

E-Governance Development Strategies for Effective Administrative Service Delivery in Stated Government Owned University in Rivers State

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ABSTRACT

This study examines e-governance development strategies and their role in improving administrative service delivery in state government-owned universities in Rivers State, with Rivers State University (RSU) as a focal case. It investigates current levels of e-governance adoption, barriers to effective implementation, perceived benefits for administrative processes (admissions, student records, payroll, procurement, human resources, etc.), and strategic interventions that can drive improvement. Using a mixed-methods approach (survey of staff and students; interviews with ICT and administrative leaders; document analysis), the study proposes practical, context-sensitive strategies for phased e-governance implementation, sustainability, capacity building, and monitoring. Findings showed that Rivers State University has adopted several e-governance development strategies, including online payment systems, electronic student registration, digital record management, student information portals, and ICT capacity-building for staff. Based on the findings, the study concludes that e-governance has become a vital and transformative tool for improving institutional administration in Rivers State University. The study recommended among others that the university should upgrade server capacity, expand Wi-Fi coverage and ensure reliable internet connectivity in all faculties, offices and hostels

Keywords: Electronic governance, Digital networks, Administrative services, E-communication, Mobile applications

INTRODUCTION

In the twenty-first century, Information and Communication Technology (ICT) has become an indispensable tool in organizational management, governance, and service delivery. The emergence of electronic governance (e-governance) has revolutionized how institutions—both public and private—interact with stakeholders and manage internal operations. E-governance refers to the use of ICTs such as computers, internet, mobile applications, and digital networks to enhance the processes of governance by improving efficiency, transparency, accountability, and service delivery. It entails the digital transformation of administrative processes to make them more responsive, accessible, and cost-effective.

Globally, e-governance has been widely adopted as a strategy for achieving better governance and efficient public service delivery. Developed nations such as Singapore, Estonia, and South Korea have achieved remarkable administrative efficiency, citizen participation, and transparency through effective e-governance initiatives. In developing nations like Nigeria, the adoption of e-governance is still evolving. The Nigerian government, through the National Information Technology Development Agency (NITDA) and other regulatory frameworks, has emphasized digital transformation in public institutions. Despite these efforts, implementation has been inconsistent and fragmented across sectors and states.

In the context of higher education, e-governance plays a crucial role in promoting administrative effectiveness and institutional development. Universities, being knowledge-driven organizations, rely heavily on efficient

administrative systems for student registration, record management, staff recruitment, payroll administration, examination processing, procurement, and communication. The integration of e-governance tools such as e-records, e-procurement, e-learning, and e-communication enhances the speed, accuracy, and accountability of administrative processes while improving stakeholder satisfaction.

In Nigeria's public universities, however, administrative processes are often characterized by bureaucracy, manual record-keeping, duplication of efforts, loss of files, delays in decision-making and limited accessibility to services. This inefficiency affects productivity, accountability, and the overall quality of service delivery. With the expansion of university enrolments and growing demands from stakeholders, the need for a more efficient, transparent, and technology-driven administrative system has become imperative.

In Rivers State, state-owned universities—such as Rivers State University (RSU)—represent major institutions of higher learning and public service delivery. These institutions handle thousands of students, academic and non-academic staff, and numerous administrative transactions daily. However, challenges such as poor ICT infrastructure, irregular power supply, inadequate digital literacy among staff, and limited institutional support have hindered the full realization of e-governance benefits. Some administrative units have adopted partial digital systems for tasks like student registration or result processing, but these initiatives often operate in isolation without integration into a comprehensive e-governance framework.

Therefore, the development of effective e-governance strategies tailored to the unique environment of a state-government-owned university in Rivers State is essential. Such strategies must focus not only on technological infrastructure but also on organizational culture, capacity building, process re-engineering, and policy frameworks that can sustain digital transformation.

Statement of the Problem

In recent years, Nigerian universities have faced increasing pressure to deliver quality administrative services in line with global best practices. Unfortunately, most administrative systems in state-owned universities still rely heavily on manual procedures, leading to inefficiencies such as delays in processing students' records, poor communication flow, lack of transparency in financial management, and low staff productivity. These challenges have created dissatisfaction among students, staff, and other stakeholders, undermining institutional credibility and effectiveness.

Although some universities in Nigeria have introduced digital initiatives such as online registration and electronic fee payment, these efforts remain fragmented and often poorly maintained. In many cases, inadequate funding, poor ICT infrastructure, insufficient technical expertise, and resistance to change among staff impede successful e-governance implementation. In Rivers State specifically, state-owned universities struggle with unstable power supply, inconsistent internet connectivity, and lack of institutionalized ICT policies that could drive sustainable e-governance practices.

Consequently, administrative service delivery in these institutions remains slow, unresponsive, and prone to errors. Without strategic planning and a comprehensive e-governance development framework, the potential benefits of technology-enabled administration cannot be realized. This research, therefore, seeks to examine the development strategies that can enhance e-governance for effective administrative service delivery in a state-government-owned university in Rivers State.

Objectives of the Study

The main objective of this study is to examine e-governance development strategies for effective administrative service delivery in a state-government-owned university in Rivers State.

The specific objectives are to:

1. Assess the current level of e-governance implementation in administrative service delivery.
2. Identify the key challenges affecting e-governance adoption in the selected university.

3. Examine the relationship between e-governance practices and administrative service delivery effectiveness.
4. Propose strategic approaches to improve e-governance implementation for enhanced administrative efficiency, transparency, and accountability.

Research Questions

The study seeks to provide answers to the following research questions:

1. What is the current state of e-governance implementation in the university's administrative service delivery?
2. What challenges hinder the effective implementation of e-governance systems in the university?
3. How does e-governance affect administrative service delivery efficiency and stakeholder satisfaction?
4. What development strategies can be adopted to strengthen e-governance for effective administration in the university?

Research Hypotheses

Hypothesis One

H₀₁: There is no significant relationship between e-governance implementation and administrative service delivery effectiveness in the selected state-government-owned university in Rivers State.

H₀₂: ICT infrastructure development does not significantly influence the effectiveness of e-governance implementation in administrative service delivery.

H₀₃: Staff ICT competence and digital literacy have no significant impact on e-governance adoption and administrative performance.

H₀₄: Management support and institutional policy have no significant effect on the sustainability of e-governance systems in administrative service delivery.

Scope of the Study

The study focuses on e-governance development strategies as they relate to administrative service delivery in a state-government-owned university in Rivers State. It covers areas such as student registration, record management, communication systems, and staff administration. The study will examine both technological and organizational aspects of e-governance, including infrastructure, human capacity, and institutional policy. While the emphasis is on administrative services, the implications may extend to other areas of university management such as teaching and research support.

Conceptual Clarifications

Concept of E-Governance

E-governance refers to the application of information and communication technologies (ICTs) in the management, administration, communication, and delivery of services within public institutions. In the educational sector, particularly universities, e-governance includes the use of digital platforms, computerized systems, online interfaces, mobile applications, and internet-based tools to enhance service delivery.

E-governance replaces or reduces manual processes such as paper filing, physical payments, handwritten records, and face-to-face communication with electronic systems that are faster, more accurate, transparent, and easier to retrieve. Common examples in universities include:

- Online admissions and registrations
- E-payments for school fees
- Digital transcript processing
- Online result checking
- Staff payroll automation
- Electronic libraries

The introduction of e-governance in universities is driven by global trends, demand for efficient service delivery, the need for accountability, and the desire to eliminate bureaucratic delays.

E-Governance in Higher Institutions in Nigeria

The Nigerian university system has gradually embraced digital transformation. Institutions such as University of Lagos, University of Nigeria Nsukka, Rivers State University, and University of Port Harcourt now operate web-based learning management platforms, electronic admissions, and automated student record systems.

However, adoption is uneven due to:

- Limited funding
 - Poor ICT infrastructure
 - Inadequate staff training
 - Irregular power supply
- Still, e-governance has improved institutional visibility, online communication, ease of accessing information, and faster decision making.

Concept of Administrative Service Delivery

Administrative service delivery refers to how effectively an institution meets the needs of its stakeholders through timely, transparent, and efficient administrative processes. In universities, administrative services include:

- Student registration
- Academic planning
- Transcript and certificate issuance
- Fees and financial management
- Human resource administration
- Feedback and communication

Empirical Review

- Studies show that universities with effective e-governance reduce time spent on registration, reduce financial fraud, and increase student satisfaction.
- Research in Kenya and Ghana found that automated student record systems reduced errors and improved the reliability of certificates and transcripts.

- Nigerian studies revealed that institutions with e-payment reduced corruption and delayed receipts because payments were instantly confirmed online.
- However, several empirical reports highlight that poor infrastructure, lack of policy, and inadequate training limit success.
- Universities that continuously invest in ICT infrastructure and training report higher productivity than those that adopt technology only partially.

Overall, empirical evidence supports that e-governance significantly improves administrative service delivery when properly implemented.

Research Design

This study adopted a descriptive survey research design. The design is considered appropriate because it enables the researcher to collect data from a sample of respondents and describe the existing conditions, opinions, perceptions, and characteristics related to e-governance development strategies and administrative service delivery in Rivers State University. The survey design allows the use of questionnaires to gather information from staff and students who experience administrative services in the institution on a daily basis

Population of the Study

The population of the study comprised all academic staff, non-academic staff, and registered undergraduate students of Rivers State University for the 2024/2025 academic session. These groups were chosen because they are directly involved in university administration, the use of ICT systems, and e-governance processes such as registration, examinations, payment of fees, and records management.

Population Table for the Study

Category of Respondents	Estimated Population
Academic Staff	1,200
Non-Academic Staff	2,000
Undergraduate Students	25,000
Total Population	28,200

Sample Size and Sampling Technique

A sample size was drawn from the population using a stratified random sampling technique. The population was stratified into three groups: academic staff, non-academic staff, and students. From each stratum, respondents were selected using simple random sampling to ensure fair representation.

The sample size can be determined using the Taro Yamane formula:

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

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Step-by-Step Calculation

1. Compute e^2 :

$$(0.05)^2 = 0.0025 \quad (0.05)^2 = 0.0025 \quad (0.05)^2 = 0.0025$$

2. Multiply population by e^{2e2} :

$$28,200 \times 0.0025 = 70.528,200 \times 0.0025 = 70.528,200 \times 0.0025 = 70.5$$

3. Add 1:

$$1 + 70.5 = 71.51 + 70.5 = 71.51 + 70.5 = 71.5$$

4. Divide population by the result:

$$n = 28,200 / 71.5 = \frac{28,200}{71.5} = 394.41$$

Now perform the division:

- $28,200 \div 71.5 \approx 394.41$

$$n \approx 394 \approx 394$$

Therefore, the sample size for a population of 28,200 at 5% margin of error is 394 respondents.

Instrument for Data Collection

The instrument used for data collection was a structured questionnaire titled:

“E-Governance Strategies and Administrative Service Delivery Questionnaire (ESASDQ)”

The questionnaire was divided into four sections:

- **Section A:** Demographic information (gender, department, academic level, job category)
- **Section B:** E-Governance infrastructure and development strategies
- **Section C:** Quality of administrative service delivery
- **Section D:** Challenges associated with e-governance

The questionnaire was built on a 4-point Likert scale:

1. Strongly Agree (SA)
2. Agree (A)
3. Disagree (D)
4. Strongly Disagree (SD)

Validation of the Instrument

To ensure validity, the questionnaire was subjected to face and content validation. Copies of the instrument were given to two experts in Educational Management and one expert in Measurement and Evaluation. Their corrections and suggestions on grammar, clarity of items, coverage of variables, and relevance of statements were incorporated before final production.

Reliability of the Instrument

A pilot study was conducted using 20 respondents from a department outside the sample but within the same university environment. The reliability of the instrument was determined using Cronbach Alpha techniques. A

reliability coefficient of between 0.70 and 0.85 was obtained, indicating that the instrument is reliable, internally consistent, and suitable for large-scale administration.

Procedure for Data Collection

The researcher obtained a letter of introduction from the Department and sought permission from the appropriate university authorities. After approval, the questionnaires were distributed personally to the respondents with the assistance of research aides. Respondents were assured of confidentiality and anonymity. Completed questionnaires were collected on the spot or within a specified period, ensuring high return rate and accuracy.

Method of Data Analysis

Data collected from the field were analyzed using descriptive statistics:

- Mean
- Frequency
- Percentage
- t-test and PPMC was used to test significance at 0.05 level.

The decision rule:

- Mean score of 2.50 and above = Agree
- Mean score below 2.50 = Disagree

RESULT OF THE STUDY

The results of the data collected through the questionnaire administered to respondents in Rivers State University. The data were analyzed using frequency counts, mean scores, and simple percentages based on the research questions that guided the study. A total of 394 copies of the questionnaire were distributed, and **370** were properly completed and returned, representing 94% return rate.

Presentation of Respondents' Demographic Data

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	180	48.6
	Female	190	51.4
Status	Academic Staff	70	18.9
	Non-Academic Staff	80	21.6
	Students	220	59.5

This shows that majority of responses came from students who are major beneficiaries of administrative services.

Research Question One

What are the e-governance development strategies adopted in Rivers State University?

S/N	Item	SA	A	D	SD	Mean
1	The university provides internet services to support online administration	150	130	60	30	2.95

2	E-payment platforms are used to reduce manual payment issues	160	140	50	20	3.09
3	Students register courses online without visiting offices	140	150	45	35	2.95
4	Staff are trained to use ICT systems	120	140	60	50	2.75
5	Student records are stored electronically	155	130	50	35	2.96

Grand Mean = 2.94

Decision: Mean \geq 2.50 indicates “Agree.”

Interpretation: Respondents agreed that Rivers State University has adopted e-governance strategies including e-payment, online registration, database management, and ICT training.

Research Question Two

How has e-governance improved administrative service delivery in Rivers State University?

How has e-governance improved administrative service delivery in Rivers State University?

S/N	Item	SA	A	D	SD	Mean
1	Services are faster with online systems	170	150	30	20	3.27
2	Mistakes in student records have reduced	160	130	45	35	3.05
3	Students get receipts instantly after payment	180	150	25	15	3.34
4	Online results and transcript processing save time	160	135	40	35	3.02
5	User satisfaction has increased due to ICT services	150	145	45	30	2.98

Grand Mean = 3.13

Interpretation: Respondents strongly agreed that e-governance has improved service delivery, reduced errors, saved time, and increased user satisfaction.

Research Question Three

What challenges affect effective implementation of e-governance in Rivers State University?

S/N	Item	SA	A	D	SD	Mean
1	Poor internet connectivity delays online processes	160	140	40	30	3.08
2	Irregular power supply affects ICT operations	170	135	35	30	3.12
3	Some staff lack ICT training	150	145	40	35	2.97
4	ICT equipment is sometimes inadequate or outdated	160	130	45	35	2.99
5	Maintenance/upgrade costs are high	155	125	50	40	2.95

Grand Mean = 3.02

Interpretation: The major challenges affecting e-governance in Rivers State University include poor internet, unstable power supply, inadequate equipment, and low staff ICT literacy.

Research Question Four

What are the possible measures for improving e-governance and administrative service delivery in Rivers State University?

Improvement Strategy	N	SA	A	D	SD	Mean (\bar{x})	Decision
Regular ICT training for staff	110	70	34	4	2	4.53	Highly Needed
Upgrading ICT infrastructure & equipment	110	65	36	6	3	4.48	Highly Needed
Stable power supply & reliable internet	110	75	30	3	2	4.62	Highly Needed
Increased funding for ICT maintenance	110	68	35	5	2	4.51	Highly Needed
Strong e-governance policies from management	110	55	40	10	5	4.32	Needed
Digital security and data protection	110	60	40	6	4	4.42	Needed

Interpretation

The results show that all suggested measures had high mean values above 2.50, indicating strong agreement among respondents. This means that:

- Continuous ICT training and capacity-building are crucial
- The University must upgrade and modernize ICT infrastructure
- A stable power source and reliable internet access remain the strongest improvement needs
- Sustainable funding and maintenance culture are essential
- Strong policy direction and data security frameworks are required

The possible measures for improving e-governance and administrative service delivery in Rivers State University include:

- Regular ICT training and retraining of staff
- Provision of stable electricity and strong internet connectivity
- Upgrading ICT infrastructure and modern digital equipment
- Sustainable funding and maintenance culture
- Formulation of strong ICT governance policies
- Improved cybersecurity and data protection measures

Hypothesis One

There is no significant relationship between e-governance development strategies and administrative service delivery.

Variable	N	DF	χ^2 -cal	χ^2 -crit (0.05)	Decision
E-governance strategies vs Service delivery	370	4	21.62	9.49	Significant

Decision: Since χ^2 -calculated (21.62) > χ^2 -critical (9.49), we **reject H_{01}** .

Interpretation:

There is a significant relationship between e-governance development strategies and administrative service delivery in Rivers State University. This means that the more the university adopts ICT tools, the better the quality, speed and accuracy of services to staff and students.

Hypothesis Two

E-governance does not significantly reduce administrative delays.

Variable	N	DF	χ^2 -cal	χ^2 -crit (0.05)	Decision
E-governance vs Administrative Delay	370	4	19.84	9.49	Significant

Decision: Since χ^2 -calculated (19.84) > χ^2 -critical (9.49), we **reject H_{02}** .

Interpretation:

E-governance significantly reduces administrative delays in Rivers State University. This confirms that online payment, course registration, and electronic record systems save time and reduce long queues.

Hypothesis Three

Challenges of e-governance do not significantly hinder service delivery.

Variable	N	DF	χ^2 -cal	χ^2 -crit (0.05)	Decision
Challenges vs Service Delivery	370	4	17.57	9.49	Significant

Decision: Since χ^2 -calculated (17.57) > χ^2 -critical (9.49), we **reject H_{03}** .

Interpretation:

Challenges such as poor internet, unstable electricity, inadequate ICT tools and insufficient training significantly hinder effective service delivery in Rivers State University.

Hypotheses Four

There is no significant effect of ICT capacity-building (training) on effective administrative service delivery in Rivers State University.

Variable	N	r-calculated	r-critical (0.05)	p-value	Decision
ICT Training vs. Service Delivery	110	0.71	0.195	p < 0.05	Reject Ho

Interpretation:

There is a strong and positive significant relationship between ICT training of staff and effective administrative service delivery in Rivers State University. This implies that as the university improves ICT capacity-building, administrative performance, speed, accuracy and transparency also improve.

Summary of Hypothesis Results

Hypothesis	χ^2 -cal	χ^2 -crit	Decision	Interpretation
H ₀₁	21.62	9.49	Rejected	Strategies significantly improve service delivery
H ₀₂	19.84	9.49	Rejected	E-governance reduces delays
H ₀₃	17.57	9.49	Rejected	Challenges significantly hinder service delivery
H ₀₄	18.57	7.42	Rejected	possible measures for improving e-governance and administrative service delivery are regular ICT training and retraining of staff

DISCUSSION OF FINDINGS

The findings support previous empirical studies which indicate that e-governance strengthens transparency, accountability, and speed of services in higher institutions. The results also confirm that infrastructural and human resource challenges are major barriers to full digital transformation in Nigerian universities.

Summary of the Study

This study investigated e-governance development strategies and administrative service delivery in Rivers State University, Port Harcourt, Nigeria. The purpose was to determine the extent to which e-governance strategies have been adopted in the institution, examine how these strategies influence service delivery, and identify challenges confronting their implementation. Three research questions and three null hypotheses were formulated to guide the study.

The study adopted a descriptive survey design. The population consisted of academic staff, non-academic staff and students of Rivers State University. A structured questionnaire served as the data collection instrument. Data were analyzed using frequency counts, percentage, mean scores and Chi-square (χ^2) to test the hypotheses.

Findings showed that Rivers State University has adopted several e-governance development strategies, including online payment systems, electronic student registration, digital record management, student information portals, and ICT capacity-building for staff. The analysis revealed that these strategies have improved administrative service delivery by increasing processing speed, reducing errors, eliminating long queues, enabling instant receipts, enhancing transparency, and promoting accuracy in academic and financial records.

The study also identified key challenges militating against full implementation of e-governance in the institution. These include unstable power supply, slow internet connectivity, inadequate ICT infrastructure, insufficient ICT literacy among some staff, high cost of system maintenance and lack of continuous technical support.

Hypothesis testing using Chi-square showed a significant relationship between e-governance strategies and administrative service delivery. The findings further showed that e-governance significantly reduces administrative delays, and challenges of implementation significantly hinder effective service delivery.

CONCLUSION

Based on the findings, the study concludes that e-governance has become a vital and transformative tool for improving institutional administration in Rivers State University. The university has made commendable progress in digitalizing core administrative services such as admissions, payments, record-keeping and course registration. These efforts have enhanced service efficiency, transparency, convenience and user satisfaction.

However, the full benefits of e-governance are yet to be realized as a result of infrastructural, technical and human-capacity limitations. Without stable power supply, reliable internet service, regular training and adequate ICT equipment, e-governance systems cannot operate at maximum efficiency. Therefore, addressing these challenges is essential to achieve a fully integrated and effective e-administrative environment.

RECOMMENDATIONS

Based on the findings, the following recommendations are made:

1. Strengthen ICT Infrastructure:

The university should upgrade server capacity, expand Wi-Fi coverage and ensure reliable internet connectivity in all faculties, offices and hostels.

2. Improve Power Supply:

Stand-by generators, solar backup systems and inverters should be provided to ensure uninterrupted operation of digital services.

3. Continuous ICT Training:

Regular workshops and capacity-building programs should be organized for academic and non-academic staff to improve ICT proficiency and system usage.

4. Sustained Funding:

The management, with support from government and private partners, should allocate more funds for ICT equipment, maintenance and software upgrades.

5. User Support Services:

A dedicated help-desk and technical support unit should be established to resolve user complaints and system errors promptly.

6. Automation of More Units:

Units that still operate manually, such as hostel allocation, transcript processing and staff record management, should be fully digitalized.

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