

**Empirical Validation of Indices for Consideration in the Revision of
Recommended Senior School Financial Accounting Textbooks in
Southwestern Nigeria**

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Abstract

The study determined a significant difference in teachers' overall evaluations of six recommended Financial Accounting Textbooks in Southwestern Nigeria. It also assessed the specific evaluation parameters that account for the difference. It adopted the survey research design. The multistage sampling technique was used to select a total of 80 teachers from 64 schools from the six states in Southwestern Nigeria. Results of data collected which were analysed using the Kruskal-Wallis (H) test depicted a significant difference in teachers' overall evaluations of the textbooks. Also, results revealed that the textbooks differ significantly on the parameters of mechanics, assessment, lesson design and instructional strategy and incorporation of technology into students' learning. The implications of these findings were discussed and the study concluded that financial accounting textbook writers and ministry of education officials at both national and state levels should give adequate consideration for these parameters in the revision of recommended financial accounting textbooks for improved effectiveness in the realization of curricular objectives in the subject.

Keywords: financial accounting; senior school; teachers and textbook evaluation.

Introduction

Without prejudice to the level of exit, the corpus of skills required of school graduates leaving the educational system for the world of work is on the increase. Such skills according to the International Labour Organisation (2013) include the broad categories of core employability skills, technical skills and personal/professional attributes. Further still, skills hitherto considered to belong to students of a particular stream/field of studies (Science and Mathematics, Technology, Humanities and Business Studies) are now required of all graduates who enter the labour market either as entrepreneurs or employees in already established organisations (entrepreneurs) in the wake of globalisation. As an aftermath of this, recommendations have been made by scholars such as Ivowi (1992); Benavot (2006); Adeyemi (2011); Obanya (2014), (2016) and Oranu (n.d.) for functional, qualitative and diversified basic education (that spans nine years comprising six years of primary education and three years of junior secondary education) and post-basic (that continues after the basic education level to include three years of senior secondary education) education. The argument for these education levels by these scholars is that they are terminal formal education points for most school leavers.

Taking a clue from the conceptualisation of functional literacy as provided by UNESCO (1970) in Udagama (1978), functional education is all education operations oriented towards development, integrated in development and made a component part of a development project. In less subtle terms, functional education entails education that is practical, useful and purposeful for the students and for the society where they will function after exit from the school system. It is an education that emanates and seeks to solve problems in the environment of its recipients. Functional education lays emphasis on the acquisition of serviceable entrepreneurial skills such as marketing, communication, interpersonal relations and financial literacy; trade skills such as computer hardware and phone repairs, crop production and animal husbandry, hair dressing, dress-making, furniture making and so forth, and; desirable personal and professional attributes such as integrity, perseverance, resilience, honesty, and so on. The need for functionality of basic and post-basic education is a global concern as emphasised in reports published by the United Nations Educational, Scientific and Cultural Organisations (UNESCO) under the auspices of Jacques Delors and associates (1996), Barrett and associates (2008), among others. These scholars via these publications emphasise that objectives of school curricula offerings should reflect the four pillars of learning which are learning to know, learning to do, learning to live together and learning to be; and that education is a catalyst for sustainable development. Qualitative education on the other hand, implies quality education. Though the need for improved quality in education is replete in the literature, it however appears that defining quality education in unequivocal terms is evasive as “no general theory as to what determines the quality of education has been validated by empirical research” (UNESCO, 2005, p. 228). However, for the sake of this study, quality education is the education that gives “everyone in a society the chance to realize our (sic) full potential and enjoy better health, improved living standards, and fuller social and political participation in the society” (Tang in UNESCO, 2011).

The consideration of the need for functional, diversified and qualitative education could be conjectured to have led to the introduction of thirty-six trade and entrepreneurship subjects at the senior secondary school (SSS) level and the restructuring/re-invention of such subjects as business studies, information technology, civic education and cultural and creative arts at the junior secondary school (JSS) level in Nigeria. One of the skills that are being emphasised in the repository of skills expected of secondary school graduates is financial literacy or basic

record keeping and accounting skills. From reviews of employability skills as perceived by employers which were presented in research reports by Lowden, Hall, Elliot and Lewin (2011), the Commonwealth of Australia (2007) and the Department of Education, Science and Training (2002); it could be inferred that financial literacy/basic record keeping and accounting skills may be embedded in skill/quality descriptors such as technical ability, business/organisation awareness, critical evaluation, review and reflection abilities, problem solving, communication and literacy, application of numeracy and application of information technology.

At the post-basic education level (also referred to as the senior secondary school level), one of the school subjects that teach financial literacy or basic record keeping and accounting skills is Financial Accounting. The exigency of the skill for Nigerian senior secondary school leavers could be reasonably posited to have led to the creation of book-keeping as a distinct entrepreneurship subject which is widely available to all students irrespective of field of study. Despite the relative importance given to financial literacy or basic record keeping and accounting skills, indices of performance in the West African Senior School Certificate Examinations (WASSCE) in Financial Accounting remain relatively poor and unstable. For instance, Oyetoro (2014) reported that the national trend of candidates' performance in the subject within a 9-year period that ranged between 2002 and 2010 revealed that less than 50% of the candidates passed with acceptable grades of A1 to C6 between 2002 and 2009 and that it reached a high of 52.2% only in 2010 in the period with least performance of 18.47% reported in 2006. The average percentage of students with non-acceptable passes of D7 and E8 was 30.13% during the period (The range of the percentages was between 16.07% and 35.21%). A similar trend was reported by Adetayo (2005) in a sample of students in Ijebu North local government area of Ogun State, Southwestern Nigeria where between 1999 and 2002, the percentage of students with A1-C6 ranged between 14.55% and 39.35%.

Several generic factors have been adduced as causative factors to these relatively poor performances which have in turn informed spirited attempts at identifying specific factors. Observably, some studies have been conducted on presage variables of students' personal characteristics that affect learning and achievement in the subject. Such research endeavours include that of Adetayo (2010), Gaffney, Ryan and Wurst (2010) and Phang, Johl and Cooper (2011). Also, relatively large research efforts pervade the literature on process variables of teaching strategies adopted in mediating and facilitating positive learning outcomes in the subject. Some of these latter efforts are typified in such research by Boyce (1999) on Computer Assisted Teaching and Learning; Raymond and Ogunbameru (2005) on the efficacy of Guided Discovery; Chang and Lee (2007) on Activity Based Teaching and Learning; Gaffney, Ryan and Wurst (2010) on Online Homework Systems; Chen, Jones and Moreland (2010) on the efficacy of groups in both online and traditional face-to-face courses; Azih and Nwosu (2011) on Instructional Scaffolding among others. However, little research endeavour exist concerning the pattern of textbooks usage and the suitability and relevancy of recommended textbooks in the subject area although inclinations on the centrality of textbooks in the subject could be gleaned from literature (see Ferguson, Collison, Power & Stevenson, 2008 and Davidson & Baldwin, 2005 in Chiang, Englebrecht, Phillips & Wang, 2008).

The concept of the textbook is rather elusive. As such, diverse definitions abound in the literature on the concept. One definition which is relatively comprehensive and overt was given by Fredericks (2005). This scholar defined a textbook as a collection of knowledge, concepts and principles of a selected topic or course usually written by one or more teachers,

college professors or education experts who are authorities in a specific field and accompanied by teacher guides which provide one with supplemental teaching materials, ideas, and activities throughout the academic year. Traditionally, textbooks are only thought of as printed materials. Technology has however changed the substance of the traditionally printed textbooks with increasing sophistication in the layouts, diverse range of text types and integration of Internet links. Textbooks are even now available in electronic (*e*)-forms and as documents on laptops and phones. The benefits accruable to textbooks as important components of the teaching and learning process include: their definition of the main points of the aims, content, organisation and sequence of the curriculum and their influence on the determination of strategies by which certain topics are conceptualised and implemented; adaptability for independent study, tutorial endeavours and individualised instructions because they lend themselves to self-pacing; provision of a yardstick for the concrete measurement of students' progress and achievement among others (Litz, 2001; Moore & Quinn, 2004; Ehindero, 1986 in Oyetoro, 2014).

Despite the obvious merits of textbooks, they are not without deficiencies. Some of these include their lack of: enough flexibility to cater for the diverse and ever dynamic needs, interests and learning styles of learners; textual and communicative interactivity; multimedia power that take into cognisance the multisensory modalities by which learning takes place; the presence of coherent, current pedagogic principles depending on the capitalising interests and exploitations of the sponsoring agent; objectivity in the treatment of some culturally and socially sensitive issues such as ethnicity, tribalism, religion, women's right in relation to men and controversial issues; etc. (Litz, 2001; Moore & Quinn, 2004; Nwagbara, 1998). In order to maximise the advantages of textbooks while at the same time minimising their disadvantages, there is need for their evaluation for purposes of adoption or revision. Such evaluation should be continuous, free from political, administrative and individual biases and bottlenecks. This is because, according to Adeoye and Olaboye (2011), the choice of the wrong kinds of textbooks and students and teachers' considerable reliance on them can confound learning, waste class time, skew information, pauperize students (or even provide inadequate return on investment) and even sabotage instructional goals. Textbook evaluation in the words of Hrelovic (2002), is the systematic analysis of a textbook with the aim of identifying the relative effectiveness of various aspects of textbook materials through a system of objective criteria (evaluative indicators).

Suffice it to state that several evaluative indicators have been developed for textbooks generally and specifically for textbooks within a field of discipline. A mix of these criteria become necessary, as the criteria are relatively extensive, depending on the purpose intended to be served by the evaluation. For the purpose of this study, the textbook evaluation indices used are: content; organisation; utility; mechanics; appropriateness; illustrations; physical make-up of the text; assessment; alignment with national curriculum, state standards, skills and assessments; learning design and instructional strategies; and incorporation of technology into students' learning. These indices accommodate items which to a large extent are keys and competences to be emphasised in vocational education as contained in Mayer's 2002 Committee Reports (as cited in Cornford, 2006). These competencies are collecting, analysing and organising information; communicating ideas and information; planning and organising activities; working with others and in teams; using mathematical ideas and techniques and; solving problems and using technology. Also, these indices are characteristic of elements of change expected in the contents of vocational textbooks as explicitly listed by Gerard in European Centre for the Development of Vocational Training (CEDEFOP) (2010) which include the provision of:

1. situations/problems which are defined to help learners relate knowledge to familiar contexts;
2. a wide range of different materials and information types (texts, graphics, images, etc.) proposed to students to select the information needed to solve problems;
3. complex activities proposed to learners to solve problems and tasks which are meaningful and produce useful results;
4. grouped activities proposed to encourage social interaction;
5. activities that invite learners to reflect their own meaning and identify the resources and factors which were useful in solving a problem;
6. information that is synthesised and links are established between different themes, contexts or even disciplines to aid integration of different kinds of knowledge and transfer of knowledge and skills to new situations and contexts; and
7. contents aimed at making knowledge and social skills meaningful to learners by relating them to professional, social or personal contexts in which the learner might use these knowledge and skills.

There are insinuations that the presently used recommended financial accounting textbooks in southwestern Nigeria are grossly inappropriate for the realisation of curricular and instructional learning outcomes in the subject. The bases for these insinuations could be the vote-of-no-confidence placed by the majority on the textbook selection process and the abysmal trend of performance of students in the subject. Calls have thus been made for: the revision of these textbooks; adoption of newly published ones and/or commissioning of teams to write new textbooks from inception. It is imperative to state that the latter calls of adoption of newly published textbooks and commissioning of teams for writing new ones may be exercises in futility leading to the cycle of adoption of substandard textbooks if conscious efforts are not made to determine – from those who use the textbooks in teaching (teachers) – what in the nature of hitherto recommended and used textbooks need be strengthened for improved effectiveness in learning outcomes in the subject. This is the lacunae that this present study seeks to fill.

Empirical Review of Research on the Evaluation of Textbooks

Some of the researches on the evaluation of financial accounting textbooks have been reviewed in this section. The reviewed studies border on the readability of introductory and intermediate financial accounting textbooks and the evaluation of these textbooks on some pertinent indices. Flory, Phillips and Tassin (1992) examined seven intermediate accounting textbooks to determine if readability varies across the texts. The readability scores were derived from the Flesch Reading Ease Formula (Flesch, 1948) and Gunning's Fog Index (Gunning, 1952). The scores were analysed using the Kruskal-Wallis one-way analysis of variance followed by the Mann-Whitney U test for any differences initially discovered. Results show mostly insignificant differences across the textbooks. They explicated that the finding of their study differs from an earlier study that utilised the cloze procedure by Adelberg and Razek (1984), instead, similar to a study of textbooks written in the 1970s conducted by Razek, Hosch and Pearl (1982). They suggested that the two readability techniques presented and used in their study may assist accounting educators since they are both easy to use and are objective.

Davidson (2005) carried out a study to provide evidence on whether the writing styles used in accounting textbooks have changed in any systematic way over a 100-year period. The study

was in response to the pervasive reporting on problems in public school education in the United States which included the phenomenon of students graduating from high school with very poor reading and writing skills and the reduction (dumbing down) in the writing level of major school books, with no published study that has considered whether accounting textbooks have undergone the same reduction. The results revealed that the trends for all three levels of textbooks, namely: introductory, intermediate and advanced financial accounting textbooks consistently showed that the grammatical (sentence) complexity used has decreased steadily while the vocabulary (word) complexity has increased. As might be reasonably expected, the majority of the variables selected to measure the complexity of both grammar and vocabulary depicted that advanced accounting textbooks are the most complex, followed by intermediate, then introductory accounting texts. The limitations of the study as pointed out by Davidson himself include the non-consideration of other detailed measures besides from the Flesch-Kincaid readability formula. The implication of this is that since most of the readability formulas combine some aspect of word and sentence length; systematic changes in one of these two may be offset by opposite changes in the other measure. This produces reading levels that are relatively unchanged. Also, the study adopted the convenience sampling technique which may not have chosen the most representative or most commonly used textbooks. Last among the limitations is the limited statistical tests on which conclusions were based. While it is expected that subsequent work should improve the study by taking cognisance of the limitations pointed out, the use of rather excessive statistical tools should be approached with caution.

While a study of the trends in the readability of textbooks through several decades appealed to Davidson as reviewed above, Chiang, Englebacht, Phillips and Wang (2008) were interested in the readability differences of leading financial accounting principles textbooks with a 2002 or later publishing date. Readability scores were obtained using four readability evaluation methods: Flesch Reading Ease, Flesch-Kincaid Grade Level Index, Gunning's FOG Index and the SMOG procedure. Three sets of comparisons were made in the study. They were overall readability comparisons, chapter comparisons and topic comparisons. The Kruskal-Wallis test was used for multiple test comparisons and where significant differences exist, the Wilcoxon Rank-Sum test with a Bonferroni adjustment for multiple comparisons was used in further comparisons. The results of the study indicated significant differences for all three sets of comparisons although the use of the conservative Bonferroni adjustment substantially reduced the number of differences that were shown in the study. Evidence from the study also suggested that readability among textbooks vary, but readability within the textbooks was generally consistent. The study has the obvious advantage, over other studies in the readability of accounting textbook series, of investigating further with the use of the Wilcoxon Rank-Sum test with a Bonferroni adjustment where significant differences existed. However, the choice of seven textbooks, which were not even randomly selected out of more than 30 financial accounting principles textbooks available in the market as pointed out by the authors, is a limitation to the generalisability of the study.

Plucinski, Olsavski and Hall (2009) in their study determined the readability of seven introductory financial and managerial accounting textbooks using the widely acclaimed Flesch-Kincaid Grade Level Formula. Sample writings which were selected from first half and second half of the textbooks were subjected to analysis using the independent t-test statistic with a view to determine if significant differences exist between the textbooks. The study finds that one text is clearly more readable than all of the others and another text is less readable than almost all of the other texts. A similar study, also involving seven (four full-length, "traditional" intermediate accounting texts, averaging 1,351 pages per text and three

texts which are shorter, "abridged" texts, averaging 1,071 pages per text) intermediate accounting textbooks, was carried out by Plucinski in 2010. Comparisons of the textbooks by chapter and of the overall textbooks took place. Results of the comparison of the textbooks by chapter indicated that while some texts were more readable than others for select chapters, no one text is more readable (or less readable) than the other texts for all six chapters. Also, results from the overall comparison of the texts using independent t-test statistic also made this scholar conclude that in terms of readability, there appears to be no compelling evidence to prefer one text over another text in the same category.

Accounting textbooks have a major influence on the nature and type of learning activities in preparing students as new accounting professionals (Davidson & Baldwin, in Chiang 2005, Englebrecht, Phillips & Wang, 2008). As principles of financial accounting are the first major contact students have with accounting, textbooks selected for use in the teaching and learning of the subject must be written at the appropriate readability level. However, researchers such as Plucinski (2010) advised against using this criterion solely in the selection of financial accounting textbooks to the exclusion of other important variables such as a text's pedagogical approach, coverage of material, exhibits, and supplements. One of the methods of obtaining sufficient evidence on these other important criteria is a careful evaluator-analysis (content analysis) of a textbook in order to determine the sufficiency and adequacy of a particular variable of interest.

The content analysis method was employed in a relatively recent study by Phillips, Alford and Guina (2011). The study had as its objects the determination of the extent to which illustrations vary in four financial accounting textbooks widely used in the first financial accounting course in the United States of America. It also determined the extent to which two variations of illustrations, illustration function (decorational and organisational) and placement (earlier or later in relation to the corresponding text), interact to affect student learning. A total of 377 illustrations were examined. Across chapters, they reported little diversity in the total number of illustrations or their density per page but a substantial variability in the type, function and targeted learning level across the four books. More specifically, 33 (9%) of the illustrations were decorational, 121 (32%) were representational, 108 (28%) were organisational, 71 (19%) were interpretational, 6 (2%) were transformational and 38 (10%) were a blend of two or more functions. Inferences drawn from chi-square analyses and tests of standardised residuals conducted to verify the statistical significance of the apparent differences suggested that considerable variability existed in illustration characteristics. The analysis also revealed that illustrations in accounting textbooks were most commonly placed after the related text (37%); fewer illustrations were integrated within the text body (32%) and rarely were illustrations placed before the related text (6%). It was also more common for illustrations to appear on a different page (16%) or in a side bar (9%). Plausible explanations were provided for the prevalence of the illustrations and their placement in accounting books vis-à-vis topics in sciences and engineering texts. The second object of the study which was to determine the effects of illustration function and placement on students' learning showed that students learn more when decorational images precede rather than follow corresponding text and when organisational images follow rather than precede corresponding text.

Beside the use of content analysis as a means of textbook evaluation is the use of textbook evaluation checklists which are equally viable instruments. Textbook evaluation checklists have been employed and administered by teachers and students who are the real users of such textbooks and who are more often than not totally excluded or partially consulted in the

textbook selection and adoption as well as the review processes most especially in the Nigerian educational system. They have been used in the evaluation of essential school subjects' textbooks such as English (most especially in a Second language context) and Social Studies. The results of such studies could provide important feedback and input in the revision of the currently recommended textbooks with a view to improving students' learning as appropriate. This present study utilised a textbook evaluation checklist in order to make valid inferences on its objectives.

Methodology

Statement of the Problem

Textbooks have been recognised as core for the new sustainable development goal on education (UNESCO Global Education Monitoring Report, 2016). In specific terms, they are useful aids in the sharing, mediation and construction of Financial Accounting knowledge. There are many textbooks available for teachers and students' use in the teaching and learning of Financial Accounting. These textbooks complement teachers' efforts and also help students in their private studies. The inadequacy and the unsuitability of elements in these textbooks have been alluded to by reports as the cause of students' poor performance in the subject. Specific recommendations in the West African Examinations Council's (WAEC) executive summary of entries, results and chief examiners' reports on the WASSCE conducted between 2004 and 2006 which was released in 2006 included that: appropriate authorities in the education sector should address critical issues such as the learning environment, appropriate infrastructure, required teaching aids and equipment, and appropriate number and quality of teachers. It was also recommended that government should take necessary steps to make relevant books readily available and affordable for students' use.

Textbooks are integral component of the Financial Accounting learning environment. This assertion has been given credence by Ferguson, Collison, Power and Stevenson (2008) and Oyetoro (2014). However, such statements as "the government should take necessary steps to make relevant books readily available" (WAEC, 2006) would raise questions on the fidelity of the textbook recommendation and adoption process, most especially where the textbooks used in the secondary school system are recommended by the government through its agencies which include the Ministries of Education at the federal and state levels and the Nigerian Educational and Research Development Council (NERDC). Yet, if it could be established that due diligence and process was taken in the recommendation of these textbooks, then aspersions need not be cast on their recommendation and adoption processes but a shift in focus might be needed to what specific indices in them need be revisited and revised to make these textbooks relevant for the realisation of objectives in the subject area. Hence, in order to make recommended financial accounting textbooks relevant in the now for students and teachers' use as suggested by informed reports, the need for their assessment by teachers who are often neglected in the adoption process with a view to identify critical elements therein that may need to be revised is imminent.

The need for specificity in the elements of the textbooks that are needed to make them relevant comes to the fore as generic recommendations may not inform the desired positive change in the repertoire of expected learning outcomes in the subject. More so, the question of what exactly in the nature of Financial Accounting textbooks need be revised is yet to be answered, hence this study.

Theoretical Framework

This study adopted Daniel L. Stufflebeam's Context, Input, Process and Product (CIPP) Evaluation model. The concept of evaluation underlying the CIPP model is that evaluation should assess and report an entity's merit, worth, and significance and also present lessons learnt. The model's main theme is that evaluation's most important purpose is not to prove but to improve (Stufflebeam, 2002). Stufflebeam explained that a programme can be evaluated in a single dimension or in a few dimensions altogether (Stufflebeam, 1971 in Ghazali, 2016). Thus, a programme can be evaluated with a focus on only one of the dimensions of Context or Input or Process or Product or a combination of two or three of these dimensions or all of the dimensions.

Stufflebeam (1971) explained that context evaluation provides information about the strengths and weaknesses of a total system to assist in planning improvement-oriented objectives at each level of the system. Input evaluation provides information about the strengths and weaknesses of alternative strategies which might be chosen and structured for the achievement of given objectives. Process evaluation provides information about the strengths and weaknesses of a chosen strategy under the conditions of actual implementation, so that either the strategy or its implementation might be strengthened. Lastly, product evaluation provides information for determining whether objectives are being achieved and whether the change procedure which has been employed to achieve them should be continued, modified or terminated. He surmised that basically, the CIPP model has been developed to answer four basic questions, namely: What should we do? How should we do it? Are we doing it correctly? and Did it work? (Stufflebeam, 1971). Stufflebeam also explained that though the CIPP model is intended to facilitate educational improvement through a proactive approach, it also provides an adequate means for accountability through a retroactive approach.

Out of the quad dimensions, the process evaluation dimension of the CIPP model has been chosen to provide an adequate theoretical basis for the present study. This is because the intent of this study as guided by the stated hypotheses are to identify the indices where significant discrepancies exist among the recommended Financial Accounting textbooks (retroactive). The identified indices of discrepancies could then be relied upon as critical elements for revision in the presently recommended textbooks and the writing of new ones in the subject area (proactive). This dimension was appropriate as this study was on the evaluation of the recommended textbooks in a post-use textbook evaluation context. The evaluation was done with a view to establish how those textbooks that had already been used fared on important textbook evaluation indices. The indices of textbooks considered were Content, Organisation, Utility, Mechanics and Appropriateness. Others include: Illustrations, Physical Make-up of the text, Lesson design and instructional strategies, Incorporation of Technology into Students' Learning, Alignment with national curriculum, state standards and skills and Assessments. These indices, which have been used with a wide range of secondary school textbooks, are deemed pertinent for evaluation of textbooks in the subject area and are used in the present study.

Purpose of the Study

The general purpose of the study was to ascertain the critical indices that textbook writers, reviewers, publishers and other persons connected with the writing, recommendation, adoption and usage of financial accounting textbooks at the senior school level are to focus

on in the subsequent revision of these textbooks. Specifically, the objectives of the study were to:

- a. ascertain whether variation exists in teachers' overall evaluations of six mostly used recommended Financial Accounting Textbooks in Senior Secondary Schools in Southwestern Nigeria, and;
- b. determine the specific index (ices) that may account for the variation in teachers' overall evaluations of the textbooks.

The results from this study are expected to provide information to all stakeholders in the financial accounting textbook production, writing, recommendation and adoption process on the index (ices) that need be the foci in the subsequent revision and adoption cycles of the textbooks. The results would thus have far-reaching implication for the identification of specific indices of financial accounting textbooks that need be revisited for the textbooks to be relevant for the attainment of curricular objectives in the subject rather than cast wide aspersions on the whole textbooks.

Hypotheses

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

1. There is no significant difference in teachers' overall evaluations of six mostly used recommended Financial Accounting Textbooks in Southwestern Nigeria;
2. There is no significant difference in teachers' evaluations of the textbooks on each of the evaluation index.

Methods

This study utilised the survey research design. The study population consisted of Financial Accounting teachers in public and private senior secondary schools in South West Nigeria. The multistage sampling technique was used to select a total of 80 teachers from 72 schools from the six states in South Western Nigeria. The first stage was the total enumeration of all the six states in South West Nigeria, namely: Lagos, Ogun, Ekiti, Osun, Ondo and Oyo. The second stage was the selection of two Local Government Areas (LGAs) from each of the states using the simple random sampling technique to give a total of 12 LGAs. Three privately owned and government owned secondary schools each were then selected from the LGAs also using the random sampling technique to give a total of 72 schools. The instrument was then administered on at least one financial accounting teacher in the schools who possessed and has been using at least one of the textbooks recommended by their respective state ministries of education in the teaching of the subject for a period not less than one academic session.

An instrument titled Financial Accounting Textbooks Formal Evaluation Questionnaire (FATFEQ) was used to collect data from the respondents. The items of the instrument were adapted from the textbook evaluation checklists developed by Moore and Quinn (1994), South Washington County Schools (2009) and two others: Textbook Evaluation Tool (n.d.) and Mathematics Textbook Evaluation Checklist (n.d.) (both retrieved online), taking cognisance of the nature of Financial Accounting. FATFEQ comprised 57 items with 11 subscales. The Subscales in FATFEQ include Appropriateness, Illustrations, Physical Make-up of the text, Lesson design and instructional strategies and Alignment with national curriculum, state standards and skills and Assessments. Each item in the teacher version has

the following Likert type scale: “to the greatest extent”, “to a large extent”, “to some extent”, “just barely” and “not at all” which were also assigned a rating of 4, 3, 2, 1 and 0 respectively. The Cronbach alpha coefficients of the subscales for FATFEQ were between 0.5 and 0.79 with a global scale index of 0.95. These values were considered suitable for conducting this study. The Kruskal-Wallis non-parametric inferential statistics was used to analyse the data.

Results

Hypothesis 1: There is no significant difference in teachers’ overall evaluations of six mostly used recommended Financial Accounting Textbooks in Southwestern Nigeria.

In order to accept or refute this hypothesis, teachers’ overall evaluation scores for each of the textbooks were subjected to the Kruskal-Wallis (H) statistics. The results obtained are as presented in Table 1.

Table 1: Analysis of Differences in Teacher’s Overall Evaluations of Recommended Financial Accounting Textbooks

Evaluation Index	Mean rank						df	Test statistics (H)	p
	A	B	C	D	E	F			
Textbook Label ²									
Overall Evaluation Index	40.70	47.38	38.20	54.71	13.63	19.30	5	13.68	0.018

Table 1 depicts that there is significant difference in teachers’ overall evaluations of the recommended textbooks. The H value of the result (H=13.68; $p < 0.05$) is significant at 0.05 level of significance. The null hypothesis was which stated that there will be no significant difference in teachers’ overall evaluations of six mostly used recommended Financial Accounting Textbooks in South Western Nigeria was therefore rejected.

Hypothesis 2: There is no significant difference in teachers’ evaluations of the textbooks on each of the evaluation indices.

In order to reach valid conclusion on whether to accept or reject this hypothesis, the score of each textbook on each of the identified indices was subjected to Kruskal-Wallis. The results obtained are as presented in Table 2.

Table 2: Analysis of Differences in Teacher’s Evaluations of the Recommended Financial Accounting Textbooks on Each Evaluation Index

Textbook Labels → Evaluation Index ↓	Mean rank						df	Test statistics (H)	P
	A	B	C	D	E	F			
Content	41.20	47.65	28.65	50.29	23.50	32.00	5	8.16	0.15
Organisation	41.86	38.38	42.55	51.00	13.00	30.40	5	8.63	0.13
Utility	38.60	48.81	28.40	58.36	25.63	37.30	5	11.03	0.51
Mechanics	40.94	52.23	45.15	36.07	22.88	9.60	5	15.68	0.008*
Appropriateness	36.83	39.19	41.00	49.00	57.00	39.30	5	4.20	0.52
Illustrations	40.64	38.46	38.60	52.43	30.38	32.00	5	3.57	0.61

Physical Make-up	40.20	40.81	48.50	41.64	14.13	37.70	5	6.67	0.25
Assessment	39.25	52.85	38.70	53.14	16.00	16.00	5	16.43	0.006*
Alignment with Curriculum	40.78	34.12	39.55	54.86	27.75	39.00	5	5.39	0.37
Lesson Design and Instructional Technology	39.93	48.81	37.50	51.79	18.63	23.30	5	10.13	0.014*
Incorporation of Technology into Students' Learning	40.96	46.96	35.05	57.50	18.25	18.10	5	10.13	0.014*

* Significant at 0.05 level of significance

Table 2 shows that there is no significant difference in the teachers' evaluations of the textbooks on seven indices of content ($H=0.15$, $p>0.05$), organisation ($H=0.13$, $p>0.05$), utility ($H=0.51$, $p>0.05$), appropriateness ($H=0.52$, $p>0.05$), illustrations ($H=0.61$, $p>0.05$), physical make-up ($H=0.25$, $p>0.05$) and alignment with curriculum ($H=0.37$, $p>0.05$). For each of these indices, the null hypothesis was accepted. On the other hand, the table reveals that significant difference exist on four indices of mechanics ($H=0.008$, $p<0.05$), assessment ($H=0.06$, $p<0.05$), lesson design and Instructional technology ($H=0.014$, $p<0.05$) and incorporation of technology into students' learning ($H=0.014$, $p<0.05$). For these latter indices, the null hypothesis was rejected.

Discussion

The results obtained are very indicative, showing that the significant difference was observed in teachers' evaluations of some indices of evaluation of the textbooks. This result is supported by several other studies such as Plucinski, Olsavski and Hall (2009), Plucinski (2010), Phillips, Alford and Guina (2011), that showed differences in the indices among financial accounting textbooks though the indices considered in such studies differ from those of the present. This finding is also not surprising as Stradling (2001) posited that what counts as being a good textbook in one place by a certain group people is likely to be perceived differently in another place by other people and that a definitive answer usually leads to little more than broad and rather platitudinous generalisations.

Results obtained from the analysis of teachers' evaluation to ascertain if there are differences in the means of the evaluation indices of the Financial Accounting textbooks reveals that the mean ranking of the textbooks are similar on the indices of content, organisation, utility, appropriateness, illustrations, physical make-up and alignment with national curriculum, state standards, skills and assessments. The similarity of the textbooks on these indices could be accounted for as they amend themselves to the classification by Mukudan, Hajimohammadi and Nimehchisalem (2011) as general attributes which could have been explicitly provided for by the criteria used by the state ministries of education and the Nigerian Educational and Research Development Council (NERDC). Hence, authors and publishers of these textbooks would have developed these textbooks taking cognisance of these indices in order to facilitate their recommendation.

The textbooks' means however differ on the mechanics, assessment, lesson design and instructional strategy and incorporation of technology into students' learning indices. Apparently, these criteria are distinctive features that also relate to the interactions that occur among the elements in the classroom teaching and learning process. They relate to the meaning that teachers could give to the teaching process and also to the meaning students are able to make from their interaction with the textbooks. These indices amend themselves to

the constructivist principles of textbook design advocated by Cunningham, Duffy, and Knuth (2000) and Oloyede (2010).

Specifically, Cunningham, Duffy, and Knuth explicated that textbooks should conform to the goals of the constructivist learning environment which are: the provision of experience with the knowledge construction process, provision of experience in and appreciation of multiple perspectives, embedding of learning in realistic and relevant contexts, encouragement of ownership and voice in the learning process, the embedding of knowledge in social experience, encouragement of the use of multiple modes of presentation and encouragement of the self-awareness of the knowledge construction process. The items in the indices identified to differ significantly in this study are much related to these goals. The utilisation of hypermedia and other information systems with databases according to them would place emphasis on the provision of strategies or tools for navigating and customising those databases so that learners can explore and search out issues which are of interest to them within the subject and would thus avoid the linear mode of thinking associated with traditional textbooks.

Observably, these indices that differ across the textbooks are essential in ensuring that accounting skills and competencies are learned and acquired as appropriate. The disparities in the textbook with respect to these important textbook indices corroborates the assertion of Meurant (2010) that textbooks need to be compatible with blended learning, prepare students for a globalised world and foster autonomous learning.

Conclusion

The role of textbooks in the realisation of curricular and instructional objectives in Financial Accounting has been recognised in the literature. Also, the need to improve the quality of existing recommended Financial Accounting textbooks so that they could help maximise gains in students' achievement in the subject has been suggested by scholars. Yet, few studies point to specific indices of quality that need to be the foci in the process of revising or improving these textbooks. In order to bridge the gap in knowledge for informed decision in this identified area, this study determined if significant difference exists among the textbooks and if any significant difference exists, what indices account for such differences. The areas where significant differences are highlighted could then be inferred to be the areas where these textbooks need to be improved on.

The results have shown that the indices of mechanics, assessment, lesson design and instructional technology and incorporation of technology into students' learning account for differences in the textbooks. Remarkably, these indices are least focused on in textbook evaluation checklists and are at the crux of the meaning students could make from the textbooks when they interact with them. These indices also conform to the recent advocacy for textbooks design according to constructivist principles. The conclusion that could be reached from this study is that significant and desirable improvement in learning outcomes in Financial Accounting via effective textbook usage may only be realised if cognisance is taken of the constructivist-related indices of mechanics, assessment, lesson design and instructional technology and incorporation of technology into students' learning by textbook writers, editors, reviewers and users.

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Endnotes

1. This categorisation is as stated in the 6th edition of Nigeria's National Policy on Education (NPE) (Nigerian Educational Research and Development Council, 2013) as distinct from the former of Science, Arts and Business Studies (Commercial).
2. Letters of the alphabets have been used to represent the recommended textbooks-in-use as depicted below. Evaluation results are reported for six out of the thirteen textbooks. This was due to the nature of the questionnaire used as the respondents were requested to evaluate only the textbook that they use most frequently. Also, the numbers of respondents who evaluated each textbook is shown.

Textbook label	Textbook Title	Teachers (n)
A	Essential Financial Accounting for Senior Secondary Schools by Longe, O.A and Kazeem, R.A	40
B	Business Accounting 1 (West African Edition) by Wood, F and J.O. Omuya	13
C	Simplified and Amplified Financial by Longe, O.A.	10
D	Business Accounting 1 by Wood, F and Sangster, A	7

E	Comprehensive Financial Accounting for Senior Secondary Schools S.Lola Akintelure and Oguobi, J.I.	4
F	Financial Accounting Made Simple (Vol 1) by Igben, R.O.	5

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