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MANAGEMENT OF INTERNALLY GENERATED REVENUE FOR EFFECTIVE ACADEMIC DELIVERY IN PUBLIC UNIVERSITIES IN RIVERS STATE

Andy Nwenenda OTOGBO

Department of Educational Management

Faculty of Education

Ignatius Ajuru University of Education, Nigeria

andy.otogbo@iaue.edu.ng

<https://orcid.org/0009-0000-9937-4077>

ABSTRACT

The study investigated the extent to which management of internally generated revenue enhance effective academic delivery in public universities in Rivers State, Nigeria. Four research questions guided the study and four null hypotheses were tested at .05 alpha level of significance. Descriptive survey design was adopted. The population of the study comprised 4,002 Academic staff from the three (3) Public Universities in Rivers State, Nigeria. A sample of 364 Academic staff was drawn from the population of the study using the Taro Yamane's formula. Researcher's developed instrument titled "Management of Internally Generated Revenue for Effective Academic Delivery Questionnaire (MIGREADSQ)". The instruments were validated by three experts. Reliability of the instrument was established using Cronbach's Alpha method which yielded reliability indices of .841, .811, .801 and .791 respectively for subscales, and the overall reliability index of .810 was obtained. Mean and standard deviation were used to answer the research questions while t-test was used to test the hypotheses at .05 alpha level. The findings of the study revealed that to a very high extent, the use of automated electronic collection systems for Internally generated revenue, diversification of internally generated revenue sources, budgetary allocation of internally generated revenue and internally generated revenue expenditure on infrastructural maintenance enhances effective academic delivery in public universities in Rivers State. In conclusion, management of internally generated revenue through the implementation of automated collection systems, diversification of income streams, and intentional budgetary allocation and expenditure on infrastructural maintenance enhances academic delivery. The researcher recommended amongst other that University management bodies and governing councils are urged to transition all residual manual revenue processes to a fully integrated Electronic Accounting System (EAS), thereby eliminating "shadow accounting" practices and reducing administrative bottlenecks.

Keywords: Management of Internally Generated Revenue, Automated Electronic Collection Systems, Effective Academic Delivery.

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INTRODUCTION

Management of internally generated revenue (IGR) represents a critical framework. In the current global economic environment, effective IGR management is no longer a choice but a necessity for ensuring that essential public services, such as healthcare and infrastructure, are adequately funded. Internally generated revenue encompasses the total income and receipts collected by a government from entities and activities operating within its territorial boundaries, independent of external grants or statutory central allocations (Adinoge et al., 2022; Oladele & Okafor, 2023). These authors emphasized that the capacity of a state to generate its own funds determines its level of independence from volatile central government disbursements, and their research highlighted that a direct correlation exists between a state's internal revenue strength and its ability to weather unforeseen economic shocks, such as fluctuating oil prices or global pandemics.

Modern revenue management requires a shift from passive collection to active strategic administration. According to Orboh (2023), effective management is built on a centralized financial management system that ensures transparency and aligns revenue collection with the organization's strategic objectives. He further argued that such a system is vital for eliminating the fragmented collection methods that often lead to leaking funds and administrative confusion. This involves a robust planning process in which realistic budgets are created to project revenue based on economic indicators such as inflation and changes in policy. By anchoring projections in macroeconomic realities, managers can avoid the common pitfall of over-budgeting, which frequently results in abandoned projects and fiscal deficits.

The implementation of automated electronic collection systems significantly reduces leakages and ensures the integrity of the revenue cycle, thereby directly stabilizing the funding available for academic activities. The use of e-payment platforms and integrated portals, universities in Rivers State can mitigate the risks of embezzlement and manual errors associated with cash handling. This financial transparency allows management to plan academic calendars with greater certainty, thereby ensuring that faculty and students have access to necessary digital resources without interruption. Asuru and Okpoma (2020) asserted that the adoption of electronic financial management systems has minimized revenue loss and fostered a more accountable environment, which is essential for maintaining consistent academic standards and administrative efficiency. This accountability ensures that every naira paid by a student is accounted for and channeled back into the institutional ecosystem rather than disappearing into private pockets. Furthermore, these authors argued that real-time financial reporting enabled by such systems affords more agile decision-making during fiscal crises.

Relying solely on student tuition is insufficient for the high costs of modern tertiary education; consequently, diversifying IGR sources through consultancy services, commercial farming, and printing presses creates a robust financial buffer. This expanded revenue base allows institutions to fund specialized research, sponsor faculty development, and procure advanced laboratory equipment that regular government subventions might not cover. When a university operates multiple business units, it can subsidize academic programmes that are socially vital but not necessarily self-sustaining. Nwideduh and Nwokidu (2021) argued that the diversification of revenue streams in institutions has been instrumental in bridging the funding gap, thereby providing the financial flexibility required to enhance the quality of teaching and learning. They emphasized that universities must evolve into "entrepreneurial hubs" to survive

the dwindling nature of government-funded education. This shift not only generates cash but also provides students with practical, hands-on experience in these various commercial ventures.

The strategic budgetary allocation of IGR ensures that funds are prioritized for core academic needs, such as library acquisitions, laboratory consumables, and faculty research grants. Effective budgeting serves as a roadmap that aligns financial resources with the institution's pedagogical goals, preventing the diversion of funds into non-essential administrative overheads. By earmarking a significant portion of generated funds for academic departments, universities can maintain accreditation standards and improve the student learning experience. Onyije and Olori (2019) emphasized that the prudent budgetary allocation of internally generated funds is a critical determinant of institutional effectiveness, as it ensures that the primary mission of knowledge production remains well-funded despite external economic fluctuations. Their study highlights that a budget is a moral document; where a university spends its IGR reflects its true commitment to academic excellence versus administrative comfort. This alignment is crucial for building trust among stakeholders who contribute to the revenue pool.

Consistent expenditure on the maintenance of physical infrastructure such as lecture halls, laboratories, and hostels is vital for creating an environment conducive to academic excellence. Dilapidated facilities often lead to a decline in student morale and instructional quality; however, when IGR is reinvested into renovating classrooms and upgrading ICT facilities, the carrying capacity and overall productivity of the university increase. Infrastructural upkeep ensures that technical equipment remains functional for practical sessions, which is the cornerstone of effective academic delivery in science and technology-based programmes. Amadi and Job (2022) posited that the regular maintenance of physical facilities, funded through internal revenue, directly correlates with improved academic performance and the sustained psychological well-being of both staff and students. This consistent reinvestment prevents the “infrastructure deficit” that often leads to student protests and academic strikes.

Okon et al. (2021) conducted a descriptive survey across multiple state-owned polytechnics to evaluate the impact of Electronic Accounting Systems (EAS) on financial management. Their findings revealed that manual revenue collection was highly susceptible to “shadow accounting” and embezzlement. Gomez and Al-Saud (2022) examined how digital payment gateways affected the academic calendar. Prior to automation, faculty members routinely spent the first three weeks of a semester verifying paper receipts, resulting in a significant loss of instructional time. Empirical data also indicated that automated verification systems reduced student registration time by 70 %. Bello (2020) investigated the relationship between automated fee collection and the availability of Information and Communication Technology (ICT) resources. Through a longitudinal analysis of university budgets, he found that institutions employing automated IGR systems experienced more predictable cash flows. Appiah (2023) focused on the human-capital dimension of academic delivery, specifically examining faculty research grants. The study found that manual IGR processes often resulted in “trapped funds” that were difficult to trace.

Isagua et al. (2021) examined how diversified IGR sources influence the availability of teaching aids. Their empirical findings demonstrated a significant positive relationship between income derived from commercial ventures (such as university farms and printing presses) and the procurement of modern classroom technologies. Appiah (2023) explored the role of university consultancy units as a diversified revenue source. The research demonstrated that profitable consultancy services produced a dual benefit: they generated non-tuition revenue and provided a platform for faculty to engage in real-world problem-solving. Ukpogon and Uzoigwe

(2020) investigated the sustainability of university education through the lens of IGR management. Their empirical analysis revealed that investment income and school-run auxiliary services were the strongest predictors of long-term institutional growth.

Abolade (2024) investigated the impact of IGR-based budgetary implementation on the quality of education in Nigerian tertiary institutions. The study shows that when a higher proportion of IGR is allocated to instructional recurrent expenditure (such as laboratory consumables and classroom supplies), there is a measurable improvement in student practical competency. Bello and Abdulsalam (2025) examined the proportion of institutional IGR allocated to digital infrastructure. The empirical findings revealed that libraries receiving a dedicated and consistent “budgetary slice” of the university’s internal revenue were significantly more successful in maintaining high-impact e-journal subscriptions and AI-integrated research tools. Ukpogon and Uzoigwe (2020) conducted a survey to assess how the management and allocation of IGR influence the sustainability of the learning environment. Their data showed that universities allocating a substantial portion of their consultancy and investment income to capital maintenance experienced fewer disruptions in academic activities.

Adeleye and Olajide (2022) performed an empirical assessment of the relationship between IGR expenditure on facility maintenance and the quality of the learning environment. The study revealed that institutions prioritizing the renovation of lecture theatres and laboratories using internal funds achieved significantly higher student satisfaction rates. Chukwuemeka and Nnaji (2024) explored how IGR expenditure on the maintenance of server rooms and campus-wide Wi-Fi networks influences instructional quality. Their findings demonstrated that allocating IGR for routine servicing and upgrading of digital hardware increased faculty adoption of blended learning approaches. Olatunji (2023) examined the role of utility infrastructure maintenance, specifically focusing on the operation of power plants and alternative energy sources funded through IGR. The research found that institutions investing in the maintenance of solar grids and high-capacity generators ensured an uninterrupted academic calendar. The researcher seeks to investigate the extent to which management of Internally Generated Revenue enhance effective academic delivery in public universities in Rivers State, Nigeria.

Statement of the Problem

The traditional dependence of public universities in Rivers State on government subventions has become increasingly unsustainable in the context of diminishing statutory allocations and a volatile national economy. As the chasm between the actual cost of high-quality education and governmental funding widens, these institutions have been compelled to adopt inward-looking strategies, diversifying their income through Internally Generated Revenue (IGR) sources such as consultancy services, postgraduate programmes, and commercial ventures. Nonetheless, despite these initiatives to enhance financial independence, a pressing paradox endures: the heightened impulse to generate revenue does not invariably translate into improved academic outcomes.

The crux of the issue lies in the apparent disconnect between the accrual of these funds and their strategic deployment toward core academic mandates. In public universities across Rivers State, there are observed evidences of deteriorating instructional infrastructure, antiquated laboratory equipment and a shortage of contemporary pedagogical tools; all of which indicate that generated funds may be entangled in administrative overheads, systemic leakages, or inefficient budgetary priorities. This paucity of transparency and strategic foresight in IGR

management engenders a fiscal environment in which academic delivery is subordinate to institutional survival.

Furthermore, the pressure to generate internal revenue frequently imposes an undue burden on students and faculty without a commensurate enhancement of the teaching and learning environment. If the prevailing management frameworks for IGR remain opaque or uncoordinated, the quality of degrees conferred by these universities is at risk of further devaluation. Consequently, there is an exigent need to examine the extent to which management of Internally Generated Revenue enhance effective academic delivery in public universities in Rivers State, Nigeria.

Aim and Objectives of the Study

The aim of this study was to investigate the extent to which management of Internally Generated Revenue enhance effective academic delivery in public universities in Rivers State, Nigeria. Specifically, the study sought to achieve the following objectives:

- Determine the extent the use of automated electronic collection systems for internally generated revenue enhance effective academic delivery in public universities in Rivers State, Nigeria.
- Examine the extent to which diversification of internally generated revenue sources enhance effective academic delivery in public universities in Rivers State, Nigeria.
- Ascertain the extent to which budgetary allocation of internally generated revenue enhances effective academic delivery in public universities in Rivers State, Nigeria.
- Investigate the extent to which internally generated revenue expenditure on infrastructural maintenance enhance effective academic delivery in public universities in Rivers State, Nigeria.

Research Questions

The following research questions guided the study:

- To what extent does the use of automated electronic collection systems for internally generated revenue enhance effective academic delivery in public universities in Rivers State, Nigeria?
- To what extent does the diversification of internally generated revenue sources enhance effective academic delivery in public universities in Rivers State, Nigeria?
- To what extent does the budgetary allocation of internally generated revenue enhance effective academic delivery in public universities in Rivers State, Nigeria?
- To what extent does the internally generated revenue expenditure on infrastructural maintenance enhance effective academic delivery in public universities in Rivers State, Nigeria?

Hypotheses

The following null hypotheses were tested at .05 alpha level:

- There is no significant difference in the mean ratings of federal and state universities on the extent the use of automated electronic collection systems for internally generated revenue enhances effective academic delivery in public universities in Rivers State, Nigeria.
- There is no significant difference in the mean ratings of federal and state universities on the extent the diversification of internally generated revenue sources enhances effective academic delivery in public universities in Rivers State, Nigeria.
- There is no significant difference in the mean ratings of federal and state universities on the extent the budgetary allocation of internally generated revenue enhances effective academic delivery in public universities in Rivers State, Nigeria.
- There is no significant difference in the mean ratings of federal and state universities on the extent the internally generated revenue expenditure on infrastructural maintenance enhances effective academic delivery in public universities in Rivers State, Nigeria.

METHODOLOGY

The study adopted descriptive survey design. The choice of this design was necessary because the study interprets the opinion held and processes that are on-going on the extent to which management of internally generated revenue enhance effective academic delivery in public universities in Rivers State, Nigeria.

The population of the study comprised 4,002 Academic staff from the three (3) Public Universities in Rivers State, Nigeria. This includes University of Port Harcourt (1,435), Rivers State University (1,589) and Ignatius Ajuru University of Education (978). A sample of 364 academic staff was drawn from the population of the study using the Taro Yamane's formula. After which, simple random sampling technique (using the balloting method without replacement) was used to select the required number of respondents in each of the 3 public universities in Rivers State, Nigeria. The instrument that was used for data collection was researcher's self-developed instrument titled "Management of Internally Generated Revenue for Effective Academic Delivery Questionnaire (MIGREADSQ)".

The instruments consisted of 22-items. The instrument was structured using four points rating scale of Very High Extent (VHE) = 4, High Extent (HE) = 3, Low Extent (LE) = 2 and Very Low Extent (VLE) = 1 respectively. The instruments were validated by three experts. Reliability of the instrument was established using Cronbach's Alpha method before it was adopted. The internal consistency of the instrument yielded reliability indices of .841, .811, .801 and .791 respectively for subscales, and the overall reliability index of .810 was obtained. Three hundred and sixty-four (364) copies of instrument were administered to Academic Staff in Public Universities in Rivers State with the aid of six (6) research assistants briefed by the researcher. Three hundred and fifty-eight (358) copies were correctly filled and returned, representing a 98% return rate. Mean and standard deviation were used to answer the research questions while t-test was used to test the hypotheses at .05 level of significance. Decisions were taken based on the mean of boundary limits of the four responses pattern. Any value from 3.01 – 4.00 was regarded as VHE, 2.01 – 3.00 HE, 1.01 – 2.00 LE, and 0.01 – 1.00 as VLE.

RESULTS AND DISCUSSION

Research Question 1: To what extent does the use of automated electronic collection systems for Internally Generated Revenue enhance effective academic delivery in public universities in Rivers State, Nigeria?

Table 1: Mean ratings and standard deviation of academic staff of Federal and State Universities on the extent to which automated electronic collection systems enhances effective academic delivery

S/N	Use of Automated Electronic Collection Systems for Internally Generated Revenue Enhance Effective Academic Delivery	Federal (<i>n</i> = 128)			State (<i>n</i> = 230)		
		Mean	S. D	Rmk.	Mean	S. D	Rmk.
1.	The use of automated electronic payment platforms mitigates delays in accessing the funds requisite for departmental academic activities.	3.15	0.52	VHE	3.22	0.48	VHE
2.	Automated revenue collection attenuates financial leakages, thereby ensuring a surplus of resources available for teaching and learning materials.	3.42	0.41	VHE	3.35	0.55	VHE
3.	Real-time tracking of internally generated revenue (IGR) via digital systems augments financial planning throughout the academic calendar.	2.95	0.60	HE	3.08	0.42	VHE
4.	Automated systems have abolished prolonged queues for fee payment, affording students additional time to concentrate on their academic lectures.	3.65	0.35	VHE	3.58	0.39	VHE
5.	The reliability of automated collection systems enhances the university's capacity to sustain ICT infrastructure employed in academic delivery.	3.10	0.58	VHE	3.25	0.44	VHE
6.	High efficiency in electronic IGR collection ensures a continuous supply of classroom consumables	2.85	0.72	HE	2.90	0.65	HE
7.	Automated clearance processes have alleviated administrative bottlenecks that previously impeded student registration.	3.55	0.45	VHE	3.60	0.38	VHE
Average Mean and Standard Deviation		3.24	0.52	VHE	3.28	0.47	VHE

Scale: 0.01 – 1.00 Very Low Extent (VLE) , 1.01 – 2.00 Low Extent (LE), 3.01 – 4.00 Very High Extent (VHE), 2.01 – 3.00 High Extent (HE)

Table 1 shows that, items 1, 2, 4, 5 and 7 under Federal University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While items 3 and 6 under Federal University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). Items 1, 2, 4, 5 and 7 under State University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While item 6 under State University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). In summary, with the average mean of 3.24 and 3.28 for Federal and State Universities respectively, between 3.01 and 4.00, which fell under Very High Extent (VHE), indicates that to a very high extent, the use of automated electronic collection systems for Internally Generated Revenue enhances effective academic delivery in public universities in Rivers State.

Research Question 2: To what extent does the diversification of Internally Generated Revenue sources enhance effective academic delivery in public universities in Rivers State, Nigeria?

Table 2: Mean ratings and standard deviation of academic staff of Federal and State Universities on the extent the diversification of internally generated revenue sources enhance effective academic delivery

S/N	Diversification of Internally Generated Revenue Sources Enhance Effective Academic Delivery	Federal (<i>n</i> = 128)			State (<i>n</i> = 230)		
		Mean	<i>S. D</i>	Rmk.	Mean	<i>S. D</i>	Rmk.
8.	Revenue derived from university-owned enterprises furnishes supplementary funds for academic research.	2.88	0.61	HE	3.02	0.54	VHE
9.	Income from consultancy services enables the university to sponsor academic staff participation in international conferences.	3.12	0.44	VHE	2.95	0.60	HE
10.	The introduction of part-time certificate programmes has augmented the funds available for hiring visiting professors.	3.45	0.38	VHE	3.55	0.41	VHE
11.	Diversified income sources reduce the institution's overall dependency on governmental grants for academic operations.	3.05	0.55	VHE	3.28	0.47	VHE
12.	Capital obtained from alumni endowments has elevated the quality of contemporary teaching aids within the department.	2.65	0.78	HE	2.52	0.82	HE
Average Mean and Standard Deviation		3.03	0.55	VHE	3.06	0.57	VHE

Table 2 shows that, items 9, 10 and 11 under Federal University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While items 8 and 12 under Federal University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). Items 8, 10 and 11 under State University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While items 9 and 12 under State University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). In summary, with the average mean of 3.03 and 3.06 for Federal and State Universities respectively, between 3.01 and 4.00, which fell under Very High Extent (VHE), indicates that to a very high extent, the diversification of Internally Generated Revenue sources enhances effective academic delivery in public universities in Rivers State.

Research Question 3: To what extent does the budgetary allocation of Internally Generated Revenue enhance effective academic delivery in public universities in Rivers State, Nigeria?

Table 3: Mean ratings and standard deviation of academic staff of Federal and State Universities on the extent budgetary allocation of internally generated revenue enhance effective academic delivery

S/N	Budgetary Allocation of Internally Generated Revenue Enhance Effective Academic Delivery	Federal (<i>n</i> = 128)			State (<i>n</i> = 230)		
		Mean	<i>S. D</i>	Rmk.	Mean	<i>S. D</i>	Rmk.
13.	A significant portion of the university's internal budget is expressly allocated to faculty-level academic development.	3.02	0.54	VHE	3.41	0.44	VHE
14.	Budgetary transparency ensures that IGR is distributed equitably across all academic departments.	2.95	0.60	HE	3.02	0.58	VHE
15.	The university prioritizes the procurement of e-journal subscriptions within its annual IGR budget.	3.55	0.41	VHE	3.45	0.39	VHE
16.	Timely release of budgeted internal funds forestalls disruptions to the academic calendar	3.28	0.47	VHE	3.15	0.53	VHE
17.	Allocations for departmental "running costs" are sufficient to sustain daily instructional activities.	2.52	0.82	HE	2.98	0.62	HE
Average Mean and Standard Deviation		3.06	0.57	VHE	3.20	0.51	VHE

Table 3 shows that, items 13, 15 and 16 under Federal University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While items 14 and 17 under Federal University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). Items 13, 14, 15 and 16 under State University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While item 17 under State University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). In summary, with the average mean of 3.06 and 3.20 for Federal and State Universities respectively, between 3.01 and 4.00, which fell under Very High Extent (VHE), indicates that to a very high extent, the budgetary allocation of Internally Generated Revenue enhances effective academic delivery in public universities in Rivers State.

Research Question 4: To what extent does the Internally Generated Revenue expenditure on infrastructural maintenance enhance effective academic delivery in public universities in Rivers State, Nigeria?

Table 4: Mean ratings and standard deviation academic staff of Federal and State Universities on the extent internally generated revenue expenditure on infrastructural maintenance enhance effective academic delivery

S/N	Internally Generated Revenue Expenditure on Infrastructural Maintenance Enhance Effective Academic Delivery	Federal (<i>n</i> = 128)			State (<i>n</i> = 230)		
		Mean	<i>S. D</i>	Rmk.	Mean	<i>S. D</i>	Rmk.
18.	Expenditure of IGR on the renovation of lecture halls has rendered the learning environment more conducive for students.	2.98	0.36	HE	3.03	0.32	VHE

19.	Regular maintenance of equipment funded by IGR enhances the quality of practical session	3.28	0.45	VHE	3.17	0.44	VHE
20.	Investment of internal revenue in campus-wide ICT infrastructure has improved digital learning delivery.	3.06	0.23	VHE	2.87	0.50	HE
21.	Consistent funding for the maintenance of power supply in academic areas supports effective teaching.	3.28	0.45	VHE	3.05	0.47	VHE
22.	The upkeep of office facilities for academic staff through IGR expenditure enhances staff productivity	2.94	0.41	HE	3.20	0.55	VHE
Average Mean and Standard Deviation		3.09	0.33	VHE	3.08	0.46	VHE

Table 4 shows that, items 19, 20 and 21 under Federal University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While items 18 and 22 under Federal University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). Items 18, 19, 21 and 22 under State University had mean scores between 3.01 and 4.00, which fell under Very High Extent (VHE). While item 20 under State University had mean scores between 2.01 and 3.00, which fell under High Extent (HE). In summary, with the average mean of 3.09 and 3.08 for Federal and State Universities respectively, between 3.01 and 4.00, which fell under Very High Extent (VHE), indicates that to a very high extent, the Internally Generated Revenue expenditure on infrastructural maintenance enhance effective academic delivery in public universities in Rivers State.

Test of Hypothesis

Hypothesis 1: There is no significant difference in the mean ratings of federal and state universities on the extent the use of automated electronic collection systems for Internally Generated Revenue enhances effective academic delivery in public universities in Rivers State.

Table 5: Summary of t-test Analysis Mean Ratings of Federal and State Universities on the Extent the Use of Automated Electronic Collection Systems for Internally Generated Revenue Enhance Effective Academic Delivery in Public Universities in Rivers State

Universities	N	Mean	SD.	Df.	t-cal.	p-value	Decision
Federal	128	3.24	.52	356	-0.73	.46	H ₀ Accepted
State	230	3.28	.47				
Total	358						

Table 5 shows that the t-value calculated stood at -0.73, while p-value stood at .46 using 356 degrees of freedom and at .05 alpha level. Since p-value (.46) is greater than the alpha level of .05, the null hypothesis is accepted. This means that there is no significance difference in the mean ratings of in the mean ratings of federal and state universities on the extent the use of automated electronic collection systems for Internally Generated Revenue enhances effective academic delivery in public universities in Rivers State.

Hypothesis 2: There is no significant difference in the mean ratings of federal and state universities on the extent the diversification of Internally Generated Revenue sources enhances effective academic delivery in public universities in Rivers State?

Table 6: Summary of t-test Analysis Mean Ratings of Federal and State Universities on the Extent the diversification of Internally Generated Revenue Sources Enhance Effective Academic Delivery in Public Universities in Rivers State

Universities	N	Mean	SD.	Df.	t-cal.	p-value	Decision
Federal	128	3.03	.55	356	-0.48	.63	H ₀ Accepted
State	230	3.06	.57				
Total	358						

Table 6 shows that the t-value calculated stood at -0.48, while p-value stood at .63 using 356 degrees of freedom and at .05 alpha level. Since p-value (.63) is greater than the alpha level of .05, the null hypothesis is accepted. This means that there is no significance difference in the mean ratings of in the mean ratings of federal and state universities on the extent the diversification of Internally Generated Revenue sources enhances effective academic delivery in public universities in Rivers State.

Hypothesis 3: There is no significant difference in the mean ratings of federal and state universities on the extent the budgetary allocation of Internally Generated Revenue enhances effective academic delivery in public universities in Rivers State?

Table 7: Summary of t-test Analysis Mean Ratings of Federal and State Universities on the Extent the Budgetary Allocation of Internally Generated Revenue Enhance Effective Academic Delivery in Public Universities in Rivers State

Universities	N	Mean	SD.	Df.	t-cal.	p-value	Decision
Federal	128	3.06	.57	356	-2.37	.018	H ₀ Rejected
State	230	3.20	.51				
Total	358						

Table 7 shows that the t-value calculated stood at -2.37, while p-value stood at .018 using 356 degrees of freedom and at .05 alpha level. Since p-value (.018) is less than the alpha level of .05, the null hypothesis is rejected. This means that there is significance difference in the mean ratings of in the mean ratings of federal and state universities on the extent budgetary allocation of Internally Generated Revenue enhances effective academic delivery in public universities in Rivers State.

Hypothesis 4: There is no significant difference in the mean ratings of federal and state universities on the extent the Internally Generated Revenue expenditure on infrastructural maintenance enhances effective academic delivery in public universities in Rivers State.

Table 8: Summary of t-test Analysis Mean Ratings of Federal and State Universities on the Extent the Internally Generated Revenue Expenditure on Infrastructural Maintenance Enhance Effective Academic Delivery in Public Universities in Rivers State

Universities	N	Mean	SD.	Df.	t-cal.	p-value	Decision
Federal	128	3.09	0.33	356	.22	.82	H0 ₄ Accepted
State	230	3.08	0.46				
Total	358						

Table 8 shows that the t-value calculated stood at .22, while p-value stood at .82 using 356 degrees of freedom and at .05 alpha level. Since p-value (.82) is greater than the alpha level of .05, the null hypothesis is accepted. This means that there is no significance difference in the mean ratings of in the mean ratings of federal and state universities on the extent the Internally Generated Revenue expenditure on infrastructural maintenance enhances effective academic delivery in public universities in Rivers State.

DISCUSSION OF FINDINGS

Findings of the study revealed that to a very high extent the use of automated electronic collection systems for Internally Generated Revenue enhances effective academic delivery in public universities in Rivers State. This indicates that the use of automated electronic payment platforms mitigates delays in accessing the funds requisite for departmental academic activities, attenuates financial leakages, thereby ensuring a surplus of resources available for teaching and learning materials, augments financial planning throughout the academic calendar, enhances the university's capacity to sustain ICT infrastructure employed in academic delivery, ensures a continuous supply of classroom consumables and alleviate administrative bottlenecks that previously impeded student registration. This is in line with the findings of Gomez and Al-Saud (2022), who found that manual verification of receipt required the faculty to do away with classroom teaching during the first three weeks of every semester. The data demonstrated that the deployment of automated payment gateways reduced registration time by 70 %, thereby ensuring that the academic calendar commences on schedule. These empirical observations corroborate the assertion that automated systems function as catalysts for effective academic delivery by prioritizing instructional time over administrative bureaucracy. Beyond time management, automation preserves the financial integrity necessary to fund contemporary learning environments. As Abolade (2024) and Bello and Abdulsalam (2025) illustrated, efficient collection and redirection of IGR toward instructional recurrent expenditure and digital infrastructure yields measurable improvements in student practical competency and access to AI-integrated research tools. Hypothesis 1 revealed no significant difference in the mean ratings of in the mean ratings of federal and state universities academic staff on the extent the use of automated electronic collection systems for internally generated revenue enhances effective academic delivery in public universities in Rivers State.

Results of the study established that to a very high extent, the diversification of Internally Generated Revenue sources enhances effective academic delivery in public universities in Rivers State. This indicates that revenue derived from university-owned enterprises furnishes supplementary funds for academic research, income from consultancy services enables the university to sponsor academic staff participation in international conferences, introduction of part-time certificate programmes has augmented the funds available for hiring visiting

professors, diversified income sources reduce the institution's overall dependency on governmental grants for academic operations and capital obtained from alumni endowments has elevated the quality of contemporary teaching aids within the department. This aligns with the observation of Isagua et al. (2021) identified a significant positive correlation between income derived from commercial ventures such as university farms and printing presses, and the procurement of modern classroom technologies. This evidence supports the claim that diversification into commercial sectors generates revenue that frequently underpins the acquisition of educational aids necessary for superior academic delivery. Moreover, Appiah (2023) highlights the beneficial aspects of diversification as a human-capital feature through university consultancy departments. His findings indicate that these units serve a dual purpose: they generate essential non-tuition revenue while concurrently furnishing faculty with platforms to apply theoretical knowledge to real-world problems. Ukpong and Uzoigwe (2020) identified investment income and school-run auxiliary services as the most robust predictors of institutional growth. Their data reveal that universities with diversified income sources can allocate substantial funds to "capital maintenance," resulting in fewer disruptions to academic activities. Hypothesis 2 revealed no significant difference in the mean ratings of of federal and state universities academic staff on the extent the diversification of internally generated revenue sources enhances effective academic delivery in public universities in Rivers State.

The study discovered that to a very high extent the budgetary allocation of internally generated revenue enhances effective academic delivery in public universities in Rivers State. This indicates that to a very high extent, significant portion of the university's internal budget is expressly allocated to faculty-level academic development, budgetary transparency ensures that IGR is distributed equitably across all academic departments, university prioritizes the procurement of e-journal subscriptions within its annual IGR budget, timely release of budgeted internal funds forestalls disruptions to the academic calendar and Allocations for departmental running costs are sufficient to sustain daily instructional activities. This is in line with the study of Abolade (2024), who demonstrated that a higher proportion of IGR earmarked for "instructional recurrent expenditure" including laboratory consumables and classroom supplies correlates with measurable gains in student practical competency. This supports the inference that effective delivery in Rivers State universities is a direct consequence of how IGR allocations prioritize tangible learning tools. Bello and Abdulsalam (2025) found that libraries and departments receiving dedicated internal revenue were markedly more successful in maintaining AI-integrated research tools and high-impact electronic journal subscriptions. This empirical evidence substantiates the discovery that the extensive impact observed is driven by budgetary allocations that empower both students and faculty with requisite digital resources for 21st-century scholarship. The stability of the academic calendar and the physical learning environment hinges on maintenance-focused budgeting. Adeleye and Olajide (2022) established that institutions prioritizing the renovation of lecture theatres and laboratories through internal funds achieved higher student satisfaction. This finding is complemented by Ukpong and Uzoigwe (2020), whose data indicate that universities allocating a substantial share of consultancy and investment income to "capital maintenance" experienced significantly fewer disruptions in academic activities. Collectively, these studies confirm that strategic budgetary allocation of IGR safeguards the physical and digital infrastructure of the university, thereby fostering uninterrupted and effective academic delivery. Hypothesis 3 revealed that there is significant difference in the mean ratings of in the mean ratings of federal and state universities

academic staff on the extent budgetary allocation of how internally generated revenue enhances effective academic delivery in public universities in Rivers State.

Empirical evidence established that to a very high extent, the Internally Generated Revenue expenditure on infrastructural maintenance enhance effective academic delivery in public universities in Rivers State. This indicates that expenditure of IGR on the renovation of lecture halls has rendered the learning environment more conducive for students, regular maintenance of equipment funded by IGR enhances the quality of practical session, investment of internal revenue in campus-wide ICT infrastructure has improved digital learning delivery, consistent funding for the maintenance of power supply in academic areas supports effective teaching and upkeep of office facilities for academic staff through IGR expenditure enhances staff productivity. This finding correlates with Adeleye and Olajide (2022) revealed that institutions prioritizing the renovation of lecture theatres and laboratories achieved notably higher student satisfaction and engagement. This observation validates the identified “very high extent” of effectiveness in Rivers State, which originates from the quality of the physical spaces where learning occurs. Furthermore, the definition of infrastructure has expanded to encompass the digital backbone of the university. Adedeji (2023) and Chukwuemeka and Nnaji (2024) demonstrated that allocating IGR to routine servicing and upgrading of digital hardware increases faculty adoption of blended learning approaches. These results imply that maintenance expenditure directly empowers lecturers to employ modern pedagogical tools, thereby enhancing academic delivery. Olatunji (2023) reported that universities investing IGR into the maintenance of solar grids and high-capacity power plants secured an uninterrupted academic calendar. This aligns with the work of Ukpong and Uzoigwe (2020), who also reported that allocating IGR to “capital maintenance” led to fewer disruptions in academic activities. Hypothesis 4 revealed that there is no significant difference in the mean ratings of in the mean ratings of federal and state universities academic staff on the extent the Internally Generated Revenue expenditure on infrastructural maintenance enhances effective academic delivery in public universities in Rivers State.

CONCLUSION

Based on the findings of the study, management of internally generated revenue such as use of automated electronic collection systems for internally generated revenue, diversification of internally generated revenue sources, budgetary allocation of internally generated revenue and internally generated revenue expenditure on infrastructural maintenance to a very high extent contribute significantly to effective academic delivery in public universities in Rivers State. The management of internally generated revenue through the implementation of automated collection systems, diversification of income streams and intentional budgetary allocation and expenditure on infrastructural maintenance enhances academic delivery in public universities in Rivers State.

Recommendations

Based on the findings of this study and conclusion, the following recommendations are made:

- University management bodies and governing councils are urged to transition all residual manual revenue processes to a fully integrated Electronic Accounting System (EAS),

thereby eliminating “shadow accounting” practices and reducing administrative bottlenecks.

- Directorates of Enterprise and Consultancy Services within universities ought to proactively broaden their portfolio into commercial ventures, including, but not limited to, university farms, printing presses, and specialized professional training programmes.
- University budget committees are required to adopt a “Teaching-First” allocation policy that prioritizes recurrent instructional expenditures and digital infrastructure within the annual Internally Generated Revenue budget.
- Departments of Works and Physical Planning should establish a “Preventive Maintenance Fund”, financed exclusively through IGR, dedicated to the routine maintenance of utility and digital infrastructure.

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