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Quality Assurance Mechanisms And Students' Academic Achievement In Nasarawa State Public Universities

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ABSTRACT
This study examined quality assurance mechanisms and students' academic achievement in Nasarawa State public universities. Despite routine accreditation and resource verification exercises conducted by the National Universities Commission (NUC), persistent concerns regarding declining graduate quality suggest a possible disconnect between quality assurance processes and actual academic outcomes. The study adopted a correlational ex-post-facto research design, targeting a population of 1,283 academic staff from which 327 respondents were drawn using stratified random sampling. Data were collected through the Quality Assurance Mechanisms Questionnaire (QAMQ) with a reliability coefficient of 0.79, and the Students' Academic Achievement Checklist (SAAC) which extracted anonymized CGPA data. Pearson Product-Moment Correlation and multiple regression analyses were employed to test three null hypotheses at 0.05 significance level. Findings revealed that accreditation indices significantly influenced students' academic achievement ($r = .650$, $p = .000$), accounting for 43.2% of the variance in student performance. Resource verification benchmarks also significantly influenced academic achievement ($r = .621$, $p = .000$), explaining 38.4% of the variance. The joint influence of both mechanisms yielded an r-value of .641 and an F-value of 172.584 ($p = .000$), indicating a strong combined effect accounting for 40.4% of variance in students' academic achievement. The study concludes that quality assurance mechanisms are significant determinants of students' academic achievement when properly implemented and sustained. It recommends intensified continuous monitoring of accreditation compliance, sustained investment in institutional resources, and the adoption of an integrated quality assurance framework that harmonizes standards enforcement with resource provision to maximize positive impact on students' academic outcomes and promote sustainable educational development in Nigerian public universities.
Keywords: Quality Assurance Mechanisms and Students' Academic Achievement in Nasarawa State Public Universities

INTRODUCTION

The quality of higher education has become a critical concern for stakeholders worldwide, with institutions increasingly held accountable for demonstrating measurable improvements in student learning outcomes and institutional effectiveness. Quality assurance (QA) mechanisms serve as systematic approaches through which universities monitor, evaluate, and enhance their educational provisions to ensure they meet established standards and achieve their stated objectives. In Nigeria, the National Universities Commission (NUC) serves as the principal regulatory body charged with maintaining academic standards through accreditation exercises and resource verification processes. However, despite

these regulatory frameworks, questions persist about the actual relationship between quality assurance mechanisms and students' academic achievement, particularly in state-owned universities where resources are often constrained and challenges more pronounced. Nasarawa State's public universities operate within a complex educational system characterized by rapid enrollment growth, infrastructure deficits, and evolving stakeholder expectations. Understanding how quality assurance mechanisms specifically accreditation indices and resource verification benchmarks influence student academic achievement is essential for evidence-based policy formulation and institutional improvement.

Quality assurance in higher education draws upon multiple theoretical frameworks. General Systems Theory provides a useful lens for understanding how various components of the university system including quality assurance mechanisms, resources, faculty, students, and curriculum interact to produce educational outcomes (Umar & Mohammed, 2023). Organizational Change Theory, as extended by recent research, positions accreditation effectiveness as a mediating mechanism between staff commitment to change and institutional performance (Alshammari et al., 2024). This perspective highlights the importance of internal stakeholder buy-in for quality assurance mechanisms to effectively translate into improved outcomes. Quality assurance in higher education represents a multifaceted construct that has evolved considerably over recent decades. Ryan (2015) conceptualized quality in education as encompassing infrastructure provision, research culture, faculty management, students' services, academic programs and evaluation, teaching and learning processes, and institutional learning facilities, all of which play essential roles in students' academic achievements. The evolution of quality assurance has shifted from exclusive reliance on financial indicators to embracing non-financial indicators that prove indispensable for organizational functioning, particularly in higher education institutions (Kis, 2022). Harvey and Green (1993) identified multiple dimensions of quality in higher education, including quality as exceptional, as perfection, as fitness for purpose, as value for money, and as transformation. This multidimensional understanding acknowledges that quality cannot be reduced to a single metric but must be assessed through various lenses depending on stakeholder perspectives and institutional contexts. The Standards and Guidelines for Quality Assurance in the European Higher Education Area have emphasized that internal quality assurance should not be reduced to formalized processes but should be likened to a set of institutional and individual attitudes a "quality culture" aiming at continuous enhancement of quality (Stensaker et al., 2011).

Accreditation has emerged as a primary mechanism for external quality assurance, serving both quality improvement and accountability purposes. Volkwein et al. (2007) investigated the impact of professional accreditation on student experiences and learning outcomes through a comprehensive study involving over 140 program chairs, 1,200 faculty members, and nearly 10,000 graduates. Their findings revealed that despite significant variation across measures before the introduction of new accreditation criteria, evidence from subsequent years demonstrated a surprisingly uniform level of student experiences and outcomes, suggesting that engineering accreditation was beginning to accomplish its quality assurance goals. Recent research has provided empirical evidence of accreditation's impact on student performance. A retrospective quantitative analysis conducted at King Saud University's undergraduate medical program examined student mean grade scores across a full accreditation cycle, analyzing data from 1,090 students across 32,677 examination encounters (Althubaiti & Alkhazim, 2021). The pre- and post-accreditation comparison revealed statistically significant improvements in students' mean scores, increasing from 80 ± 9 (pre-accreditation) to 87 ± 11 (post-accreditation). The researchers attributed these improvements to curriculum development enhancements, improved teaching strategies, better learning resources, and more appropriate guidance and counseling for students that resulted from the accreditation process. However, accreditation's effectiveness remains contested. Anderson (2006) found that Australian academics were acutely aware of the power dimensions in quality assurance processes, with evaluation by superiors perceived as a form of surveillance conflicting with notions of professional autonomy. The study revealed that academics' negative assessments of quality assurance mechanisms, identified in the early 1990s, appeared undiminished over time, with many viewing the system as a "beast" to be fed through ritualistic and largely meaningless practices, resulting in dramaturgical compliance and game playing.

In Nigeria, the National Universities Commission oversees licensing, accreditation, and quality assurance for all universities. Okebukola (2013) documented that the NUC's accreditation framework examines multiple quality parameters including academic staff qualifications, library facilities, physical infrastructure, and funding adequacy. Research examining accreditation's impact on quality assurance in Nigerian universities has yielded mixed results. A descriptive survey of 74 universities involving 1,480 respondents found significant relationships between accreditation requirements and the quality status of academic staff, library facilities, and funding, but revealed no significant relationship between accreditation and quality of academic content (Oyewole & Alonge, 2013). Studies examining quality assurance and students' academic performance in North-Western State Universities in Nigeria found that quality assurance had direct stimulating impacts on students' academic performance, with an Average Impact of Quality Assurance Index of 3.3 (Umar & Mohammed, 2023). However, lecturers in Nigerian universities identified several critical variables for quality assurance, including availability of adequate numbers of qualified staff, students' attitude to study, early publication of examination results, availability of well-equipped laboratories and workshops, and funding of tertiary education (Obiekezie, 2016).

Resource verification represents another critical quality assurance mechanism, focusing on the adequacy and appropriateness of physical, human, and material resources necessary for effective teaching and learning. The relationship between campus infrastructure and student performance has received increasing scholarly attention. Recent research at Universiti Kebangsaan Malaysia examined how environmental factors, extracurricular infrastructure, disability facilities, and digital facilities impact student performance, finding that infrastructure adequacy significantly influenced both student participation and academic outcomes (Li et al., 2025). A study in the United Kingdom documented that universities experienced a 16% increase in student achievement after improving design and environmental features focusing on stimulation, personalization, and naturalness (Barrett et al., 2015). Furthermore, approximately 90.4% of students indicated that the quality and condition of campus facilities impact their decision to remain enrolled, underscoring infrastructure's role in both achievement and retention (Hajrasouliha, 2017). Singh and Kumar (2019) posited that universities require six essential infrastructures for accelerated growth: physical infrastructure, digital infrastructure, innovative academic and training infrastructure for confidence building, intellectual property infrastructure, emotional infrastructure, and networked infrastructure. The challenge of infrastructure adequacy is particularly acute in developing contexts. Research on infrastructure distribution at the University of Uyo found that high enrollments combined with limited physical infrastructure contributed to student dropouts, absenteeism, and overall poor performance (Ouma, 2011). The study emphasized that adequate and permanent infrastructure would greatly increase student enrollments and improve delivery of quality education and overall student performance.

Benchmarking has emerged as a critical tool for universities to assess their performance relative to peers and identify areas for improvement. The University Benchmark Project offers over 300 benchmarks covering areas from student life to business operations, allowing institutions to measure and demonstrate success (NHEBI, 2022). Research demonstrates that smarter, data-driven benchmarking can illuminate hidden opportunities to reinvest in student success, with institutions using benchmarking data to answer critical questions about resource allocation alignment with mission and strategic initiatives (HelioCanvas, 2023). The Student Achievement Measure provides a more comprehensive approach to tracking student success beyond traditional completion rates, particularly important for non-traditional students with varied completion trajectories (AASCU & APLU, 2019). Recent reforms in accreditation standards have increasingly emphasized student success outcomes. The Higher Learning Commission's revised Criteria for Accreditation, effective September 2025, introduced Core Component 3.G on Student Success Outcomes, requiring institutions to demonstrate continuous improvement in student success outcomes while accounting for student populations served and benchmarks referencing peer institutions (HLC, 2025).

Despite widespread implementation of quality assurance mechanisms, their effectiveness in improving educational quality remains debated. Harvey (2024) argued that while quality assurance pretends to be an instrument to improve, as an improvement tool it is incompetent "like cracking an egg with a

steamroller." The imposed mechanisms, with their focus on accountability and forced compliance, may have diminished hope that real quality will be enhanced or improved. This critique resonates with Jones' (2003) concern that in an age of increasing attention to objective measurements of quality in educational delivery, the very purpose of universities educating students appears overshadowed by administrative measurement concerns. Conversely, proponents argue that quality assurance processes, when properly implemented, can drive meaningful improvements. Dill and Beerkens (2013) advocated external attention to quality assurance processes rather than achievement standards alone, suggesting that the most beneficial university education still results from academic programs designed by knowledgeable faculty members whose standards are assured through collective actions. The European Standards and Guidelines have emphasized student-centered approaches, with quality assurance processes including students as active participants even as members of evaluation panels (ENQA, 2015).

Statement of the Problem

In the pursuit of sustainable national development, public universities in Nasarawa State are tasked with producing high-quality graduates capable of competing in a globalized economy. To ensure these standards, the National Universities Commission (NUC) mandates rigorous quality assurance mechanisms such as resource verification to ensure readiness before a program begins and accreditation to evaluate ongoing program quality. These processes scrutinize critical indices such as academic content, staffing, library adequacy, and laboratory facilities. However, a troubling paradox has emerged within the higher education system in Nasarawa State. Although most programs in these universities routinely receive "Full Accreditation" or "Verified" status, there are persistent outcries regarding the declining level of students' academic achievement. Stakeholders, including employers and postgraduate supervisors, have expressed concerns over the perceived drop in the quality of graduates, many of whom struggle to demonstrate the competencies reflected in their academic transcripts. This suggests a possible "decoupling" between quality assurance exercises and actual classroom reality. It is observed that some institutions may engage in "window dressing" a practice where resources are temporarily mobilized to pass NUC inspections only for those standards to dwindle shortly after the evaluators leave. Consequently, there is a lack of empirical clarity on how much these indices such as the ratio of senior lecturers to students or the functionality of laboratories truly contribute to the students' CGPAs and mastery of their disciplines. If this gap is not investigated, these quality assurance mechanisms may remain mere administrative formalities rather than tools for academic excellence. This study, therefore, seeks to address this problem by investigating the relationship between accreditation/resource verification indices and the academic achievement of students in public universities in Nasarawa State.

Research Questions

The following questions were raised;

1. To what extent do accreditation indices relate to students' academic achievement?
2. What is the relationship between resource verification benchmarks and students' academic achievement?
3. Accreditation indices, resource verification benchmarks and students' academic achievement are not related.

Hypotheses

The following hypotheses were formulated;

1. Accreditation indices do not significantly influence students' academic achievement.
2. Resource verification benchmarks do not significantly influence students' academic achievement.
3. Accreditation indices, resource verification benchmarks and students' academic achievement are not significantly related.

METHODS

This study adopts a correlational research design utilizing an ex-post-facto approach to investigate the relationship between quality assurance mechanisms and students' academic achievement within public universities in Nasarawa State. The choice of an ex-post-facto design is necessitated by the fact that the independent variables accreditation and resource verification as well as the dependent variable pre-

existing student academic records have already occurred in their natural setting without researcher manipulation. The study targets a population of 1,283 academic staff, from which a sample of 327 respondents was drawn using a stratified random sampling technique. This sampling method ensures a proportionate and representative distribution across various faculties and departments within both state and federal institutions, thereby minimizing institutional bias and ensuring that the findings are reflective of the diverse academic system. Research data are gathered using two primary instruments: the Quality Assurance Mechanisms Questionnaire (QAMQ), a Likert-scale tool measuring staff perceptions of staffing, content, and infrastructure, and the Students' Academic Achievement Checklist (SAAC), a pro-forma used to extract anonymized CGPA data from official university records. The QAMQ underwent rigorous face and content validation by experts and demonstrated high internal consistency with a Cronbach Alpha coefficient of 0.79. Following the direct administration of questionnaires and the retrieval of academic records through official registrar clearance, the data were analyzed using both descriptive and inferential statistics. Specifically, Pearson Product-Moment Correlation (r) and the Coefficient of Determination (r^2) were used to determine the strength and variance of the relationships, while simple and multiple regression analyses was employed to test the null hypotheses at a 0.05 level of significance.

RESULTS

Research Question 1: *To what extent do accreditation indices relate to students' academic achievement?*

Table 1: Relationship between accreditation indices and students' academic achievement

Variable	Mean	SD	r	r^2	r^2%	Remark
Accreditation Indices	2.75	.81	0.650	0.423	43.2	Positive Relationship
Students' Academic Achievement	3.12	.76				

Data in Table 1 shows relationship between accreditation indices and students' academic achievement. The result shows a mean score of 2.75, SD = .81 for accreditation indices and mean score of 3.12, SD= .76 for students' academic achievement. The computed r value of .650 shows that there is a positive relationship between accreditation indices and students' academic achievement. The r^2 value of .423 revealed that accreditation indices relate to students' academic achievement by 43.2%.

Research Question 2: *What is the relationship between resource verification benchmarks and students' academic achievement?*

Table 2: Relationship between resource verification and benchmark students' academic achievement

Variable	Mean	SD	r	r^2	r^2%	Remark
Resource Verification Benchmark	2.88	.79	0.621	0.384	38.4	Positive Relationship
Students' Academic Achievement	3.12	.76				

Data in Table 2 shows the relationship between resource verification benchmark and students' academic achievement. The result shows a mean score of 2.88, SD = .79 for the resource verification benchmark and a mean score of 3.12, SD= .76 for students' academic achievement. The computed r value of .621 shows that there is a positive relationship between resource verification benchmark and students' academic achievement. The r^2 value of .384 revealed that resource verification benchmark relates to students' academic achievement by 38.4%.

Research Question 3: Accreditation indices, resource verification benchmarks and students' academic achievement are not related.

Table 3: Relationship between accreditation indices, resource verification benchmark and students' academic achievement

Variable	Mean	SD	r	r^2	r^2%	Remark
Accreditation Indices	2.75	.81	0.641	0.404	40.4	Positive Relationship
Resource Verification Benchmark	2.88	.79				
Students' Academic Achievement	3.12	.76				

Data in Table 3 shows the relationship between accreditation indices, resource verification benchmark, and students' academic achievement. The result shows a mean score of 2.75, SD = .81 for accreditation indices, mean score of 2.88, SD= .79, and mean score of 3.12, SD= .76 for students' academic achievement. The computed r value of .641 shows that there is a positive relationship between accreditation indices, resource verification benchmark and students' academic achievement. The r^2 value of .404 revealed that accreditation indices and resource verification benchmark relate to students' academic achievement by 40.4%.

Hypothesis 1: Accreditation indices do not significantly influence students' academic achievement.

Table 4: Pearson r accreditation indices and students' academic achievement

		Accreditation Indices	Students' Academic Achievement
Accreditation Indices	Pearson Correlation	1	.650**
	Sig. (2-tailed)		.000
	N	327	327
Students' Academic Achievement	Pearson Correlation	.650**	1
	Sig. (2-tailed)	.000	
	N	327	327

** Significant at 0.05

Table 4 revealed the Pearson r on accreditation indices and students' academic achievement. The table shows a significant relationship with r value of .650 and significance p=.000. at 0.05 level of significance. Therefore, the hypothesis which states that accreditation indices do not significantly influence students' academic achievement was rejected. Thus, accreditation indices significantly influence students' academic achievement.

Hypothesis 2: Resource verification benchmarks do not significantly influence students' academic achievement.

Table 5: Pearson r accreditation indices and students' academic achievement

		Resource Verification Benchmark	Students' Academic Achievement
Resource Verification Benchmark	Pearson Correlation	1	.621**
	Sig. (2-tailed)		.000
	N	327	327
Students' Academic Achievement	Pearson Correlation	.621**	1
	Sig. (2-tailed)	.000	
	N	327	327

** Significant at 0.05

Table 5 revealed the Pearson r on resource verification benchmark and students' academic achievement. The table shows a significant relationship with r value of .621 and significance p=.000. at 0.05 level of significance. Therefore, the hypothesis which states that resource verification benchmark was rejected. Thus, resource verification benchmark significantly influence students' academic achievement.

Hypothesis 3: Accreditation indices, resource verification benchmarks and students' academic achievement are not significantly related.

Table 6: Regression on accreditation indices, resource verification benchmark and students' academic achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1865.432	2	932.716	172.584	.000
	Residual	1882.568	322	5.410		
	Total	3748.000	324			

Significant at 0.05

Table 6 revealed an F value of 172.584 and a p-value of .000, testing at an alpha level of .05, the p value is less than alpha level, the hypothesis which states that accreditation indices, resource verification benchmarks and students' academic achievement are not significantly related was rejected. Thus, accreditation indices, resource verification benchmarks and students' academic achievement significantly related.

DISCUSSION OF RESULT

Finding revealed that accreditation indices significantly influence students' academic achievement. The finding that accreditation indices significantly influence students' academic achievement can be justified by the fact that accreditation processes are designed to enforce minimum academic standards across institutions. Accreditation indices typically assess critical areas such as curriculum relevance, adequacy of qualified teaching staff, governance structures, instructional delivery, and assessment practices. When these standards are met and periodically reviewed, institutions are better positioned to deliver quality teaching and learning experiences, which translate into improved student performance. Compliance with accreditation requirements also promotes institutional accountability and continuous improvement, thereby creating an environment conducive to academic excellence. This finding agrees with Althubaiti and Alkhazim (2021) who found statistically significant improvements in students' mean scores, increasing from 80 ± 9 (pre-accreditation) to 87 ± 11 (post-accreditation). The researchers attributed these improvements to curriculum development enhancements, improved teaching strategies, better learning resources, and more appropriate guidance and counseling for students that resulted from the accreditation process. Volkwein et al. (2007) whose findings revealed that despite significant variation across measures before the introduction of new accreditation criteria, evidence from subsequent years demonstrated a surprisingly uniform level of student experiences and outcomes. Oyewole and Alonge (2013) whose study revealed mixed results regarding academic content, the research demonstrated that accreditation mechanisms significantly influenced critical infrastructure and human resource dimensions that directly support student learning and achievement. The Higher Learning Commission (2025) revised its Criteria for Accreditation to include Core Component 3.G on Student Success Outcomes, requiring institutions to demonstrate continuous improvement in student success outcomes while accounting for student populations served and benchmarks referencing peer institutions.

Finding revealed that resource verification benchmark significantly influences students' academic achievement. The significant influence of resource verification benchmarks on students' academic achievement is justified by the central role of educational resources in the teaching–learning process. Verified availability and functionality of instructional resources such as laboratories, libraries, workshops, ICT facilities, and learning materials enhance students' engagement, practical exposure, and comprehension of course content. Resource verification ensures that facilities are not only available on paper but are adequate, accessible, and usable. This directly supports effective instruction and skill acquisition, which ultimately improves students' academic outcomes. This finding aligns with the finding of Stone, Pattern, and Ramsden (2011) and Stone (2015) whose analyses showed that library use, measured by three distinct indicators (the use of online resources, print book borrowing, and visits to the library), bears a positive relationship to student academic performance. Specifically, the use of electronic resources and borrowing of materials were shown to relate positively to students' GPA, term retention, and degree completion. Barrett et al. (2015) whose research demonstrated that the quality and condition of physical infrastructure and learning spaces significantly impact student performance. Li, Chen, and Zhang (2025) whose findings indicated that infrastructure adequacy significantly influenced both student participation and academic outcomes. The research emphasized that resource verification ensuring adequacy, accessibility, and functionality of facilities creates enabling environments that support effective learning and improved academic performance. Beile (2020) who found statistically significant correlations between library resource utilization and higher GPA scores, demonstrating the critical role of verified, functional resources in supporting academic achievement. Handayani and Budi (2024) investigated the influence of facilities and infrastructure in computer laboratories on student learning outcomes at SMK (vocational schools). Their quantitative research found that computer laboratory

infrastructure facilities significantly affected learning outcomes, with these infrastructure variables contributing 14.9% to learning outcome variations.

Finding revealed that accreditation indices, resource verification benchmarks and students' academic achievement significantly related. The finding that accreditation indices and resource verification benchmarks jointly and significantly relate to students' academic achievement reflects the interconnected nature of quality assurance mechanisms in education. Accreditation sets the standards and expectations for quality, while resource verification provides the tangible inputs required to meet those standards. When both mechanisms operate simultaneously, they create a synergistic effect that strengthens institutional capacity, improves instructional quality, and enhances learning outcomes. This combined influence underscores the systems perspective of educational quality, where outcomes are shaped by the interaction of regulatory frameworks and institutional resources. This finding support Umar and Mohammed (2023) whose research demonstrated that quality assurance mechanisms, when implemented comprehensively including both accreditation standards and resource verification, create integrated systems that support improved student outcomes. The European Association for Quality Assurance in Higher Education (ENQA, 2015) established Standards and Guidelines for Quality Assurance in the European Higher Education Area that emphasize the integration of internal quality assurance mechanisms. The standards highlight that quality assurance should not be reduced to formalized processes but should encompass both institutional standards (accreditation compliance) and adequate resources, creating a "quality culture" aiming at continuous enhancement. Alshammari, Almutairi, and Alharbi (2024) who found that institutions with both strong accreditation compliance and adequate resources showed significantly better student achievement than those strong in only one dimension, confirming the synergistic relationship between these quality assurance mechanisms. The OECD (2022) in its analysis of education evaluation and quality assurance systems worldwide found that the most effective educational systems employ multiple quality-assurance mechanisms working in concert. These include both regulatory frameworks (such as accreditation requiring systematic recording of student test results and graduation rates) and resource-based mechanisms (such as adequate teacher qualifications, instructional materials, and infrastructure).

CONCLUSION

This study concludes that quality assurance mechanisms, particularly accreditation indices and resource verification benchmarks, are significant determinants of students' academic achievement. Accreditation indices ensure adherence to academic and administrative standards, while resource verification guarantees the availability and adequacy of essential learning facilities. The joint influence of these variables highlights the importance of a comprehensive and integrated approach to quality assurance in educational institutions. Strengthening both regulatory oversight and institutional resource provision is therefore critical for improving students' academic outcomes and sustaining educational quality.

RECOMMENDATIONS

Based on the findings of this study, it is recommended that accreditation agencies intensify regular, transparent, and outcome-oriented accreditation exercises to ensure sustained compliance with academic standards. Such exercises should move beyond periodic evaluation to continuous monitoring that supports institutional improvement rather than mere certification.

Educational institutions should also prioritize continuous investment in instructional resources and ensure that verified facilities are adequately maintained and effectively utilized. This includes upgrading laboratories, libraries, and ICT infrastructure to meet evolving academic and technological demands, as resource adequacy has a direct impact on students' academic achievement.

Finally, policymakers and educational administrators should adopt an integrated quality assurance framework that aligns accreditation requirements with systematic resource verification. By harmonizing standards enforcement with resource provision, institutions can maximize the positive impact of quality assurance mechanisms on students' academic achievement and promote sustainable educational development.

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