

QUALITY ASSURANCE INDICATORS AND SUSTAINABILITY OF UNIVERSITY EDUCATION IN SOUTH-SOUTH NIGERIA

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ABSTRACT: This study examined the relationship between quality assurance indicators and sustainability of university education in South-South, Nigeria. Two research hypotheses were tested in the study. Relevant and related literature were reviewed. Correlational research design was adopted for the study. The population of the study comprised 17 public universities established on or before 2019 in South-South, Nigeria. Census sampling approach was used in the study. A self-structured questionnaire tagged “Quality Assurance Indicators and Sustainability of University Education Questionnaire (QAISUEQ)” was used as instrument for data collection. It was subjected to face validity and Cronbach alpha reliability method, and the reliability coefficient ranged from .70 to .88. Pearson’s Product Moment Correlation analysis was used for data analysis. The results of the analysis revealed that facility management and staff development programmes, significantly related to sustainability of university education in South-South, Nigeria. Based on the result of the study, it was concluded that to improve the sustainability of university education in South-South, Nigeria quality assurance indicators ought to be properly and adequately applied. It was recommended among others that university managers should prioritize facility management through regular assessment of existing facilities to identify gaps and future needs based on student enrollment projections, academic programs, and modern educational trends.

Keywords: Quality Assurance Indicators, Facility Management, Staff Development Programmes, Sustainability, Universities Education.

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INTRODUCTION

Education is widely acknowledged as a critical determinant of a nation’s economic, political, social, cultural, technological, scientific, and entrepreneurial development. It is a systematic process through which individuals are nurtured into responsible and effective citizens by acquiring knowledge, skills, attitudes, values, and sound judgment at the basic, post-basic, and tertiary levels. In Nigeria, the education system is structured into three levels: primary, secondary, and tertiary, with universities forming part of the tertiary level, primarily tasked with meeting the nation’s manpower requirements (Obona et al., 2024). Tertiary education is offered in institutions such as colleges of education, polytechnics, monotechnics, universities, innovation enterprise institutions, and vocational enterprise institutions. Among these, university education represents the highest level of formal education and is regarded as the apex of teaching, learning,

and research. Universities are therefore central to knowledge creation and dissemination, serving as engines for technological advancement, socio-economic transformation, national development, and global competitiveness. They also play a vital role in training future leaders, professionals, scientists, and entrepreneurs, making university education indispensable to human capital development.

According to the Federal Republic of Nigeria (FRN, 2014), the objectives of university education include contributing to national development through high-level manpower training; providing accessible and affordable quality learning opportunities; offering career guidance and lifelong learning programmes that promote self-reliance; reducing skills shortages in the labour market; promoting scholarship, entrepreneurship, and community service; fostering national unity; and encouraging national and international understanding. The attainment of these objectives is expected to be driven by quality teaching, research and development, adequate facilities, efficient service delivery, and continuous staff development (FRN, 2014). Consequently, universities are established to generate knowledge and specialized skills required for economic development, leadership, management, and technical expertise. The extent to which graduates acquire employable and entrepreneurial skills, as well as relevant mental, physical, and social competencies, largely depends on the sustainability of the university system.

Sustainability has attracted increasing attention within educational systems globally. According to Ekpoh and Asuquo (2017), and Edet and Asuquo (2020) as cited in Mota et al. (2015), sustainability refers to development that meets present needs without compromising the ability of future generations to meet theirs. In the educational context, sustainability involves the continuous maintenance of institutional standards and the uninterrupted delivery of academic programmes and services to meet current student needs while safeguarding future educational outcomes (Edet & Asuquo, 2019). Specifically, sustainability of university education refers to the capacity of the university system to consistently achieve expected academic and developmental outcomes without undermining the welfare of students, staff, or the institution's corporate image.

Sustainability in education can be enhanced through effective teaching, learning, and research, community engagement, proper conduct of examinations, staff discipline and commitment, effective curriculum implementation, appropriate assignment of courses based on specialization, staff motivation, accurate record keeping, and effective personnel management (Parry & Metzger, 2023). The sustainability of education involves ensuring that all programmes and activities within the secondary school system remain operational and effective, addressing the current needs of students without jeopardizing the ability of future generations to meet their own needs (Obona et al., 2021). However, several prevailing conditions in public universities undermine sustainability. These include limited access to modern teaching and learning facilities, student overpopulation, declining educational quality, corruption, mismanagement of human resources, brain drain, poor facility management, inadequate funding, and frequent industrial actions by unions such as the Academic Staff Union of Universities (ASUU) and the Non-Academic Staff Union (NASU).

Despite concerted efforts by government, private individuals, philanthropists, and religious organizations to improve university resources and outcomes such as student satisfaction, career development, academic programmes, institutional image, and employers' ratings of graduates many universities continue to struggle with sustaining acceptable standards. Asuquo and Ekpoh (2018) reported that numerous Nigerian universities operate with inadequate teaching and learning facilities and weak staff capacity development programmes, which

adversely affect their corporate image. The authors further observed deviations from established standards in areas such as student admission, screening, supervision, and instructional processes. In addition, employers' assessments of many university graduates have been reported to be discouraging.

Furthermore, poor sustainability of physical infrastructure, ineffective promotion of academic programmes, weak internally generated revenue systems, and unconducive learning environments remain common in many public universities. These challenges have contributed to the low regional and global rankings of Nigerian universities (Bassey & Asuquo, 2024; Ekpoh & Asuquo, 2020). Observations and interactions with students also revealed concerns about inadequate access to quality education and healthcare services, largely due to insufficient funding. Such conditions have widened disparities in access to quality education and contributed to inequitable academic environments within the university system. Additionally, many Nigerian universities lag behind in adopting sustainability initiatives, particularly in staff training and development programmes aimed at enhancing skills acquisition and graduate employability (Radebe & Ozumba, 2021). In education, quality shapes decisions regarding where and how learning occurs (Gbesoevi et al., 2022). Quality is commonly viewed as the degree of excellence, conformity to standards, and the presence of desirable characteristics that ensure effectiveness. It also encompasses the totality of features and attributes of educational processes and services that enable them to meet intended objectives. Quality assurance in the university system therefore refers to the institution's ability to meet societal and labour market expectations regarding the competence and skills of its graduates (Ajayi & Akindutire, 2017). The purpose of quality assurance practices is to enhance the efficiency of inputs, processes, and outputs (Nwokonko & Obona, 2024).

According to Obona et al. (2024), quality assurance is crucial in the university education system, as it has a direct impact on national development. Key quality assurance indicators include staff development, adequate funding, functional physical facilities, and well-equipped libraries. In this study, quality assurance indicators are conceptualized as administrative mechanisms essential for promoting efficiency, effectiveness, and sustainable educational outcomes in the university system. These indicators include; facility management and staff development programmes. Against this backdrop, the present study seeks to investigate quality assurance indicators and their relationship with the sustainability of public universities in South-South Nigeria.

Statement of the Problem

Universities are established to generate and disseminate knowledge, develop specialized human resources, and drive national development through quality teaching, research, adequate facilities, effective service delivery, and staff development programmes. The sustainability of university education is reflected in graduates' acquisition of employable and entrepreneurial skills, students' satisfaction, effective career development, quality academic programmes, positive institutional image, and favourable employers' ratings. Sustaining these outcomes is essential for universities to remain relevant and competitive in meeting societal and labour market needs.

Despite sustained efforts by government and other stakeholders to improve university education, public universities in South-South Nigeria continue to face challenges that threaten their sustainability. Students increasingly express dissatisfaction with academic programmes, excessive workloads, limited academic support, inadequate digital and learning resources, and

weak academic advising. Frequent industrial actions, administrative inefficiencies, corruption, brain drain, and poor resource management have further destabilized academic calendars and weakened institutional reputation, as reflected in low regional and global rankings. These persistent issues raise concerns about the effectiveness of existing quality assurance indicators in sustaining university education, thereby necessitating an investigation into the relationship between quality assurance indicators and the sustainability of public universities in South-South Nigeria.

Purpose of the Study

The main purpose of this study was to examine quality assurance indicators and sustainability of university education in South-South Nigeria. Specifically, the study sought to find out whether:

- Facility management relate to sustainability of university education in South-South, Nigeria.
- Staff development programmes relate to sustainability of university education in South-South, Nigeria.

Hypotheses

The following hypotheses were tested in this study:

- Facility management does not significantly relate to sustainability of university education in South-South, Nigeria.
- Staff development does not significantly relate to sustainability of university education in South-South, Nigeria.

Significance of the Study

The findings of this study are expected to be beneficial to university management, staff, students, and the host community. For university management, the study may provide valuable insights into the effective management of quality assurance indicators necessary for sustaining university education. The results may encourage management to strengthen practices that enhance the effectiveness of academic programmes, students' career development, institutional corporate image, maintenance culture of facilities, educational consultancy services, and staff motivation in teaching, research, and community service.

University staff may also benefit from the study, as adequate attention to quality assurance indicators by management is likely to improve working conditions, enhance staff motivation, and reduce dissatisfaction that often leads to industrial actions and brain drain. Effective facility management, as a quality assurance indicator, may further ensure adequate provision, availability, utilization, and maintenance of facilities, thereby improving staff service delivery and overall institutional effectiveness.

Students stand to benefit from improved institutional sustainability, as strengthened quality assurance practices can enhance teaching and learning outcomes, academic performance, and career readiness. Through the promotion of access to quality resources and supportive

academic environments, the study may contribute to the graduation of competent, globally competitive, and socially responsible graduates.

Finally, the host community may benefit from a sustainable university system through increased access to educational consultancy, training, and development programmes. Such initiatives can provide opportunities for skill acquisition and capacity building, enabling community members to enhance their professional competence and effectively address workplace and societal challenges.

LITERATURE REVIEW

Facility Management and Sustainability of University Education

Universities are higher education institutions established, funded, and regulated by government to provide accessible and affordable tertiary education to the populace (Odoh et al., 2025). One of the critical factors influencing the effectiveness and sustainability of these institutions is facility management. Facility management refers to the administrative and managerial processes involved in planning, providing, maintaining, utilizing, repairing, and replacing physical resources to ensure continuous functionality and user satisfaction within the school system (Asuquo & Edet, 2018). In the university context, facility management ensures that adequate and appropriate spaces, buildings, and equipment are available and optimally utilized to support effective teaching, learning, and research activities.

The management of physical facilities has been identified as a strategic tool for promoting sustainability in higher education institutions. Radebe and Ozumba (2021) noted that the availability and effective management of facilities significantly influence sustainability initiatives through activities such as campus planning, environmental management, and resource optimization. Facilities in educational institutions include buildings, classrooms, hostels, libraries, laboratories, furniture, recreational equipment, and instructional materials. Evidence has shown that institutions with well-managed and conducive physical environments record better academic performance than those with poorly maintained facilities (Amanchukwu & Ololube, 2015). Similarly, Obona et al. (2024) emphasized that efficient management of educational resources minimizes wastage, reduces operational costs, and enhances both academic and administrative effectiveness.

Sustainability in education has increasingly become a global concern, with higher education institutions expected to play a leadership role in addressing contemporary challenges and driving transformative change (Ramísio et al., 2019). Empirical studies have demonstrated a strong link between facility management practices and educational sustainability. For instance, Obona et al. (2021) investigated the impact of physical facilities maintenance strategies on secondary school system sustainability in the post-COVID-19 era in Calabar Education Zone. Using an ex-post facto research design, the study revealed a positive relationship between preventive, corrective, and routine maintenance strategies and system sustainability, underscoring the importance of proactive facility management practices. Radebe and Ozumba (2021) further explored barriers to the implementation of sustainable facilities management practices in higher education through an integrative literature review. The study identified major challenges such as limited knowledge, inadequate senior management commitment, financial and time constraints, and insufficient technical capacity. The authors also highlighted a scarcity of

context-specific empirical evidence, particularly within developing regions, and emphasized the need to address these barriers to enhance sustainability outcomes in higher institutions.

At the secondary school level, Chimekwele and William-Yobo (2021) examined physical resource management during the COVID-19 pandemic and its implications for school effectiveness in Rivers State. The study adopted a descriptive survey design and found inadequate provision, low utilization, and poor maintenance of physical resources, which adversely affected school effectiveness. Similarly, Onuh et al. (2021) reported that secondary school administrators in Anambra State did not effectively apply routine, preventive, corrective, and emergency physical resource management strategies, thereby limiting institutional effectiveness. Related evidence from Kenya further reinforces the significance of facility utilization. Nyamai et al. (2024) using a convergent parallel mixed methods approach, found that effective utilization of physical facilities such as classrooms and laboratories positively influenced students' learning achievement in free day secondary schools in Mombasa County. However, the study revealed that ICT facilities were largely inadequate and underutilized, which constrained optimal academic performance.

In Nigeria, Umar (2023) examined the influence of facility and resource management on school effectiveness in public secondary schools in Edo South Senatorial District. The findings indicated that financial and time resource management significantly influenced school effectiveness, while human and material resource management did not show significant effects. This suggests that resource prioritization and strategic allocation play a crucial role in institutional performance.

Beyond physical facilities, quality assurance mechanisms are closely linked to sustainability in higher education. Gbesoevi et al. (2022) investigated the relationship between quality assurance indicators and academic staff productivity in public universities in Lagos State. The study found significant relationships between school facilities, instructional supervision, quality monitoring, minimum academic standards, and academic staff productivity. The authors concluded that effective implementation of quality assurance indicators is essential for achieving productivity and sustainability in university systems.

Staff Development Programmes and Sustainability of University Education

Staff development programmes refer to structured capacity-building initiatives aimed at equipping university staff with the requisite knowledge, skills, competencies, and professional capabilities needed to perform effectively within a dynamic academic environment. Such programmes include on-the-job training, refresher courses, study fellowships, workshops, seminars, conferences, mentoring, coaching, and delegated responsibilities, all of which are essential for sustaining educational systems (Ekpoh, Edet, & Nkama, 2013; Asuquo et al., 2023). The quality of teachers and academic staff has been identified as a critical factor in ensuring the sustainability of education and the effective integration of learners into society (Owan, 2019). Consequently, sustained improvement in staff quality through continuous development programmes is necessary to meet present and future pedagogical demands and to remain globally competitive (Asuquo et al., 2023).

Staff development programmes are embedded within educational systems to enhance existing staff knowledge, skills, and competencies, while also promoting the acquisition, dissemination, and transfer of new knowledge to support institutional growth and sustainability (Asuquo et al., 2023). Training is therefore fundamental to improving job performance, ensuring

efficiency, and preparing employees for evolving institutional roles. Beyond immediate skill enhancement, development programmes also prepare academic staff for future leadership and administrative responsibilities by strengthening their conceptual understanding of how various units and functions within the educational system interrelate.

Empirical evidence supports the positive impact of staff development on institutional effectiveness. Ekpoh et al. (2013) found that teachers who participated in staff preparation and development programmes were more productive than those who did not. Similarly, Asuquo et al. (2023) evaluated staff training and development programmes in public secondary schools in Cross River State using a survey research design. The study revealed diverse staff development needs, multiple training methods in use, and several constraints hindering effective programme implementation. The authors concluded that well-structured training and development initiatives are essential for enhancing staff performance and sustaining educational institutions.

Beyond the education sector, Aboyassin and Sultan (2017) examined the role of human resource training dimensions in improving employee performance in five-star hotels in Jordan. Their findings revealed a positive relationship between training and employee productivity, service quality, and job satisfaction, reinforcing the broader relevance of staff development to organizational sustainability. In the educational context, Obona et al. (2025) reported a significant relationship between administrators' financial management strategies and school system effectiveness in Cross River State, emphasizing the complementary role of staff capacity and management competence in sustaining educational systems.

Further evidence from Madukwe et al. (2024) showed that in-service training, seminar attendance, and conference participation significantly influenced sustainable school administration in the Calabar Education Zone of Cross River State. The study highlighted the importance of continuous professional development in strengthening administrative effectiveness and institutional sustainability. Similarly, Hervie and Winful (2018) in a study conducted under the Ghana Education Service, found that inadequate in-service training, lack of teaching and learning materials, poor motivation, and weak supervision contributed significantly to teachers' poor performance. At the higher education level, Lambrechts et al. (2017) explored the relationship between professional development and organizational change towards sustainability in Flanders, Belgium. Using a constructivist approach, the study demonstrated that professional development initiatives framed as organizational change processes particularly those emphasizing staff empowerment enhanced the integration of sustainability competencies within higher education institutions. The authors emphasized that staff development programmes are most effective when aligned with institutional sustainability goals.

The reviewed literature established that effective facility management staff development programmes and quality assurance practices are central to the sustainability of educational institutions. However, gaps exist; the gaps highlighted the need for empirical investigation into quality assurance indicators as determinants of sustainability in public universities, particularly in the South-South region of Nigeria.

METHODOLOGY

This study adopted a correlational research design to examine the relationship between quality assurance indicators and the sustainability of university education in South-South Nigeria. The study area comprised the six states in the South-South geopolitical zone: Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers. The population consisted of all 17 public universities

established on or before 2019 in the zone, with Heads of Departments (HODs) serving as respondents. A census sampling approach was employed due to the manageable population size.

Data were collected using a researcher-developed questionnaire titled Quality Assurance Indicators and Sustainability of University Education Questionnaire (QAISUEQ). The instrument consisted of two sections measuring quality assurance indicators (facility management and staff development) and sustainability of university education. The questionnaire was structured on a four-point Likert scale. Face validity was established by experts in Educational Administration, Planning, and Measurement and Evaluation, while reliability was confirmed using Cronbach Alpha, with coefficients ranging from .70 to .88. The instrument was administered with the assistance of trained research assistants, and the data collected were analyzed using Pearson's Product Moment Correlation.

Presentation of results

Hypothesis One: Facility management does not significantly relate to sustainability of university education in South-South, Nigeria.

Table 1: Summary of correlations between facility management and sustainability of public universities in South South, Nigeria (N=17).

Variables	Mean	SD	r	p-value
Facility management	17.765	1.715	.598*	.046
Sustainability of university	56.118	5.243		

*Significant at $p < .05$

Hypothesis one states that facility management does not significantly relate to the sustainability of university education in South-South, Nigeria. The results presented in Table 1 do not support this hypothesis.

The correlation analysis reveals a moderate positive relationship between facility management and the sustainability of public universities in the South-South region of Nigeria ($r = .598$). This relationship is statistically significant at the .05 level ($p = .046$). The positive correlation indicates that improvements in facility management such as effective maintenance, efficient utilization, and proper planning of university facilities are associated with higher levels of sustainability in university education.

Given that the p-value (.046) is less than the .05 level of significance, the null hypothesis is rejected. This implies that facility management significantly relates to the sustainability of university education in the study area. In practical terms, the finding suggests that universities with better-managed facilities are more likely to achieve sustainable educational outcomes, including continuity of academic programmes, improved learning environments, and long-term institutional effectiveness.

On the whole, the result highlights the critical role of effective facility management as a strategic factor in promoting the sustainability of public universities in South-South, Nigeria.

Hypothesis Two: Staff development does not significantly relate to sustainability of university education in South-South, Nigeria.

Table 2: Summary of correlations between staff development programmes and sustainability of public universities in south south, Nigeria (N=17).

Variables	Mean	SD	r	p-value
Staff development programmes	17.647	3.019	.442*	.037
Sustainability of university	56.118	5.243		

*Significant at $p < .05$

Hypothesis two stated that staff development does not significantly relate to the sustainability of university education in South-South, Nigeria. The results presented in Table 2 do not support this hypothesis.

The correlation analysis showed a positive relationship between staff development programmes and the sustainability of public universities in the South-South region of Nigeria ($r = .442$). This correlation is statistically significant at the .05 level ($p = .037$). The positive coefficient indicates that as staff development programmes such as training, workshops, seminars, and professional capacity-building initiatives increase or improve, the sustainability of university education also tends to improve.

Since the p-value (.037) is less than the .05 level of significance, the null hypothesis is rejected. This implies that staff development programmes significantly relate to the sustainability of university education in South-South, Nigeria. The finding suggested that universities that invest in continuous staff development are better positioned to sustain quality teaching, research productivity, institutional stability, and adaptability to emerging educational challenges.

In essence, the result highlighted staff development as a key driver of sustainable university education, emphasizing the importance of human capital development in ensuring the long-term viability and effectiveness of public universities in the region.

DISCUSSION OF FINDINGS

The analysis of the first hypothesis revealed a positive and significant relationship between facility management and the sustainability of university education in South–South Nigeria, contrary to the null hypothesis. This finding suggests that effective facility management plays a crucial role in sustaining university education. Well-maintained and properly designed facilities provide a safe, comfortable, and stimulating learning environment that supports teaching, learning, and research activities. Adequate lighting, temperature regulation, ventilation, and acoustics enhance students' concentration, engagement, and academic performance. Effective facility management also ensures the continuous availability and functionality of essential academic infrastructure such as lecture halls, laboratories, and libraries. Through routine and preventive maintenance, disruptions to academic and research activities are minimized, allowing universities to achieve their core mandate without interruption. In addition, proper management of facilities promotes campus safety and health by ensuring compliance with safety standards, adequate sanitation, and security systems. This contributes to the physical and emotional well-being of staff and students and reduces absenteeism. A well-maintained work environment further enhances staff morale, job satisfaction, and productivity, thereby helping institutions attract and retain qualified academic personnel.

This finding aligned with the views of Amanchukwu and Ololube (2015), who emphasized the adoption of appropriate maintenance strategies, regular inspections, effective

replacement of physical resources, establishment of physical resource management committees, and community involvement as key strategies for improving school effectiveness. It also supported the position of Radebe and Ozumba (2021), who identified inadequate knowledge, weak management commitment, time constraints, financial limitations, and lack of technical capacity as major barriers to sustainable facilities management. Similarly, Chimekwele and William-Yobo (2021) reported inadequate provision, low utilization, and poor maintenance of physical resources in schools, while Onuh et al. (2021) observed that administrators often fail to apply routine, preventive, emergency, and corrective maintenance strategies effectively. In the same vein, Nyamai et al. (2024) found that effective utilization of physical resources positively influences learning outcomes, although inadequate resources limit optimal academic performance. However, this result contradicts the findings of Umar (2023), who reported that school, human, and material resource management did not significantly influence school effectiveness.

The analysis of the second hypothesis showed a positive and significant relationship between staff development programmes and the sustainability of university education, leading to the rejection of the null hypothesis. This outcome indicates that staff development programmes are essential to the long-term sustainability of university education. Such programmes enhance staff skills, knowledge, and competencies, enabling them to perform their teaching, research, and administrative duties more effectively.

Staff development initiatives also improve motivation, morale, and job satisfaction by making employees feel valued and supported. When academic staff are equipped with current pedagogical techniques, research skills, and administrative competencies, the quality of instruction and student support improves, leading to better learning outcomes. Furthermore, continuous professional development helps address skill gaps, increases efficiency, and strengthens institutional capacity.

Investment in staff development fosters commitment and loyalty to the institution, reduces staff turnover, and promotes a positive and engaged workforce. Staff who perceive growth opportunities are more likely to align with institutional goals and contribute meaningfully to the university's success and reputation.

This finding supported the position of Asuquo et al. (2023), who reported the use of various methods for staff training and development in educational institutions. It also aligned with the empirical findings of Aboyassin and Sultan (2017), who established that training has a positive effect on employee productivity, service quality, and job satisfaction. Similarly, Lambrechts et al. (2017) observed that professional development initiatives focused on sustainability significantly enhanced institutional practices within higher education.

CONCLUSION

Based on the result of the study, it was concluded that to improve the sustainability of university education in South-South, Nigeria, quality assurance indicators ought to be properly and adequately applied.

Recommendations

Based on the result of this study, the following recommendations are made:

- University managers should prioritize facility management by regular assessment of existing facilities to identify gaps and future needs based on student enrollment projections, academic programs, and modern educational trends. They should also move away from reactive maintenance by establishing a robust preventive maintenance program with scheduled inspections and routine tasks to extend asset lifespan, minimize downtime, and reduce costly emergency repairs.
- Sponsored staff development programmes in their various forms should be provided for academic staff in public universities. These programmes equip academic staff with new knowledge, skills, and pedagogical approaches, enabling them to adapt to evolving educational landscapes and deliver high-quality instruction.

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