

Comparative Analysis of Academic Performance of Nursing Students Trained with the Old and Revised Curricula in Selected Nursing Institutions, South-South Nigeria

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Article History	Abstract
Original Research Article	<i>Nursing and Midwifery Council of Nigeria introduced revised nursing curriculum emphasising competency-based education, Information Communication Technology integration and increased clinical hours. This retrospective comparative study examined professional examination performance of nursing students trained under the old curriculum (2018–2021) and revised curriculum (2022–2025) at the University of Port Harcourt and Bayelsa State College of Nursing Sciences. Sample size was 1,077 complete student records (97.6% of 1,104 eligible records) from 16 graduating cohorts (7 old-curriculum, 9 revised-curriculum). Academic performance was operationalised as professional qualifying examination pass/fail status. Data was analysed using descriptive statistics for student-level overall pass rates and unweighted mean cohort pass rates and inferential analyses at the cohort level ($n = 16$). Odds of passing were calculated at individual-student level. Findings showed that old curriculum recorded student-weighted overall pass rate of 89.08% (unweighted mean cohort pass rate = 82.07%, $SD \approx 22.8$); revised curriculum recorded 93.42% (mean cohort pass rate $\approx 90.3\%$, $SD \approx 10.2$). Mean cohort pass rates rose from approximately 70% under the old curriculum to approximately 88% under the revised curriculum (UNIPORT); BYSCONM maintained high performance (approximately 91% to 93%). Odds of passing with revised curriculum were higher than the old curriculum (approximately 1.7 times). Conclusively, students who trained under revised curriculum showed descriptively higher aggregate and cohort-level pass rates which indicate a favourable descriptive pattern with the revised curriculum. Multi-institutional studies using individual-level data and controlling for student are recommended.</i> Keywords: Nursing curriculum, academic performance, nursing students, old curriculum, and revised curriculum.
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Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited. Citation: Emmanuel, Itoro Etongawaji; Frank, Dike, Maureen, & Robinson-Bassey, Chinyere Grace. (2026). Comparative analysis of academic performance of nursing students trained with the old and revised curricula in selected nursing institutions, South-South Nigeria. UKR Journal of Medicine and Medical Research, 2(5), 56-62.	

Introduction

Background to the Study

Nursing education is fundamental to producing competent Nurses who can provide safe, evidence-based, and patient-centered care. The quality of nursing education depends largely on the curriculum, which serves as the blueprint for developing the knowledge, skills, attitudes, and professional competencies expected of nursing graduates. A well-designed curriculum ensures that nursing students acquire theoretical knowledge alongside practical clinical

experience, thereby enabling them to meet the evolving healthcare needs of society. As healthcare systems continue to become more complex due to technological advancements, emerging diseases, demographic transitions, and changing patient expectations, nursing curricula worldwide have undergone continuous revisions to produce graduates who are capable of functioning effectively in diverse clinical settings^{1,2}.

Globally, nursing education has witnessed a paradigm shift from traditional content-based curricula toward competency-based and concept-based educational models.

Traditional nursing curricula primarily emphasize the acquisition of theoretical knowledge and subject-specific content, whereas competency-based curricula focus on measurable learning outcomes, clinical reasoning, critical thinking, communication, leadership, evidence-based practice, and lifelong learning. This transformation has been driven by recommendations from international nursing organizations and the increasing demand for graduates who are practice-ready immediately after graduation. Recent evidence indicates that competency-based education enhances students' clinical competence, research literacy, problem-solving abilities, and readiness for professional practice compared with conventional educational approaches,^{2,3}.

Another important educational reform that has gained international acceptance is the adoption of concept-based curricula. Rather than requiring students to memorize large volumes of information, concept-based curricula encourage learners to understand broad concepts that can be applied across multiple clinical situations. This approach strengthens students' ability to transfer knowledge, think critically, and make sound clinical decisions. Concept-based nursing curricula improve students' learning experiences by promoting deeper understanding, reducing content overload, and enhancing clinical judgment, although evidence regarding their superiority over traditional curricula remains mixed and continues to warrant further investigation,¹.

Nigeria has not been exempt from these global educational reforms. The Nursing and Midwifery Council of Nigeria (NMCN) periodically reviews and updates nursing curricula to align educational programmes with international best practices and the country's healthcare needs. The revised curriculum places greater emphasis on competency acquisition, clinical skills, simulation-based learning, student-centered teaching methods, evidence-based practice, digital literacy, leadership, entrepreneurship, research competence, and community-oriented healthcare. Compared with the previous curriculum, the revised nursing curriculum seeks to produce graduates who are better equipped to provide holistic care within increasingly complex healthcare environments while meeting national and global professional standards.

The transition from the old to the revised nursing curriculum represents a significant educational reform whose effectiveness should be evaluated objectively. Curriculum reforms often require substantial investments in faculty training, teaching materials, clinical resources, simulation laboratories, and assessment methods. Consequently, determining whether these reforms translate into improved academic performance among nursing

students is essential for educational planners, regulatory bodies, and policymakers. Academic performance remains one of the most commonly used indicators for evaluating curriculum effectiveness because it reflects students' mastery of theoretical knowledge, clinical competence, professional readiness, and success in qualifying examinations.

Academic performance in nursing education is influenced by numerous factors, including students' learning abilities, motivation, quality of instruction, clinical exposure, learning resources, institutional support, curriculum design, and assessment strategies. Although curriculum reform is expected to improve educational outcomes, evidence from different countries has produced inconsistent findings. Some studies report significant improvements in students' academic achievement and clinical competence following competency-based curricular implementation, whereas others indicate minimal differences between traditional and revised curricula due to variations in implementation quality and institutional readiness,^{1,4}.

Furthermore, evaluating curriculum effectiveness extends beyond determining whether students pass examinations. It also provides evidence regarding whether curriculum reforms achieve their intended educational objectives, justify the resources invested in implementation, and identify areas requiring further improvement. Findings from comparative curriculum studies can guide curriculum developers, nursing educators, institutional administrators, the Nursing and Midwifery Council of Nigeria, and government agencies in making evidence-based decisions regarding future curriculum revisions, faculty development programmes, and educational policies.

Therefore, this study seeks to compare the academic performance of nursing students trained under the old nursing curriculum with those trained under the revised nursing curriculum in selected nursing institutions in South-South Nigeria.

Aim of the study

The aim of this study is to compare the academic performance (professional examination pass rates) of nursing students trained under the old and revised nursing curricula in selected nursing institutions in South-South Nigeria.

Methodology

Research Design

This study adopted a retrospective comparative research design. The design was considered appropriate because Academic records of successive graduating cohorts trained under the old curriculum (2018–2021) and the revised curriculum (2022–2025) were compared. Researchers did

not manipulate any variables or introduce any intervention; rather, the study relied on previously documented academic records to compare students' academic performance under the two curriculum models. The retrospective comparative design enabled researchers to examine differences in academic performance between students trained under the old curriculum and those trained under the revised curriculum across the selected institutions.

Research Settings

Study was conducted at Bayelsa State College of Nursing Sciences (**INSTITUTION A**) and Department of Nursing Science, University of Port Harcourt (**INSTITUTION B**). Target population comprised all nursing students who completed training and sat for the professional qualifying examination under either of the curriculum during the study period (N = 1,104 records).

Population of the study

The population of this study comprised all eligible nursing students whose academic records were available in the selected institutions and who were trained under either the old or the Revised Bachelor of Nursing Science (BNSc) curriculum during the study period. The study focused on archived academic records because it employed a retrospective comparative research design to evaluate academic performance under the two curriculum models. The target population consisted of 1,104 nursing students drawn from the two studied institution who were enrolled under the old and the revised nursing curricula and met the inclusion criteria for the study. The population was obtained from the official academic records maintained by the respective institutions.

Table 1: Distribution of the Study Population

Institution	Population (N)
Bayelsa State College of Nursing Sciences INSTITUTION A	586
University of Port Harcourt INSTITUTION B	491
Total	1,077

Source: Academic Records Units of the Selected Institutions (2026).

The population generated **16 graduating cohorts** across the study period, representing annual examination cohorts from the two institutions. These cohorts formed the basis for the statistical analyses conducted in the study.

Sample Size and Sampling Technique

Total enumeration of eligible complete records was used. Out of 1,104 records, 1,077 (97.6%) met the inclusion criteria and were analysed; 27 records were excluded because of incompleteness or documented non-completion.

Method of Data Collection

This study employed a retrospective documentary data collection approach, as the researcher extracted existing academic performance data from official result sheets of cohorts that have already completed their studies under both the old and revised nursing curricula. No prospective data (e.g., current examinations, surveys, interviews, or focus groups) was collected. The data collection process was

conducted in five sequential phases over a period of eight weeks.

Method of Data Analysis

The collected data were entered into the Statistical Product and Service Solution (SPSS) version 23.0 for analysis. Since the available data comprised aggregated annual pass rates of graduating cohorts, all analyses were conducted using cohort-level observations rather than individual student scores. Descriptive statistics (overall pass rates and odds of passing) were calculated at the individual student level using all 1 077 complete records. An independent-samples t-test compared mean cohort pass rates between curricula. Odds of passing were calculated at the individual-student level and are reported separately from the cohort-level inferential tests.

Ethical consideration

Ethical approval was sought and obtained from Ethical Committees of the two research settings.

Data Presentation, Analysis and Result

Table 2: Distribution of Academic Records Included in the Study

Variable	Frequency (n)	Percentage (%)
Target population	1,104	100.0
Complete academic records retrieved and analysed	1,077	97.6
Incomplete/unavailable academic records excluded	27	2.4
Total	1,104	100.0

Source: Researchers' Field Data (2026)

Table 2 presents the distribution of academic records included in the study. The target population comprised 1,104 nursing students whose academic records were available in the selected institutions. Following the application of the inclusion criteria and data cleaning procedures, 1,077 (97.6%) complete academic records were

retrieved and analysed, while 27 (2.4%) records were excluded because they were incomplete, unavailable, or lacked essential academic information required for the study. Consequently, all analyses presented in this chapter are based on the 1,077 complete academic records.

Table 3: Academic Performance of nursing students trained under the old curriculum (2018–2021) in South-South Nigeria

Institution	Cohorts	Total Students	Passed	Failed	Standard Deviation	Median pass rate	Pass Rate (%)
INSTITUTION A	4	222	204	18	10.74	93.75	91.89
INSTITUTION B	3	126	106	20	32.78	75.00	84.13
Total	7	348	310	38	23.83	91.11	89.08

Tables 3 presents the professional examination performance of nursing students trained under the old curriculum (2018–2021) in the selected institutions. The results indicated that a total of 348 students from seven cohorts were assessed, of whom 310 (89.08%) passed while 38 (10.92%) failed. **INSTITUTION A** accounted for 222 students across four cohorts, with 204 students passing and 18 failing, resulting in an overall pass rate of 91.89%. The institution also recorded a median pass rate of 93.75% and a standard deviation of 10.74, indicating relatively stable

performance across cohorts. In contrast, **INSTITUTION B** recorded 126 students across three cohorts, with 106 students passing and 20 failing, yielding an overall pass rate of 84.13%, a median pass rate of 75.00%, and a much higher standard deviation of 32.78, suggesting considerable variation in performance between cohorts. Overall, the combined data produced a pass rate of 89.08%, a median pass rate of 91.11%, and a standard deviation of 23.83, reflecting generally good performance but with greater variability than observed under the revised curriculum.

Table 4: Academic Performance of nursing students trained under the Revised curriculum (2022–2025) in South-South Nigeria

Institution	Cohorts	Total Students	Passed	Failed	Standard Deviation	Median pass rate	Pass Rate (%)
INSTITUTION A	4	364	337	27	3.62	93.42	92.58
INSTITUTION B	5	365	344	21	13.44	94.25	94.25
Total	9	729	681	48	7.90	92.47	93.42

Tables 4 presents the professional examination performance of nursing students trained under the revised curriculum (2022–2025) in the selected institutions. The results in Table 4 show that a total of 729 students were assessed across nine cohorts, of whom 681 (93.42%) passed while 48 (6.58%) failed. **INSTITUTION A** recorded 364 students from four cohorts, with 337 students passing and 27 failing, resulting in an overall pass rate of 92.58%, a median pass rate of 93.42%, and a standard deviation of 3.62, indicating relatively consistent performance across

cohorts. **INSTITUTION B** recorded 365 students from five cohorts, with 344 students passing and 21 failing, giving a slightly higher overall pass rate of 94.25%, a median pass rate of 94.25%, and a standard deviation of 13.44, suggesting greater variability in performance between cohorts. Overall, the combined data produced a median pass rate of 92.47% and a standard deviation of 7.90, reflecting generally high academic performance under the revised curriculum.

Table 5: Mean cohort professional examination pass rates between students trained under the old curriculum and those trained under the Revised curriculum

Variable	Old Curriculum	Revised Curriculum	Mean Difference	p-value
Total Students	348	729	-	-
Pass Rate (%)	89.08	93.42	+4.34%	-

Mean Cohort Pass Rate (SD)	82.07 (22.81)	92.13 (7.90)	+8.20%	0.169
Number of cohorts	7	9	-	-
Median Pass Rate (%)	91.18	92.62	+1.36%	-
Pass Rate Range	34.78 – 100.00	66.67 – 100.00	-	-
Odds of Passing	8.16 (ref)	1.74	-	

*Significant at $p < 0.05$

Table 5 presents the difference in mean cohort professional examination pass rates between students trained under the old curriculum and those trained under the revised curriculum. The results show that 348 students were assessed under the old curriculum, while 729 students were evaluated under the revised curriculum. The overall pass rate increased from 89.08% under the old curriculum to 93.42% under the revised curriculum, representing an improvement of 4.34 percentage points. Similarly, the mean cohort pass rate increased from 82.07% (SD = 23.83) under the old curriculum to 92.13% (SD = 7.90) under the Revised curriculum, reflecting an improvement of 10.06 percentage points. The lower standard deviation recorded under the Revised curriculum indicates that students' performance was more consistent across cohorts compared with the old curriculum, which exhibited greater variability.

Furthermore, the median pass rate improved slightly from 91.11% under the old curriculum to 92.47% under the revised curriculum, an increase of 1.36 percentage points. The range of pass rates also became narrower, changing from 34.78%–100.00% under the old curriculum to 66.67%–100.00% under the Revised curriculum, suggesting a reduction in extremely low-performing cohorts. In addition, the odds of passing under the revised curriculum were 2.42 times those observed under the old curriculum, indicating better student performance following the curriculum change. However, despite these observed improvements, the difference in mean cohort pass rates between the two curricula was not statistically significant ($p = 0.169$; $p > 0.05$).

Discussion of Findings

Professional Examination Performance under the Old Curriculum (2018–2021)

The study assessed the academic performance of nursing students who were trained under the old nursing curriculum between 2018 and 2021. The findings revealed that a total of 348 students from seven graduating cohorts were assessed across two institutions; Bayelsa State College of Nursing Sciences (**INSTITUTION A**) and the University of Port Harcourt (**INSTITUTION B**). Students trained under the old curriculum recorded an overall (student-weighted) pass rate of 89.08 % and an unweighted mean cohort pass rate of 82.07 % (SD = 22.81). The relatively

large standard deviation indicates substantial variability across the seven old-curriculum cohorts, with individual cohort pass rates ranging from 34.78 % to 100.00 %.

This pattern of high overall performance accompanied by marked cohort-to-cohort fluctuation is consistent with earlier observations that traditional content-based curricula can produce satisfactory average outcomes while remaining sensitive to institutional and temporal factors^{1,4}. The wide variability also aligns with reports that performance under older nursing curricula in Nigeria was often influenced by differences in faculty readiness, clinical exposure and examination conditions⁵.

This is particularly relevant when considering the study on *"Influence of Adverse Childhood Experiences on Academic Performance of 300 Level Nursing Students in a Federal University in South-South Region of Nigeria"* which found that adverse childhood experiences profoundly impacted academic performance, reducing motivation and engagement (89%), focus (85%), and peer and teacher relationships (94%)⁶.

It is also instructive to consider the findings of this study in relation to the study on *"Students' Preferences for Teaching Methods and Their Performances in Schools of Nursing, Nigeria"* which found that students exposed to interactive teaching methods such as demonstrations, group discussions, problem-solving activities, and case studies achieved significantly higher academic scores compared to students predominantly taught using traditional lecture methods, the old curriculum, being largely teacher-centered and lecture-dependent, may have disadvantaged students who would have thrived under more interactive approaches⁷. This may explain why some cohorts particularly the 2018 **INSTITUTION B** cohort performed so poorly, as the pedagogical approach may not have aligned with students' learning preferences or needs.

Professional Examination Performance under the Revised Curriculum (2022–2025)

Again, the study assessed the academic performance of nursing students who were trained under the revised nursing curriculum between 2022 and 2025. The findings revealed that students trained under the revised curriculum achieved an overall pass rate of 93.42 % and a mean cohort

pass rate of 90.27 % (SD = 10.20). The standard deviation was substantially lower than that observed under the old curriculum, and the range of cohort pass rates was narrower (66.67 % to 100.00 %). The descriptive improvement in both central tendency and consistency is compatible with the intended goals of the competency-based, ICT-integrated revised curriculum ⁸. Similar reductions in performance variability following curriculum reform have been noted in other Nigerian and African settings when competency-based assessment and increased clinical hours were introduced, ^{3,5}.

The finding of consistently high performance at **INSTITUTION A** under the revised curriculum (overall pass rate of 93.42%) is consistent with the study titled "*Competency-Based Assessment and Academic Performance of Nursing Students in College of Nursing Sciences, Calabar, Nigeria.*" Which observed a significant positive relationship between competency-based assessment practices and academic performance ($r = 0.68$, $p < 0.05$), with their regression model indicating that assessment strategies accounted for approximately 46% of the variation in students' academic performance ($R^2 = 0.46$), ⁵.

The exceptional performance of the 2025 **INSTITUTION B** cohorts both achieving 100.00% pass rates is noteworthy and invites comparison with the study titled "*Socio-Economic Determinants of Academic Performance among Undergraduate Nursing Students in South-South Nigeria.*" Which reported that parental income, availability of learning resources, and students' access to technology significantly influenced academic performance, with students from higher socio-economic backgrounds recording significantly better academic outcomes ($p < 0.05$), ⁹.

The finding that the revised curriculum produced a lower failure rate (6.58%) compared to the old curriculum (10.92%) is consistent with the work titled "*Peer Mentorship, Wellbeing and Academic Performance of Nursing Students in a Federal Institution in Eastern Nigeria.*" which found statistically significant improvement in academic performance among students who participated in peer mentorship compared to those who did not, concluding that structured mentorship positively influences both academic achievement and psychological adjustment ¹⁰. This interpretation is also consistent with the findings of the study on "*Factors Influencing Academic Performance in Introductory Examinations at Plateau State College of Nursing Sciences, Jos Campus,*" which found that poor study habits, inadequate desire, and psychological obstacles such as fear and concern emerged as important impediments to academic success, the revised curriculum's learner-centred approaches may have helped address these

impediments by promoting active engagement, self-directed learning, and psychological support ¹¹.

Comparison of Mean Cohort Pass Rates between the Two Curricula

The revised curriculum showed a descriptively higher mean (difference of approximately 8.2 percentage points) and the odds of passing at individual-student level were approximately 1.74 times higher. This finding is consistent with several curriculum-comparison studies that reported favourable descriptive trends without statistically significant differences, particularly when analyses were conducted at the cohort rather than the individual level and when sample sizes were modest, ^{12, 13}. The finding of improved performance under the revised curriculum is consistent with the study titled "*Impact of Nursing Curriculum on Clinical Competence and Nursing Practice: A Cross-Sectional Study of Selected Institutions in Nigeria.*" their finding that the redesigned curriculum significantly emphasized evidence-based practice and core clinical skills—reflecting improvements aligned with contemporary healthcare challenges—provides a theoretical explanation for the improved performance observed in the present study, ¹⁴. The pattern of improved performance under the revised curriculum is also consistent with the work titled "*Comparative effectiveness of cybernetic-based instruction and traditional lecture method on nursing students' academic achievement: A quasi-experimental study.*" which demonstrated that a structured cybernetic feedback-loop approach was associated with significantly higher short-term achievement than traditional lecturing, with an effect size (partial eta squared = 0.554) that was notably large, ¹⁵.

Conclusion

This study compared the professional examination performance of nursing students trained under the old curriculum (2018–2021) and the revised curriculum (2022–2025) at two (2) different institutions at South-South, Nigeria.

Students trained under the revised curriculum demonstrated descriptively higher aggregate pass rates (93.42 % versus 89.08 %) and higher mean cohort pass rates (90.27 % versus 82.07 %). The odds of passing were approximately 1.74 times higher under the revised curriculum at the individual-student level.

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