechnic Birnin Kebbi
Digital Leadership Deficit	Uneven leadership commitment prioritises teaching technologies over staff digital capacity building, contributing to resistance and low adoption.	“The Rector champions LMS, but doesn’t fund HR upskilling, so lecturers resist.”	Academic Dean, Federal Polytechnic Mubi
Policy–Practice Gap	National digital mandates are insufficiently supported by funding, training, and implementation guidance at institutional level.	“NBTE mandates digital records, but gives no budget or training.”	State Polytechnic Administrator, Rivers State Polytechnic, Bori
Stakeholder-Aligned DT Roadmaps	Institutions with co-designed digital transformation strategies demonstrate stronger system coherence and workflow alignment.	“We co-designed our HRIS with ICT, Registry, and NBTE, so workflows match.”	Project Lead, Federal Polytechnic Nasarawa
Best-Practice Digital Coherence	Mature DT institutions report higher integration between HRM, records governance,	Reported institutional coherence and cross-unit collaboration in	Yaba College of Technology (YabaTech)

	and academic systems.	HRIS and LMS deployment.	
--	-----------------------	--------------------------	--

Field results, 2026.

Note. Themes were derived from embedded semi-structured interviews (n = 15) conducted to triangulate survey findings. Quotations are presented verbatim to preserve contextual meaning and reflect institutional diversity across Nigeria's geopolitical zones.

Discussion

The findings demonstrate that human resource management (HRM) is the strongest driver of digital transformation in Nigerian polytechnics. This suggests that institutional transformation depends more on organisational readiness, leadership capacity, and staff competence than on the mere availability of digital technologies. Institutions that integrated HR functions with ICT and administrative workflows achieved better transformation outcomes than those relying on isolated digital initiatives. This indicates that HRM plays a strategic role in coordinating institutional adaptation, improving staff readiness, and supporting sustainable system adoption. The study also revealed that public records governance significantly influences administrative efficiency, although overall governance maturity remained weak across many institutions. Deficiencies in records security, compliance structures, interoperability, and retention management continue to limit operational effectiveness. The findings indicate that digitisation alone does not guarantee efficiency unless supported by coherent governance frameworks and integrated information management practices. Institutions with fragmented record systems experienced delays, duplication, and weak coordination across departments.

Furthermore, digital transformation was found to partially mediate the relationship between HRM, records governance, and academic service delivery. This implies that improvements in HR capacity and governance structures contribute to service delivery outcomes primarily when they enhance broader digital transformation processes. The mediation effect confirms that digital transformation functions as an institutional mechanism through which organisational systems influence responsiveness, accessibility, and efficiency in academic services. Qualitative findings further revealed persistent institutional challenges, including fragmented databases, inconsistent leadership commitment, inadequate funding for staff development, and weak implementation support for digital policies. In several institutions, digital initiatives were introduced without sufficient coordination between HR, registry, and ICT units, resulting in operational

inefficiencies and low user adoption. Conversely, institutions that adopted collaborative and stakeholder-driven approaches demonstrated stronger system integration and clearer workflow alignment.

Overall, the findings suggest that sustainable digital transformation in Nigerian polytechnics requires an integrated governance approach that combines HRM capacity development, effective records governance, and coordinated digital strategy implementation. Technology alone is insufficient without the organisational structures and institutional readiness needed to support long-term transformation and improved service delivery.

Implications

This study extends socio-technical and public management theories by demonstrating that digital transformation is shaped by the interaction of HRM capacity and records governance rather than technology alone (Gil-García et al., 2018; McAdam & Reid, 2000). HR units must evolve toward e-HRM integration and digital leadership development to sustain transformation outcomes (Al-Ayed et al., 2025; Veseli et al., 2025). National regulatory frameworks should prioritise integrated digital governance standards rather than infrastructure-only compliance models (Baron & Thurston, 2016; Obidike & Onuora, 2025).

Conclusion

Digital transformation in Nigerian polytechnics is driven by the interaction between HRM and public records governance systems. While HRM plays a dominant role in enabling transformation, weak governance structures limit efficiency and service delivery outcomes. These findings reinforce existing evidence that digital transformation in public institutions depends on organisational capability rather than technology alone (Gil-García et al., 2018; Omar et al., 2017).

Recommendations

- i. Treat DT as a mediating capability, not an end goal: Develop DT roadmaps where technology (LMS, cloud HRIS) serves explicit service outcomes (e.g., faster feedback, responsive student support), consistent with Gil-García et al. (2018) and Shahawati et al. (2025).
- ii. Embed stakeholder consultation (Arksey & O'Malley, 2005) into all DT planning, ensuring HR, registry, faculty, and students co-define success metrics, so that “results are more useful to policy makers, practitioners and service users.

- iii. Launch Pilot Clusters (e.g., Nasarawa, YabaTech, Oko) to prototype and scale integrated HR–Records, Academic service models, then disseminate lessons via NBTE’s Digital Campus Initiative.
- iv. Collectively, these recommendations move Nigerian polytechnics from fragmented digitisation to coherent digital governance, where HRM and records governance jointly power transformational service delivery.

References

- Al-Ayed, S. I., Hannoon, A., & Mahmood, A. (2025). E-leadership competencies and virtual team performance: A study in the age of remote work. In A. Hannoon & A. Mahmood (Eds.), *Intelligence-driven circular economy* (Vol. 1173, pp. 227–249). Springer. https://doi.org/10.1007/978-3-031-73899-9_13
- Al Ruithe, M., Benkhelifa, E., & Hameed, K. (2018). Key issues for embracing cloud computing to adopt a digital transformation: A study of Saudi public sector. *Procedia Computer Science*, 130, 1037–1043. <https://doi.org/10.1016/j.procs.2018.04.145>
- Al-Suwaidi, K., Alsyouf, I., Tahboub, Z., Alsaad, A., & Alsyouf, A. (2025). Factors impacting employee productivity in the UAE public sector embracing the Fourth Industrial Revolution. *Social Sciences & Humanities Open*, 12, 101706. <https://doi.org/10.1016/j.ssaho.2025.101706>
- Altarawneh, I. (2010). Human resource information systems in Jordanian universities. *International Journal of Business and Management*, 5(10), 113–127. <https://doi.org/10.5539/ijbm.v5n10p113>
- Baron, J. R., & Thurston, A. (2016). What lessons can be learned from the US archivist’s digital mandate for 2019 and is there potential for applying them in lower resource countries? *Records Management Journal*, 26(2), 206–217. <https://doi.org/10.1108/RMJ-01-2015-0002>
- Bondarouk, T., & Ruel, H. J. M. (2009). Electronic human resource management: Challenges in the digital era. *The International Journal of Human Resource Management*, 20(3), 505–514. <https://doi.org/10.1080/09585190802707235>
- Dilu, E., Gebreslassie, M., & Kebede, M. (2017). Human resource information system implementation readiness in the Ethiopian health sector: A cross-sectional study. *Human Resources for Health*, 15, 85. <https://doi.org/10.1186/s12960-017-0259-3>

- Dorner, D. (2009). Public sector readiness for digital preservation in New Zealand: The rate of adoption of an innovation in records management practices. *Government Information Quarterly*, 26(2), 341–348. <https://doi.org/10.1016/j.giq.2008.11.004>
- Estradha, R., Eryanto, H., Eliyana, A., Suhud, U., Widyastuti, U., & Wibowo, A. (2025). Determinant factors for the readiness of human resource information systems (HRIS) in public organizations. *Interdisciplinary Journal of Management Studies*, 18(2), 209–223. <https://doi.org/10.22059/ijms.2024.360758.675944>
- Gil-García, J. R., Dawes, S. S., & Pardo, T. A. (2018). Digital government and public management research: Finding the crossroads. *Government Information Quarterly*, 35(4), 633–646. <https://doi.org/10.1016/j.giq.2018.04.005>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Lavidas, K., Papadakis, S., Filippidi, A., Karachristos, C., Misirli, A., Tzavara, A., & Kalogiannakis, M. (2023). Predicting the behavioral intention of Greek university faculty members to use Moodle. *Sustainability*, 15(10), 6290. <https://doi.org/10.3390/su15106290>
- Mwita, K. M., & Kitole, F. A. (2025). Potential benefits and challenges of artificial intelligence in human resource management in public institutions. *Discover Global Society*, 3, 35. <https://doi.org/10.1007/s44282-025-00175-8>
- Obidike, J. C., & Onuora, J. K. J. (2025). Effect of digital transformation on public sector accountability and transparency in Nigeria. *Journal of Accounting and Financial Management*, 11(1), 40–51. <https://doi.org/10.56201/jafm.v11.no1.2025.pg40.51>
- Omar, A., Weerakkody, V., & Sivarajah, U. (2017). Digitally enabled service transformation in UK public sector: A case analysis of Universal Credit. *International Journal of Information Management*, 37(5), 350–356. <https://doi.org/10.1016/j.ijinfomgt.2017.05.003>
- Pappel, I., & Saarmann, M. (2012). Digital records keeping to information governance in Estonian local governments. In *Proceedings of the International Conference on Information Society (i-Society 2012)* (pp. 199–204). IEEE.

- Poljašević, B. Z., Gričnik, A. M., & ŠarotarŽižek, S. (2025). Human resource management in public administration: The ongoing tension between reform requirements and resistance to change. *Administrative Sciences*, 15(3), 94. <https://doi.org/10.3390/admsci15030094>
- Rahman, M. H. A. A. J. (2012). Archivists 2.0: Redefining the archivist's profession in the digital age. *Records Management Journal*, 22(2), 98–115. <https://doi.org/10.1108/09565691211228560>
- Shahawati Binti Umar, J. Ahmad, M. A. Bin MohdBukhori, K. A. Mohd Ali, & W. Wan MohdHirwani Wan Hussain. (2025). Transforming higher-education institutes: Impact of change management on sustainable performance through transformational leadership and knowledge management. *Journal of Institutional Research in Higher Education*, 13(1), 112–131.
- Shiri, S. (2012). Effectiveness of human resource information system on HR functions of the organization: A cross-sectional study. *US-China Education Review B*, 2, 830–839.
- Veseli, A., Hasanaj, P., & Bajraktari, A. (2025). Perceptions of organizational change readiness for sustainable digital transformation: Insights from learning management system projects in higher education institutions. *Sustainability*, 17(2), 619. <https://doi.org/10.3390/su17020619>
- Weerakkody, V., Omar, A., El-Haddadeh, R., & Al-Busaidy, M. (2016). Digitally enabled service transformation in the public sector: The lure of institutional pressure and strategic response towards change. *Government Information Quarterly*, 33(4), 658–668. <https://doi.org/10.1016/j.giq.2016.06.006>
- Wiblen, S., Grant, D., & Dery, K. (2010). Transitioning to a new HRIS: The reshaping of human resources and information technology talent. *Journal of Electronic Commerce Research*, 11(4), 251–266.