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**CONTENT VALIDITY ANALYSIS OF SSCE FINANCIAL
ACCOUNTING MULTIPLE-CHOICE TESTS: A COMPARATIVE STUDY
OF WAEC, NECO, AND NABTEB IN 2020**

***Abstract:** the purpose of this study was to assess the content validity of the multiple-choice Financial Accounting Senior School Certificate Examination (SSCE) tests given by the National Business and Technical Examination Board (NABTEB), West African Examinations Council (WAEC), and National Examinations Council (NECO). It primarily assessed how well the test items represented the taxonomy and subject matter of the foundational Financial Accounting program. The 2020 exam items were used as the sample, and the population consisted of all SSCE multiple-choice Financial Accounting question papers from WAEC, NECO, and NABTEB. The study was led by a single hypothesis and three research questions. The main tools for gathering data*

were the SSCE exam papers and the Financial Accounting curriculum. To ascertain content validity, 160 multiple-choice questions were examined using the coefficient of validity and percentage difference. The findings showed that WAEC (0.80), NECO (0.78), and NABTEB (0.79) had good validity indices, with WAEC having the highest coefficient. Findings, however, showed that several subjects, such "Introduction to Accounting" and "Branch Account", were either under-represented or completely left out, indicating disparities in topic representation.

Keywords: *assessment, multiple-choice tests, financial accounting, content validity, SSCE, NECO, NABTEB.*

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**АНАЛИЗ СОДЕРЖАТЕЛЬНОЙ ОБОСНОВАННОСТИ ТЕСТОВ SSCE
ПО ФИНАНСОВОМУ УЧЕТУ С МНОЖЕСТВЕННЫМ ВЫБОРОМ:
СРАВНИТЕЛЬНОЕ ИССЛЕДОВАНИЕ WAEC, NECO И NABTEB
В 2020 ГОДУ**

***Аннотация:** целью исследования было оценить достоверность содержания тестов на получение сертификата об окончании средней школы по финансовому учету с несколькими вариантами ответов (SSCE), проводимых Национальным экзаменационным советом по бизнесу и техническим вопросам (NABTEB), Западноафриканским экзаменационным советом (WAEC) и Национальным экзаменационным советом (NECO). В первую очередь, рассматривалось несколько тестовых заданий, которые отражают таксономию и предметную область базовой программы финансового учета. В качестве выборки были использованы экзаменационные задания 2020 года из всех контрольных работ SSCE по финансовому учету с несколькими вариантами ответов от WAEC, NECO и NABTEB. В основу исследования была положена одна гипотеза и три исследовательских вопроса. Основными инструментами для сбора данных были экзаменационные работы SSCE и учебная программа по финансовому учету. Для проверки достоверности содержания были проанализированы 160 вопросов с несколькими вариантами ответов с использованием коэффициента достоверности и процентной разницы. Результаты показали, что WAEC (0,80), NECO (0,78) и NABTEB (0,79) имели хорошие показатели достоверности, причем WAEC имел самый высокий коэффициент. Однако некоторые предметы, такие как «Введение в бухгалтерский учет» и «Бухгалтерский учет филиала», были либо недостаточно представлены, либо полностью исключены, что указывает на различия в представленности тем.*

***Ключевые слова:** оценка, множественные варианты, финансовый учет, достоверность содержания, SSCE, NECO, NABTEB.*

Introduction

The more thorough the information obtained throughout the teaching and learning process, the better instructors' perspectives on students' knowledge and potential gaps. This technique is known as assessment. According to Black and William (2008), effective assessment is critical for tracking student progress and offering feedback to

enhance learning outcomes. Because learning is fundamentally dynamic and unpredictable, evaluation is an essential tool for making adaptive changes to training. Assessment of students' learning outcomes is essential in the educational industry. Scholars have investigated its different aspects and classifications.

Baku (2008) defines assessment as the systematic gathering of information about students' knowledge, abilities, beliefs, and attitudes using techniques like as observation, testing, and examinations. It evaluates the extent to which educational goals and objectives are met. Similarly, Oyegoke (2017) describes assessment as an organised procedure that determines students' knowledge and competences gained during a teaching-learning experience. Ekpuyama (2017) broadens this approach, characterising assessment as a catch-all word for the various techniques educators employ to document academic preparedness, skill development, and learning progression.

Huba and Freed (2000) define assessment as the methodical gathering, examination, and use of information regarding educational programs to improve student learning. This renders assessment an essential component of the educational system, with a critical role in planning, curriculum creation, and evaluating instructional efficacy. Particularly, in Nigeria and Ghana, evaluation is viewed as a means of measuring the extent to which education achieves its stated objectives (Durowoju, 2017; Daramola & Obimuyiwa, 2023). According to Black and William (2008), the advantages of assessment involve giving helpful recommendations to educators, administrators, and legislators, supporting changes to instructional practices, inspiring students, and encouraging continual development in educational institutions.

The assessment and evaluation of pupils' learning is based on educational objectives. According to Olatunji (2007), assessment is essential for planning educational activities, creativity in curriculum, and monitoring the effectiveness of educational assets. However, Abiri (2015) warns that assessments used for choosing or certification are frequently subjected to intense public scrutiny, emphasising the need of instrument validity and reliability. In general, assessments may be divided into two categories: formative assessments, which measure learning, as well as summative assessments, which measure learning. The goal of assessment of learning is to utilise tests or exams

to gauge students' performance at the end of a lesson. According to Durowoju (2017), this kind of evaluation has several uses, such as certifying students, assessing educational policies, keeping an eye on the calibre of educational institutions, and guaranteeing accountability. Summative tests are administered in Nigeria by the three main examination bodies: the National Examinations Council (NECO), the West African Examinations Council (WAEC), and the National Business and Technical Examinations Board (NABTEB). These organisations create standardised assessments with a focus on reliability and validity to guarantee precise assessment of student performance, in line with national educational goals and curriculum.

The multiple-choice test (MCT), an objective exam style, is one that is frequently used in summative evaluations. MCTs are items that ask students to select the right response from a selection of reasonable options, according to Ogunjimi (2019). A multiple-choice question's structure consists of a stem, which is the problem or question; choices, which are the potential solutions; a key, which is the right answer; and distractors, which are erroneous but believable possibilities. Because they reduce subjectivity in scoring, MCTs are seen to be effective, equitable, and trustworthy instruments for evaluating a wide variety of knowledge (Kolawole, 2005; Osunde, 2009). Furthermore, examination boards like WAEC and NECO, which seek to evaluate how well students meet the goals specified in national curricula, frequently use MCTs (Jimoh et al., 2020). These assessments are standardised and follow test construction guidelines to ensure consistency and equity for a range of student demographics.

One of the fundamental courses studied via summative evaluations in the Nigerian educational system is financial accounting. Financial accounting, according to Asaolu (2002), is the act of gathering, evaluating, and interpreting financial data in order to convey company information. The subject is very relevant both academically and practically, giving students' abilities that they may use in a variety of professional settings. However, research has shown disparities in topic representation and compatibility with educational objectives, raising questions regarding the content validity of Financial Accounting test topics (Oguguo et al., 2020). This emphasises how crucial it is to make

sure exam questions accurately represent the curriculum and encourage fair evaluation of students' skills and knowledge.

A key component of any evaluation instrument is validity, which is essential to accomplishing this goal. The degree to which a test captures what it is supposed to capture is known as its validity (Ogunjimi, 2019). Because it assesses whether test questions accurately reflect the subject matter and related learning objectives, content validity is one of the most important types of validity for educational assessments. According to Babbie (2007), content validity is the extent to which an evaluation covers the whole range of the construct it is intended to evaluate. Achieving high content validity in standardised testing necessitates careful matching of test items to the goals and curriculum of the topic being assessed.

A number of issues are brought to light by empirical research on the content validity of Nigerian tests. For example, Ogunjimi (2008) discovered that WAEC items were more valid than NECO ones. Similar to this, Daramola et al. (2017) found discrepancies in how Economics material was represented in continuous assessments, pointing to discrepancies in grade-level content alignment. These results highlight the necessity of thorough content analysis and adherence to accepted validity standards in order to improve the calibre and equity of evaluations. The purpose of this study is to determine the extent of content validity indices for the 2020 SSCE Financial Accounting multiple-choice test administered by WAEC, NECO, and NABTEB. As a result, we addressed the following study questions:

1. What are the validity coefficients for 2020 SSCE Financial Accounting multiple-choice exam items administered by WAEC, NECO, and NABTEB?
2. How do the validity coefficients of the 2020 SSCE Financial Accounting multiple-choice exam questions differ across WAEC, NECO, and NABTEB?
3. Do multiple-choice exam questions from WAEC, NECO, and NABTEB accurately represent the Financial Accounting curriculum content?

This hypothesis was also investigated.

H_0 There is no significant difference among the validity indices of the 2020 SSCE Financial Accounting multiple-choice test conducted by WAEC, NECO and NABTEB

Methodology

This study used an analytic survey research approach, which Asim, Idaka, and Eni (2017) define as the methodical collection and analysis of data that already exists in recorded media such as written texts, photographs, or artefacts. This design was chosen because it matches with the study's goal of assessing and analysing current Financial Accounting multiple-choice test questions from the 2020 Senior Secondary Certificate Examinations (SSCE) administered by WAEC, NECO, and NABTEB. Using this method, the study attempted to determine the extent to which these assessments represent the subject stated in the Financial Accounting curriculum.

The study's population included all 160 multiple-choice exam questions from the 2020 SSCE Financial Accounting question papers set by WAEC, NECO, and NABTEB. The sample was selected from the Financial Accounting question papers used in the May/June (WAEC), July/August (NECO), and June/July (NABTEB) examination cycles. The sample was accurate to reflect the population since it contained every applicable test items from the prescribed examinations.

The purposive sampling strategy was used in this investigation. This non-probabilistic sample strategy was used because the researchers intentionally chose the most current Financial Accounting exam papers from the 2020 SSCE conducted by WAEC, NECO, and NABTEB. The selection of these specific test papers was determined on their compatibility with the study aims and ability to give insights on the content validity of the multiple-choice elements. The major data source were the Financial Accounting multiple-choice question papers from the 2020 SSCE. These papers were collected in their entirety and analysed without modification to verify the validity and trustworthiness of the results. The study used the published syllabus and syllabi for Financial Accounting as defined by the examination authorities to assess the test items' compliance with the intended learning goals.

To answer the research question, the study used the Percentage Difference Coefficient of Validity (PDCV) to evaluate the congruence between the distribution of test questions and curricular content. This technique assesses the extent to which test items provide a fair and thorough sample of the topic curriculum. The validity coefficient

was evaluated according to Abiri's (2007) standards, which state that coefficients close to unity reflect more content validity. The PDCV method was used for contrasting the share of questions produced from each curricular topic to the weight allocated to those topics in the syllabus. The findings were presented in tabular form to allow for comparability among the three separate examination bodies.

The analytic survey research design, along with purposive selection and careful data analysis, demonstrated that the study's methodology was reliable and acceptable for assessing content validity. The inclusion of the whole population of test items in the sample reduced any sampling bias, while the use of established validity standards offered an objective framework for evaluating the results. This technique adequately addressed the research topic while also allowing for significant comparisons between the three examining bodies.

Result of the findings

The major goal of this study was to determine the content validity indices for the 2020 SSCE Financial Accounting multiple-choice exam questions offered by WAEC, NECO, and NABTEB. To accomplish this, the Percentage Difference in Coefficient of Validity was derived through contrasting the test items' respective percentage weightings to the Financial Accounting curriculum material. Abiri's (2007) criteria was used as a baseline for validity analysis, with coefficients near unity indicating higher degrees of validity. Table 1 shows the estimated validity coefficients for each examining body.

Table 1

Validity Coefficients of 2020 SSCE Financial Accounting multiple-choice test conducted by WAEC, NECO and NABTEB

Examination Body	Validity Coefficients
WAEC	0.80
NECO	0.78
NABTEB	0.79

The findings show that the validity coefficients for the Financial Accounting multiple-choice exam items were 0.80 for WAEC, 0.78 for NECO, and 0.79 for NABTEB. These coefficients indicate that all three testing organisations achieved good content validity, with WAEC having the best congruence of test items with the curriculum. The

somewhat lower indices for NECO and NABTEB indicate some gaps in coverage, but their values are still within acceptable ranges for content validity.

Discussion

The outcomes of this study offer clarification as to the degree to which which the 2020 SSCE Financial Accounting multiple-choice exam items represent a thorough sampling of the required curriculum topics. The validity coefficients, which range from 0.78 to 0.80, suggest good alignment, highlighting WAEC, NECO, and NABTEB's attempts to provide examinations that mirror the learning goals indicated in their syllabuses. However, the observed differences amongst examining organisations show possibilities for future development. A closer look at the syllabuses found that all three exams get their test items from 15 basic themes that are judiciously dispersed over three academic years. As advised by Gronlund (1976), the weights allocated to each topic are commensurate to the teaching time provided. Despite this congruence, the minor discrepancies in validity coefficients indicate inconsistencies in the use of these concepts throughout test development.

WAEC's greatest validity coefficient of 0.80 indicates a strict adherence to a Table of Specifications, a vital instrument for ensuring thorough coverage of curricular material throughout test development. This data supports Ogunjimi's (2008) statement that WAEC items often have more validity than their equivalents. In comparison, NECO's coefficient of 0.78, while good, may represent modest gaps in content coverage or discrepancies in item distribution. NABTEB's value of 0.79 places it slightly above NECO but significantly below WAEC, indicating a modest degree of alignment.

These findings are further corroborated by Kpolovie's (2010) claim that higher alignment percentages equate to increased content validity. Similarly, the results support the findings of Daramola et al. (2017), who discovered that properly designed continuous assessment items had increasing validity. However, the minor discrepancies amongst the inspection organisations raise concerns regarding the consistency of their quality assurance systems and the training offered to item creators. These findings have important consequences for Nigeria's educational assessment systems. First, the satisfactory content validity indices show that the testing boards are making significant

strides in developing exams that reflect curricular objectives. However, the minor differences in the validity coefficients indicate a need for increased standardisation in test construction methods.

Ensuring strong content validity is crucial to the legitimacy of standardised tests. Inadequately valid tests risk incorrectly portraying pupils' curriculum competence and affecting the comparability of outcomes among assessment organisations. As a result, constant adherence to Tables of Specification and thorough training of item creators are critical for boosting test validity and assuring fair assessment outcomes. Furthermore, WAEC's outstanding performance in content validity should be used as a standard by NECO and NABTEB. NECO and NABTEB can improve their test building procedures and achieve higher validity indices by adopting WAEC methods such as systematic training, increased quality assurance protocols, and greater adherence to curriculum rules.

Conclusion

This study looked at the content validity indices for the 2020 SSCE Financial Accounting multiple-choice test questions created by WAEC, NECO, and NABTEB. Using the Percentage Difference Coefficient of Validity, the study discovered that all three testing bodies had acceptable levels of content validity, with coefficients of 0.80, 0.78, and 0.79, respectively. The findings indicate that the items on the multiple-choice assessments are reasonably reflective of the mandated curricular content. However, WAEC had the greatest validity coefficient, showing a significantly greater agreement with the curriculum than NECO and NABTEB.

The findings emphasise the significance of adhering to rigorous test building procedures, such as using a Table of Specifications to guarantee fair coverage of all curricular areas. The high validity scores seen across all three examining organisations indicate that the quality of test creation procedures has improved over time. Nonetheless, the minor differences in validity indices highlight the need for more development, notably in providing a uniform and thorough representation of all curricular themes in test items.

The study's findings are consistent with earlier research that has highlighted the importance of content validity in maintaining the fairness and dependability of high-stakes tests. By reaching approved validity limits, these exams serve an important role

in correctly assessing student ability and assuring the integrity of credentials issued. However, the study also indicates the possible hazards linked to the over- or insufficient representation of certain themes, which may have an unintended effect on the general balance and impartiality of evaluations.

Recommendations

After considering the study's results and conclusions, the following suggestions are made to improve the accuracy and reliability of the 2020 SSCE Financial Accounting multiple-choice examinations conducted by WAEC, NECO, and NABTEB:

1. It is suggested that all examining organisations fully conform to the Table of Specifications (TOS) while developing their multiple-choice examinations. The TOS provides a methodical framework for ensuring that each topic in the curriculum is adequately represented in test items, hence encouraging balanced assessment. The TOS should be revised and updated on a regular basis to reflect curricular changes and keep it relevant to current educational goals.

2. To increase the integrity of test construction, assessors and test developers must attend frequent educational sessions and seminars. The workshops should include standards of excellence in test production, such as aligning material with the curriculum, preventing subject over- or under-emphasis, and assuring test item consistency and balance. Such activities will contribute to the professional development of test designers and increase the general efficacy of assessments.

3. Establish a systematic feedback process for students, instructors, and stakeholders to rate the high standards and coverage of multiple-choice exam items. This will assist discover any missing elements or areas for development in the test design process, thus guaranteeing the test items cover the whole curriculum. The procedure for receiving feedback should be continuous to allow for continued improvement of the test items.

4. Before any test items are finalised, they must go through a more thorough review and validation procedure to ensure their content validity. This approach should go through several rounds of review by subject matter specialists, educators, as well as psychometri-

cians to verify that all topics are thoroughly addressed and that no essential areas are ignored. Furthermore, regular post-examination evaluations should be undertaken to check the validity of the items and make any required revisions for future assessments.

5. The results of this research indicate that the multiple-choice items in the WAEC, NECO, and NABTEB examinations were broadly balanced in terms of topic coverage, with minor differences amongst the testing boards. However, to achieve a more equal evaluation, future test designs should pay special attention to ensuring a balanced mix of questions across all themes. This prevents any topic from being over-emphasised and ensures that students' understanding is examined comprehensively.

6. Future research should involve longitudinal studies that monitor the content validity of SSCE multiple-choice assessments over time. This will give useful insights into test construction patterns and assist in identifying any systematic concerns that may have an impact on the overall quality as well as fairness of the exams. Such studies might also investigate how curricular revisions affect the long-term validity of these evaluations.

7. Given WAEC, NECO, and NABTEB's comparable aims and target audiences, it is proposed that these agencies work more closely together to design test items and share best practices. Collaboration may ultimately contribute to a more standardised approach to test design, reducing variations in the assessments. Joint educational programs, training courses, and collaborative research activities may assist enhance the overall quality of exams across all three testing organisations.

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