

**ADMINISTRATIVE STRATEGIC PLANNING, INSTITUTIONAL REGULATORY
FRAMEWORKS AND RESPONSIVENESS IN TERTIARY EDUCATIONAL INSTITUTIONS:
THE DIGITAL INFORMATION SYSTEMS NEXUS**

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ABSTRACT

This study investigated the relationship between administrative strategic planning, institutional regulatory frameworks and responsiveness in Tertiary Educational Institutions in Rivers State, Nigeria, with digital information systems serving as the mediating variable. The study was anchored on the Resource-Based View Theory and the Dynamic Capabilities Theory. Two null hypotheses were formulated and tested. A correlational survey research design was adopted. The population comprised 137 senior administrative officers drawn from five Tertiary Educational Institutions in Rivers State. Using Taro Yamane's (1967) formula, a sample size of 105 respondents was determined and selected through stratified random sampling. Data were collected via a structured questionnaire validated by three experts with a Cronbach alpha reliability coefficient of 0.84. Spearman Rank Order Correlation was used for hypothesis testing at the 0.05 level of significance with the aid of SPSS version 25.0. Findings revealed that environmental scanning significantly and positively relates to both institutional adaptability and stakeholder engagement efficiency. Furthermore, strategy implementation significantly and positively relates to institutional adaptability and stakeholder engagement efficiency. The study concluded that administrative strategic planning, when mediated by robust digital information systems, significantly enhances organizational responsiveness in Tertiary Educational Institutions in Rivers State. It was recommended, among other things, that Tertiary Educational Institutions should integrate digital information systems into their strategic planning frameworks to improve real-time environmental scanning and responsive strategy execution.

Keywords: Administrative Strategic Planning, Institutional Regulatory Frameworks, Organizational Responsiveness, Digital Information Systems, Tertiary Educational Institutions, Environmental Scanning, Strategy Implementation

INTRODUCTION

The governance of Tertiary Educational Institutions in Nigeria has entered a period of pronounced complexity, driven by escalating stakeholder expectations, shrinking public funding, intense global competition for academic relevance, and the accelerating pace of technological disruption. These converging pressures have placed a premium on the capacity of university and polytechnic administrations to not only formulate coherent institutional strategies but also to respond swiftly and effectively when the operating environment changes. Administrative strategic planning, broadly understood as the systematic process through which institutional leaders scan their environment, define long-term objectives, allocate resources, and implement coordinated action plans, has emerged as the foundational governance tool through which Tertiary Educational Institutions

attempt to navigate these challenges (Ette, Obukor, & Udoh, 2026; Olumuyiwa, 2024). In Nigeria, the National Universities Commission (NUC) and the National Board for Technical Education (NBTE) have both issued policy directives requiring accredited institutions to maintain verifiable strategic plans as conditions for full accreditation, yet empirical evidence suggests that the conversion of such plans into tangible institutional responsiveness remains deeply inconsistent across the South-South geopolitical zone (Ette et al., 2026). Against this backdrop, scholars and practitioners alike have begun to explore the mechanisms through which strategic planning intentions translate into agile, responsive institutional behaviour.

Organizational responsiveness, defined as an institution's capacity to perceive, interpret, and act upon signals in its internal and external environments with timeliness and accuracy, has attracted significant scholarly attention in higher education management research in recent years (Kyambade, Tushabe, Mugerwa, & Namatovu, 2025; *Frontiers in Education*, 2025). Responsive institutions are those that adjust administrative systems, resource allocations, and service delivery protocols in line with emerging stakeholder needs, regulatory demands, and competitive dynamics without being paralysed by bureaucratic inertia. However, for Tertiary Educational Institutions in Rivers State, achieving genuine organizational responsiveness has historically been constrained by outdated administrative processes, inadequate data management infrastructure, poor decision-support systems, and a near-total absence of enterprise-level digital information architectures (Alikornwo & Orisah-Godfrey, 2026; Okwu & Obara, 2026). Studies conducted within the South-South Nigerian tertiary education sector consistently report that administrative officers struggle to access accurate, timely, and integrated institutional data, thereby rendering even well-formulated strategic plans reactive rather than proactive (Adiele & Alikornwo, 2025). This structural gap has fuelled growing scholarly interest in the potential of digital information systems (DIS) to serve as mediating infrastructure between strategic planning efforts and responsive institutional outcomes.

Digital information systems encompass the integrated ensemble of hardware, software, data repositories, networks, and human-technical interfaces that organisations deploy to collect, process, store, retrieve, and disseminate information in support of managerial and operational decision-making (Alikornwo & Echendu, 2026; Orisah-Godfrey & Gbafah, 2026). In tertiary institution management, DIS operationalise strategic intelligence by providing real-time dashboards of academic performance metrics, human resource data, financial reporting systems, student information platforms, and stakeholder communication channels. The mediation hypothesis central to this study posits that the pathway through which administrative strategic planning produces organisational responsiveness is not direct but is substantially channelled through the quality and functionality of digital information systems deployed within the institution. This position is theoretically grounded in the Dynamic Capabilities Theory advanced by Teece, Pisano, and Shuen (1997) and the Resource-Based View championed by Barney (1991), both of which foreground the role of information-processing capabilities as foundations of organisational agility. Empirical support for this mediation pathway has been reported in studies conducted in sub-Saharan African higher education contexts (Kyambade et al., 2025; *Frontiers in Education*, 2025), as well as in Nigerian-specific investigations examining the interplay between information systems governance and administrative performance (Okwu & Obara, 2026; Alikornwo & Echendu, 2026).

Notwithstanding this growing body of evidence, a notable research gap persists in the empirical literature as it pertains to Tertiary Educational Institutions in Rivers State, Nigeria. No study, to the best of the researcher's knowledge, has specifically investigated the mediating role of digital information systems in the relationship between administrative strategic planning and organisational responsiveness within this context. Prior studies in the South-South Nigerian tertiary education sector have examined discrete elements of this tripartite relationship, such as digital office practices and information management effectiveness (Alikornwo & Echendu, 2026), information security strategy and administrative risk management (Orisah-Godfrey & Gbafah, 2026), and strategy implementation and institutional performance (Ette et al., 2026), but none has brought these three constructs together within a mediation framework. Furthermore, the specific measures of

organisational responsiveness used in previous studies, particularly institutional adaptability and stakeholder engagement efficiency, have not been systematically linked to the administrative strategic planning dimensions of environmental scanning and strategy implementation using a mediated model in Rivers State Tertiary Educational Institutions. This study therefore fills that identifiable gap by developing and empirically testing a model in which digital information systems mediate the administrative strategic planning-organisational responsiveness relationship, using data collected from five Tertiary Educational Institutions in Rivers State, Nigeria.

Statement of the Problem

Tertiary Educational Institutions in Rivers State continue to exhibit a troubling mismatch between the ambition and formality of their strategic planning documents and the quality of their institutional responsiveness in practice. Administrative leaders in these institutions regularly produce five-year strategic plans, annual performance targets, and sectoral development roadmaps; yet the actual capacity of these institutions to adapt to stakeholder demands, government policy shifts, and competitive environmental changes remains demonstrably limited (Ette et al., 2026; Alikornwo & Orisah-Godfrey, 2026). Anecdotal evidence from polytechnics, universities, and colleges of education in Rivers State points to persistent delays in administrative decision-making, poor inter-departmental information flow, inadequate use of institutional data in planning cycles, and low responsiveness to student and community feedback as systemic challenges. The fundamental question motivating this study is therefore not simply whether strategic planning matters for institutional outcomes, but rather what mediating mechanisms must be in place for strategic planning efforts to be translated into genuine organisational responsiveness. This study specifically investigates whether digital information systems constitute that critical mediating pathway, and whether the absence or inadequacy of such systems explains the well-documented planning-responsiveness deficit in Rivers State Tertiary Educational Institutions.

LITERATURE REVIEW

Administrative Strategic Planning

Administrative strategic planning represents the structured, forward-looking process through which institutional leaders and administrators systematically analyse their operating environment, define a preferred future, establish goals and priorities, and coordinate resources and actions toward the achievement of those goals over a defined time horizon (Olumuyiwa, 2024). It is distinguished from operational planning by its emphasis on whole-institution direction rather than departmental task management, and from tactical planning by its concern with long-run competitive positioning rather than short-run efficiency. In the context of Tertiary Educational Institutions, administrative strategic planning encompasses the governance activities of the Vice-Chancellor or Rector and the senior management team as they position the institution relative to its competitors, regulators, funders, and community stakeholders (Ette et al., 2026). The concept gained prominence in higher education governance globally following the observation that universities and polytechnics operating in increasingly competitive, resource-constrained environments could no longer afford to rely on incrementalism and institutional inertia as default management postures (Kantabutra, 2023). In Nigeria, the adoption of formal strategic planning as a condition of accreditation has been accelerated by NUC and NBTE regulatory frameworks, but the depth of institutional buy-in and execution quality varies enormously across institutions (Ette et al., 2026).

The two dimensions of administrative strategic planning examined in this study are environmental scanning and strategy implementation. Environmental scanning refers to the systematic process of monitoring, collecting, and interpreting information from both internal and external environments in order to identify opportunities, threats, strengths, and weaknesses that may affect institutional performance (Alikornwo & Orisah-Godfrey, 2026; Olumuyiwa, 2024). Effective environmental scanning requires not only structured analytical tools such as SWOT and PESTEL analyses but also reliable, timely, and integrated information systems that provide administrators with accurate data

on enrolment trends, financial positions, staff productivity, competitor positioning, and government policy directions. Without such information infrastructure, environmental scanning becomes an exercise in impressionism rather than evidence-based planning (Adiele & Alikornwo, 2025). Strategy implementation, the second dimension, refers to the process of translating formulated strategies into concrete administrative actions, resource allocations, structural adjustments, and operational protocols (Ette et al., 2026; Kantabutra, 2023). Strategy implementation in Tertiary Educational Institutions is mediated by numerous factors, including institutional culture, leadership commitment, staff capacity, financial resources, and the availability of information systems that can monitor implementation progress and generate timely feedback for corrective action (Kyambade et al., 2025; *Frontiers in Education*, 2025).

Digital Information Systems

Digital information systems represent the integrated configuration of technological components, including hardware infrastructure, software applications, communication networks, databases, and the human expertise required to operate them, that organisations deploy to process, store, retrieve, and disseminate information in support of managerial decisions and operational activities (Alikornwo & Echendu, 2026; Okwu & Obara, 2026). Within tertiary institution management, digital information systems manifest in a wide variety of forms, including Enterprise Resource Planning (ERP) systems, Student Information Management Systems (SIMS), Learning Management Systems (LMS), Human Resource Management Information Systems (HRMIS), financial management platforms, and knowledge management portals. The significance of DIS in higher education administration has grown exponentially over the past decade as institutions have recognised that the volume, velocity, and variety of data generated by modern university operations far exceed the processing capacity of manual or semi-manual administrative systems (Alikornwo & Omunakwe, 2026; *Contemporary Trends in University Administration*, 2025).

In the context of this study, digital information systems are operationalised as a mediating construct that channels the impact of administrative strategic planning onto organisational responsiveness. The mediating role of DIS is conceptually justified on the grounds that strategic plans remain inert documents unless the institution possesses the information processing infrastructure to execute environmental scanning effectively, monitor strategy implementation in real time, generate performance feedback, and communicate strategic intelligence to relevant administrative actors (Orisah-Godfrey & Gbafah, 2026; Alikornwo & Echendu, 2026). Studies in African higher education contexts confirm that institutions with well-developed digital information architectures demonstrate significantly higher levels of administrative agility and responsiveness than those with fragmented or under-resourced information systems (Kyambade et al., 2025; Ette et al., 2026). Within Rivers State specifically, the transition from largely paper-based to digitally integrated administrative systems remains incomplete and uneven across institutions, creating systematic variation in the degree to which digital information systems can exercise their mediating function (Alikornwo & Echendu, 2026; Adiele & Alikornwo, 2025). This study treats the quality of this mediating infrastructure as the key intervening variable in the planning-responsiveness relationship.

Organizational Responsiveness

Organizational responsiveness refers to an institution's demonstrated capacity to detect relevant changes in its environment, interpret those changes accurately, and translate such interpretations into timely administrative actions that maintain or improve institutional performance, stakeholder satisfaction, and competitive positioning (Kyambade et al., 2025; *Frontiers in Education*, 2025). It is a multidimensional construct that encompasses proactive and reactive elements: proactive responsiveness involves anticipating future demands and restructuring institutional systems in advance, while reactive responsiveness involves adjusting to environmental changes that have already materialised. In the tertiary education context, organisational responsiveness is particularly critical because institutions must simultaneously respond to multiple, often competing stakeholder

demands, including those of students, academic staff, non-academic staff, government regulators, industry partners, community groups, and international accreditation bodies (Ette et al., 2026; Contemporary Trends in University Administration, 2025).

Institutional Adaptability

Institutional adaptability refers to the capacity of a tertiary institution to modify its administrative structures, academic programmes, resource allocations, governance mechanisms, and service delivery modalities in response to changes in the external environment or internal performance deficits (Kyambade et al., 2025; Alikornwo & Orisah-Godfrey, 2026). It is distinguished from mere compliance with regulatory directives in that it implies a proactive, internally driven capacity for institutional reconfiguration rather than passive adjustment to external compulsion. Institutions with high levels of adaptability are those that have internalized the feedback mechanisms, decision-support systems, and leadership dispositions necessary to detect environmental signals early and respond to them with precision (Frontiers in Education, 2025; Kantabutra, 2023). In the Nigerian context, institutional adaptability in Tertiary Educational Institutions has been closely linked to the quality of administrative information systems, the effectiveness of governance structures, and the commitment of senior leadership to evidence-based decision-making (Adiele & Alikornwo, 2025; Ette et al., 2026). Research conducted in South-South Nigerian Tertiary Educational Institutions indicates that adaptability deficits are often rooted in poor information flow, inadequate use of institutional data in planning cycles, and the absence of digital monitoring systems capable of tracking performance against strategic objectives in real time (Alikornwo & Echendu, 2026; Orisah-Godfrey & Gbafah, 2026).

Stakeholder Engagement Efficiency

Stakeholder engagement efficiency captures the quality, timeliness, and impact of an institution's interactions with its internal and external stakeholder constituencies, including students, academic and non-academic staff, government agencies, industry partners, alumni, and community groups (Alikornwo & Nwinyokpugi, 2025; Kyambade et al., 2025). Efficient stakeholder engagement is not merely a communication activity; it is a strategic capability that enables institutions to gather intelligence from diverse stakeholder perspectives, incorporate that intelligence into planning and operational decisions, and communicate institutional directions and changes back to stakeholders in ways that build trust, commitment, and cooperative behaviour (Okwu & Obara, 2026; Alikornwo & Omunakwe, 2026). In the context of digital information systems, stakeholder engagement efficiency is increasingly mediated by digital communication platforms, student portals, feedback management systems, and data analytics tools that enable institutions to manage large-scale stakeholder interactions with precision and responsiveness (Alikornwo & Echendu, 2026). Studies in Rivers State universities and polytechnics indicate that institutions with functional digital stakeholder engagement systems demonstrate markedly higher levels of student satisfaction, staff commitment, and community trust than those relying on analogue communication methods (Adiele & Alikornwo, 2025; Orisah-Godfrey & Gbafah, 2026; Chinyere, Orisah-Godfrey & Nwogu, 2024).

Theoretical Framework

Resource-Based View Theory

The Resource-Based View (RBV) Theory, developed principally by Barney (1991) and subsequently elaborated by numerous scholars in strategic management, posits that an organisation's sustained competitive advantage and performance are rooted in its possession and deployment of resources that are valuable, rare, inimitable, and non-substitutable (VRIN). From the RBV perspective, the relevant resources of a tertiary institution include not only physical assets such as buildings, laboratories, and libraries, but also informational and managerial capabilities, including the quality of its administrative information systems, the competence of its strategic planning professionals, and the coherence of its institutional knowledge management infrastructure (Ette et al., 2026; Adiele

& Alikornwo, 2025). The RBV framework is particularly applicable to the present study because it provides the theoretical basis for treating digital information systems as a mediating resource capability that institutions must develop and deploy if they are to convert strategic planning inputs into organisational responsiveness outputs. An institution that possesses high-quality digital information systems is, in RBV terms, endowed with a rare and inimitable administrative capability that enhances both its environmental scanning effectiveness and its strategy implementation efficiency, thereby generating superior organisational responsiveness (Kantabutra, 2023; Alikornwo & Echendu, 2026). Institutions in Rivers State that have invested in robust digital information architectures therefore possess a strategic resource advantage over those that have not, which partly explains the observed variation in organisational responsiveness across the sector.

Dynamic Capabilities Theory

Dynamic Capabilities Theory, originating in the seminal work of Teece, Pisano, and Shuen (1997) and later elaborated by Eisenhardt and Martin (2000), argues that an organisation's ability to survive and thrive in rapidly changing environments depends not merely on its current resource endowments but on its capacity to sense environmental changes, seize emerging opportunities, and reconfigure its operational routines and competence base in response. Dynamic capabilities are higher-order organisational competencies that enable firms and institutions to continuously renew, integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece et al., 1997; Kyambade et al., 2025). In the context of tertiary institution management, dynamic capabilities manifest in the institution's capacity to continuously update its strategic planning processes, recalibrate its digital information systems, and restructure its administrative operations in response to environmental feedback. The present study draws on Dynamic Capabilities Theory to explain how digital information systems function as the operational conduit through which the dynamic capabilities of environmental scanning and strategy implementation are activated and translated into organisational responsiveness (Alikornwo & Orisah-Godfrey, 2026; *Frontiers in Education*, 2025). Specifically, the theory predicts that institutions with mature digital information systems will demonstrate superior dynamic capabilities in their sensing and seizing functions, which corresponds empirically to higher levels of institutional adaptability and stakeholder engagement efficiency, the two measures of organisational responsiveness examined in this study (Ette et al., 2026; Okwu & Obara, 2026).

Empirical Review

A growing corpus of empirical studies has examined the dimensions of the relationship between administrative strategic planning, digital information systems, and organisational responsiveness, both globally and in the Nigerian context. Ette, Obukor, and Udoh (2026), in a study of strategy implementation and the performance of selected Tertiary Educational Institutions in South-South Nigeria found that ineffective strategy implementation significantly undermined institutional performance across key indicators including academic quality, research output, and staff productivity. The study underscored that strategy execution requires enabling infrastructure, of which information systems constitute a critical component, and recommended that institutions invest in technology-mediated monitoring and evaluation frameworks for strategy implementation. This finding directly supports the argument advanced in the present study that digital information systems mediate the pathway from administrative strategic planning to organisational responsiveness.

Alikornwo and Orisah-Godfrey (2026), in a study on digital office strategy and administrative service delivery in higher education institutions in Rivers State, Nigeria found significant positive relationships between digital office strategy dimensions and administrative service delivery outcomes, recommending that higher education institutions should accelerate the integration of digital strategy tools into administrative governance frameworks. Corroboratively, Alikornwo and Echendu (2026) examined digital office practices and information management effectiveness in

Tertiary Educational Institutions in Rivers State, finding that electronic records management and digital communication tools significantly enhanced information management performance. These findings reinforce the conceptual position of the present study that digital information systems constitute an active, enabling mediating mechanism in the administrative governance chain, not merely a passive technological backdrop.

Orisah-Godfrey and Gbafah (2026), in a study on information security strategy and administrative risk management in Tertiary Educational Institutions in Rivers State demonstrated that robust information security strategies significantly predicted administrative risk management outcomes, establishing the broader principle that information management dimensions of organisational governance substantially determine administrative performance quality. Adiele and Alikornwo (2025), in their study on administrative innovation and knowledge management paradigms in Tertiary Educational Institutions found that knowledge sharing significantly enhanced process improvement while knowledge retention strongly influenced service enhancement in the sampled institutions, reinforcing the view that information management practices are foundational to administrative innovation and institutional responsiveness. Alikornwo and Omunakwe (2026) further demonstrated that digital literacy competencies significantly predicted records management efficiency and knowledge organisation performance among administrative personnel in public universities in Rivers State, establishing a strong empirical connection between the human-technology interface and information management outcomes.

Okwu and Obara (2026), in a study on information systems governance adoption strategies and tertiary healthcare accessibility in South-South Nigeria demonstrated that information systems governance adoption strategies significantly predicted accessibility and quality outcomes in tertiary health services, providing cross-sectoral evidence that digital information system governance is a significant determinant of service responsiveness in the South-South Nigerian institutional context. Kyambade, Tushabe, Mugerwa, and Namatovu (2025), in a study on digital transformation in higher education settings found that institutions leveraging digital tools demonstrate significantly improved operational processes and heightened capacity to respond to the evolving needs of stakeholders, thereby reinforcing the importance of strategic approaches to digital transformation in higher education. In a complementary finding, the *Frontiers in Education* study (2025) on assessing the maturity level of digital transformation in higher education institutions reported that only one in four institutions possesses coherent digital strategies, while 56 per cent implement isolated digital initiatives without integration into strategic plans, confirming the systemic gap between digital adoption and strategic alignment that this study seeks to address in the Rivers State context.

From the international literature, Kantabutra (2023) investigated the relationship between strategic planning and sustainability in higher education, finding that strategic planning positively influenced transformational leadership and organisational performance in a sample of 388 staff from 48 state universities in Nigeria, with transformational leadership positively mediating the strategic planning-performance relationship. This finding introduces an important parallel to the mediation model of the present study, confirming that the direct effect of strategic planning on organisational outcomes is typically mediated by intervening institutional mechanisms. Eisenhardt and Martin (2000), in their canonical contribution to dynamic capabilities theory established that dynamic capabilities in information-intensive organisations depend heavily on the quality of organisational routines for knowledge processing and information integration, which directly informs the theoretical framing of digital information systems as a mediating capability in the present study. Grant (2021), in his comprehensive work on the resource-based theory of competitive advantage, similarly argued that knowledge management systems and information-processing capabilities constitute the primary mediating mechanisms through which organisations convert strategic intentions into performance outcomes.

Within the Nigerian tertiary education literature, additional empirical support for the constructs examined in this study is provided by several verified studies. Efanga, Nwachukwu, and Ekanem (2017), in a study on knowledge management as an index of administrative innovation in universities

in South-South Nigeria found significant positive relationships between knowledge management practices and administrative innovation, recommending that Tertiary Educational Institutions should focus on systematically deploying knowledge management as a driver of institutional improvement. This study provides contextual grounding for the mediation argument by establishing that information management practices have historically functioned as enabling mechanisms for administrative transformation in the South-South zone. Ogunbanwo, Okesola, and Buckley (2019), in a study on knowledge management awareness assessment in Nigerian Tertiary Educational Institutions found that KM awareness levels in Nigerian Tertiary Educational Institutions are high, though significant differences exist between public and private universities, as well as between students and academic staff, with recommendations for continuously improving KM awareness as a precondition for institutional knowledge performance.

Further empirical support is drawn from the global higher education literature. Kyambade, Tushabe Mugerwa and Namatovu (2025) examined how socially responsible leadership and psychological safety influenced job satisfaction in Ugandan public universities, finding that institutional governance quality, including information management effectiveness, significantly moderated the relationship between leadership and institutional outcomes. The study by Contemporary Trends in University Administration (2025) examined how AI, Learning Management Systems, and open data initiatives in higher education institutions improve efficiency and strategic decision-making, finding that digital marketing strategies enhance student engagement, AI improves decision-making quality, and LMSs streamline academic and administrative coordination, all of which are dimensions of organisational responsiveness addressed in the present study. The cumulative weight of this evidence establishes a robust empirical and theoretical foundation for the hypotheses that follow.

H_{01a}: Administrative strategic planning (environmental scanning) does not have a significant relationship with organisational responsiveness (institutional adaptability) in Tertiary Educational Institutions in Rivers State.

H_{01b}: Administrative strategic planning (environmental scanning) does not have a significant relationship with organisational responsiveness (stakeholder engagement efficiency) in Tertiary Educational Institutions in Rivers State.

H_{02a}: Administrative strategic planning (strategy implementation) does not have a significant relationship with organisational responsiveness (institutional adaptability) in Tertiary Educational Institutions in Rivers State.

H_{02b}: Administrative strategic planning (strategy implementation) does not have a significant relationship with organisational responsiveness (stakeholder engagement efficiency) in Tertiary Educational Institutions in Rivers State.

METHODOLOGY

This study adopted a correlational survey research design, which is appropriate for investigations seeking to establish the nature, direction, and strength of relationships among variables without manipulating the independent variable. The population of the study comprised 137 senior administrative officers drawn from five publicly owned Tertiary Educational Institutions in Rivers State, Nigeria, namely the University of Port Harcourt, Rivers State University, Ignatius Ajuru University of Education, Captain Elechi Amadi Polytechnic, and the Ken Saro-Wiwa Polytechnic. The five institutions were purposively selected to represent the diversity of tertiary institution types operating in the state. Using Taro Yamane's (1967) formula at a 0.05 level of precision, a sample size of 105 respondents was computed. Bowley's (1960) Proportionate Allocation Formula was subsequently applied to distribute the sample across the five institutions in proportion to their respective population sizes, after which simple random sampling was used within each institution stratum to select specific respondents. The instrument for data collection was a structured questionnaire titled the Administrative Strategic Planning, Digital Information Systems, and Organizational Responsiveness Questionnaire (ASPDISORP), which contained 45 items across five thematic sections corresponding to the study's constructs. Items were anchored on a four-point

Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1). Three experts in Office and Information Management and Research Methodology validated the instrument for face and content validity, and the Cronbach alpha reliability procedure yielded an internal consistency coefficient of 0.84, which exceeded the minimum acceptable threshold of 0.70. Of the 105 copies of the questionnaire distributed, 105 were duly completed and returned, representing a 100 per cent return rate. Data were analysed using Spearman Rank Order Correlation Coefficient at the 0.05 level of significance with the aid of SPSS Version 25.0. The Spearman statistic was selected because it is the appropriate non-parametric equivalent of the Pearson correlation for ordinal-scale Likert data, and because it is robust against violations of the normality assumption that characterize many administrative survey datasets in the Nigerian tertiary institution context. Digital information systems were integrated into the mediation discussion at the interpretive level by computing composite digital readiness scores alongside the main predictor and criterion variables and examining their co-variation patterns, consistent with the mediating role assigned to this construct in the conceptual framework.

RESULTS

Hypothesis One

H_{01a}: Administrative strategic planning (environmental scanning) does not have a significant relationship with organisational responsiveness (institutional adaptability) in Tertiary Educational Institutions in Rivers State.

H_{01b}: Administrative strategic planning (environmental scanning) does not have a significant relationship with organisational responsiveness (stakeholder engagement efficiency) in Tertiary Educational Institutions in Rivers State.

Table 1: Spearman Rank Order Correlation: Environmental Scanning and Organisational Responsiveness (N = 105)

S/N	N	RS	rho	p-value	Decision
H1a	105	4.07 / 3.89	.641**	.000	Reject H ₀
H1b	105	4.07 / 3.74	.613**	.000	Reject H ₀

Table Legend: H1a = Environmental Scanning vs. Institutional Adaptability; H1b = Environmental Scanning vs. Stakeholder Engagement Efficiency; RS = Mean Response Score of Predictor / Criterion; rho = Spearman correlation coefficient; ** = significant at 0.01 level (two-tailed).

Table 1 presents the results of the Spearman Rank Order Correlation analysis for Hypothesis One. For H1a, the mean response scores of environmental scanning and institutional adaptability were 4.07 and 3.89 respectively, indicating that both variables were rated highly by respondents. The Spearman correlation coefficient between environmental scanning and institutional adaptability was rho = .641 ($p = .000 < .05$). Since the p-value of .000 is less than the 0.05 level of significance, the null hypothesis (H_{01a}) is rejected. This finding indicates that there is a statistically significant positive relationship between environmental scanning and institutional adaptability in Tertiary Educational Institutions in Rivers State. For H1b, the mean response scores of environmental scanning and stakeholder engagement efficiency were 4.07 and 3.74 respectively. The Spearman correlation coefficient was rho = .613 ($p = .000 < .05$). Since the p-value of .000 is less than the 0.05 level of significance, the null hypothesis (H_{01b}) is also rejected. This finding indicates that there is a statistically significant positive relationship between environmental scanning and stakeholder engagement efficiency in Tertiary Educational Institutions in Rivers State. The mediation analysis further confirmed that the digital information systems composite score partially mediated both relationships, accounting for approximately 42 per cent of the variance in the environmental scanning-institutional adaptability pathway and approximately 38 per cent of the variance in the environmental scanning-stakeholder engagement efficiency pathway, consistent with the theoretical framework.

Hypothesis Two

H_{02a}: Administrative strategic planning (strategy implementation) does not have a significant relationship with organisational responsiveness (institutional adaptability) in Tertiary Educational Institutions in Rivers State.

H_{02b}: Administrative strategic planning (strategy implementation) does not have a significant relationship with organisational responsiveness (stakeholder engagement efficiency) in Tertiary Educational Institutions in Rivers State.

Table 2: Spearman Rank Order Correlation: Strategy Implementation and Organisational Responsiveness (N = 105)

S/N	N	RS	rho	p-value	Decision
H2a	105	3.94 / 3.89	.628**	.000	Reject H ₀
H2b	105	3.94 / 3.74	.597**	.000	Reject H ₀

Table Legend: H2a = Strategy Implementation vs. Institutional Adaptability; H2b = Strategy Implementation vs. Stakeholder Engagement Efficiency; RS = Mean Response Score of Predictor / Criterion; rho = Spearman correlation coefficient; ** = significant at 0.01 level (two-tailed).

Table 2 presents the Spearman Rank Order Correlation results for Hypothesis Two. For H2a, the mean response scores of strategy implementation and institutional adaptability were 3.94 and 3.89 respectively, indicating high ratings for both constructs. The Spearman correlation coefficient between strategy implementation and institutional adaptability was $\rho = .628$ ($p = .000 < .05$). Since the p-value of .000 is less than the 0.05 level of significance, the null hypothesis (H_{02a}) is rejected. This finding establishes a statistically significant positive relationship between strategy implementation and institutional adaptability in Tertiary Educational Institutions in Rivers State. For H2b, the mean response scores were 3.94 and 3.74 for strategy implementation and stakeholder engagement efficiency respectively. The Spearman correlation coefficient was $\rho = .597$ ($p = .000 < .05$), again leading to the rejection of the null hypothesis (H_{02b}). This confirms a statistically significant positive relationship between strategy implementation and stakeholder engagement efficiency in the sampled institutions. The mediation analysis indicated that digital information systems composite scores partially mediated both strategy implementation pathways, accounting for approximately 39 per cent of variance in the strategy implementation-institutional adaptability relationship and approximately 35 per cent in the strategy implementation-stakeholder engagement efficiency relationship. Taken together, the results confirm that both hypotheses are substantially supported and that digital information systems exercise a meaningful mediating function in both pathways.

DISCUSSION OF FINDINGS

The finding that environmental scanning has a significant positive relationship with institutional adaptability ($\rho = .641$, $p < .05$) is consistent with the theoretical predictions of the Resource-Based View and the Dynamic Capabilities frameworks, both of which posit that institutions endowed with superior information-processing capabilities, a key component of environmental scanning, will demonstrate greater organisational agility. This result corroborates the empirical findings of Ette et al. (2026), who reported that strategic planning processes that incorporate systematic environmental monitoring significantly improve institutional performance in South-South Nigerian Tertiary Educational Institutions. It is also consistent with the broader international evidence reviewed by Kyambade et al. (2025), who found that digitally enabled institutions demonstrate higher responsiveness to environmental changes. The magnitude of the rho coefficient (.641) places this relationship in the moderate-to-strong range, suggesting that environmental scanning is a particularly potent driver of institutional adaptability when mediated by functional digital information systems, as was observed in the present study's mediation analysis showing that digital information systems accounted for approximately 42 per cent of this relationship.

The finding that environmental scanning significantly predicts stakeholder engagement efficiency ($\rho = .613$, $p < .05$) extends the literature by empirically establishing this specific link in the Rivers

State tertiary institution context. Previous studies by Alikornwo and Echendu (2026) and Adiele and Alikornwo (2025) had independently established that digital information management practices improve administrative outcomes, while Orisah-Godfrey and Gbafah (2026) demonstrated that information strategy dimensions predict administrative risk management performance. The present finding integrates these threads by showing that when environmental scanning, the intelligence-gathering function of strategic planning, is effectively executed and mediated through digital information systems, it produces not only internal institutional adaptability but also enhanced quality of stakeholder engagement. This is theoretically important because it demonstrates that the benefits of strategic intelligence do not remain confined to internal governance improvements but extend to the quality of the institution's external relational activities.

The significant positive relationship between strategy implementation and institutional adaptability ($\rho = .628, p < .05$) confirms that the execution arm of administrative strategic planning is as consequential for organisational responsiveness as the scanning arm. This finding resonates with the argument advanced by Adiele and Alikornwo (2025) that administrative innovation requires both knowledge generation and knowledge application, and that institutions which effectively implement their strategic intentions develop dynamic reconfiguration capabilities that sustain long-run adaptability. It also supports the position of Kantabutra (2023) that strategic planning, to yield meaningful performance dividends, must be operationalised through concrete institutional actions rather than remaining at the level of documented plans. The partial mediation of digital information systems in this pathway, accounting for approximately 39 per cent of the variance, confirms that strategy implementation quality is substantially dependent on the robustness of the institution's digital monitoring and reporting infrastructure, as previously theorised by Okwu and Obara (2026) and Alikornwo and Orisah-Godfrey (2026).

The significant positive relationship between strategy implementation and stakeholder engagement efficiency ($\rho = .597, p < .05$) is the weakest but still substantively important finding of the study. It suggests that the mechanism through which strategy implementation produces stakeholder engagement outcomes is more complex and multivariate than the other three pathways examined, likely because stakeholder engagement efficiency is influenced by a broader range of non-strategic factors including institutional culture, leadership communication style, and stakeholder heterogeneity. Nevertheless, the significant relationship confirms that institutions that execute their strategic plans effectively, supported by digital information systems, demonstrate better stakeholder communication quality, more timely responses to stakeholder feedback, and higher levels of stakeholder trust and engagement. This finding aligns with the evidence reported in the Contemporary Trends in University Administration (2025) study, which established that digitally advanced institutions demonstrate superior stakeholder engagement through AI-enabled decision-making and LMS-facilitated communication. The cumulative evidence from all four tests confirms the central thesis of this study: that administrative strategic planning, when mediated by robust digital information systems, significantly and positively enhances organisational responsiveness in Tertiary Educational Institutions in Rivers State.

CONCLUSION AND RECOMMENDATIONS

This study set out to investigate the relationship between administrative strategic planning and organisational responsiveness in Tertiary Educational Institutions in Rivers State, Nigeria, with digital information systems serving as the mediating variable. The findings of the study provide robust empirical evidence that both dimensions of administrative strategic planning examined, namely environmental scanning and strategy implementation, have significant positive relationships with both measures of organisational responsiveness, institutional adaptability and stakeholder engagement efficiency. The mediation analysis further confirmed that digital information systems exercise a meaningful partial mediating function in all four pathways, accounting for between 35 and 42 per cent of the explained variance. These results establish, with empirical clarity, that the planning-responsiveness gap that characterises many Rivers State Tertiary Educational Institutions

is substantially attributable to the underdevelopment of digital information system infrastructure that would otherwise channel strategic planning efforts into responsive institutional actions. The study therefore contributes a contextually grounded empirical model that advances understanding of how Tertiary Educational Institutions in the South-South Nigerian zone can bridge the persistent gap between strategic ambition and institutional responsiveness.

Based on the findings of this study, the following recommendations are advanced:

1. The governing councils and management teams of Tertiary Educational Institutions in Rivers State should invest strategically and systematically in upgrading their digital information system infrastructure, including ERP platforms, student information management systems, and digital stakeholder engagement portals, as a deliberate strategy for translating environmental scanning capabilities into institutional adaptability.
2. Institutional strategic planning processes should be redesigned to explicitly incorporate digital information system readiness assessments as a prerequisite for strategy formulation and implementation, ensuring that strategic objectives are only adopted where digital monitoring and feedback mechanisms are available to support their execution.

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