ASSESSMENT OF TESTING SKILLS AMONG TECHNICAL COLLEGE INSTRUCTORS FOR ENHANCED ACADEMIC EXCELLENCE IN EKITI STATE, NIGERIA

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Abstract
This study evaluated the testing skills of Technical college instructors in Ekiti State, focusing on planning, construction, administration, and assessment of students. The study used a descriptive survey design to survey 154 instructors in all the six GTC in Ekiti State. Purposive sampling technique was employed to collect data from all the instructors of the technical colleges in Ekiti State. Self-constructed instrument tagged "testing skills among technical college instructors questionnaire (TSTCIQ) was used for the study. The instrument was checked for face and content validity by tests and measurement experts at the Institute of Education, Ekiti State University, Ado-Ekiti. The reliability coefficient of the TSTCIQ yielded a value of 0.79 using Cronbach alpha. Data collected were analysed using descriptive statistics. The study found that technical college instructors have above-average test planning skills, but their use of test blueprints for content validity was below average. Based on the findings of the study, it was recommended that technical college instructors should maintain their test planning for excellent performance of students learning outcome. Also, the government, through Ekiti State Board for Technical and Vocational Education ***EKBTVE****, should put more effort into training and retraining of technical college instructors in test construction techniques.*

Keyword: Assessment, testing skills, technical colleges, technical instructors

Introduction

Assessment is crucial for educators to ascertain whether a student has comprehended a concept or requires further instruction, as well as to assess whether a programme achieves its declared objectives. As a vital component of the learning process, assessment should hold substantial weight within the educational structure. It encompasses a wide range of activities, both large-scale and classroom-based, such as tests, assignments, demonstrations, and other forms of evaluation that assist students in retaining and recalling what they have learned. Assessment is the process of evaluating the effectiveness of classroom learning experiences and the realization of lesson objectives as noted by Omirin and Jimoh (2022). This process involves ranking the performance of examinees based on their scores, from highest to lowest, with the primary goal of fostering and advancing learning.

Technical Colleges serve as Senior Secondary Schools (SSS) specifically established for the purpose of delivering technical and vocational education and training within the Nigerian educational system. This

experiential education encompasses a variety of technological fields including electrical installations, welding fabrication, vehicle body construction, garment making, plumbing, ceramics, and automotive mechanics, among others, all of which play a pivotal role in a nation's comprehensive development (Olanipekun, 2020). These institutions enroll students for the National Technical Certificate (NTC), National Business Certificate (NBC), Advanced National Technical Certificate (ANTC), and Advanced National Business Certificate (ANBC) examinations administered by NABTEB. In Ekiti State, the management of technical and vocational education is done by the Ekiti State Board for Technical and Vocational Education, an entity within the State Ministry of Education, Science and Technology. The board's objective is to spearhead the technical education sector in the state by fostering innovation and ensuring quality, with an emphasis on scholarly excellence, comprehensive practical training, and partnerships with relevant corporate entities.

Before students are registered for these national assessments, tests are indispensable as an assessment tool in schools. As Aborisade (2024) notes, "a test is a tool for extracting a sample of human behavior, which can be categorized into cognitive, affective, or psychomotor domains. Test results are typically used as a criterion for determining whether or not students advance to the next class and as a yardstick for evaluating schools and the teachers who work there, even though objectives offer an outline for administering and analyzing the results of classroom-based assessments. Teacher-made tests are widely used in Technical Colleges for assessing students' achievement, achieving various educational goals such as placement, formative, diagnostic, and summative evaluations.

Teacher - made tests, as the name suggests, are designed by subject teachers or instructors. They are used to evaluate student's progress in school, teacher – made achievement test are designed for local use. This implies that individual instructor constructs his test, administers it, scores it and interprets the scores without following a standard. Reko and Maxwell (2016) emphasize the need for technical instructors in Nigeria to be trained in testing skills to enhance enthusiasm and interest in Technical and Vocational education.

Testing skills encompass various skills used for planning, construction, administration, scoring, and interpretation of tests and assessments of students' performance for effective teaching and learning. Test construction skills are needed by instructors to develop and validate tests based on the stipulated principles of test construction. These skills help construct tests that are appropriate for different ages, abilities, and ensure students finish within a specified time frame. Although there is no consensus on the number of steps in teacher-made test construction and administration, tests experts strongly recommend the observance of the guidelines for planning, preparation, administration, and scoring. High-quality teacher-made tests are crucial to accurately assess students' performance. Agu, Onyekuba, and Anyichie (2013) emphasized the importance of psychometric qualities in test construction. Poor construction can lead to erroneous assessments, affecting instruction efficacy and performance.

Test planning is the process of outlining the course content, choosing the purpose of the test, selecting the appropriate testing methods and

formats (essay test, or objective test,) and developing a test schedule and timeline. The purpose of test planning is to guarantee that the testing procedure is methodical, thorough, and well-recorded, and that the outcomes are valid, dependable, and helpful in decision-making (Sasu, 2017; Zakariya, 2020).

In test construction, there should be more number of items in the preliminary draft than what is expected in the final draft, properly worded, cover all the stated objectives using table of specification, and apportioned the same marks. Test developers face challenges in creating effective test items that accurately measure cognitive content. A "table of specification" is used in the test construction phase to select relevant content, aligning it with Bloom's taxonomy of learning objectives. This helps ensure quality assurance and accurately represent students' learning, Amani et al. (2021)

Test administration shows how examiners relate with the examinees, the ability of the examiner to create a psychological and physical environment that are conducive to the students and also control factors that might interfere with reliable measurement. To produce reliable, useful and valid scores without much influence of guessing, NOUN (2022) suggested that all testees must be given a fair and equal chance to demonstrate their achievement of learning objectives. Test administration principles involve informing students in advance about the test date, time, conditions, format, scoring, grade, and the significance of results.

Test scoring is the process of assigning numerical values to test responses. The following principles improves scoring thus; create a scoring guide form, adhere to the marking scheme, scoring anonymously, confidentiality in scoring, score essay-type test when you are physically fit and mentally alert in a conducive environment.

Finally, interpreting test outcomes involves assigning grades to test responses, providing parents and students with a clear understanding of their learning progress. This process helps identify strengths and weaknesses, enabling proactive improvement measures, and can be complex depending on the test's purpose.

The issue of assessment of testing skills among Technical College instructors in Ekiti State has not attracted much attention from researchers. For instance, Agu, et al. (2013) developed a Test Construction Skill Inventory (TCSI) to assess Anambra State secondary school teachers' competencies in constructing classroom-based tests while Ubi and Ibe (2020) conducted a study on the evaluation of the implementation of testing skills among secondary school educators in the Calabar Education Zone of Cross River State. While Agu et al. (2013) were of the opinion that a large number of classroom-based assessments in Nigeria are invalid and unreliable due to teachers' inexperience with test design and administration, Ubi and Ibe (2020) averred that with the exception of test administration, the utilization of testing skills among secondary school teachers in the Calabar Education Zone of Cross River State, Nigeria was not significantly positive. The seeming dearth of research on testing skills assessment in Technical Colleges in Ekiti State prompted the present study with special reference to test planning, construction, administration, scoring, and student performance assessment.

Research Questions

Based on the problem stated above, two research questions were raised to guide the study:

a) Do Technical College instructors have the requisite skills for test planning?
b) Do Technical College instructors have the requisite skills for test construction?

Methodology

The study adopted descriptive research design of the survey type to collect data so as to make informed inferences about the characteristics and behaviour of the population under investigation. The study was designed to assess testing skills among Technical College Instructors in Ekiti State. The population of the study was made up of all 154 instructors in the six government – owned Technical Colleges spread across the three senatorial districts in Ekiti State. The population comprised of 63 female instructors and 91 male instructors. This include all the instructors teaching basic subjects and trade - related subjects. Purposive sampling technique was employed to collect data from all the instructors of the Technical Colleges in Ekiti State due to the fact that all the instructors are few and accessible. The study consisted of all the 154 instructors in the six state government – owned Technical Colleges located in the three senatorial districts in Ekiti State.

Research Instrument

The instrument used for this study was a self - constructed questionnaire titled Testing Skills among Technical College Instructors Questionnaire (TSTCIQ)." The questionnaire consisted of three sections labelled "sections A-C. Section A contained the socio-demographic data of respondents while Section B addressed how instructors plan for test. In Section C, respondents were to response to items related to test construction practices. Apart from Section A, other sections contained close - ended questions scaled using likert-type scale of SA (Strongly Agree), A (Agree), D (Disagree), and SD (Strongly Disagree). The mean benchmark was 2.50. This was derived using SA (Strongly Agree) = 4, A (Agree) =3, D (Disagree) = 2, and SD (Strongly Disagree) = 1. The average of 2.50 was obtained by dividing the sum of the Likert scale by 4.

Validity of the Instrument

The instrument used for data collection was checked for face and content validity by Tests and Measurement experts at the Institute of Education, Ekiti State University, Ado-Ekiti.

Administration of the Instrument.

The instrument was administered by the researcher and a research assistant. The research assistant was adequately trained on the composition of the instrument and was also briefed on the objectives of the study. All the "154 copies of the questionnaire administered were completely filled and returned. Thereby, representing 100% return rate.

Results

The data collected were subjected to statistical analysis using frequency count and percentage.

Research Question 1: Do Technical College instructors' possess the skill in test planning?

Table 1: Mean rating score of Technical College instructors' skill in test planning.

S/N	TEST PLANNING	SA	A	D	SD	MEAN
1	Is it essential to decide on the purpose of the test before constructing it?	73 (47.4)	74 (48.1)	6 (3.9)	1 (0.6)	3.42
2	Should the test outline the course content of the test to be measured?	54 (35.1)	86 (55.8)	9 (5.8)	5 (3.2)	3.23
3	Is selecting the question type (either essay or objective test items) when planning the test items needed?	54 (35.1)	76 (49.4)	21 (13.6)	3 (1.9)	3.18
4	Is it necessary to decide on the class you want to test?	58 (37.7)	68 (44.2)	22 (14.3)	6 (3.9)	3.16
5	Should the methods of testing students be decided in test planning?	67 (43.5)	78 (50.6)	8 (5.2)	1 (0.6)	3.37
6	Should drafts of the items be written following the guidelines for the selected item type?	56 (36.4)	71 (46.1)	22 (14.3)	5 (3.2)	3.16
7	Is plotting the outline of the appropriate levels necessary for effective test items?	43 (27.9)	68 (44.2)	41 (26.6)	2 (1.3)	2.99
	Grand Mean					**3.22**

Mean benchmark = 2.50

From Table 1 above, it can be seen that the grand mean (3.22) is above the mean benchmark (2.50). This implies that the mean rating score of Technical instructors' skill in test planning was above average, indicating that the instructors have adequate knowledge of test planning.

Question 2: Do Technical College instructors' possess the skills for test construction?

Table 2: Mean rating score of Technical College instructors' skill in test construction.

S/N	TEST CONSTRUCTION	SA	A	D	SD	MEAN
8	Is a table of specification or test blueprint essential in constructing valid test items?	33 (21.4)	12 (7.8)	39 (25.3)	70 (45.5)	2.05
9	Is it necessary to select the taxonomy to be used before constructing test items?	48 (31.2)	14 (9.1)	27 (17.5)	65 (42.2)	2.29
10	Is aligning questions with learning outcomes crucial for valid assessment?	17 (11.0)	1 (0.6)	67 (43.5)	69 (44.8)	1.78
11	Should instructions be clearly stated on test items?	19 (12.3)	3 (1.9)	67 (43.5)	65 (42.2)	1.84
12	Is it ideal to set questions from previous past questions?	35 (22.7)	8 (5.2)	33 (21.4)	78 (50.6)	2.00
13	Should questions be used directly as stated in textbooks?	52 (33.8)	16 (10.4)	31 (20.1)	55 (35.7)	2.42
14	Is seeking help from colleagues beneficial for constructing test items?	45 (29.2)	28 (18.2)	25 (16.2)	56 (36.4)	2.40
15	Should colleagues in the subject area vet test items?	44 (28.6)	19 (12.3)	23 (14.9)	68 (44.2)	2.25
16	Is reproducing the test necessary to make decisions on layout and format?	39 (25.3)	13 (8.4)	30 (19.5)	72 (46.8)	2.12
17	Should the time allocated for test items be considered during test construction?	18 (11.7)	3 (1.9)	51 (33.1)	82 (53.2)	1.72
18	Do you try to solve the questions yourself to determine the time required?	23 (14.9)	1 (0.6)	48 (31.2)	82 (53.2)	1.77
19	Should the questions be reviewed for clarity before administration?	19 (12.3)	3 (1.9)	67 (43.5)	65 (42.2)	1.84
20	Is setting more test items than needed a good practice?	45 (29.2)	10 (6.5)	41 (26.6)	58 (37.7)	2.25
21	Should selected questions be arranged in a logical order?	29 (18.8)	7 (4.5)	45 (29.2)	73 (47.4)	1.95
22	Are necessary corrections on the items ideal before administration?	10 (6.5)	3 (1.9)	57 (37.0)	84 (54.5)	1.60
23	Should questions be written at least two weeks before the test date?	33 (21.4)	15 (9.7)	34 (22.1)	72 (46.8)	2.06
	Grand Mean					**2.02**

Mean benchmark = 2.50

Table 2 revealed the grand mean (2.02) is below the mean benchmark (2.50) then. This implies that the mean rating score of Technical College instructors' ability in using test construction skills such as the use of test blueprint for content validity of test was below average.

Discussion

The study showed that Technical instructors' skill in test planning was above average. It implies that the Technical instructors' possession of essential knowledge and skills in test planning in terms of**:** outlining the course content, choosing the purpose of the test, selecting the appropriate testing methods and formats (essay test, or objective test,) and developing a test schedule and timeline, ensuring outcomes validity, dependable, and helpful in decision-making is given priority attention. Hence, instructors can genuinely measure students' understanding of a particular topic with

accuracy and consistency when the test is well constructed. The finding negates the work of Ubi, and Ibe (2020) which showed that, except for test administration, the application of testing skills among secondary school teachers was not significantly positive. The finding is also at variance with the research study carried out by Ekpoudom (2014) which revealed that testing skills among secondary school teachers was not significantly high.

The study showed that the Technical College instructors' ability in using test construction skills such as the use of test blueprint for content validity of test was below average. This is an indication that Technical instructors' skills' knowledge regarding correlation between the content areas and the objectives is poor**.** This finding is in agreement with the view of Crooker and Algina (2018) that, if teaching and learning objectives are to be met, then test construction skills and ability are essential tools that each educator must possess. However, the finding is in agreement with the studies by Hamafyelto, Hamman-Tukur and Hamafyelto (2015), Sasu (2017), Salihu (2019), Zakariya (2020), Amani, Kitta, Kapinga and Mbilinyi (2021) and Fehintola (2022). They discovered that majority of secondary school teachers do not possess requisite test construction skills. Similarly, Abe and Adu (2016) posited that teachers generally construct poor items and that a typical subject teacher in a secondary school cannot construct good multiple-choice test items.

Conclusion and Recommendations

Based on the findings of this study, it was concluded that Technical College Instructors' skill in test planning was above average while their use of test blueprint for content validity of the instrument was below average. Hence, continuous improvement in test development and construction is imperative for the Technical College instructors.

The following recommendations were made based on the above findings:

1. Technical College instructors should maintain their test planning for excellent performance of students learning outcome.
2. The government, through the Ekiti State Board for Technical and Vocational Education, should put more effort into training and retraining technical instructors" in test construction techniques termly by bringing in test experts from reputable academic institutions to conduct regular teacher workshops and seminars to enhance their skills in construction.
3. Government should recruit experienced and professionally qualified teachers in Technical Colleges geared towards improving their testing skills.

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