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Digital Transformation Strategies and Performance of
Private Universities in Nairobi City County, Kenya



Digital Transformation Strategies and Performance of Private Universities in Nairobi City County, Kenya

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ABSTRACT

Purpose: The main research objective is to examine the influence of digital transformation strategies on performance of private universities in Nairobi City County, Kenya. Specifically, the study sought to determine the effect of administrative systems strategy and data management strategy on the performance of private universities in Nairobi City County, Kenya. The study was anchored on; Contingency Theory and Knowledge Management (KM) Theory.

Methodology: This study used a cross-sectional survey design. The target population for this study was 363 respondents from 33 Private institutions accredited to undertake higher education in Kenya (CUE, 2024). The unit of analysis comprised of 33 institutions accredited to undertake university education in Kenya while the unit of observation was the 363 respondents comprising of Vice Chancellors, Deputy Vice Chancellors and Deans of Schools. The study adopted Yamane (1957) to determine the appropriate sample size. Hence, the sample size of the study was 190 respondents. Simple random sampling was adopted to select study sample. Data was collected using a self-administered semi-structured questionnaire. A pilot test on 19 respondents 10% of the sample size was conducted to determine validity and reliability of the data collection instrument. Data obtained from the field was coded, cleaned, and entered to the computer for analysis using SPSS version 28. Descriptive statistical analysis techniques, such as frequency, percentages, mean and standard deviation were used to summarize the data. Inferential statistical analysis, including multiple regression and correlation analysis was used to assess the relationship between the independent and the dependent variables.

Findings: The study concludes that administrative systems strategy and data management strategy has a positive and significant influence on performance of private universities in Nairobi City County, Kenya.

Unique Contribution to Theory, Policy and Practice: Based on the findings, the study recommends that private universities in Kenya should implement an integrated administrative systems strategy that adopts centralized, automated, and interoperable digital platforms for functions such as admissions, finance, human resources, and student records management, as this enhances efficiency, reduces operational redundancies, improves data accuracy, and supports timely decision-making.

Keywords: *Digital Transformation Strategies, Administrative Systems Strategy, Data Management Strategy, Private Universities*

Background of the Study

The education sector is a vital engine of socio-economic development, human capital formation, and innovation worldwide. It spans multiple levels, with higher education playing a central role in knowledge creation and skills development (Adongo, Nduku & Ntabo, 2025). Global demand for tertiary education has risen substantially over the past two decades. According to the UNESCO, global tertiary enrolment has surpassed 235 million students, reflecting the increasing importance of university education in enhancing employability, productivity, and national competitiveness (Purba, *et al*, 2022). The World Bank further emphasizes that higher levels of tertiary attainment are associated with stronger economic growth and improved development outcomes. Private universities are higher education institutions established and managed by non-governmental entities such as private organizations, religious bodies, foundations, corporations, or individual proprietors (Kinuthia, 2023). Unlike public universities, which are primarily funded by the state, private universities largely depend on tuition fees, donations, endowments, and private investments for sustainability. They operate within national regulatory and accreditation frameworks that ensure compliance with academic quality standards, and they offer undergraduate and postgraduate programs across diverse fields of study (Mugo & Siaga, 2024).

Private universities play a significant role in expanding access to higher education. As public institutions in many countries face capacity and funding constraints, private universities help absorb the growing number of qualified students seeking university education (Adongo, Nduku & Ntabo, 2025). The International Finance Corporation notes that private higher education institutions account for a substantial share of tertiary enrolment in many developing regions, demonstrating their importance in increasing participation rates and reducing pressure on public systems. Beyond access, private universities contribute to innovation, labor market responsiveness, and economic development (Purba, *et al*, 2022). Their relatively flexible governance structures enable them to introduce market-oriented programs and adapt quickly to emerging industry needs. They generate employment opportunities, support research and entrepreneurship, and stimulate local economies through institutional activities (Kinuthia, 2023). Consequently, the performance of private universities is critical, as it influences student outcomes, institutional sustainability, competitiveness, and their broader contribution to social and economic advancement (Mugo & Siaga, 2024).

Digital transformation strategies refer to the deliberate and systematic plans adopted by an organization to integrate digital technologies into its structures, processes, services, and value-creation mechanisms in order to enhance efficiency, competitiveness, and long-term sustainability (Halim, Kesuma & Siregar, 2023). These strategies encompass the alignment of technological investments with organizational goals, the redesign of operational processes through digital systems, the development of digital capabilities among human resources, and the

restructuring of governance frameworks to support data-driven decision-making (Wang, *et al*, 2020).

Administrative systems strategy involves the integration and optimization of digital platforms that streamline institutional processes such as finance, human resource management, records management, and communication systems to improve operational efficiency, transparency, and coordination (Rubio-Andrés, *et al*, 2025). Data management strategy encompasses the structured governance, collection, storage, analysis, protection, and utilization of organizational data to ensure accuracy, security, compliance, and informed decision-making, thereby enabling strategic planning and performance monitoring through reliable data-driven insights (Msamba, 2025). This study aimed to examine the influence of digital transformation strategies on performance of private universities in Nairobi City County, Kenya.

Private universities in Nairobi City County, Kenya play an important role in the country's higher education landscape by offering students alternatives to public institutions. Unlike public universities, which are government-funded and often have high student populations and lower fees, private universities are independently funded and typically charge higher tuition (Adongo, Nduku & Ntabo, 2025). However, they often provide smaller class sizes, personalized attention, modern facilities, flexible schedules (such as evening or weekend classes), and programs tailored to market needs. These features make them attractive to students who want closer interaction with faculty, quicker administrative support, and practical skills that closely match industry demands (Purba, *et al*, 2022).

In Nairobi City County itself, there are several well-established private universities, some of which have built strong academic reputations both locally and internationally. Strathmore University is widely recognized for its excellence in business, accounting, law, IT and data science, and is often ranked as Kenya's top private institution (Kinuthia, 2023). United States International University – Africa offers U.S.-style education with a global outlook and strong international partnerships, making it a popular choice for students interested in business, communications, psychology and global studies (Mugo & Siaga, 2024). Meanwhile, Catholic University of Eastern Africa combines academic instruction with value-based education in fields such as theology, law, business and social sciences. Others like Pan Africa Christian University and Kiriri Women's University of Science and Technology serve specific student communities, with Kiriri focusing on empowering women in science and technology (Adongo, Nduku & Ntabo, 2025).

These institutions contribute significantly to Nairobi's educational and economic ecosystem. They attract students not only from across Kenya but also from other countries, adding to cultural diversity on campus and expanding global networks (Purba, *et al*, 2022). The emphasis on career-oriented programmes, internships and industry linkages helps many graduates transition smoothly into the job market, particularly in sectors like business, media, technology

and international affairs (Kinuthia, 2023). However, prospective students should consider factors such as tuition costs, program accreditation, campus facilities and personal career goals before choosing a private university, as fees can vary widely and some may offer niche programmes not available elsewhere (Mugo & Siaga, 2024).

Statement of the Problem

Private universities play a significant role in advancing national development by expanding access to higher education, enhancing human capital formation, and supporting innovation. In Kenya, private universities complement public institutions by absorbing increasing student demand and offering diverse academic programs aligned with labor market needs (Adongo, Nduku & Ntabo, 2025). They contribute to economic growth through employment creation, research, community engagement, and the production of skilled graduates who drive productivity across sectors. By fostering competition and specialization, private universities also promote quality improvement in the higher education sector (Purba, *et al*, 2022). In addition, they attract both local and international students, thereby contributing to knowledge exchange, revenue generation, and the overall strengthening of the country's education system (Kinuthia, 2023).

Private universities in Nairobi City County, Kenya face challenges with enrollment growth, largely due to competition from public institutions and policy shifts. The Commission for University Education (CUE) University Statistics 2024/2025 Report shows that private chartered universities enrolled 144,236 students, about 23 % of all university enrollments, compared to 469,688 in public universities (Adongo, Nduku & Ntabo, 2025). The Kenya National Bureau of Statistics (KNBS) 2024 Economic Survey reports a 14.1 % drop in private university enrollment from 112,287 to 96,640 students in one year due to placement policy changes. Meanwhile, KUCCPS data shows placements nearly doubled from 9,622 to 18,557 students over a recent cycle, highlighting volatility that affects planning and resource allocation (Mugo & Siaga, 2024).

Regarding student satisfaction and graduation rates, statistics indicate disparities in academic resources that can influence student experiences. The 2024/2025 CUE report notes that private universities account for 32.7 % of key academic resources compared with public universities, impacting learning environments and satisfaction (Adongo, Nduku & Ntabo, 2025). For graduations, national figures rose from 99,829 in 2023 to 123,928 in 2024, with private universities contributing 30,053 graduates, about 24 % of all graduates. These numbers show that private universities play a key role in expanding higher education access but continue to face enrollment volatility, resource constraints, and challenges in achieving consistent graduation outcomes (Mugo & Siaga, 2024).

Digital transformation strategies significantly influence organizational performance by enhancing efficiency, service delivery, competitiveness, and strategic agility. The integration of digital technologies enables universities to streamline administrative processes, improve

decision-making, and enhance the student experience (Ramadan, 2026). Various studies have been conducted in different parts of the world on digital transformation strategies and organization performance. For instance, Githua (2025) assessed on digital transformation and market performance of pharmaceutical micro, small and medium-sized enterprises. Kikundu, M'kuma and Nyamu (2025) researched on digital transformation strategies on the performance of solar power enterprises and Otieno, Karimi and Nyataya (2025) examined on digital transformation strategy and competitive advantage of financial institution. However, none of these studies focused on administrative systems strategy and data management strategy on performance of private universities in Nairobi City County, Kenya. To fill the highlighted gaps, the current study sought to examine the influence of digital transformation strategies (administrative systems strategy and data management strategy) on performance of private universities in Nairobi City County, Kenya

Objectives of the Study

General Objective

The main research objective is to examine the influence of digital transformation strategies on performance of private universities in Nairobi City County, Kenya

Specific Objectives

- i. To determine the effect of administrative systems strategy on the performance of private universities in Nairobi City County, Kenya.
- ii. To examine the effect of data management strategy on the performance of private universities in Nairobi City County, Kenya.

Theoretical Review

Contingency Theory

Contingency Theory developed by Fred Fiedler (1964) is a leadership and organizational management framework that posits there is no single best way to manage or lead an organization. Instead, the effectiveness of a leader or management style depends on the context or situation in which it is applied (Githua, 2025). This theory emphasizes that organizational success is contingent upon aligning leadership approaches, decision-making processes, and structural arrangements with various internal and external factors, such as the nature of tasks, the work environment, team dynamics, and organizational goals (Halim, Kesuma & Siregar, 2023). Essentially, it rejects one-size-fits-all solutions and argues that flexibility and situational awareness are key to achieving optimal outcomes. The theory highlights that factors such as the complexity of tasks, the level of uncertainty, the capabilities of employees, and the organizational culture significantly influence the most effective leadership approach (Wang, *et al*, 2020). For instance, highly structured and routine tasks may benefit from a more directive

leadership style, whereas creative or ambiguous tasks may require participative or adaptive leadership (Sarfraz, *et al*, 2022). Contingency Theory also extends to organizational design, suggesting that the structure of an organization, centralized vs. decentralized, formalized vs. flexible, should correspond to the specific demands of its environment and objectives. By acknowledging that effectiveness is situational, this theory encourages leaders and managers to assess contextual variables carefully and adjust their strategies accordingly (Al-Ayed, Al-Tit & Alashjaee, 2021).

Furthermore, Contingency Theory has practical implications in strategic management, human resource practices, and organizational change. It provides a framework for diagnosing organizational challenges and selecting leadership approaches that align with current circumstances (Rubio-Andrés, *et al*, 2025). Leaders are encouraged to develop situational judgment, adaptability, and the ability to read environmental cues to guide decisions effectively (Msamba, 2025). The theory underscores that success in management and leadership is not solely about inherent traits or fixed styles but about the ability to match leadership behavior and organizational structure to the specific contingencies facing the organization (Ramadan, 2026). This theory was relevant in determining the effect of administrative systems strategy on the performance of private universities in Nairobi City County, Kenya.

Knowledge Management (KM) Theory

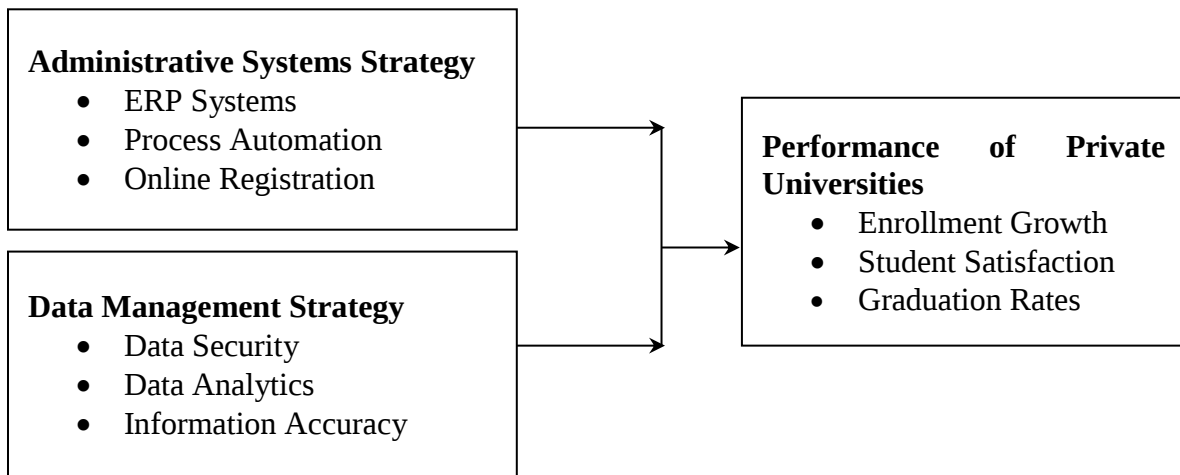
Knowledge Management (KM) Theory developed by Peter Drucker (1966) is a framework that explores how organizations create, capture, store, share, and utilize knowledge to achieve strategic objectives and improve performance (Tesda, 2025). It emphasizes the value of knowledge as a critical organizational asset, recognizing that effectively managing both tacit knowledge (personal, experience-based insights) and explicit knowledge (documented information, manuals, databases) can enhance innovation, decision-making, and competitive advantage (Pierre, 2023). KM Theory provides insights into how knowledge flows within organizations, highlighting the processes that facilitate learning, collaboration, and the transformation of individual knowledge into organizational knowledge (Mafukidze & Chiutsi, 2025).

The theory also addresses the systems, culture, and structures necessary to support knowledge activities. It examines the role of knowledge repositories, information technology tools, and social networks in ensuring that knowledge is accessible and usable (Mwenda, 2025). KM Theory underscores the importance of a knowledge-sharing culture where employees are motivated and incentivized to contribute and exchange ideas. It often draws from other disciplines, including organizational learning, cognitive science, and information systems, to explain how knowledge can be leveraged strategically (Otieno, Karimi & Nyataya, 2025). Furthermore, Knowledge Management Theory highlights the dynamic nature of knowledge within organizations. Knowledge is not static; it evolves as employees gain experience,

technologies advance, and market conditions change (Musau & Muathe, 2025). Effective KM practices involve continuous updating, validation, and dissemination of knowledge to maintain relevance and accuracy. By systematically managing knowledge, organizations can reduce redundancy, avoid repeated mistakes, and create value through informed decision-making, innovation, and enhanced organizational learning (M’kuma & Nyamu, 2025). This theory was used to examine the effect of data management strategy on the performance of private universities in Nairobi City County, Kenya.

Conceptual Framework

A conceptual framework is a diagrammatic described of how the variables in a particular study relate to one another (Mensah, 2020). Figure 2.1 presents the conceptual framework that was adopted in the study. The independent variable of the study includes administrative systems strategy and data management strategy while dependent variable is performance of private universities in Nairobi City County, Kenya.



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

Administrative Systems Strategy

Administrative Systems Strategy refers to a comprehensive plan that guides the design, implementation, and management of organizational administrative processes through structured systems and technologies (Kim & Park, 2020). It focuses on optimizing the efficiency, accuracy, and consistency of administrative operations such as record-keeping, reporting, resource allocation, and workflow management. The strategy involves integrating digital tools, software applications, and automated processes to streamline administrative tasks, reduce errors, and improve decision-making (Mensah & Boateng, 2022). It emphasizes aligning administrative systems with organizational objectives, ensuring scalability, security, and adaptability, while

promoting transparency, accountability, and effective coordination across different departments. A well-defined administrative systems strategy enhances operational performance and supports the overall strategic goals of the organization (Okello & Namusonge, 2021). ERP Systems (Enterprise Resource Planning systems) are integrated software platforms designed to centralize and manage core administrative and operational processes within an organization. They consolidate data from various departments such as finance, human resources, procurement, and student services into a unified system, enabling real-time monitoring, reporting, and analysis (Otieno & Mwangi, 2023). ERP systems enhance coordination and reduce redundancy by ensuring that all departments operate from a single source of accurate information. They also support informed decision-making, improve efficiency, and strengthen organizational control over resources and processes (Kiptoo & Chebet, 2022).

Process Automation involves the use of technology to perform routine administrative tasks with minimal human intervention. This includes workflows such as approvals, data entry, notifications, and reporting. Automation increases operational efficiency by reducing errors, saving time, and standardizing processes across the organization (Kim & Park, 2020). It allows administrative staff to focus on higher-value activities while ensuring that repetitive tasks are executed consistently and accurately. Process automation also enhances accountability, traceability, and overall organizational productivity (Mensah & Boateng, 2022). Online Registration refers to digital systems that enable learners or clients to register for courses, programs, or services electronically. This system streamlines the enrollment process by allowing users to input their information, select courses, and make payments through a secure digital interface (Okello & Namusonge, 2021). Online registration reduces administrative workload, minimizes errors associated with manual registration, and improves accessibility for users. It also provides real-time updates on enrollment status, ensures efficient record management, and contributes to a more organized and responsive administrative framework within the organization (Otieno & Mwangi, 2023).

Data Management Strategy

Data Management Strategy refers to a structured plan that guides how an organization collects, organizes, stores, protects, and utilizes its data to support decision-making and operational efficiency. It encompasses policies, processes, and technologies for data governance, quality assurance, security, and integration across different systems (Davenport & Bean, 2024). The strategy emphasizes ensuring data accuracy, consistency, accessibility, and compliance with regulatory requirements while enabling effective analysis and reporting. By aligning data management practices with organizational objectives, the strategy enhances information-driven decision-making, supports innovation, reduces risks related to data loss or misuse, and ensures that data serves as a reliable and valuable organizational asset (Moyo & Chigona, 2021). Data Security refers to the measures and protocols implemented to protect an organization's data from

unauthorized access, breaches, corruption, or loss. It involves the use of encryption, access controls, authentication mechanisms, and backup systems to safeguard sensitive information (Boateng & Agyemang, 2023). Effective data security ensures the confidentiality, integrity, and availability of data, preventing misuse or exploitation. It also builds trust in the organization's digital systems by protecting critical information assets from cyber threats and operational vulnerabilities, thereby supporting overall organizational stability and compliance with regulatory requirements (Omondi & Muturi, 2021).

Data Analytics involves the systematic examination of collected data to identify patterns, trends, relationships, and insights that can inform decision-making. It uses statistical techniques, machine learning, and computational tools to transform raw data into meaningful information (Kiptoo & Wekesa, 2022). Data analytics supports strategic planning, performance monitoring, and predictive forecasting, enabling organizations to optimize operations and make evidence-based decisions. By leveraging analytics, organizations can gain deeper insights into operations, resource utilization, and stakeholder behavior, which enhances efficiency, innovation, and competitive advantage (Davenport & Bean, 2024). Information Accuracy refers to the reliability, correctness, and precision of data used in organizational processes and decision-making. It emphasizes the importance of ensuring that all information is complete, up-to-date, and free from errors or inconsistencies (Moyo & Chigona, 2021). Accurate information enhances trust in data-driven decisions, reduces the risk of operational mistakes, and improves reporting and monitoring outcomes. Maintaining high information accuracy requires continuous data validation, verification, and quality control measures, which are essential for effective management, regulatory compliance, and achieving organizational objectives (Boateng & Agyemang, 2023).

Empirical Review

Administrative Systems Strategy and Organization Performance

Kim and Park (2020) examined on the influence of administrative systems strategy on organizational performance in technology firms in South Korea. The study adopted a correlational research design. The target population comprised 150 registered technology firms. The unit of observation was IT managers and administrative executives. Structured questionnaires were used to collect data. The study found that administrative systems strategy, especially digital workflow integration and centralized data systems, significantly enhanced organizational performance. The study concluded that advanced administrative systems are critical in improving innovation and operational efficiency in technology firms in South Korea.

Mensah and Boateng (2022) researched on the effect of administrative systems strategy on organizational performance in commercial banks in Ghana. The study adopted a descriptive research design. The target population included 23 commercial banks. The unit of observation

was branch managers and operations officers. Questionnaires were used as the research instruments. The study found that administrative systems such as automated reporting systems and internal control structures had a positive and significant influence on organizational performance. The study concluded that robust administrative systems improve efficiency and financial performance in the banking sector in Ghana.

Okello and Namusonge (2021) investigated on the influence of administrative systems strategy on organizational performance in local government authorities in Uganda. The study adopted a descriptive survey design. The target population comprised 40 district local governments. The unit of observation was administrative officers and chief administrative officers. Data was collected using structured questionnaires. The study found that administrative systems strategy, particularly in documentation processes and communication structures, significantly improved organizational performance. The study concluded that well-structured administrative systems enhance accountability and service delivery in local governments in Uganda.

Otieno and Mwangi (2023) conducted a study on the effect of administrative systems strategy on organizational performance in telecommunication companies in Kenya. The study adopted a correlational research design. The target population included major telecommunication firms operating in Kenya. The unit of observation was operations managers and administrative staff. Questionnaires were used to collect primary data. The study found that administrative systems strategy, including automated customer management systems and internal coordination frameworks, had a positive and significant effect on organizational performance. The study concluded that efficient administrative systems enhance service quality and operational performance in the telecommunication sector in Kenya.

Kiptoo and Chebet (2022) assessed on the influence of administrative systems strategy on organizational performance in private universities in Kenya. The study adopted a descriptive research design. The target population included 18 accredited private universities. The unit of observation was university administrators and departmental heads. Structured questionnaires were used as the research instruments. The study found that administrative systems strategy, particularly in academic records management and decision-making systems, significantly influenced organizational performance. The study concluded that strong administrative systems improve efficiency, service delivery, and institutional performance in private universities in Kenya.

Data Management Strategy and Organization Performance

Davenport and Bean (2024) investigated on the effect of data management and analytics strategy on organizational performance among large corporations in the United States. The study adopted a descriptive research design. The target population comprised 300 large organizations, with the unit of observation being chief data officers and senior executives. Data was collected using

structured questionnaires and secondary reports. The study found that firms with well-established data governance and analytics strategies reported higher productivity, improved decision-making, and increased profitability. The study concluded that data management strategy has a positive and significant influence on organizational performance.

Moyo and Chigona (2021) examined on the effect of data management strategy on organizational performance in public sector institutions in South Africa. The study adopted a descriptive survey design. The target population comprised 60 public institutions, with the unit of observation being ICT managers and administrative officers. Data was collected using questionnaires. The study found that data security, data standardization, and information accessibility significantly improved service delivery and accountability. The study concluded that data management strategy positively and significantly influences performance in public institutions in South Africa.

Boateng and Agyemang (2023) assessed on the influence of data management systems on performance of financial institutions in Ghana. The study adopted a cross-sectional research design. The target population included 25 financial institutions, and the unit of observation was IT officers and branch managers. Questionnaires were used to collect data. The findings revealed that data storage systems, data accuracy, and data accessibility significantly enhanced customer satisfaction and operational efficiency. The study concluded that data management strategy has a significant positive effect on organizational performance in Ghana.

Omondi and Muturi (2021) researched on the effect of data management practices on performance of telecommunication companies in Kenya. The study adopted a descriptive research design. The target population comprised 3 major telecommunication companies, with the unit of observation being ICT managers and data analysts. Data was collected using structured questionnaires. The study found that data security, data integration, and data analytics significantly improved service quality and operational efficiency. The study concluded that data management strategy positively and significantly influences organizational performance in the telecommunications sector in Kenya.

Kiptoo and Wekesa (2022) conducted a study on the influence of data management strategy on performance of public universities in Kenya. The study adopted a descriptive survey design. The target population included 31 public universities, with the unit of observation being ICT directors and administrative staff. Questionnaires were used for data collection. The findings indicated that data governance frameworks, data quality, and data sharing practices significantly enhanced institutional efficiency and decision-making. The study concluded that data management strategy has a positive and significant effect on performance of public universities in Kenya.

RESEARCH METHODOLOGY

Research Design

Research is a road map; the plan that specifies the intellectual framework to be followed in carrying out the research. Research design constitutes a blue print for collecting and analysing data (Cooper & Schindler, 2018). This study used a cross-sectional survey design. This is an observational design that enables the researcher to collect data to make inferences about a population of interest. It was employed to collect data on indicators that describe the variables, which were done through sampling of the respondents. Cross-sectional research designs provide a clear 'snapshot' of the outcome and the characteristics associated with it, at a specific point in time).

Target Population

A target population is a group of events, people or items of interest with a common observable attribute (Kothari, 2019). The target population for this study was 363 respondents from 33 Private institutions accredited to undertake higher education in Kenya (CUE, 2024). The respondents comprised of Vice Chancellors, Deputy Vice Chancellors and Deans of Schools. As a result, the unit of analysis comprised of 33 institutions accredited to undertake university education in Kenya while the unit of observation was the 363 respondents comprising of Vice Chancellors, Deputy Vice Chancellors and Deans of Schools. These categories were targeted since they have adequate information on the influence of digital transformation strategies on performance of private universities in Nairobi City County, Kenya

Table 1: Target Population

Category	Target Population
Vice Chancellors	33
Deputy Vice Chancellors	99
Deans of Schools	231
Total	363

Sample and Sampling Technique

Sample is the smallest subset of a population selected which represents the entire group (Saunders et al., 2018). The study adopted Yamane (1957) to determine the appropriate sample size for resident guests. The sample size was as follows;

$$n = \frac{N}{1 + N e^2}$$

Where:

n= Sample size

N= Population size

e= margin of error 5%

Hence the sample size for each of the research institutions was as follows:

$$n = \frac{363}{1 + 363(0.05)^2}$$

$$n = \frac{363}{1.908}$$

$$n = 190$$

Hence, the sample size of the study was 190 respondents. Sampling technique is the method used to select a sample from study population (Cooper & Schindler, 2019). In this study, simple random sampling was adopted to select study sample. The advantage of simple random sampling is that it ensures every member of the population has an equal chance of being selected for the study (Yamane, 1967). Additionally, simple random sampling reduces sampling bias and produces representative samples that can be used to make inferences about the population (Kothari, 2018).

Table 2: Sample Size

Category	Target Population	Sample Size
Vice Chancellors	33	17
Deputy Vice Chancellors	99	52
Deans of Schools	231	121
Total	363	190

Data Collection Instrument

Data was collected using a self-administered semi-structured questionnaire. Semi-structured questionnaires were used since they enabled the researcher collect quantitative data (Arbale & Mutisya, 2024). Questionnaires are a good method since they provide clarifications sought by respondents and they can be collected immediately after they are completed. Structured questionnaires are easy to administer, analyze and are economical in terms of time and money (Bell *et al.*, 2022). A five-point Likert scale was used to measure all variables. The lowest rating of 1 signifies a low opinion by respondent while a high rating of 5 signifies a high rating by the respondents. The semi-structured self-administered questionnaires provided more structured responses that facilitated quantitative analysis, testing of hypotheses, and drawing of conclusions (Burns *et al.*, 2018).

Pilot Study

A pilot test on 19 respondents 10% of the sample size was conducted to determine validity and reliability of the data collection instrument. A pilot study is a small experiment designed to test logistics and gather information prior regarding a larger study, to improve the latter quality and efficiency. Scholars opine that a pilot study with at least 10% of the sample is sufficient for an effective pilot study (Malmqvist, Hellberg, Möllås, Rose, & Shevlin, 2019). A pilot study can reveal deficiencies in the design of proposed experiment and procedure, and these can be addressed before time and resources are expended on large scale studies. The responses from respondents were used to adjust and refine the questionnaire accordingly. According to Mugenda and Mugenda (2017) the pretest sample should be between 1% and 10% depending on the sample size.

Data Analysis and Presentation

Data obtained from the field was coded, cleaned, and entered to the computer for analysis using SPSS version 28. Descriptive statistical analysis techniques, such as frequency, percentages, mean and standard deviation were used to summarize the data. Inferential statistical analysis, including multiple regression and correlation analysis was used to assess the relationship between the independent and the dependent variables. The significance of each independent variable was tested at a confidence level of 95%.

The multiple linear regressions model was specified as:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

Y_i = Performance of private universities in Nairobi City County, Kenya

β_0 = Constant Term (Coefficient of intercept)

X_1 = Administrative Systems Strategy

X_2 = Data Management Strategy

$\beta_1 - \beta_2$ = Regression Coefficients to be Estimated or partial slope coefficients for predictor variables

ε = Stochastic Error Term

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive Statistics

Administrative Systems Strategy and Organization Performance

The first specific objective of the study was to determine the effect of administrative systems strategy on the performance of private universities in Nairobi City County, Kenya. The respondents were requested to indicate their level of agreement on various statements related to administrative systems strategy and performance of private universities in Nairobi City County, Kenya. The results were as shown Table 3.

Table 3: Administrative Systems Strategy and Organization Performance

	Mean	Std. Dev
The ERP system provides accurate and timely information to support decision-making.	3.883	0.611
Users find the ERP system reliable and easy to use for their administrative tasks.	3.844	0.847
Administrative processes are efficiently automated to reduce manual effort and errors.	3.821	0.740
Automation improves the speed and accuracy of routine administrative tasks.	3.817	0.699
The online registration system is user-friendly and accessible to all students.	3.731	0.521
Registration processes are streamlined and minimize delays or errors.	3.727	0.674
Aggregate	3.804	0.682

From the results, the respondents agreed that the ERP system provides accurate and timely information to support decision-making ($M=3.883$, $SD=0.611$). In addition, the respondents agreed that users find the ERP system reliable and easy to use for their administrative tasks ($M=3.844$, $SD=0.847$). Further, the respondents agreed that administrative processes are efficiently automated to reduce manual effort and errors ($M=3.821$, $SD=0.740$).

From the results, the respondents agreed that automation improves the speed and accuracy of routine administrative tasks ($M=3.817$, $SD=0.699$). In addition, the respondents agreed that the online registration system is user-friendly and accessible to all students ($M=3.731$, $SD=0.521$). Further, the respondents agreed that registration processes are streamlined and minimize delays or errors ($M=3.727$, $SD=0.674$).

Data Management Strategy and Organization Performance

The second specific objective of the study was to examine the effect of data management strategy on the performance of private universities in Nairobi City County, Kenya. The respondents were requested to indicate their level of agreement on various statements related to data management strategy and performance of private universities in Nairobi City County, Kenya. The results were as shown Table 4.

Table 4: Data Management Strategy and Organization Performance

	Mean	Std. Dev
Measures are in place to protect sensitive student and staff data from unauthorized access.	3.867	0.899
The university regularly updates security protocols to prevent data breaches.	3.838	0.687
Data analytics tools are effectively used to support decision-making and strategic planning.	3.819	0.792
The university leverages data analytics to monitor performance and improve operational efficiency.	3.803	0.578
Verification processes are in place to ensure reliability of student and administrative records.	3.767	0.911
Accurate information is readily available to support academic and administrative functions.	3.724	0.609
Aggregate	3.803	0.746

From the results, the respondents agreed that measures are in place to protect sensitive student and staff data from unauthorized access ($M=3.867$, $SD=0.899$). In addition, the respondents agreed that the university regularly updates security protocols to prevent data breaches ($M=3.838$, $SD=0.687$). Further, the respondents agreed that data analytics tools are effectively used to support decision-making and strategic planning ($M=3.819$, $SD=0.792$).

From the results, the respondents agreed that the university leverages data analytics to monitor performance and improve operational efficiency ($M=3.803$, $SD=0.578$). In addition, the respondents agreed that verification processes are in place to ensure reliability of student and administrative records ($M=3.767$, $SD=0.911$). Further, the respondents agreed that accurate information is readily available to support academic and administrative functions ($M=3.724$, $SD=0.609$).

Organization Performance

The respondents were requested to indicate their level of agreement on various statements related to performance of private universities in Nairobi City County, Kenya. The results were as shown Table 5.

Table 5: Organization Performance

	Mean	Std. Dev
The admission process effectively attracts a diverse and high-quality student population.		0.658
Marketing and outreach strategies positively influence student enrollment numbers.	3.877	0.695
The quality of teaching and learning resources meets student expectations.	3.842	0.938
Student concerns and feedback are addressed in a timely and effective manner.	3.814	0.876
Most students complete their programs within the expected time frame.	3.765	0.923
Strategies to reduce dropout rates and improve graduation outcomes are effective.	3.728	0.615
Aggregate	3.824	0.784

Inferential Statistics

Inferential statistics such as correlation analysis and regression analysis were used to assess the relationships between the independent variables (administrative systems strategy and data management strategy) and the dependent variable (performance of private universities in Nairobi City County, Kenya).

Correlation Analysis

This research adopted Pearson correlation analysis to determine how the dependent variable (performance of private universities in Nairobi City County, Kenya) relates with the independent variables (administrative systems strategy and data management strategy).

Table 6: Correlation Coefficients

		Organization Performance	Administrative Systems Strategy	Data Management Strategy
Organization Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	166		
Administrative Systems Strategy	Pearson Correlation	.875**	1	
	Sig. (2-tailed)	.000		
	N	166	166	
Data Management Strategy	Pearson Correlation	.858**	.367	1
	Sig. (2-tailed)	.001	.091	
	N	166	166	166

** . Correlation is significant at the 0.01 level (2-tailed).

From the results, there was a very strong relationship between administrative systems strategy and performance of private universities in Nairobi City County, Kenya ($r = 0.875$, p value $= 0.000$). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the findings of Mensah and Boateng (2022) who indicated that there is a very strong relationship between administrative systems strategy and organization performance.

The results also revealed that there was a very strong relationship between data management strategy and performance of private universities in Nairobi City County, Kenya ($r = 0.858$, p value $= 0.001$). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings are in line with the findings of Davenport and Bean (2024) who indicated that there is a very strong relationship between data management strategy and organization performance.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (administrative systems strategy and data management strategy) and the dependent variable (performance of private universities in Nairobi City County, Kenya).

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 ^a	.687	.686	.10482

a. Predictors: (Constant), administrative systems strategy and data management strategy

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.687. This implied that 68.7% of the variation in the dependent variable (performance of private universities in Nairobi City County, Kenya) could be explained by independent variables (administrative systems strategy and data management strategy).

Table 8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.017	2	51.009	178.979	.002 ^b
	Residual	46.527	163	.285		
	Total	148.544	165			

a. Dependent Variable: performance of private universities in Nairobi City County, Kenya

b. Predictors: (Constant), administrative systems strategy and data management strategy

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 178.979 while the F critical was 3.051. The p value was 0.002. Since the F-calculated was greater than the F-critical and the p value 0.002 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of administrative systems strategy and data management strategy on performance of private universities in Nairobi City County, Kenya.

Table 9: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	0.326	0.084		3.881	0.000
administrative systems strategy	0.383	0.099	0.384	3.869	0.000
data management strategy	0.363	0.094	0.362	3.862	0.001

a Dependent Variable: performance of private universities in Nairobi City County, Kenya

The regression model was as follows:

$$Y = 0.326 + 0.383X_3 + 0.363X_4 + \varepsilon$$

According to the results, administrative systems strategy has a significant effect on performance of private universities in Nairobi City County, Kenya ($\beta_1=0.383$, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Mensah and Boateng (2022) who indicated that there is a very strong relationship between administrative systems strategy and organization performance.

In addition, the results revealed that data management strategy has a significant effect on performance of private universities in Nairobi City County, Kenya ($\beta_1=0.363$, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the findings of Davenport and Bean (2024) who indicated that there is a very strong relationship between data management strategy and organization performance

CONCLUSION AND RECOMMENDATIONS

Conclusions

The study concludes that administrative systems strategy has a positive and significant influence on performance of private universities in Nairobi City County, Kenya. Findings revealed that ERP systems, process automation and online registration influence performance of private universities in Nairobi City County, Kenya

The study also concludes that data management strategy has a positive and significant influence on performance of private universities in Nairobi City County, Kenya. Findings revealed that data security, data analytics and information accuracy influence performance of private universities in Nairobi City County, Kenya

Recommendations

The study recommends that private universities in Kenya should implement an integrated administrative systems strategy that adopts centralized, automated, and interoperable digital platforms for functions such as admissions, finance, human resources, and student records management, as this enhances efficiency, reduces operational redundancies, improves data accuracy, and supports timely decision-making

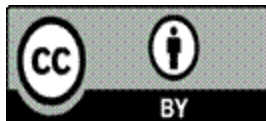
The study also recommends that private universities in Kenya should establish a robust data management strategy that emphasizes centralized data governance, standardized data collection and storage systems, and the use of advanced analytics tools, as this enhances data accuracy, accessibility, and security while supporting evidence-based decision-making.

REFERENCES

- Adewale, A., & Oluwaseun, O. (2022). The impact of digital infrastructure strategy on organizational performance in telecommunication firms in Nigeria. *African Journal of Business Management*, 16(4), 85–95.
- Blumberg, B., Cooper, D. R., & Schindler, P. S. (2020). *Business Research Methods* (4th ed.). McGraw-Hill Education.
- Boateng, R., & Agyemang, F. (2023). influence of data management systems on performance of financial institutions in Ghana. *African Journal of Information Systems*, 11(3), 210–225.
- Bryman, A. (2019). *Social Research Methods* (5th ed.). Oxford University Press.
- Creswell, R. (2019). *Research design: qualitative, quantitative, and mixed methods approaches*. USA: Sage Publications.
- Cronbach, L. J. (2019). *My Current Thoughts on Coefficient Alpha and Successor Procedures*. Washington, D: Educational and Psychological Measurement.
- Kikonde, F. K., M’kuma, E. K., & Nyamu, J. (2025). Digital transformation strategies on the performance of solar power enterprises in Nairobi, Kenya. *The Strategic Journal of Business & Change Management*, 12(1), 314–321.
- Kim, J., & Park, H. (2020). Influence of administrative systems strategy on organizational performance in technology firms in South Korea. *Asia Pacific Journal of Management*, 37(4), 1123–1140.
- Kinuthia, A. W. (2023). *Factors that influence performance of foreign owned private universities in Kenya*. Retrieved From, <https://erepository.uonbi.ac.ke/bitstream/handle/11295/23204/>
- Li, L., Su, F., Zhang, W., & Mao, J. Y. (2020). Effect of digital transformation on firm performance among manufacturing firms in China. *Information Systems Journal*, 28(6), 1129–1157.
- Mafukidze, B. S., & Chiutsi, A. T. (2025) Digital Transformation and Competitive Advantage in SMEs: Evidence from Zimbabwe. *Open Access Library Journal*, 12(1), 1-24.
- Mashauri, L., & Mashauri, R. (2021). Effect of digital infrastructure strategy on performance of public institutions in Tanzania. *Tanzania Journal of Development Studies*, 19(1), 67–80.
- Mugo, M. N., & Siaga, A. (2024). Factors affecting retention of academic staff in selected private chartered universities in Kiambu County Kenya. *International Journal of Social Sciences Management and Entrepreneurship*, 8(2), 673-683.

- Müller, T., & Voigt, K. (2020). The effect of digital infrastructure strategy on organizational performance among manufacturing firms in Germany. *Journal of Industrial Engineering and Management*, 13(2), 245–258.
- Musau, N. N., & Muathe, S. M. (2025). Digital transformation strategy: the quest for competitive advantage among commercial banks in Kenya. *International Journal of Research in Business and Social Science*, 14(5), 1-24.
- Mutua, F., & Kariuki, M. (2023). The effect of digital learning strategies on organizational performance in commercial banks in Kenya. *International Journal of Finance and Management*, 13(1), 40–54.
- Njoroge, J. W., & Muturi, W. (2022). Effect of digital transformation strategies on organizational performance of manufacturing firms in Kenya. *International Journal of Business Management and Finance*, 4(2), 34–52.
- Okello, P., & Namusonge, G. (2021). Influence of administrative systems strategy on organizational performance in local government authorities in Uganda. *International Journal of Public Sector Management*, 34(5), 567–582
- Pierre, J. (2023). Impact of Digital Transformation Strategies on Organizational Performance in the Retail Industry in Cameroon. *International Journal of Strategic Management*, 2(1), 38–48.
- Purba, S., Muda, I., Lumbanraja, P., & Kholis, A. (2022). Factors that Influence the Organizational Performance in Private Universities: A Review of Literature. *International Journal of Finance, Economics and Business*, 1(4), 284-291.
- Ramadan, H. M. M. (2026). The Impact of Digital Transformation on Firms' Financial Performance (An Empirical study on Egyptian stock listed Firms). *Scientific Journal for Financial and Commercial Studies and Research*, 7(1)1, 301-327.
- Rubio-Andrés, M., Linuesa-Langreo, J., Gutiérrez-Broncano, S., & Sastre-Castillo, M. A. (2025). Tackling digital transformation strategy: how it affects firm innovation and organizational effectiveness. *The Journal of Technology Transfer*, 50(1), 1893–1918.
- Sarfraz, M., Ye, Z., Dragan, F., Ivascu, L., & Artene, A. (2022). Digital Transformation Strategy and Environmental Performance: A Case Study. *International Journal of Computers Communications & Control*, 17(6), 1-15.
- Tesha, J. J. (2025). The influence of digital transformation on the performance of higher learning institutions in Tanzania. evidence from selected institutions in the Arusha region. *Journal of Humanities and Social Sciences Research Practice*, 1(2), 210-225.

- Tumusiime, D., & Lubega, J. (2020). Influence of digital transformation on performance of small and medium enterprises (SMEs) in Uganda. *Journal of African Business*, 21(3), 340–357.
- Uwizeyimana, D. E., & Raymond, L. (2020). Effect of digital transformation strategies on public sector performance in Rwanda. *Government Information Quarterly*, 37(3), 101–112.
- Wang, H., Feng, J., Zhang, H., & Li, X. (2020). The effect of digital transformation strategy on performance: The moderating role of cognitive conflict. *International Journal of Conflict Management*, 31(3), 441–462.
- Wanjiku, P. N., & Mwaura, S. K. (2021). Influence of digital transformation strategies on the performance of private universities in Kenya. *Journal of Education and E-Learning Research*, 8(3), 201–214.



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