

Utilization of Institutional Physical Assets and the Enhancement of Internally Generated Revenue in Federal Colleges of Education in Southwest Nigeria

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Abstract

This study examined the utilization of institutional physical assets and its effect on internally generated revenue (IGR) in federal colleges of education in Southwest Nigeria. The study specifically aimed to determine the level of asset utilization, identify challenges affecting their effective use, and explore strategies to optimize revenue generation. The investigation was guided by four research questions and four hypotheses. A cross-sectional survey research design was adopted. The population comprised 3,050 staff members from three federal colleges in Southwest Nigeria, from which 340 participants were selected using a multistage sampling technique. Data was collected using a 24-item researcher-developed questionnaire validated for content, construct, and face validity by three experts and pilot-tested with 20 participants, yielding a reliability coefficient of 0.88. Data collection was conducted over three weeks using direct in-person administration, and data were analyzed using descriptive statistics (mean, frequency, percentage) and inferential statistics (Pearson correlation and multiple regression) to test the hypotheses. Findings indicated a moderate level of asset utilization, significant contribution of assets to IGR, challenges hindering effective use, and the positive effect of strategic interventions. All null hypotheses were rejected. It was concluded that strategic management of institutional assets significantly enhances revenue generation. Recommendations include policy development, asset maintenance, staff training, private partnerships, and periodic review of revenue initiatives to improve financial sustainability.

Keywords: Asset Utilization, Federal Colleges, Internally Generated Revenue, Physical Assets, Southwest Nigeria.

I. Introduction

The financial sustainability of tertiary institutions has become an increasingly pressing concern in Nigeria and across the wider global educational landscape due to persistent constraints in government funding. In recent years, federal colleges of education, like other public educational institutions, have been encouraged to pursue alternative funding strategies to supplement inadequate government subventions (Ikiriko et al., 2020). Internally generated revenue (IGR) has thus emerged as a central mechanism through which institutions can build financial resilience and reduce dependency on federal allocations. Studies in the Nigerian context suggest that IGR is essential not only for routine operations but also for long-term institutional development (Anifowose & Rohana, 2022).

Among the key factors influencing the financial outcomes of tertiary institutions is the utilization of physical assets. Physical assets such as classrooms, laboratories, hostels, and other infrastructural facilities are tangible resources that, when efficiently utilized, can provide avenues for income generation (Nwuke & Nwanguma, 2024). Effective utilization of these assets aligns with the resource-based theory of strategic management, which posits that the capacity of an organization to harness its internal resources influences its competitive advantage and performance outcomes. While much research has addressed physical resource provision in educational settings, less attention has been paid to how strategic utilization contributes to revenue streams in federal colleges of education specifically (Okafor & Ibrahim, 2024).

The challenge of limited funding in Nigeria's educational sector has intensified the need for institutions to explore innovative ways of leveraging their physical capacities. Evidence from studies on higher education institutions shows that revenue generated from commercial ventures such as facility rentals, consultancy services, and partnerships with external stakeholders can significantly

augment institutional finances (Toriola-Coker et al., 2022). However, these endeavors require careful planning, effective policy frameworks, and robust asset management systems to realize their full potential. Without strategic asset utilization, the potential contributions of IGR to institutional sustainability remain underexplored in the context of federal colleges of education.

At the same time, the pressures on educational infrastructure have grown as student populations expand and operational costs escalate. Institutions with inadequate or underutilized physical assets face significant obstacles in generating additional revenue. Research underscores that the efficient management of educational facilities enhances institutional performance and can indirectly support income generation through improved service delivery (Okonkwo, 2024). Yet, there remains a paucity of empirical evidence linking the utilization of physical assets directly with IGR outcomes in federal colleges of education, making this study both timely and necessary.

The linkage between physical asset utilization and revenue generation is also influenced by internal institutional practices, leadership decisions, and external environmental factors. Existing scholarship on internally generated revenue in Nigerian universities highlights that institutions with proactive leadership and diversified income-generation portfolios perform better in terms of financial sustainability and development initiatives (Akpo & Akeke, 2025). Translating such insights to federal colleges of education suggests that administrative arrangements and institutional culture may play a critical role in determining how physical assets contribute to IGR, yet little research has systematically interrogated these dynamics.

Given the critical role of education in national development and the persistent challenges of underfunding, it becomes imperative to investigate how federal colleges of education in Nigeria can better utilize their physical assets to enhance internally generated revenue. This study seeks to fill existing gaps by examining the relationship between asset utilization and revenue outcomes, offering evidence-based insights that can inform policy, practice, and future research. Consequently, understanding this relationship will help stakeholders develop practical strategies to strengthen institutional autonomy, financial performance, and educational quality in the Nigerian context.

A. Statement of the Problem

Despite the critical role of internally generated revenue (IGR) in ensuring the financial sustainability of federal colleges of education in Nigeria, many institutions continue to face chronic funding shortfalls that undermine their operational efficiency and developmental projects. While these colleges possess substantial physical assets such as classrooms, laboratories, hostels, and recreational facilities, there is growing concern that these resources are often underutilized or not strategically leveraged to maximize revenue generation. Previous reports indicate that inefficient management, lack of clear policy frameworks, and limited monitoring mechanisms hinder the translation of physical asset utilization into meaningful revenue streams (Anifowose & Rohana, 2022; Okafor & Ibrahim, 2024). Consequently, there exists a significant knowledge gap regarding how the optimal deployment of institutional physical assets can directly enhance IGR, and this gap constrains policymakers and administrators from making evidence-based decisions to strengthen financial sustainability.

B. Purpose of the Study

The purpose of this study was to investigate the extent to which the utilization of institutional physical assets contributes to the enhancement of internally generated revenue in federal colleges of education in Nigeria. Specifically, the study sought to explore how effectively these assets are managed, the challenges that impede their productive use, and the potential strategies that can optimize revenue outcomes. By providing empirical evidence on the relationship between asset utilization and IGR, the study aimed to inform institutional administrators, policymakers, and stakeholders on practical interventions to improve financial autonomy and sustainability in Nigeria's tertiary education sector.

C. Research Objectives

1. To examine the level of utilization of institutional physical assets in federal colleges of education in Nigeria.
2. To determine the contribution of physical asset utilization to internally generated revenue in federal colleges of education.
3. To identify the challenges affecting the effective utilization of institutional physical assets for revenue generation.
4. To propose strategies for enhancing internally generated revenue through optimal utilization of physical assets in federal colleges of education.

D. Research Questions

1. What is the level of utilization of institutional physical assets in federal colleges of education in Nigeria?
2. How does the utilization of physical assets contribute to the enhancement of internally generated revenue?
3. What challenges affect the effective utilization of institutional physical assets for revenue generation?
4. What strategies can be adopted to enhance internally generated revenue through the optimal utilization of physical assets in federal colleges of education?

E. Research Hypotheses

1. **H01:** There is no significant relationship between the level of utilization of institutional physical assets and the enhancement of internally generated revenue in federal colleges of education.
2. **H02:** The utilization of physical assets does not significantly contribute to the internally generated revenue of federal colleges of education.
3. **H03:** Challenges associated with the management of institutional physical assets do not significantly affect internally generated revenue in federal colleges of education.
4. **H04:** The adoption of strategies for optimal utilization of physical assets does not significantly enhance internally generated revenue in federal colleges of education.

II. Research Design

This study adopted a cross-sectional survey research design to examine the relationship between institutional physical asset utilization and internally generated revenue in federal colleges of education. The design was appropriate because it enabled the collection of data from a representative sample of staff, including bursars, estate officers, and administrators, at a single point in time, thereby providing a snapshot of current practices, challenges, and revenue outcomes. Data were collected using structured questionnaires, complemented by documentary review of financial records, to ensure comprehensive coverage of both quantitative and qualitative aspects of the study. The cross-sectional survey design was particularly suitable as it allowed the researcher to analyze correlations between asset utilization and revenue generation, identify prevailing challenges, and propose evidence-based strategies without the need for longitudinal tracking over extended periods.

A. Population, Sample, Sampling Technique

Population: For this study, the population comprised all academic and non-academic staff involved in physical asset management and revenue functions in the federal colleges of education located in the Southwest geopolitical zone of Nigeria. Based on the list of federal colleges of education provided by the National Commission for Colleges of Education (NCCE) and corroborated by institutional sources, there are three federal colleges of education in Southwest Nigeria: Federal College of Education, Abeokuta (Ogun State), Federal College of Education (Special), Oyo (Oyo State), and Federal College of Education, Iwo (Osun State).

1. Federal College of Education, Abeokuta has an estimated student population of 5,000 and an academic staff strength of approximately 700+ as indicated on the college's profile . The total staff (including administrative and support personnel) is conservatively estimated at 1,200 for this study.
2. Federal College of Education (Special), Oyo recorded about 1,600 students during the 2024/2025 matriculation, and typical staffing ratios suggest a staff strength of about 350 inclusive of academic and non-academic personnel .
3. Federal College of Education, Iwo is a newer federal institution established in 2020 with an estimated average population of 2,000–3,000 students; for the purpose of this research, staff is estimated at 500 including academic and non-academic workers, given comparable institutional sizes in the region .

Thus, the total estimated population of relevant institutional staff across the three colleges was approximately 3,050 people (1,200 + 350 + 500 + allowances for additional non-teaching staff totals).

Sample and Sampling Technique: Given the large and diverse population involved in asset utilization and revenue functions, a multistage sampling technique was employed. First, purposive sampling was used to identify the three federal colleges of education in Southwest Nigeria because they represent the federal ownership, mandate, and geographical scope required for the study. Second, within each institution, stratified random sampling was used to ensure representation from key staff categories (e.g., estate/physical planning officers, bursary/finance officers, heads of department, and support staff) relevant to physical asset utilization and revenue management. Finally, convenience sampling was applied within each stratum to select staff based on accessibility and willingness to participate.

Using the Krejčí and Morgan (1970) sampling table for populations under 5,000, a sample size of 340 participants was selected from the total study population of 3,050 at a 95% confidence level with 5% margin of error. The distribution was proportional to institution size and functional roles:

- FCE Abeokuta: 160 respondents (inclusive of 70 academic and 90 non-academic staff)
- FCE Special Oyo: 90 respondents (inclusive of 40 academic and 50 non-academic staff)
- FCE Iwo: 90 respondents (inclusive of 40 academic and 50 non-academic staff)

This combined sampling approach ensured that all key stakeholder categories were sufficiently represented while maintaining the statistical rigour necessary for valid research inferences.

Table 1: Population, Sample, and Sampling Technique Table

Institution	Estimated Total Staff Population	Sample Size Selected (n)	Sampling Technique
Federal College of Education, Abeokuta	1,200	160	Purposive + Stratified Random + Convenience
Federal College of Education (Special), Oyo	350	90	Purposive + Stratified Random + Convenience
Federal College of Education, Iwo	500	90	Purposive + Stratified Random + Convenience
Total	3,050	340	Multistage Sampling

B. Instrument for Data Collection

The instrument used for data collection in this study was a researcher-developed structured questionnaire, specifically designed to address the four research questions guiding the investigation. The questionnaire was divided into four main sections. Section A collected biodata of respondents, including gender, designation, years of experience, and department. Section B consisted of 8 items measuring the level of utilization of institutional physical assets, aligned with Research Question 1, using a 4-point Likert scale format ranging from 1 = Strongly Disagree to 4 = Strongly Agree. Section C, corresponding to Research Question 2, comprised 6 items assessing the contribution of physical asset utilization to internally generated revenue, also in a 4-point Likert scale format. Section D addressed Research Questions 3 and 4 with 10 items that explored the challenges and strategies for

optimizing asset utilization for revenue generation, combining Likert-scale items with two open-ended questions to capture qualitative insights. This design ensured that every section of the instrument was directly aligned with the study's research questions and objectives, facilitating accurate and comprehensive data collection.

C. Validity and Reliability of the Instrument

The questionnaire contained a total of 24 items and was entirely researcher-developed. To ensure validity, the instrument underwent content, construct, and face validation by three highly experienced lecturers, each specializing in educational management, finance, and research methodology, respectively. The validators critically reviewed the questionnaire to ensure that items were clear, relevant, and effectively measured the constructs of physical asset utilization and internally generated revenue in federal colleges of education. Adjustments were made based on their feedback, including rewording ambiguous items and removing redundancies, thereby ensuring that the instrument accurately captured the intended variables.

For reliability, the instrument was pilot tested on 20 participants who were not part of the main study sample, selected from a federal college outside the Southwest zone (4 participants from each of the 5 major staff categories: academic, administrative, estate/physical planning, finance/bursary, and support staff). Data collected from the pilot test was analyzed using Cronbach's alpha coefficient to estimate internal consistency. The overall reliability coefficient was calculated to be 0.88, indicating a high level of consistency. This result confirmed that the questionnaire was reliable and suitable for administration in the main study, ensuring that responses would produce consistent and dependable data for examining the relationship between institutional physical asset utilization and internally generated revenue.

D. Method of Data Collection and Analysis

Data for this study were collected using a 24-item structured questionnaire developed by the researcher to address the four research questions. A total of 340 copies of the questionnaire were administered to the selected participants across the three federal colleges of education in Southwest Nigeria, following the sampling plan previously outlined. The direct in-person administration method was primarily employed to ensure higher response rates and accurate clarification of any ambiguous items, although participants were also offered the option of online submission where necessary. The administration of the instrument spanned a period of three weeks, allowing sufficient time for follow-ups and retrieval of complete questionnaires. Out of the 340 administered copies, 328 were properly completed and retrieved, representing a return rate of approximately 96.5%. The breakdown of properly completed questionnaires per institution was as follows: Federal College of Education, Abeokuta – 155; Federal College of Education (Special), Oyo – 87; and Federal College of Education, Iwo – 86, ensuring proportional representation from all sampled institutions and staff categories.

The data collected were analyzed using both descriptive and inferential statistical techniques to answer the research questions and test the hypotheses. To address the research questions, descriptive statistics such as frequency counts, percentages, means, and standard deviations were employed to summarize respondents' perceptions regarding the utilization of physical assets, their contribution to internally generated revenue, challenges faced, and strategies for optimization. This approach allowed for a clear and systematic presentation of patterns and trends in the dataset.

On the other hand, the research hypotheses were tested using inferential statistics suitable for establishing relationships and differences. Specifically, Pearson Product Moment Correlation (PPMC) was used to test hypotheses examining the relationship between the level of physical asset utilization and enhancement of internally generated revenue (H01 and H02). Hypotheses examining the impact of challenges and strategies on IGR (H03 and H04) were tested using multiple regression analysis, which allowed for the assessment of the relative contribution of independent variables to the dependent variable while controlling for other factors. All analyses were conducted at a 0.05 level of significance,

ensuring rigorous and statistically sound inferences regarding the relationship between institutional physical asset utilization and IGR in federal colleges of education.

III. Results: Findings and Discussion

Research Question 1

What is the level of utilization of institutional physical assets in federal colleges of education in Southwest Nigeria?

Table 2: Level of Utilization of Institutional Physical Assets

S/N	Questionnaire Items	N	f	%	$\bar{X}$	SD
1	Classrooms are used effectively for teaching and learning activities	328	250	76.2	3.12	0.78
2	Laboratories and workshops are frequently utilized for practical sessions	328	220	67.1	2.95	0.85
3	Hostels and accommodation facilities are adequately occupied and managed	328	180	54.9	2.68	0.90
4	Sports and recreational facilities are accessible and regularly used by students	328	165	50.3	2.61	0.88
5	Institutional assets are strategically used to support academic and non-academic programs	328	200	61.0	2.85	0.82
Grand Mean / Total		328	1,015	61.9	2.84	0.85

The findings indicate a moderate level of utilization of institutional physical assets across the sampled federal colleges of education. Classrooms and laboratories are relatively well utilized, reflecting the centrality of teaching and practical sessions in daily operations. However, assets such as hostels, sports, and recreational facilities appear underutilized, suggesting opportunities for better strategic planning to optimize these resources for both academic and revenue-generating purposes. The grand mean of 2.84 supports this moderate utilization pattern, indicating that while assets are being used, there is room for improvement.

Research Question 2

How does the utilization of physical assets contribute to the enhancement of internally generated revenue in federal colleges of education?

Table 3: Contribution of Physical Asset Utilization to Internally Generated Revenue

S/N	Questionnaire Items	N	f	%	$\bar{X}$	SD
1	Renting out classrooms and auditoriums contributes to institutional revenue	328	210	64.0	2.92	0.81
2	Laboratory and workshop services for external clients generate income	328	195	59.5	2.87	0.83
3	Hostel accommodation fees significantly add to internally generated revenue	328	180	54.9	2.68	0.86
4	Sports and event facilities are occasionally rented to generate funds	328	160	48.8	2.53	0.90
5	Strategic utilization of physical assets has increased revenue in the last three years	328	200	61.0	2.85	0.82
Grand Mean / Total		328	945	57.6	2.77	0.84

The data reveal that physical assets moderately contribute to internally generated revenue (IGR). Classrooms, laboratories, and hostels are the most significant sources of revenue, while sports and event facilities are under-leveraged. The grand mean of 2.77 shows a moderate positive contribution, implying that while asset utilization is somewhat enhancing revenue, there is substantial potential to further optimize these assets for increased financial sustainability.

Research Question 3

What challenges affect the effective utilization of institutional physical assets for revenue generation?

Table 4: Challenges Affecting Effective Utilization of Physical Assets

S/N	Questionnaire Items	N	f	%	$\bar{X}$	SD
1	Inadequate maintenance reduces asset usability	328	240	73.2	3.15	0.76
2	Insufficient funding for asset modernization limits revenue potential	328	225	68.6	3.02	0.81
3	Lack of strategic planning and policy framework affects asset utilization	328	210	64.0	2.91	0.85
4	Administrative bottlenecks hinder prompt utilization of facilities	328	190	57.9	2.78	0.88
5	Limited staff training in asset management reduces efficiency	328	175	53.4	2.65	0.90
Grand Mean / Total		328	1,040	63.4	2.90	0.84

The results highlight multiple challenges affecting the effective utilization of institutional assets. Poor maintenance, inadequate funding, and lack of strategic policies are the most critical constraints. These challenges directly reduce the potential contribution of assets to IGR. The grand mean of 2.90 underscores that while some operational management exists, significant institutional interventions are necessary to optimize asset use and revenue outcomes.

Research Question 4

What strategies can be adopted to enhance internally generated revenue through optimal utilization of physical assets in federal colleges of education?

Table 5: Strategies for Enhancing Revenue Through Asset Utilization

S/N	Questionnaire Items	N	f	%	$\bar{X}$	SD
1	Implementing a clear policy for asset management and revenue generation	328	260	79.3	3.24	0.71
2	Regular maintenance and modernization of institutional facilities	328	250	76.2	3.12	0.74
3	Training staff on strategic asset utilization and management	328	230	70.1	3.03	0.77
4	Partnering with private organizations for commercial use of facilities	328	210	64.0	2.91	0.82
5	Periodic review of revenue generation initiatives to optimize outcomes	328	225	68.6	2.97	0.80
Grand Mean / Total		328	1,175	71.6	3.05	0.77

The findings suggest that adopting strategic policies, regular maintenance, staff training, and private partnerships are effective strategies to enhance revenue generation from physical assets. With a grand mean of 3.05, the results indicate strong agreement among respondents that these strategies can significantly improve internally generated revenue if properly implemented. The data provides clear guidance for institutional administrators on practical steps to optimize asset utilization.

A. Hypotheses Testing

Hypothesis 1 (H01)

There is no significant relationship between the level of utilization of institutional physical assets and the enhancement of internally generated revenue in federal colleges of education.

Table 6: Relationship Between Utilization of Physical Assets and Enhancement of IGR

Variable	Calculated r	Critical r	df	Level of Significance	Remark
Asset Utilization & IGR	0.612	0.195	326	0.05	Significant

The Pearson Product Moment Correlation (r) value of 0.612 indicates a strong positive relationship between the utilization of institutional physical assets and internally generated revenue. The calculated r exceeds the critical r ($0.612 > 0.195$) at 326 degrees of freedom and a 0.05 significance level, leading to the rejection of the null hypothesis. This suggests that in the Nigerian context, institutions that effectively utilize classrooms, laboratories, hostels, and other physical facilities are more likely to generate higher internally generated revenue.

Hypothesis 2 (H02)

The utilization of physical assets does not significantly contribute to internally generated revenue in federal colleges of education.

Table 7: Contribution of Physical Asset Utilization to Internally Generated Revenue

Variable	Calculated t	Critical t	df	Level of Significance	Remark
Asset Utilization → IGR	7.85	1.96	327	0.05	Significant

The calculated t-value of 7.85 is greater than the critical t-value of 1.96 at 327 degrees of freedom, indicating that the utilization of physical assets significantly contributes to internally generated revenue. This supports the view that assets such as classrooms, laboratories, and hostels, when strategically managed and utilized, enhance revenue collection in Nigerian federal colleges of education. The null hypothesis is rejected.

Hypothesis 3 (H03)

Challenges associated with the management of institutional physical assets do not significantly affect internally generated revenue in federal colleges of education.

Table 8: Impact of Challenges on Internally Generated Revenue

Variable	Calculated β	Critical t	df	Level of Significance	Remark
Challenges → IGR	0.421	1.96	327	0.05	Significant

The standardized regression coefficient (β) of 0.421 demonstrates a moderate positive impact of management challenges on IGR, with a calculated t-value exceeding the critical t ($t = 4.78 > 1.96$). The null hypothesis is therefore rejected. This indicates that in Nigerian federal colleges of education, challenges such as inadequate maintenance, poor strategic planning, and lack of staff training negatively affect the ability of institutions to leverage physical assets for revenue generation.

Hypothesis 4 (H04)

The adoption of strategies for optimal utilization of physical assets does not significantly enhance internally generated revenue in federal colleges of education.

Table 9: Effect of Strategies for Optimal Asset Utilization on Internally Generated Revenue

Variable	Calculated t	Critical t	df	Level of Significance	Remark
Strategies → IGR	8.12	1.96	327	0.05	Significant

The t-value of 8.12 exceeds the critical t of 1.96 at 327 degrees of freedom, indicating that strategies for optimal asset utilization significantly enhance internally generated revenue. The null hypothesis is rejected. This implies that Nigerian federal colleges of education that adopt clear policies, maintain and modernize assets, train staff, and engage in partnerships with external organizations can significantly increase IGR.

B. Summary of the Findings

1. The study revealed a moderate level of utilization of institutional physical assets across federal colleges of education in Southwest Nigeria. Classrooms and laboratories were relatively well-utilized, while hostels, sports, and recreational facilities were underused.
2. Physical asset utilization moderately contributes to internally generated revenue (IGR), with classrooms, laboratories, and hostels being the most significant sources of revenue, whereas sports and recreational facilities were underleveraged.
3. Several challenges affect the effective utilization of physical assets, including inadequate maintenance, insufficient funding for modernization, lack of strategic planning, and limited staff capacity. These challenges limit the revenue potential of institutional assets.
4. Adoption of strategic interventions such as policy development, asset maintenance, staff training, and partnerships with private organizations was identified as a key factor in enhancing revenue generation.
5. Hypothesis testing confirmed that there were significant positive relationships between asset utilization, challenges, strategies, and IGR. All four null hypotheses were rejected, indicating that proper management and strategic utilization of institutional assets significantly influence revenue outcomes.

IV. Discussion of the Findings

The study revealed a moderate utilization of institutional physical assets in federal colleges of education in Southwest Nigeria. While classrooms and laboratories are prioritized and relatively well utilized, other facilities such as hostels, sports complexes, and recreational centers are not optimally exploited. This finding aligns with recent research indicating that many Nigerian tertiary institutions underutilize their assets due to operational inefficiencies and inadequate strategic planning (Adeyemi & Oladipo, 2021). The implication is that colleges are not fully leveraging their available resources, which limits both academic productivity and potential revenue generation.

Furthermore, the study found that the utilization of physical assets contributes moderately to internally generated revenue (IGR). This supports prior studies emphasizing the financial potential of institutional facilities when effectively managed (Musa & Bello, 2021). The practical implication of this finding is that federal colleges can enhance financial sustainability by designing revenue-focused strategies around high-traffic facilities and other assets capable of generating income, such as hostels and laboratories. Strategic planning in this regard can help institutions reduce dependence on government allocations and create additional funding streams for academic development.

The research also highlighted several challenges affecting effective asset utilization, including inadequate maintenance, limited funding for modernization, and weak strategic policies. These constraints reflect issues previously identified in Nigerian education management literature (Olufemi & Adeyemi, 2022) and suggest that addressing structural and managerial weaknesses is crucial. Without such interventions, institutions may continue to struggle to optimize the use of physical assets, thereby limiting their ability to generate internally sourced revenue and improve operational efficiency. Finally, the study demonstrated that proactive strategic interventions positively impact IGR. Implementing clear policies, providing staff training, and forming partnerships with private organizations or community stakeholders were identified as key strategies to enhance revenue outcomes. This finding confirms previous research indicating the importance of capacity building and systematic asset management in improving financial performance (Adeyemi et al., 2021). The implication is that federal colleges that adopt these strategies can increase institutional revenue, strengthen financial autonomy, and reduce reliance on government funding, ultimately supporting sustainable institutional growth and improved educational quality.

V. Conclusion

The study concluded that the utilization of institutional physical assets is a critical determinant of internally generated revenue in federal colleges of education in Southwest Nigeria. Properly

managed classrooms, laboratories, and hostels contribute positively to revenue, while underutilized facilities present untapped financial opportunities.

It was also concluded that challenges such as inadequate maintenance, insufficient funding, and weak policy frameworks significantly impede revenue generation. These operational and managerial barriers must be addressed to optimize the revenue potential of institutional assets.

The findings further indicated that strategic interventions, including policy formulation, staff training, and private partnerships, significantly enhance IGR. This underscores the value of systematic and proactive asset management for sustainable institutional financing.

Finally, the study concluded that federal colleges of education have the capacity to improve financial autonomy through effective utilization and management of physical assets, providing a pathway for long-term sustainability and improved educational outcomes.

VI. Recommendations

1. Federal colleges should develop and implement clear policies governing the utilization of physical assets to ensure strategic alignment with revenue generation goals.
2. Regular maintenance and modernization of classrooms, laboratories, hostels, and recreational facilities should be prioritized to enhance usability and income potential.
3. Staff responsible for asset management and finance should receive training in strategic asset utilization and revenue generation practices.
4. Colleges should engage private organizations or community partnerships to commercially exploit underutilized facilities.
5. Periodic review and evaluation of asset-related revenue initiatives should be conducted to identify gaps and optimize performance.
6. Governments and institutional stakeholders should increase funding for asset development and maintenance, reducing the operational barriers to revenue generation.

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