

INTERNATIONAL JOURNAL OF EDUCATIONAL RESEARCH, INNOVATION AND MULTIDISCIPLINARY DEVELOPMENT

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ON ECONOMICS STUDENTS' ACHIEVEMENT IN ABUJA, NIGERIA**

**e-ISSN: 2616-1370
Print_ISSN: 1115-5868
Volume 1, Number 1 (2025)**



TEACHERS' TEST CONSTRUCTION AND ADMINISTRATION SKILLS ON ECONOMICS STUDENTS' ACHIEVEMENT IN ABUJA, NIGERIA

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Dates:

Received: 2025-05-15

Accepted: 2025-05-28

Published: 28-07-2025

Citation:

Maikudi Kwanza Allahnana & Erhuotor Ejiro Efe.(2025).
Teachers' Test Construction
and Administration Skills on
Economics Students'
Achievement in Abuja, Nigeria.

International Journal of
Educational Research,
Innovation and
Multidisciplinary Development
(IJERIMD), 1(1), 1-29.
<https://njsr.com.ng/index.php/home/article/view/18>

Abstract

The study investigated the "Relationship between test construction and administration skills' on students' achievement in Economics in senior secondary schools Abuja, Nigeria." It utilized a correlational survey research design, guided by three research questions and corresponding hypotheses. The population comprised 26,954 respondents, including 26,954 Economics students and 223 Economics teachers from 62 senior secondary schools in Abuja. The sample consisted of 436 respondents, comprising 379 SS II students and 57 Economics teachers, selected from three area councils of Abuja using a multistage sampling technique combined with simple random sampling. The researchers developed instruments for data collection namely: Economics Test Construction and Administration Skills Inventory (ETCOASI) and Economics Achievement Test (EAT), validated by two experts. EAT demonstrated a validity index of 0.88 and a reliability coefficient of 0.89 through content validity and the Kuder-Richardson 20 method. Meanwhile, ETCOASI exhibited a validity index of 0.68 with reliability coefficients of 0.77 using construct validity and Cronbach's Alpha methods. Data analysis involved descriptive statistics (mean and standard deviation) to address research questions and Pearson's Correlation Coefficient (r) for testing hypotheses at a significance level of 0.05. The findings underscored a significant relationship between effective test construction skills and student academic achievement in economics. Despite educators' subject matter expertise, opportunities exist to better align assessment with the cognitive demands of Economics achievement tests. Contextual factors such as educational background and participation in professional development programs were identified as significant relationships of economics teachers' test construction skills. The study recommends a comprehensive reassessment of current assessment practices to enrich students' Economics learning experiences in secondary education settings. It concludes with practical suggestions aimed at enhancing Economics assessment practices.

Keywords: Teachers', Test, Construction, Skills, Achievement

1.1 INTRODUCTION

To effectively construct Economics achievement test items in the 21st century, economics teachers are encouraged to adhere to rigorous validation and reliability processes and conduct thorough item analyses. This ensures that the tests are valid and reliable measures of students' knowledge and skills. The role of Economics teachers in the educational system is crucial as their qualities and dedication significantly establishment of the relationship its effectiveness, development, and growth. However, many secondary school Economics teachers often rely on test items provided by math textbook publishers and past exams. When these steps are not executed properly, test outcomes become unreliable and unusable. In student assessment, teachers are expected to use test results to provide feedback and organize remedial lessons as needed. Despite this expectation, there is uncertainty about how consistently these practices are implemented in schools. Research underscores that formative assessment, which includes tests, feedback, and remediation, significantly enhances student performance. Moreover, studies indicate that combining formative tests with feedback and remediation yields better results than using formative tests alone (Owolabi, 2012).

The National Policy on Education in Nigeria emphasizes the pivotal role of teachers, recognizing that the quality of education cannot surpass that of its educators (Federal Republic of Nigeria, 2014, as cited in Offiong, 2021). Teachers face the challenge of translating educational policies into actionable steps during their interactions with students, with classroom testing serving as a critical measure of this translation. Assessment literacy is essential for effective teaching. It refers to the knowledge and skills acquired by assessors (teachers) to identify and effectively use appropriate assessment techniques to gather accurate evidence of student learning (Popham, 2019). Test literacy, a subset of assessment literacy, involves the ability of teachers to develop and use valid and reliable assessment instruments that accurately measure student learning across different domains—cognitive, affective, and psychomotor (Osuji, Nnaji, & Okonkwo, 2016).

Understanding various assessment procedures depends significantly on assessors' assessment literacy or ability. Assessment literacy refers to the knowledge and skills acquired by assessors to identify and effectively use appropriate assessment techniques to

gather accurate evidence of student learning. Popham (2019) articulates this concept, stating that assessors demonstrate assessment literacy when they possess the necessary knowledge and skills to define clear learning goals, select appropriate assessment methods, and provide accurate evidence of student learning. Effective test items should diagnose what students know and can do with that knowledge, particularly in technical school settings where the emphasis is on skill acquisition and soft skills conducive to an entrepreneurial mindset. Achieving this requires designing assessment tools (tests) that accurately measure student achievement, aligning with established assessment systems, standards, and curriculum frameworks. Testing is a critical tool for teachers, as the quality of tests directly impacts their ability to provide relevant information about student performance. Well-designed tests enable Economics teachers to consistently and accurately measure students' mastery of specific content taught in class, facilitating informed decision-making by educators, administrators, parents, and stakeholders at all levels of education. Understanding the test construction skills and abilities of teachers, including their test construction skills, is crucial for translating educational policies into effective classroom practices. While many studies have explored various aspects of teachers' characteristics and their impact on educational outcomes, there remains a need for more research specifically focusing on teachers' test construction abilities and their implications for classroom assessments.

The quality of test construction directly impacts teachers' ability to provide relevant information about student performance. Well-designed tests enable educators to consistently and accurately measure students' mastery of specific content, thereby facilitating informed decision-making by stakeholders at all levels of education. Conversely, poorly constructed tests can yield results that do not accurately reflect students' knowledge and skills, undermining the educational process (Allen, 2014). In the context of Economics education, effective test construction is crucial. It involves planning, preparing, administering, scoring, and analyzing tests to gauge students' understanding of economic concepts. Teachers must align their test construction skills with educational objectives to ensure that assessments accurately measure student achievement and contribute meaningfully to instructional practices (Ngozi, Chika, & Allonyms, 2013).

Historically, tests have been used to measure individual differences in skills and knowledge. Their evolution has paralleled advancements in educational theory and practice, aiming to provide fair and accurate assessments of students' abilities. In Nigeria, various examination bodies such as the West African Examinations Council (WAEC), the Joint Admissions and Matriculation Board (JAMB), and the National Examinations Council (NECO) play critical roles in assessing students' academic achievements (Adeniyi, Oyekanmi, & Tijani, 2011). Despite the importance of assessments, reliance on single final examinations to determine students' abilities has been criticized for its potential unfairness. Factors like sudden illness, accidents, or psychological issues can significantly influence students' performance in these high-stakes assessments (Bassey & Idaka, 2007).

Economics teachers are central to the preparation and administration of classroom tests, serving as the primary assessors who interact directly with students. This teacher-student relationship facilitates the diagnosis of students' needs through testing, which also fulfills other functions such as placement, promotion, guidance, and reporting. Tests are instrumental in assessing the extent to which educational objectives are achieved, essentially driving the learning process. A well-designed test can establish clear expectations, provide manageable workloads, and offer opportunities for students to self-assess, practice, and receive feedback. Conversely, poorly designed tests can hinder learning. In education, tests are tools employed by teachers to measure students' behavior before, during, or after instructional processes. Therefore, it is crucial for test developers (teachers) to possess the necessary skills to avoid inaccurate generalizations (Offiong, 2021).

Testing literacy refers to the ability of economics teachers to set and use valid and reliable instruments that effectively measure cognitive, affective, and psychomotor domains of learning. It involves understanding how test qualities (purpose specification, standard conditions, validity, reliability, usability) vary across different learning objectives. Economics teachers with strong testing literacy are adept at constructing tests that align with content standards, test blueprints, and exhibit good validity, reliability, discrimination, and distractor indices for multiple-choice items. Test, as a measuring instrument or device is used for finding out the presence or absence of a particular phenomenon or trait possessed

by an individual or group of individuals (Osuji, Nnaji & Okonkwo, 2016). The first written tests were the informal examinations used by the Chinese to recruit people into the civil service. This was about 2,200 B.C. The oral examinations conducted by Socrates in the 5th Century B.C were informal. The West African Examination Council was established first on 31st Dec. 1951 in Gambia and in 1952 in Nigeria. This serves as an examination body for the West African Countries. WAEC conducts such examinations as school certificate (GCE), Royal Society of Arts (RSA) and City and Guilds examinations. The Joint Admission and Matriculation Board (JAMB), established in 1976 are charged with the responsibility of conducting common entrance examinations for Universities, Colleges of Education and Polytechnics in Nigeria. The National Business and Technical Education Board (NABTEB) are charged with the responsibility of organizing examinations and certification of Business and Technical or Vocational examinations. The National Examination Council (NECO) was established to organize examinations for school certificates, both senior and junior, and the common entrance examinations to the unity schools in Nigeria. The international Center for Educational Evaluation (ICEE) is concerned with educational evaluation in Nigeria. Apart from the National Bodies, there are xli some of the state education boards and local education boards that have their assessment units.

Test construction refers to the science and art of planning, preparing, administering, scoring, statistically analyzing, and reporting results of tests. Downing (2010) equates tests to examinations consisting of a series of questions, problems, or practical tasks to gauge somebody's knowledge, ability, or experience. A test, in the formal schooling system, is used to designate any kind of device for measuring ability, achievement, interest, and other traits. An instrument is the general term that researchers use for a measurement device (survey, test, and questionnaire). It is a device used by investigators for collecting, measuring, and analyzing data related to their research topics (Adeniyi, Oyekanmi, & Tijani, 2011). Assessment is the process of investigating the status or standard of a learner's achievement or the achievement of a group of learners where group instruction prevails with reference to expected outcomes which must have been specified as objectives. To address these challenges, it is essential for teachers to develop robust test construction skills. These skills include understanding test purposes, ensuring standard conditions, establishing validity and

reliability, and selecting appropriate assessment methods aligned with learning objectives (Anikweze, 2015). Teachers with strong test construction abilities can design assessments that accurately measure student achievement and provide valuable insights into instructional needs.

The use of one final examination at the end of the term to determine economics students' achievement is unfair and cannot give a true representation of individual child's ability. Bassey and Idaka (2007) observed that intervening variables like sudden ill-health, accident, inability of the home and other periodic students' psychological factors could considerably influence this single assessment. Assessment plays a fundamental role in education, necessitating the validity and reliability of classroom testing instruments to accurately measure students' real knowledge and skills rather than their test-taking abilities. Understanding various assessment procedures requires assessors to possess assessment literacy—the knowledge and skills to identify and use appropriate assessment techniques effectively. Popham (2019) underscores this by stating that assessment literacy includes defining clear learning goals, choosing assessment methods, and interpreting results accurately. Assessment in education serves a fundamental purpose: to enhance student learning. It encompasses various methods and tools employed by educators to gauge students' levels of understanding across different learning activities. As Allen aptly states, assessment involves the utilization of empirical data to refine educational programs and improve learning outcomes. It is a process characterized by gathering and analyzing information from diverse sources to develop a comprehensive understanding of what students know, understand, and can do as a result of their educational experiences (Allen, 2014). Within the educational landscape, one essential aspect of assessment is test construction – the process through which educators prepare and administer tests to obtain crucial insights into student achievement during the teaching and learning process. Tests serve as vital instruments for assessing students' progress and providing valuable feedback to both teachers and learners. They do not only measure the extent of learning but also create opportunities for further academic growth. In the context of Economics education, the significance of assessment cannot be overstated. Economics serves as the cornerstone of societal development, underpinning advancements in various fields such as science,

technology, engineering, and medicine (Ukeje, 2015). Its pivotal role in shaping the economic and technological landscape underscores the importance of effective Economics education at the secondary school level (Ngozi, Chika, & Allonyms, 2013).

Academic achievement in Economics emerges as a key predictor of success in individuals' careers and societal contributions. Therefore, the quality of Economics directly impacts a nation's progress and prosperity. Given the critical role of Economics in modern society, the need for high-quality professional development programs in Economics education becomes increasingly apparent (Blank, Alas, & Smith, 2017). Amidst these considerations, it becomes evident that assessment practices, particularly test construction skills, play a crucial role in shaping the teaching and learning of Economics. However, the proficiency of teachers in constructing tests aligned with educational objectives has come under scrutiny in contemporary educational discourse. Effective teaching of Economics demands competencies in measurement, assessment, and evaluation skills, with test construction skills serving as a cornerstone of teachers' responsibilities. The quality of tests crafted by teachers significantly influences the accuracy and reliability of assessments conducted in classrooms (Ngozi, Chika, & Allonyms, 2013). Well-constructed tests provide teachers with valuable insights into students' mastery of specific mathematical content, facilitating informed instructional decisions. Conversely, poorly constructed test items can lead to inaccurate measurements of learning outcomes and hinder instructional effectiveness. The competency of Economics teachers in test construction is an essential tool needed by every teacher if learning and instructional objectives are to be effectively attained. Test construction competencies include the construction of quality tests based on the principles of test construction. Test construction skills include: test planning and construction, grading, interpretations of test results, use of assessment results to inform teaching and learning, communicating results to relevant stakeholders (Anikweze, 2015). Academic achievement is influenced by various factors such as socioeconomic status, parental involvement, teaching quality, and school environment. Research by Anderson (2024) provides. Effective classroom practices, including instructional strategies, differentiation, and classroom management, play a crucial role in fostering students' achievement. Studies by Brown et al. (2024) examine the correlation between specific teaching practices and student outcomes.

Furthermore, the decisions made regarding students' academic achievements rely heavily on the data derived from assessments. These decisions shape educational programs and interventions, making it imperative to ensure the validity and reliability of assessment instruments (Hamafyelto, Hamman-Tukur, & Hamafyelto, 2015). Thus, efforts to improve the quality of tests must be prioritized by both test developers and users to ensure the integrity of educational assessments. In light of these considerations, this research seeks to delve into the intricacies of Economics assessment practices, with a particular focus on teachers' test construction skills. By critically examining the various components of test construction skills, including planning, scoring, grading, learning objectives, administering, and communication effectiveness, the study aims to provide valuable insights into enhancing Economics education in secondary schools. Through a comprehensive analysis of teachers' test construction skills and their impact on student learning outcomes, this research endeavors to contribute to the ongoing discourse on improving Economics education practices. Test construction ability denotes the intelligence required by teachers (test constructors) to design assessments that maintain coherence across content standards, test blueprints, actual test items, and uphold high validity, reliability, and usability standards. This ability is crucial for ensuring that assessments accurately reflect students' learning and inform effective instructional practices. Test construction is the set of activities involved in developing and evaluating a test of some standards for educational and psychological testing. It involved decisions about the nature of the item or question to which teachers ask students to respond, that is whether discreet or integrative, how teachers will score the item. Example, objectively or subjectively, the skills teachers purport to test (Anikweze, 2015).

Arubayi (2013) found that the original instrument contained fifteen extraneous items unrelated to any of the seven sub-scales or factors. After analyzing the factor loadings, twenty-five items were identified as valid. The reliability coefficient was established using the test-retest method and product moment correlation statistics, indicating both reasonable reliability and a strong purpose for each sub-scale. Unlike Arubayi's study, which focused on university students evaluating lecturers, the present study targets junior secondary school students and teachers to assess the Economics classroom learning environment for effective teaching and learning.

While Arubayi used product moment correlation statistics to establish reliability coefficients, this study employed Construct validity and KR-20 for reliability coefficient, specifically suited for Economics test construction skills in the Nigerian academic environment.

Sani, Usamatu and Muhammad (2024) found out that there is no significant gender difference in test construction competency among teachers of JSS in Jigawa state. The result also found that there is significant difference in test construction competency among professional and non-professional teachers of JSS in Jigawa Stat. Frank, Isaac and Francis (2018) revealed that teachers had limited skills in constructing end-of-term examinations, evident from issues related to content representativeness, relevance, reliability, and fairness of assessment tasks. They recommended that head teachers should invite resource persons from recognized academic institutions to conduct regular workshops for teachers, aiming to enhance their skills in effective test construction practices. Akinodi (2020) found initially homogeneous groups, yet using Bloom's taxonomy blueprint-based achievement test significantly improved Biology performance compared to conventional strategies after treatment. The test showed no gender bias, suggesting the encouragement of its use in Biology classes across secondary schools to enhance students' academic performance.

Heather, Brian, Deborah and Ball (2021) linked teachers' mathematical knowledge to student achievement gains in first and third grades, controlling for key student and teacher-level covariates. This supports policy initiatives aimed at improving Economics achievement by enhancing teachers' mathematical skills. Tanu (2021) validated a test with a reliability coefficient of 0.89, promoting students' understanding of Economics concepts, strategies, and decision-making. Ngozi, Chika, and Aloysius (2013) identified twenty-five essential skills for quality classroom-based test construction, recommending the TCSI for assessing secondary school teachers' test construction skills in Anambra State, Nigeria. Rufina, Hamman-Tukur, and Stephen (2015) found significant relationships between teachers' commerce competence and content validity, noting low competence in constructing examination questions and recommending workshops and seminars for improvement. Classical Test Theory (CTT), developed by Charles Spearman in 1904, addresses measurement errors as random variables and defines reliability as the ratio of true score

variance to observed score variance. CTT's methods for assessing reliability, like Cronbach's α , influence educational and psychological settings, including evaluating teachers' impact on Economics achievement in Abuja, Nigeria.

Stakeholders in Nigeria's education sector express concern over consistent underachievement in Economics among senior secondary school students in public examinations like WASSCE and NECO. This issue persists despite the Federal Republic of Nigeria (FRN) emphasizing the importance of Economics assessment. Challenges include the lack of teacher test construction skills, resulting in inaccurate assessments and grammatical errors in test items. The absence of standardized, expertly constructed test items exacerbates the problem, as teacher-made tests often lack validity, reliability, and clarity. The need for valid, reliable, and well-constructed Economics achievement tests in secondary schools is urgent to improve student outcomes, addressing deficiencies in test construction skills and ensuring assessment instruments align with educational goals in Nigerian secondary schools, particularly in Abuja.

Research Questions

The following research questions guided the study:

- i. What is the relationship between teachers' used planning skill and Economics student's achievement in Abuja, Nigeria?
- ii. How does teachers' used of scoring-grading skill relates to Economics students' achievement in Abuja, Nigeria?
- iii. To what extent does teachers' used of learning objectives skill relates to Economics students' achievement in Abuja, Nigeria?

Objectives

The main objective of this study was to assess the relationship between teachers' test construction skills and Economics Students' Achievement in Abuja, Nigeria. Specifically, the study sought to:

- i. determine the relationship between teachers' used of planning skill and Economics students' achievement in Abuja, Nigeria

- ii. Examine how teachers' used of scoring and grading skills on Economics students' achievement in Abuja, Nigeria.
- iii. Ascertain how teachers' used of administration skills on Economics students' achievement in Abuja, Nigeria.

Hypotheses

The following hypotheses were postulated and tested at 0.05 level of significance:

- i. There is no significant relationship between teacher used of planning skills and Economics students' achievement in Abuja, Nigeria.
- ii. There is no significant relationship between teacher used of scoring-grading skills and Economics students' achievement in Abuja, Nigeria.
- iii. There is no significant relationship between teacher used of learning objectives skill and Economics students' achievement in Abuja, Nigeria

METHODOLOGY

The research employed the Correlational Survey research design as appropriate for the study. The population comprised 26,954 respondents, including 26,954 Economics students and 223 Economics teachers from 62 senior secondary schools in Abuja. The sample consisted of 436 respondents, comprising 379 SS II students and 57 Economics teachers, selected from three area councils of Abuja using a multistage sampling technique combined with simple random sampling. The researchers developed instruments for data collection namely: Economics Test Construction and Administration Skills Inventory (ETCOASI) and Economics Achievement Test (EAT). These instruments were designed based on dimensions such as Bloom's taxonomy, and content knowledge and knowledge, comprehension, application, analysis, synthesis, and evaluation comprises 20 items, with each dimension. EAT, on the other hand, includes 25 multiple-choice questions with 4 response options (A-D). Each correct response earns four marks, while incorrect responses receive zero marks. The scoring guide, containing answers for all 25 questions, were also developed by the researchers. The instruments were validated by two experts. EAT demonstrated a validity index of 0.88 and a reliability coefficient of 0.89 through content validity and the Kuder-Richardson 20 method. Meanwhile,

ETCOASI exhibited a validity index of 0.68 with reliability coefficients of 0.77 using construct validity and Cronbach's Alpha methods.

Data analysis involved descriptive statistics (mean and standard deviation) to address research questions and Pearson's Correlation Coefficient (r) for testing hypotheses at a significance level of 0.05.

Table 1: Table of Specifications for Economics Achievement Test (EAT)

S/NO	Content Area	Time Hrs	Know 32%	Comp 32%	App 12	Ana 8%	Syn. 16%	Eva 0%	Total 100%
1	Labour Market	3	2(1,2)	2 (6,7)	1 (25)	-	1(3,4)	-	6
2	Price determination	2	2 (8, 9)	1 (20)	1(24)	-	1(10)	-	5
3	Industries in Nigeria	3	2(11,13)	2(19)	-	1(22)	1(12)	-	6
4	Utility theory	2	2(5,6)	3(16,17,18)	1 (21)	1(23)	1(17)	-	8
Total		10	8	8	3	2	4	0	25

K = Knowledge, C = Comprehension, A = Application, A = Analysis, S = Synthesis, E = Evaluation.

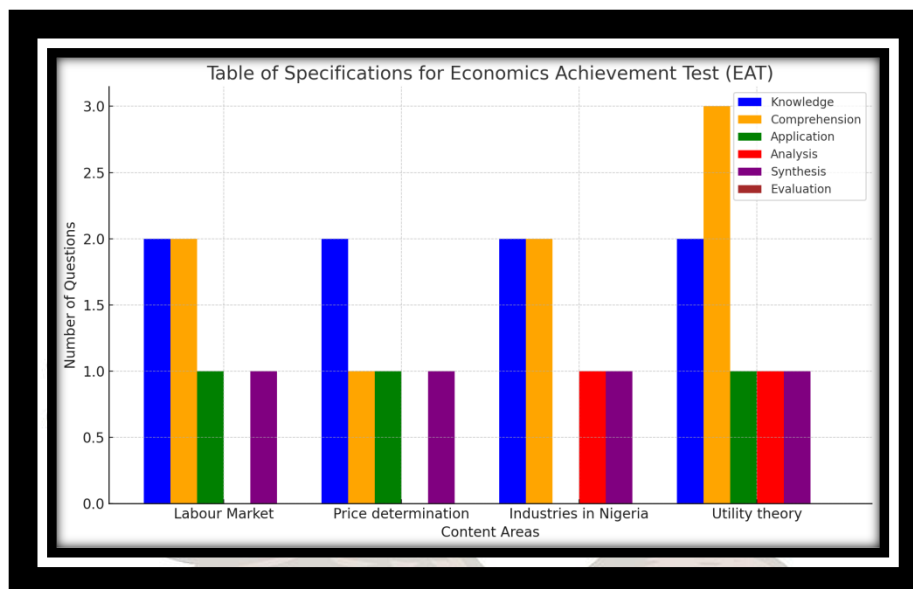


Figure 1: Bar chart representing the Table of Specifications for the Economics Achievement Test (EAT).

Each bar in Figure 1 group corresponds to a content area, and the different colored bars represent the distribution of question types (Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation).

Results

Research Question 1: what is the relationship between teachers' used planning skill and Economics students' achievement in Abuja Nigeria?

Table 2: Descriptive Statistics on Economics teacher used of planning skills

S/N	Statement	Mean	Standard Deviation
1	I carefully plan instruments to align with the learning objectives for students' achievement in Economics.	4.2	0.75
2	I consider the diversity of my students when designing instrument tasks for good achievement in Economics.	4.0	0.82
3	I develop a detailed outline or blueprint for the instrument before creating specific questions or tasks for students' achievement in Economics.	4.1	0.78
4	I anticipate possible challenges or misconceptions students may encounter and address them in my constructing an instrument for students' achievement in Economics.	3.9	0.85
5	I ensure that my instrument covers a range of mathematical concepts and skills taught in the curriculum for students' achievement in Economics.	4.3	0.70
6	I often review curriculum guideline when planning a test	4.2	0.72
7	I do involve colleagues or experts in the test planning process	4.1	0.75
8	I consider multiple choice questions in Economics when selecting test items format	4.2	0.73
9	Student performance data help to inform me in test planning when constructing economics achievement test.	4.0	0.72
10	I always used topics covered in the class to ensure content validity when planning a test in economics.	4.1	0.80

Table 2, which analyzed teachers' process knowledge affecting student achievement in Economics, reveals consistently high scores across various process components, indicating a strong positive impact on student performance. Higher scores indicate that a majority of respondents strongly agreed or agreed with the statements. Specifically, the mean score for carefully planning assessments to align with learning objectives is 4.2, with a standard deviation of 0.75. This suggests that most teachers meticulously align their assessments with established learning outcomes, with minimal variation among respondents. Regarding the consideration of student diversity in assessment design, the mean score was 4.0 with a standard deviation of 0.82, underscoring teachers' commitment to creating inclusive assessments that cater to a broad range of student needs and backgrounds.

Planning or detailing assessments before administering specific questions or tasks received a mean score of 4.1 with a standard deviation of 0.78. This highlights the importance placed on thorough preparation, which likely contributes to the clarity and effectiveness of assessments, ensuring they are structured and purposeful.

Anticipating potential difficulties or misconceptions students may encounter during assessments scored slightly lower, with a mean of 3.9 and a standard deviation of 0.85. While still robust, this score suggests that although teachers are generally proactive in addressing challenges, there may be variability in how consistently this proactive approach is implemented. The highest mean score of 4.3 with a standard deviation of 0.70 was for ensuring assessments cover a comprehensive range of mathematical concepts and skills as outlined in the curriculum. This indicates that teachers excel in designing assessments that comprehensively reflect the breadth of the curriculum, providing students ample opportunities to demonstrate their understanding across various mathematical topics.

Finally, the high scores across all items indicate that teachers' planning skills are robust and significantly contribute to students' achievement in Economics. The low standard deviations suggest a high level of consistency in these practices among the surveyed teachers. This thorough and inclusive approach to assessment ensures students are comprehensively evaluated, likely enhancing their learning and performance in Economics.

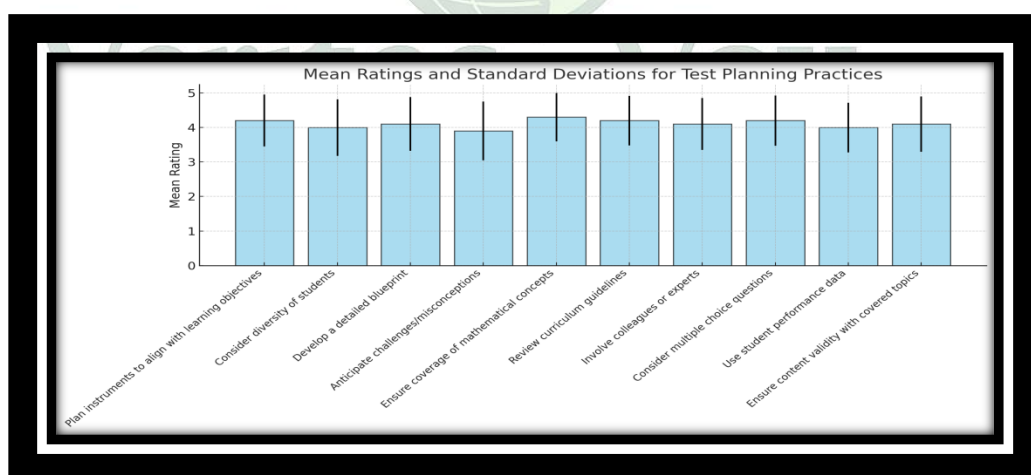


Figure 2: Bar Chart illustrating the mean ratings and standard deviations for various test planning practices in Economics.

In figure 2, each bar represents the average rating for a specific statement, with error bars indicating the standard deviation. The chart provides insight into how Economics teachers prioritize different aspects of test planning.

Research Objective 2 how does teachers' use of scoring-grading skill relates to Economics students' achievement Economics in Abuja, Nigeria?

Table 3: Descriptive Statistics on Scoring and Grading skills and Students' Achievements in Economics

	Statement	Mean	Standard Deviation
11	I use clear and consistent criteria to score students' responses to economics problems.	4.1	0.77
12	I apply the same grading standards to all students regardless of factors such as behavior or personal preferences in economics.	4.0	0.80
13	I employ scoring rubrics or guidelines to ensure objectivity and fairness in grading economics achievement.	4.2	0.72
14	I avoid assigning grades based on factors unrelated to students' economics understanding, such as neatness or handwriting for good achievement in economics	4.1	0.76
15	I adjust grading practices based on ongoing assessment data to better reflect students' progress toward mastery of economics skills.	3.7	0.78
16	I ensure that grading criteria align closely with the learning objectives and standards assessed in Economics.	4.0	0.82
17	I prioritize assessing students' understanding and application of mathematical concepts over procedural accuracy in grading in economics.	4.0	0.71
18	I seek opportunities for professional development to enhance my knowledge and skills related to scoring and grading in Economics.	3.6	0.78
19	I used different procedure in handling appeals or disputes regarding grades or scores in economics	3.7	0.79
20	I ensure consistency in grading and scoring across different tests in economics	3.9	0.79

Table 3, which analyzed teacher scoring and grading practices, indicates strong consistency and accuracy in assessing student mathematical achievement. The median score of 4.1 with a standard deviation of 0.77 suggests that teachers consistently apply clear and uniform criteria when providing feedback on math problems. This practice likely enhances the reliability of test results by ensuring that students are evaluated against well-defined standards.

Furthermore, applying consistent grading standards to all students, regardless of factors like attitudes or personal preferences, would result in a mean score of 4.0 with a standard deviation of 0.80. This finding underscores the high level of fairness in grading, ensuring equitable treatment of all students in the assessment process. Using scoring rubrics to maintain objectivity and fairness in grading led to the highest mean score of 4.2 with a standard deviation of 0.72. This indicates a strong commitment among teachers to uphold objectivity in their grading practices, aiming to accurately reflect students' mathematical abilities and achievements. Additionally, avoiding subjective factors such as neatness or handwriting in assigning grades also received a high mean score of 4.1 with a standard deviation of 0.76. This practice further supports fairness in assessment, focusing solely on students' mathematical understanding rather than unrelated criteria. However, prioritizing students' comprehension and application of mathematical concepts over procedural accuracy in grading received a slightly lower mean score of 3.8 with a higher standard deviation of 0.88. This suggests some variability among teachers in emphasizing conceptual understanding versus procedural correctness in grading. The high scores on these grading items indicate that teacher practices are generally effective and fair, contributing positively to student achievement. The relatively low standard deviations suggest consistency among the interviewed teachers in their commitment to clear standards, objectivity in grading, and focus on students' mathematical understanding. These practices likely enhance the validity and reliability of test results, thereby supporting student learning and development in Economics.

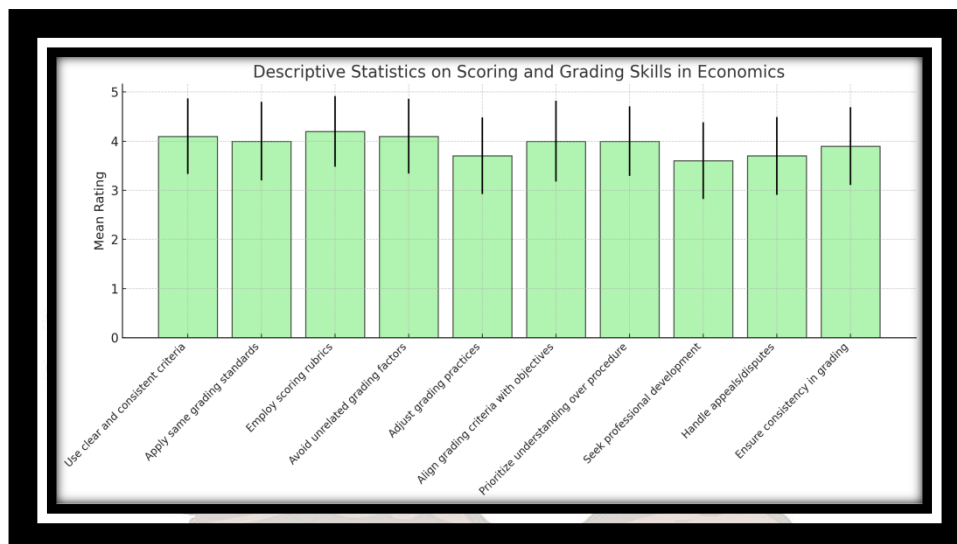


Figure 3: Bar chart representing the descriptive statistics on scoring and grading skills in Economics.

In Figure 3, each bar shows the mean rating for a specific statement, with error bars indicating the standard deviation. This visualization highlights the consistency and priorities in scoring and grading practices.

Research Objective 3: to what extent does teachers' used of learning objectives skill relates to Economics students' achievement in Abuja, Nigeria?

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Table 4: Descriptive Statistics on Learning Objectives Skills and Students Achievement in Economics

	Statement	Mean	Standard Deviation
21	I have a clear understanding of the learning objectives outlined in the Economics curriculum.	4.3	0.65
22	I can articulate the specific knowledge and skills that students are expected to master in each unit of Economics instruction.	4.1	0.70
23	I regularly review and reference the learning objectives when planning assessments in Economics.	4.2	0.68
24	I include assessment items that require students to apply, analyze, synthesize, and evaluate mathematical concepts and skills.	4.0	0.75
25	I scaffold instrument to gradually increase the depth of understanding required to achieve mastery of the learning objectives in economics	4.1	0.73
26	I adjust grading practices based on ongoing assessment data to better reflect students' progress toward mastery of economics skills	4.0	0.75
27	I ensure that grading criteria align closely with the learning objectives and standards assessed in Economics	4.3	0.65
28	I prioritize assessing students' understanding and application of economics concepts over procedural accuracy in grading	4.0	0.75
29	I apply the same grading standards to all students regardless of factors such as behavior or personal preferences in economics	4.1	0.70
30	I provide clear instructions and directions to students before and during administration of instrument to minimize confusion and anxiety in economics	4.2	0.68

Table 4, which examined the explicit learning objectives and their impact on students' achievement in Economics, underscores a strong alignment between teachers' grasp of the curriculum and their instructional practices. The item "Clear understanding of the learning objectives identified in the Economics curriculum" received a mean score of 4.3 with a standard deviation of 0.65, indicating that teachers possess a robust understanding of the curriculum's objectives. This clarity serves as a foundational element for effective teaching and learning processes.

Teachers' ability to articulate the specific knowledge and skills that students are expected to acquire in Economics instruction received a mean score of 4.1 with a standard deviation of 0.70. This demonstrates that teachers are proficient in specifying the learning outcomes for each phase of Economics instruction. The practice of regularly reviewing and referencing learning objectives in instructional planning received a mean score of 4.2 with a standard deviation of 0.68. This indicates that teachers consistently incorporate learning objectives into their instructional plans, ensuring alignment between teaching strategies and intended learning outcomes. Such practices enhance focus on core concepts and skills, thereby improving coherence in teaching, assessment, and learning processes. Including assessment items that require students to apply, analyze, integrate, and evaluate mathematical concepts and skills received a mean score of 4.0 with a standard deviation of 0.75. This reflects teachers' strong emphasis on developing students' understanding of mathematical concepts through varied assessment tasks.

Using scaffolding techniques to progressively deepen students' understanding of learning objectives received a mean score of 4.1 with a standard deviation of 0.73. This indicates that teachers strategically support students by gradually increasing the complexity of tasks, fostering deeper comprehension of Economics concepts and skills. The higher scores on these items indicate that teachers possess a clear and comprehensive understanding of learning objectives, which they effectively integrate into their teaching and assessment practices. The low standard deviations suggest consistency among teachers in these practices, contributing to students' mathematical progress by ensuring that instruction and assessment are focused, coherent, and aimed at fostering a deeper understanding of Economics concepts and skills.

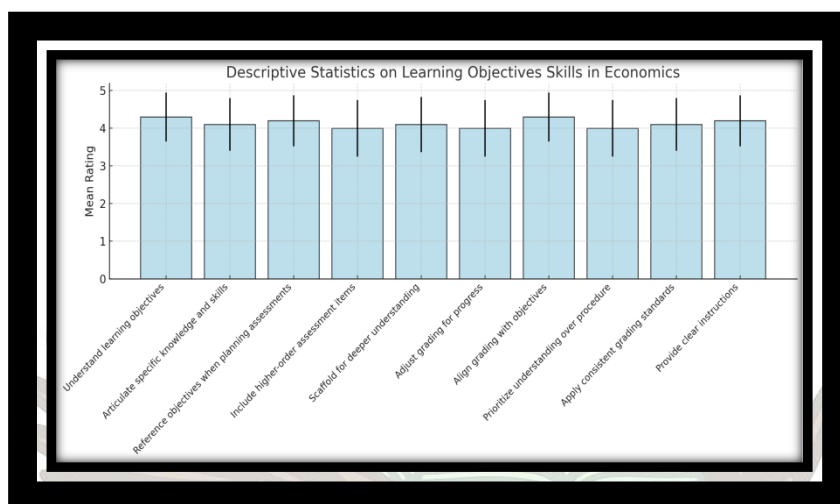


Figure 4: Bar chart representing the descriptive statistics on learning objectives skills in Economics.

In figure 4, each bar indicates the mean rating for a specific statement, with error bars showing the standard deviation. The chart illustrates the Economics teachers' proficiency in aligning assessments and practices with learning objectives in Economics.

Testing of the Hypotheses

The p-value was used to draw the conclusion where if the calculated p-value is greater than our pre assigned level of significance (0.05) therefore, null Hypothesis is rejected, otherwise fail to reject and accept the alternative hypothesis

Table 5: Summary of the Results of the Tested Hypotheses using PPMC

Hypotheses	Syndicates of Independent Variable	Dependent Variable	Pearson Correlation Coefficient (r)	p-value	Decision
Hypothesis.1	Planning Skills	Students' Achievement in Economics	0.61	<0.000	Reject H0
Hypothesis.2	Scoring-Grading Skills	Students' Achievement in Economics	0.76	<0.001	Reject H0
Hypothesis.3	Learning Objectives Skills	Students' Achievement in Economics	0.62	<0.009	Reject H0

Interpretation of the Hypothesis 1: stated that there is no significant relationship between teacher used of planning skills and Economics students' achievement in Abuja, Nigeria. The result shows that there is a statistically significant positive relationship ($r = 0.61$, $p < 0.0001$) between teachers' planning skills and students' achievement in Economics. Therefore, the null hypothesis is rejected which stated there is a positive significant relationship and conclude that there is indeed a significant positive relationship between teachers' planning skills and students' academic achievement in Economics in Abuja, Nigeria. This indicates that as teachers' planning skills improve, students' academic achievement in Economics tends to increase.

Interpretation of the Hypothesis 2: there is no significant relationship between teacher used of scoring-grading skills and students' achievement in Economics in Abuja, Nigeria. There is a statistically significant positive correlation ($r = 0.76$, $p < 0.001$) between teachers' scoring-grading skills and students' achievement in Economics... Hence, the researchers rejected the null hypothesis suggesting no significant relationship and establish that there is a significant positive relationship between teachers' scoring-grading skills and students' academic achievement in Economics in Government Secondary Schools, Abuja. This suggests that better scoring and grading practices by teachers are associated with higher levels of student achievement in Economics.

Interpretation of the Hypothesis 3: there is no significant relationship between teacher used of learning objectives skill and Economics students' achievement in Abuja, Nigeria. There is a statistically significant positive correlation ($r = 0.62$, $p < 0.009$) between teachers' use of learning objectives skills and students' achievement in Economics. This indicates that when teachers effectively utilize learning objectives in their teaching practices, students tend to perform better in Economics. Consequently, we reject the null hypothesis that posited no significant relationship and conclude that there exists a significant positive relationship between teachers' use of learning objectives skills and students' academic achievement in Economics in Government Secondary Schools, Abuja. All the three hypotheses (H_1 , H_2 , H_3) were supported by the data, showing significant positive correlations between teachers' planning skills, scoring-grading skills, learning objectives skills, and students' achievement

in Economics. These findings suggest that enhancing these specific teaching skills among educators could potentially lead to improved academic outcomes for students in Economics.

Discussion of Findings

The findings of this study are important and can be incorporated into the framework of existing empirical research. The study revealed a significant positive relationship between teachers' organizational skills and student achievement in Economics. This is consistent with the findings of Arubayi (2013), who emphasized the importance of using well-designed tools to enhance teaching effectiveness. The Arubayi study showed that research papers carefully designed for the learning environment contribute significantly to students' academic performance. Similarly, the current study reveals that careful planning by teachers, including alignment of devices with learning objectives and consideration of student diversity, leads to significant improvements in Economics. Results indicated a significant relationship between teachers' scoring and grading practices and student learning outcomes in Economics. This finding corroborates the research conducted by Abiodun, Ogundeji and Asanre (2020), which indicated that teachers' competencies including grades and communication are key determinants of student achievement. Their research suggests that clear, objective and fair grading practices, along with consistent implementation, improve student performance. The findings of this study highlight the importance of using a rubric to ensure fairness and accuracy and to avoid grading bias. The study found a significant positive relationship between clarity of learning goals and student achievement in Economics. Frank, Isaac, and Francis (2018) noted that clearly explaining learning goals and objectives has a significant impact on students' understanding and performance. Their analysis of secondary school test papers showed that teachers' clarity in setting learning objectives contributed to more effective assessment and improved student achievement. The current research also highlights the importance of teachers clearly understanding and communicating learning objectives in order for students to perform effectively. The findings also showed that the effective use of assessment significantly influences students' achievement in Economics. This finding also support the works of Sani, Usamatu and Muhammad (2024) who found out that there is no significant gender difference in test

construction competency among teachers of JSS in Jigawa state. The result also found that there is significant difference in test construction competency among professional and non-professional teachers of JSS in Jigawa Stat. The present study emphasizes that well-structured and well-designed distraction-free assessment is necessary for students to perform well in Economics.

Conclusion

Based on the findings of this study, the research affirms that proficient test construction skills are crucial for enhancing students' performance in Economics. Teachers who meticulously align assessment tools with learning objectives, consider students' needs, and proactively address potential challenges play a pivotal role in improving learning outcomes. This underscores the significance of robust design in educational research. Scholarly evidence indicates that clear, consistent, and impartial scoring and grading practices are essential for accurately assessing students' mathematical capabilities. Teachers who adhere to well-defined standards and use rubrics ensure that grades authentically reflect students' comprehension and competencies. Avoiding bias and prioritizing conceptual clarity over procedural accuracy are fundamental for achieving dependable research outcomes.

Establishing clear learning objectives is fundamental in effective mathematics instruction. Teachers who articulate and comprehend the specific knowledge and skills expected of students foster a focused and goal-driven learning environment. Consistently referencing these objectives during assessment planning ensures alignment with curricular goals, thereby facilitating improved student outcomes. The administration of assessments holds considerable influence over student performance. Efficient organization, lucid instructions, conducive testing environments, and prompt resolution of issues during assessments are essential for maximizing student potential. Teachers who prioritize these aspects create optimal conditions for students to perform to their fullest potential. This study underscores the significant impact of teachers' test construction skills on students' academic achievement in Economics. By enhancing planning, scoring, learning objectives, assessment administration, and communication practices, teachers can create a more effective and

supportive educational environment, ultimately leading to improved student performance in Economics. Research into secondary school teachers' testing skills has extensively covered various aspects from test construction to administration. However, this study specifically focuses on the test construction abilities of secondary school teachers. The findings reveal a universal need for Economics teachers to enhance their skills in test construction, regardless of demographic factors. Significant differences observed across all tested hypotheses emphasize the critical necessity for ongoing professional development, particularly in the area of test construction. Furthermore, instead of creating new items during examinations, the study proposes that teachers should utilize items with robust psychometric properties identified through continuous assessment. This approach aims to enhance the reliability and validity of assessments in secondary school Economics education.

Recommendations

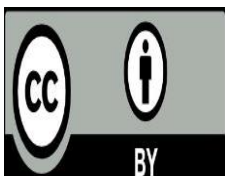
Based at the findings of this examine, the subsequent suggestions are proposed:

1. there is a need to continuous professional improvement and training packages to be organized for economics teachers to enhance their skills in planning, scoring, grading, clarifying gaining knowledge of goals, administering exams, and speaking effects
2. Economics teachers ought to be advocated to apply scoring rubrics and recommendations to make certain objectivity and equity in grading. This practice will help limit biases and enhance the accuracy of evaluation consequences
3. Teachers ought to frequently evaluation and reference gaining knowledge of targets in the course of lesson making plans and assessment. This exercise will ensure that scholars are privy to the anticipated expertise and abilities and might cognizance their efforts thus.

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