



**PREDICTIVE VALIDITY OF 2017/2018 SSCE WAEC ENTRY
QUALIFICATIONS AND FINAL YEAR CGPA OF NCE STUDENTS AT
SHEHU SHAGARI COLLEGE OF EDUCATION, SOKOTO STATE, NIGERIA**

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Umar Mahmud Alasan and Yusha'u Usman Ukashatu
College of Postgraduate Studies,
Department of Education,
Bayero University, Kano
Umalasan110@yahoo.com and yushausman44@gmail.com

Abstract

This study investigated the relationship between 2017/2018 SSCE WAEC entry qualifications and final year 2020/2021 CGPA scores of NCE students at Shehu Shagari College of Education, Sokoto, Nigeria. The study was guided by four objectives and employed a correlational research design from a population of 2,815 students and a sample of 333 selected through a random sampling technique. The raw SSCE WAEC scores and final year CGPA data were analysed using Pearson Product-Moment Correlation (PPMC) for hypotheses 1–4 at a 0.05 significance level using SPSS. Findings revealed no significant relationships between SSCE entry qualifications and CGPA in the Schools of Arts and Social Sciences and Languages, a positive but weak correlation in Vocational and Technical Education, and no significant relationships in the sciences. The study concluded that SSCE entry qualifications are not strong predictors of final academic performance among College of Education students. The study then recommended reviewing minimum credit requirements to improve the predictive validity of admission criteria.

Keywords: Predictive Validity, College of Education Students, CGPA, Academic Performance, Shehu Shagari College of Education

Introduction

Teacher education refers to the systematic preparation of teachers through the acquisition of appropriate knowledge, skills, attitudes and professional competencies required for effective teaching and societal development. It encompasses both pre-service and in-service training, aimed at improving teaching effectiveness in line with societal needs

(Federal Republic of Nigeria, 2013; Adebayo, 2021). Education plays a central role in national development by promoting social cohesion, economic growth, cultural preservation, and political stability. Teachers are critical agents in preparing learners to achieve national educational goals and societal expectations (Charity, Ogar, & Obo, 2015; Ahmed & Suleiman, 2022). To ensure quality assurance, assessment and evaluation are essential components used to measure learning outcomes and determine the effectiveness of instructional processes (NCME, 2018; Bamigbala et al., 2022). Academic achievement, a key indicator of educational success, is typically measured using test scores derived from teacher-made or standardized assessments. It reflects a student's ability to acquire, retain, recall and apply knowledge, and demonstrate competence across cognitive, affective and psychomotor domains (Bloom, 1956; Adedoyin & Afolabi, 2021). In this study, academic achievement is operationally defined as students' final Cumulative Grade Point Average (CGPA) in the Nigeria Certificate in Education (NCE) programme.

Furthermore, measurement in education involves the systematic assignment of numerical values to learners' attributes based on established rules, providing quantitative data for evaluation and decision-making (Nwana, 2007). Evaluation entails making value judgments based on such data for purposes such as grading, placement and certification (Bichi, 2004; Musa & Okoro, 2020). Tests, therefore, serve as fundamental tools for measuring latent constructs like intelligence, aptitude and achievement and should demonstrate validity and reliability to ensure accurate results (NCME, 2018; Oladimeji & Bello, 2021). Standardized examinations play a crucial role in Nigeria's educational system. Key examination bodies include the West African Examinations Council (WAEC), the National Examinations Council (NECO) and the Joint Admissions and Matriculation Board (JAMB), which conduct examinations such as the Senior School Certificate Examination (SSCE) and Unified Tertiary Matriculation Examination (UTME) (Ojerinde, 2015; Akinwumi & Olawale, 2023). Entry qualifications derived from these examinations are widely used to predict students' future academic performance and suitability for higher education (Ilogho, 2022; Akintoye & Funke, 2020).

Concerns have been raised regarding the declining quality of entrants into teacher education programmes. Studies indicate that many candidates admitted into Colleges of Education often have weaker academic backgrounds, partly because such programmes are perceived as alternatives for candidates unable to secure admission into other competitive disciplines (Abbas, 2015; Akinbote, 2007; Umar & Yusuf, 2021). This situation has implications for the quality of teacher output and the standard of basic education in Nigeria. The Nigeria Certificate in Education (NCE) is recognized as the minimum teaching qualification in Nigeria (Federal Republic of Nigeria, 2013). The programme is designed to produce competent and professional teachers capable of fostering effective learning. Assessment within NCE programmes typically follows the 40% continuous assessment and 60% examination structure prescribed by the National Commission for Colleges of Education (NCCE, 2012; Bamigbala et al., 2022).

However, academic performance in tertiary institutions is commonly measured using the Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA) systems. The GPA represents a student's overall academic performance and determines the class of graduation (Bamigbala et al., 2022; Oladimeji & Bello, 2021). In Colleges of Education, CGPA classifications include Distinction, Credit, Merit, Pass and Fail, reflecting varying levels of academic achievement. Given the importance of CGPA as an indicator of academic success, it is necessary to investigate whether entry qualifications (such as SSCE and UTME scores) significantly predict students' final academic outcomes. Understanding this relationship is essential for improving admission policies, enhancing teacher quality and strengthening the educational system (Ilogho, 2022; Akintoye & Funke, 2020).

Therefore, this study focuses on students admitted into Shehu Shagari College of Education, Sokoto (2017/2018 academic session), aiming to determine the relationship between their entry qualifications and their final CGPA. The findings are expected to contribute to policy decisions regarding admission criteria and quality assurance in teacher education.

Conceptual Clarification

Concept of Grading

Grades in the realm of education are a standardised measurement of varying levels of comprehension within a subject area. Grades can be assigned in letters (for examples, A, B, C, D, E, or F), as a range (for example, 4.0-1.0), as a number out of a possible total (for example out of 20 or 100), as descriptors (excellent, great, satisfactory, needs for improvement), in percentages, or, as is common in some post-secondary institutions in some countries, as a grade point average (GPA). Most nations have individual grading systems unique to their own schools. However, several international standards for grading have arisen recently (Koul et al, 2016).

However, Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA) are two concepts usually mentioned in the education domain and they signify the diverse systems of awarding undergraduate scores based on their educational performances in their different subjects (Quora, 2019). GPA is computed by summing the total scores and then dividing by the credit hours offered by the student. CGPA is the average of the GPAs of a particular student which he had acquired in an institution in the courses he had taken. It is also computed by summing the scores acquired by students and then dividing by the total number of their overall credit units. GPA is normally computed in a district semester, while CGPA is computed for the entire period of a program in an institution and students aim to acquire a good CGPA. The good GPA in all the years must have been obtained by students (Quora, 2019). In the white-collar job market now, there is high competition among young graduates. Academic performance is one indicator that highlights higher education students' qualifications and this is mostly measured using the cumulative grade point average (CGPA). Most employers use CGPA to screen out candidates searching for jobs and candidates with a higher CGPA are selected (Yogendre & Andrew, 2017).

Concept of Validity

Validity is the extent to which an instrument measures what it purports to measure. Validity is trying to explain the truth of the research finding, as explained by Zohrabi (2013). For example, does an IQ test measure intelligence? Validity is measured using both theoretical and empirical evidence. Validity is defined as the extent to which a concept is accurately measured in a quantitative study. For example, a survey designed to explore depression but which actually measures anxiety would not be considered valid (Twycross & Heale, 2015). Validity refers to how accurately a method measures what it is intended to measure. If research has high validity, that means it produces results that correspond to real properties, characteristics and variations in the physical or social world (Fiona, 2022). Validity is broadly defined as the extent to which (the test) measures what it was supposed to measure (John, 2015). He further explains that validity is usually based on the existence of a sound correlation between the purpose of the study and its design, including a justified choice of criteria and variables, test measures, and other factors. Validity is a test of how well an instrument that is developed measures the particular concept it is intended to measure. In other words, validity is concerned with whether we measure the right concept or not. For example, when we ask a set of questions with the hope that we are tapping the concept, how can we be reasonably certain that we are indeed measuring the concept we set out to measure and something else (Bajpai & Shweta, 2014). Bishop et al (2014) refer to validity as whether an instrument accurately measures what it is intended to measure. Furthermore, predictive validity is one of the types of validity that indicates the ability of the measuring instrument to differentiate among individuals with reference to a future criterion. In other words, how adequately would an instrument be in differentiating between the performance and behaviour of individuals on some future criterion? For example, how well do GRE scores predict future Grades? For example, speaking –readiness test scores might be used to predict a student's future achievement in speaking or a test of dictionary skills might be used to estimate the students' current skills in the actual use of the dictionary. Looking at the example above, it is equally applicable that the entry qualification examination score is considered to be a test in order to predict the future performance of the students. i.e., Cumulative Grade Point Average (CGPA). The entry qualification examination scores can be used as a predictor variable, and students' academic performance as a criterion variable, which must be valid measures of student performance. Therefore, if we want to establish the predictive validity of entry qualification examination scores, students' CGPA after their academic year may be considered as a valid criterion.

Furthermore, recent empirical studies on the predictive validity of entry qualifications and academic performance reveal mixed and inconsistent findings, particularly within the Nigerian educational system. Several recent studies indicate that UTME scores have limited predictive validity. For instance, Uloku and Amainuren (2021) examined the predictive validity of UTME scores on first-year GPA among education students and found that UTME scores poorly predicted academic performance, suggesting weak reliability as a sole admission criterion. Similarly, Olanike, Ibrahim, and

Musa (2020) reported that UTME scores did not significantly predict students' academic performance, thereby questioning their effectiveness in admission decisions.

However, other recent studies suggest that entry qualifications may still be useful when combined with additional measures. Odudu-Modebe, Nwosu, and Adeyemi (2025) found that UTME and Post-UTME scores jointly contributed significantly to students' CGPA, although their predictive strength varied across institutions. This supports the argument that multi-criteria admission models are more effective than reliance on a single predictor. Recent research has also emphasized the role of continuous assessment and internal academic indicators. Ilogho (2022) found that continuous assessment scores had a significant predictive relationship with end-of-semester examination performance, indicating that internal assessments are strong predictors of academic success. In a related study, Aina and Adedo (2021) reported a strong positive correlation between continuous assessment and students' academic achievement, reinforcing the importance of formative evaluation.

Furthermore, contemporary studies highlight the multidimensional nature of academic performance. Eze and Nwankwo (2023) demonstrated that students' academic achievement is influenced by a combination of factors, including prior academic performance, socio-economic status, and study habits, rather than entry qualifications alone. Similarly, Adekunle and Oladipo (2024) found that non-cognitive variables such as motivation and learning strategies significantly predict CGPA, often outperforming traditional entry qualifications.

In addition, international evidence supports the argument that entry qualifications alone are insufficient predictors. Tewari (2021) found that while prior academic performance (e.g., mathematics scores) significantly predicts first-year university performance, its predictive power improves when combined with other variables. Likewise, Kintu, Zhu, and Kagambe (2020) reported that student engagement and learning environment significantly influence academic outcomes, beyond entry qualifications.

Statement of the Problem

The quality of teacher education remains a critical concern in Nigeria, particularly within Colleges of Education, where the Nigeria Certificate in Education (NCE) serves as the minimum qualification for teaching. Despite the use of standardized entry qualifications such as the Senior Secondary Certificate Examination (SSCE) and the Unified Tertiary Matriculation Examination (UTME) as criteria for admission, there is a problem regarding their effectiveness in predicting students' academic success at the tertiary level.

Empirical evidence has shown that the predictive validity of these entry qualifications is **inconsistent and inconclusive**. While some studies report significant relationships between entry qualifications and academic performance, others reveal weak or non-significant correlations. This inconsistency raises concerns about the reliability of existing admission criteria as accurate indicators of students' future academic achievement. Consequently, reliance on a single measure of entry qualification may not provide a comprehensive basis for selecting candidates who are likely to succeed

academically. More importantly, there is increasing concern about the **declining academic performance of NCE students**, particularly in Colleges of Education. For instance, records from Shehu Shagari College of Education, Sokoto, indicate a decline in the percentage pass rate of NCE (DLS) graduates from **41.10% in 2017 to 33.66% in 2018** (Shehu Shagari College of Education, 2020). This performance suggests potential weaknesses either in the quality of admitted students, the predictive validity of entry qualifications, or other underlying academic and institutional factors influencing student performance.

Furthermore, most existing studies have concentrated on universities, with **limited empirical attention given to Colleges of Education**, especially in Northern Nigeria. This creates a contextual gap, as findings from university settings may not be directly applicable to NCE programmes due to differences in structure, student characteristics, and academic demands. Given these concerns, there is a need for a more context-specific investigation into the relationship between entry qualifications and academic performance within Colleges of Education. Therefore, this study seeks to examine whether entry qualifications significantly predict the **final CGPA of NCE students in Shehu Shagari College of Education, Sokoto**, to provide empirical evidence that can inform admission policies and improve academic outcomes in teacher education programmes.

Methodology

Research Design

This study adopted a **correlational research design** to examine the relationship between students' entry qualifications and their final academic performance, measured by cumulative grade point average (CGPA). The design was considered appropriate because the study sought to determine the **predictive validity of entry qualifications (predictor variable)** on students' CGPA (criterion variable) without manipulating any variables. Correlational design enables the measurement of the **degree and direction of association** between variables, expressed through correlation coefficients ranging from 1 to +1 (Gay et al., 2006). It is particularly suitable for prediction studies where the objective is to establish whether one variable can significantly predict another.

Population and Sample

Population

The population comprised **2,815 students** admitted into Shehu Shagari College of Education, Sokoto, during the **2017/2018 academic session**. The population was heterogeneous, consisting of male and female students drawn from diverse socio-economic backgrounds and enrolled across four schools: Arts and Social Sciences, Languages, Vocational and Technical Education, and Sciences.

Sample Size

A total of **333 students** were selected as the sample for the study. The sample size was determined using the Research Advisors (2006) sample size table and was

proportionately distributed across the four schools to ensure adequate representation. A **cluster sampling technique** was employed to select the four schools as clusters, given the large and diverse population. Within each cluster, **simple random sampling** was used to select participants in proportion. This approach ensured representativeness while maintaining feasibility and cost-effectiveness (Levy & Lemeshow, 1999).

Instrument for Data Collection

The data for the study were collected using a **researcher-designed pro forma**, which was used to extract relevant information from institutional records. The pro forma captured students' **entry qualification scores (SSCE results)** and their **final NCE CGPA (2020/2021 session)**. The instrument ensured systematic and accurate retrieval of archival data from official sources.

Data Collection Procedure

The data were obtained from the **Office of the Academic Secretary and the Examinations and Records Unit** of Shehu Shagari College of Education, Sokoto. An official letter of introduction was secured, followed by formal approval from the Registrar. With the assistance of academic staff, relevant records, including students' entry qualifications and final CGPA, were retrieved. All data were handled confidentially and used strictly for research purposes.

Data Analysis Procedure

The data were analysed using **Pearson product-moment correlation (PPMC)** with the aid of the Statistical Package for the Social Sciences (SPSS). The PPMC was used to test hypotheses relating to the **relationship between entry qualifications and CGPA** at a **0.05 level of significance**, as it is appropriate for measuring the strength and direction of linear relationships between continuous variables (Sambo, 2008). To ensure compatibility of data for analysis, entry qualification scores originally recorded in **stanine format** were converted into raw score equivalents. Similarly, CGPA values were standardized by appropriate scaling to facilitate correlation analysis.

Results and Discussion

The data were analysed as follows:

Ho1: There is no significant relationship between 2017/2018 SSCE WAEC Entry Qualifications in School of Arts and Social Sciences and 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto.

Table 1: Correlation Coefficient Between 2017/2018 SSCE WAEC Entry Qualifications in School of Arts and Social Sciences and 2020/2021 NCE final year CGPA.

Variables	N	df	r	p-value
SSCE WAEC Arts and Soc Sci	178	175	0.683	0.000
NCE CGPA Arts and Soc. Sciences				

Correlation significant at 0.05

Table 1 showed that alpha value 0.05 is greater than the p-value at 0.000 ($r=0.683$, $p=0.000$), indicating a positive and significant relationship between 2017/2018 SSCE Entry Qualifications in School of Arts and Social Sciences and their 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto. Therefore, the null hypothesis stated that there is no significant relationship between 2017/2018 SSCE WAEC entry Qualifications and 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto, is rejected. Meaning that, **a positive and significant relationship** between 2017/2018 SSCE WAEC entry qualifications and 2020/2021 NCE final-year CGPA among Arts and Social Sciences students of Shehu Shagari College of Education, Sokoto was found.

Ho2: There is no significant relationship between 2017/2018 SSCE WAEC Entry Qualifications in School of Languages and 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto.

Table 2. Correlation Coefficient between 2017/2018 SSCE WAEC Entry Qualifications in School of Languages and 2020/2021 NCE final year CGPA.

Variables	N	df	r	p-value
SSCE WAEC LANGUAGES	29	27	-0.183	0.342
NCE CGPA LANGUAGES				

Correlation significant at 0.05

Table 2 showed that the alpha value 0.05 is less than the p-value at 0.342 ($r = -0.183$, $p = 0.941$), indicating a negative relationship between 2017/2018 SSCE WAEC Entry Qualifications in School of Languages and their 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto. Therefore, the null hypothesis stated that there is no significant relationship between 2017/2018 SSCE WAEC entry Qualifications in School of Languages and 2020/2021 NCE final year CGPA among Students of Shehu Shagari College of Education, Sokoto, is retained. Meaning that **no significant relationship** between 2017/2018 SSCE WAEC entry qualifications and 2020/2021 NCE final-year CGPA among School of Languages students was found.

Ho3: There is no significant relationship between 2017/2018 SSCE WAEC Entry Qualifications in School of Vocational and Technical Education and 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto.

Table 3. Correlation Coefficient between 2017/2018 SSCE WAEC Entry Qualifications in School of Vocational and Technical Education and 2020/2021 NCE final year CGPA.

Variables	N	df	r	p-value
SSCE WAEC VOC AND TECH	27	25	0.133	0.508
NCE CGPA VOC AND TECH				

Correlation significant at 0.05

Table 3 showed that the alpha value 0.05 is less than the p-value at 0.508 ($r = 0.133$, $p = 0.508$), indicating no relationship between 2017/2018 SSCE WAEC Entry Qualifications in the School of Vocational and Technical Education and their 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto. Therefore, the null hypothesis stated that there is no significant relationship between 2017/2018 SSCE WAEC entry Qualifications in the School of Vocational and Technical Education and 2020/2021 NCE final year CGPA among Students of Shehu Shagari College of Education, Sokoto, is retained. Meaning that a **positive but weak relationship** between 2017/2018 SSCE WAEC entry qualifications and 2020/2021 NCE final-year CGPA among Vocational and Technical Education students was found.

Ho4: There is no significant relationship between 2017/2018 SSCE WAEC Entry Qualifications for the School of Sciences and 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education, Sokoto

Table 4. Correlation Coefficient between 2017/2018 SSCE WAEC Entry Qualifications for School of Sciences and 2020/2021 NCE final year CGPA.

Variables	N	df	t	p-value
SSCE WAEC Sciences	99	97	0.606	0.000
NCE CGPA Sciences				

Correlation significant at 0.05

Table 3 showed that alpha value 0.05 is greater than the p-value at 0.000 ($r = 0.606$, $p = 0.000$) indicating positive and strong relationship between 2017/2018 SSCE WAEC Entry Qualifications for the School of Sciences and their 2020/2021 NCE final year CGPA among students of Shehu Shagari College of Education Sokoto. Therefore, the null hypothesis stated there is no significant relationship between 2017/2018 SSCE WAEC entry Qualifications for School Sciences and 2020/2021 NCE final year CGPA among Students of Shehu Shagari College of Education Sokoto is rejected. Meaning that a **strong positive relationship** between 2017/2018 SSCE WAEC entry qualifications and 2020/2021 NCE final-year CGPA among Science students was found.

Discussion of Findings

The findings of this study provide empirical evidence on the predictive validity of entry qualifications (SSCE/WAEC) across different schools in Shehu Shagari College of Education, Sokoto, and reveal variations in the strength and direction of relationships with final CGPA.

The study found a **positive and statistically significant relationship** between SSCE/WAEC entry qualifications and final CGPA among students in the **School of Arts and Social Sciences**. This suggests that students with better entry qualifications tend to perform better academically at the NCE level within this school. However, this finding contrasts with the results of Afu and Ukofia (2017), who reported **negative and weak**

correlations between UTME scores and CGPA among University of Abuja students, concluding that UTME was not a reliable predictor of academic performance. The discrepancy may be attributed to differences in institutional context, type of entry qualification examined and programme structure.

In the **School of Languages**, the study revealed **no significant relationship** between SSCE/WAEC entry qualifications and final CGPA. This finding is inconsistent with Owan (2017), who reported **moderate correlations in some departments**, although the overall results also indicated inconsistencies and negative correlations across sessions. The lack of relationship observed in the present study suggests that factors other than entry qualifications, such as instructional methods, student motivation, or language proficiency, may play a more significant role in determining academic performance in language-related programmes.

For the **School of Vocational and Technical Education**, the findings indicated a **positive but weak relationship** between SSCE/WAEC entry qualifications and final CGPA. This result aligns partially with Ilogho (2022), who found that academic indicators such as continuous assessment significantly predict students' performance, though the strength of prediction may vary. However, the present finding contradicts Aishatu (2017), who reported no significant relationship between computational skills and students' CGPA, suggesting that different types of predictors may vary in their explanatory power depending on the context and discipline. Furthermore, the study established a **strong and significant relationship** between SSCE/WAEC entry qualifications and final CGPA in the **School of Sciences**. This finding is consistent with Akintoye and Funke (2020), who found that continuous assessment scores significantly predicted students' academic performance. The strong relationship observed in the science-related disciplines may be due to the cumulative and hierarchical nature of scientific knowledge, where prior academic preparation plays a critical role in subsequent learning outcomes.

Overall, the findings demonstrate that the predictive validity of entry qualifications is **not uniform across disciplines**. While strong relationships were observed in some schools, weak or non-significant relationships were found in others. This variation supports the argument in the literature that **academic performance is influenced by multiple factors**, and that reliance on entry qualifications alone may not provide a comprehensive basis for predicting students' success in tertiary education. These findings therefore reinforce the need for **multi-dimensional admission criteria**, incorporating both cognitive and non-cognitive factors, to enhance the accuracy of predicting students' academic performance in Colleges of Education.

Conclusion and Recommendations

The study concluded that SSCE entry qualifications significantly predicted academic performance in the Schools of Arts and Social Sciences and Sciences, indicating their

relevance as admission criteria in these domains. However, no significant relationship was found in the School of Languages, while only a weak relationship existed in the School of Vocational and Technical Education.

Suggestion for further study: the predictive strength of SSCE results is not uniform across disciplines. Consequently, relying on SSCE as a single criterion for admission may lead to inconsistent academic outcomes, thereby contributing to the observed decline in students' performance. The study, therefore, establishes that entry qualifications, though useful, are limited in their capacity to independently predict academic success among NCE students.

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

1. Since SSCE entry qualifications showed a significant predictive relationship with final CGPA, admission decisions in the School of Arts and Social Sciences should continue to place strong emphasis on SSCE results. However, periodic validation should be conducted to ensure sustained predictive accuracy.
2. Given the strong predictive power observed, SSCE results especially in core science subjects should be given high priority during admission into science-related programmes. Additionally, minimum subject-specific performance benchmarks should be enforced to maintain academic standards.
3. As SSCE results did not significantly predict academic performance, reliance on SSCE alone for admission into language programmes should be reconsidered. Alternative measures such as aptitude tests, oral proficiency assessments, or post-admission screening should be introduced to improve selection quality.
4. Since only a weak relationship was found, SSCE should be used alongside other criteria, such as practical skill assessments, technical aptitude tests, or prior vocational exposure, to enhance the prediction of students' academic success in this school.

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