

Research Article

Application of Information on Balance Sheet and Statement of Changes in Net Assets/Equity in the Management of Tertiary Educational Institutions

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Abstract

This study ascertained the extent of application of information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria. Two research questions guided the study and two null hypotheses were tested. Descriptive survey research design was adopted for the study. The population comprised 1535 account officers in public tertiary educational institutions in South-East, Nigeria. A sample of 317 account officers were selected using Taro Yamane's formula through proportionate sampling technique. The instrument for data collection was a 18-item structured questionnaire. The instrument was validated by three experts. To determine the internal consistency of the instrument, Cronbach's alpha was used and obtained reliability co-efficient values of 0.87 and 0.94 for clusters B1 to B2 with an overall co-efficient value of 0.91. Mean and standard deviation were used to answer the research questions, while ANOVA was used to test the null hypotheses at 0.05 alpha levels. The findings of the study revealed that account officers moderately applied information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria. Account officers' institution type significantly influenced their mean ratings on the extent of application of information on balance sheet in the management of tertiary educational institutions in South-East Nigeria. They did not significantly influence their mean ratings on the application of statement of changes in net assets/equity. The study concluded that the information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions were not widely applied in South-East Nigeria. It was recommended among others that all the tertiary educational institutions/agencies should ensure that possible remedies to the causes of fraud are included in their accounting curricula for the training of business education (account educators/students) in tertiary educational institutions.

Keywords: Tertiary Educational Institutions, Information on Balance Sheet, Statement of Changes in Net Assets/Equity.

Introduction

Tertiary institutions are educational institutions purposely established to meet the educational manpower and development needs of the nation. Tertiary education is the education given after secondary education in colleges of education, polytechnics, mono-technics, universities and other institutions offering correspondence courses (Federal Republic of Nigeria (FRN), 2014). According to FRN (2014), the goals of tertiary education encompass the development of relevant high level manpower, development of intellectual capability of individuals and acquisition of physical and intellectual skills. Others are to promote and encourage scholarship as well as community service. Tertiary educational institutions pursue these goals through teaching, research, community service and dissemination of knowledge which they achieve through a variety of programmes such as certificate, diploma, undergraduate and postgraduate courses. Tertiary educational institutions in this study include public universities, polytechnics and colleges of education which are established to meet the nation's need for socio-economic development through knowledge-sharing, research and development. Modibbo (2015) asserted that tertiary institutions are expected to provide educational services and counselling to the general public at the right time. To render these services,

these institutions incur expenditures that are capital and recurrent in nature through the application of the financial accounting information. That is why Nguyena and Nguyena (2020) viewed financial accounting information used in non-profit oriented organization (which educational institutions are part of) to include balance sheet, income and expenditure, statement of cash flow, fixed assets accounts, note to the accounts, memorandum statement of account of capital fund and recurrent fund, value added statement, income from academic operations, debtors and creditors account as well. Thus, financial accounting information used in this study is composed of two constructs namely: information on balance sheet and statement of changes in net assets/equity because they appear to be exceptionally vital for every public educational institution to determine proper stewardship in fund disbursement and general resource management.

Balance sheet is a statement prepared with a view to measure the exact financial position of a business on a certain fixed date. As a result, the financial position in the balance sheet is defined as economic resources that controls, by the financial structure of assets, debts and equity, by the liquidity and solvency of the economic values and by the ability to adapt to changes in the environment where it runs its activity (Cenar, 2011). The balance sheet validates the principles of dual representation and double entry on which accounting is built. The duality of the representation of balance sheet implies that the material aspect represented by goods and monetary values, as well as the legal aspect, reflected their sources of origin. Ibrahim *et al.*, (2016) noted that accounting guidelines and policies have impact on the preparation of financial statements and maintained effective internal control system put in operation in tertiary institution. Therefore, the accounting balance sheet prepared on the basis of cash includes elements of the earnings account (revenues, expenditure), which, subsequently, are separated in a different component of financial statements, namely the earning account.

Statement of changes in net assets/equity is the statement that explains changes in a company's/institution's share capital, accumulated capital, accumulated reserves and retained earnings over the reporting period (Fletcher and Ulrich, 2010). It breaks down changes in the owners' interest in the organization, and in the application of retained profit or surplus from one accounting period to the next. Based on this, statement of changes in net assets/equity are the existence of variations between assets and commitments involved in the reporting of net assets' residual value, a positive value being interpreted as a net source that may be used in the future to cover various public services. It is therefore an investment in the entity that prepares the report. A negative value of the net assets reflects the amount of future samplings-amount that is already committed to paying off current obligations. Accordingly, financial accounting information discloses information regarding the economic viability of educational institutions, the performance of the institutions, the development stage of the institutions, as well as the risks institutions face (Florin, 2014).

Therefore, financial accounting information is applied to direct educational institutions towards control mechanisms of institution (Bushman and Smith, 2001). In other words, financial accounting information refers to control mechanisms that present the right decision of financial institution management, valuable source of data for financial planning, economic analysis, cost controlling, strategic controlling, assets controlling, liabilities controlling, cash flow and others. It also shows that educational institutions often have significantly less financial information recorded during the accounting process.

The influencing factors on application of information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions could be type of institution. Type of institution in this study means universities, polytechnics and colleges of education. Account officers in this study are the account officers in accounting units in tertiary educational institutions. Ibrahim *et al.*, (2016) reported that universities, polytechnics and colleges of education have no significant impact on the preparation of financial accounting information. This may be as a result of inability of tertiary institutions to come up with enabling statutes or provide proper accounting information on the nature of financial statements to be compiled. Apart from this, the Governing Councils of these institutions circumvent the inability of the institutions to follow laid down guidelines and policies in applying the accounting information while preparing financial statements. In view of this, it is appropriate for educational institutions to have an effective application of information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria.

Statement of the Problem

Information on balance sheet and statement of changes in net assets/equity enables educational institutions to determine proper stewardship in fund disbursement and general resource management. Despite the importance of information on balance sheet and statement of changes in net assets/equity in the

management of tertiary educational institutions in Nigeria, there are issues of fund mismanagement, misappropriation, corruption and fraud in the management of tertiary institutions. Cases of fraud, forgery, threat to life and diversion of funds abound in the nation's tertiary educational institutions. For example, in 2016, the bursar of the University of Calabar, Peter Agi, lost an appeal for his suspension at the National Industrial Court, Calabar, after being indicted for fraud, forgery and threats of life. In 2017, the 300-million-naira National Economic Empowerment and Development Strategy (NEEDS) assessment fund granted to the Federal University of Petroleum Resources (FUPRE) in Delta State was reportedly diverted. Mr. Akaehomen Ibadode, the vice-chancellor and other top officials of the university were fingered in the corrupt practice, having been quizzed by the EFCC. The fraud alert blew open when some NEEDS assessment officials who were visiting the institution found that the projects presented by the VC were refurbished structures sponsored by TETFUND in the past. SERAP, therefore, noted that corruption and impunity in the Nigerian tertiary education institutions system have adversely affected the governance of federal universities and the quality of education received by the students' results to ineffective research, teaching and learning as well as community services which are the functions of tertiary institutions. Thus, there seem to be laxity in revenue and expenditure management, inadequate payroll controls and weak internal control systems and other problems all of which point to the weakness of internal control systems leading to irregularities in financial management and financial accounting information in public tertiary educational institutions in South-East Nigeria. This study determined the extent of application of information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria.

Purpose of the Study

The main purpose of this study was to determine the extent of application of information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria. Specifically, the study determined the extent:

- 1) Information on balance sheet is applied in the management of tertiary educational institutions in South-East Nigeria.
- 2) Statement of changes in net assets/equity is applied in the management of tertiary educational institutions in South-East Nigeria.

Research Questions

The following research questions guided this study:

- 1) To what extent are information on balance sheet applied in the management of tertiary educational institutions in South-East Nigeria?
- 2) To what extent are statement of changes in net assets/equity applied in the management of tertiary educational institutions in South-East Nigeria?

Hypotheses

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

- 1) Account officers in tertiary educational institutions do not differ significantly in their mean ratings on the extent they apply information on balance sheet in the management of tertiary educational institutions in South-East Nigeria based on the institution type (universities, polytechnics and colleges of education).
- 2) Account officers in tertiary educational institutions do not differ significantly in their mean ratings on the extent they apply statement of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria based on the institution type (universities, polytechnics and colleges of education).

Method

The study adopted descriptive survey design. The population of the study comprised 1535 account officers in all the 26 public tertiary educational institutions (ten universities, eight polytechnics and eight colleges of education) in South-East geopolitical zone of Nigeria. A sample of 317 account officers was selected using Taro Yamane's formula through proportionate sampling technique. Data were collected using a 18-items structured instrument. The instrument was structured on a five-point rating scale on Very Highly Applied (5), Highly Applied (4), Moderately Applied (3), Lowly Applied and Very Lowly Applied (1).

The structured questionnaire was validated by three experts-two in business education and one in measurement and evaluation all from Nnamdi Azikiwe University, Awka. Their comments enhanced the face validity of the instrument. To establish the internal consistency of the instrument, a trial-test was conducted.

Data collected in the pilot test were analyzed using Cronbach's alpha to determine the internal consistency. Reliability coefficient values of 0.87 and 0.94 for balance sheet and statement of changes in net assets/equity respectively with an overall coefficient value of 0.91 were obtained. Out of the 317 copies of the questionnaire distributed to the respondents in their institutions through direct approach, 311 copies (representing 98 percent) were retrieved with an attrition rate of seven copies (representing two percent) and used for data analysis.

Data collected regarding the research questions were analyzed using mean and standard deviation while AONVA was used to test the null hypotheses at 0.05 level of significance. In order to determine the extent of application of statement of changes in net assets/equity financial accounting information in the management of tertiary educational institutions in South-East Nigeria, a decision rule based on real limit of numbers was used such that ratings between 4.50-5.00 were regarded as very highly applied, items with mean ratings of 3.50-4.49 were considered as highly applied, items with mean ratings of 2.50-3.49 were considered as moderately applied. Furthermore, items with mean ratings of 1.50-2.49 and 1.00-1.49 were considered as lowly applied and very lowly applied respectively.

In testing the null hypotheses, where the calculated p-value is less than the stipulated level of significance (0.05), it meant that there was a significant difference and the null hypothesis was rejected. Conversely, where the calculated p-value is greater than or equal to the stipulated level of significance (0.05), it meant that there was no significant difference and the null hypothesis was not rejected. However, where there was disagreement among the three groups, the Scheffe post hoc test was conducted to determine the group such disagreement occurred.

Results

Research Question 1

To what extent are information on balance sheet applied in the management of tertiary educational institutions in South-East Nigeria?

Table 1. Account officers mean ratings on the extent they apply information on balance sheet in the management of tertiary educational institutions (N=311).

S/N	Information on balance sheet	\bar{x}	SD	Remarks
1	Revealing the true position of assets and liabilities at any given period	3.70	0.39	Highly applied
2	Measuring the exact financial position of a business on a certain fixed date	3.63	0.53	Highly applied
3	Helping in preparation of fund flow statement at any given time	3.64	0.51	Highly applied
4	Revealing assets and liabilities that are shown separately for each fund group	3.19	0.58	Moderately applied
5	Indicating the operational efficiency of the firm	3.54	0.55	Highly applied
6	Analyzing the working capital requirement of the firm	3.64	0.52	Highly applied
7	Providing the user with a better institutional pictures	2.50	0.65	Moderately applied
8	Determining the liquidity, solvency and the future viability of the business on continuing operations	3.12	0.61	Moderately applied
9	Disclosing of deferred capital grant	2.50	0.65	Moderately applied
10	Measuring the covariance between the valuation changes in assets and liabilities	4.12	0.48	Highly applied
Cluster mean		3.36		Moderately applied

Data in Table 1 show that six out of the ten items listed have mean ratings of 3.54 to 4.12 which indicate that information on balance sheet are highly applied in the management of tertiary educational institutions, while the remaining four items are rated as moderately applied and have mean ratings of 2.50 to 3.19. The standard deviation of 0.48 to 0.65 shows that respondents are not wide apart in their mean ratings which indicate homogeneity. The cluster mean score of 3.36 indicates the extent they apply information on balance sheet in the management of tertiary educational institutions in South-East Nigeria.

Research Question 2

To what extent are statements of changes in net assets/equity applied in the management of tertiary educational institutions in South-East Nigeria?

Table 2. Account officers mean ratings on the extent they apply statements of changes in net assets/equity in the management of tertiary educational institutions (N=311).

S/N	Statements of changes in net assets/equity	\bar{x}	SD	Remarks
1	Revealing the reconciliation of beginning and ending balances in an institutions net assets/equity during a reporting period	3.50	0.49	Highly applied
2	Disclosures net profit or loss for a period	4.20	0.45	Highly applied
3	Revealing the effects of changes due to errors in prior periods	2.70	0.54	Moderately applied
4	Presenting the effects of changes in fair value for certain assets in the institution for a period	2.69	0.55	Moderately applied
5	Presenting the statement of changes in equity in an institution during a reporting period	3.54	0.47	Highly applied
6	Separately showing the par value of common stock of the institution for a period	4.24	0.44	Highly applied
7	Creating separate accounts in the general ledger for each type of equity during a reporting period	2.60	0.58	Moderately applied
8	Transferring every transaction within each equity account to a spread sheet for a period	3.50	0.49	Highly applied
Cluster mean		3.37		Moderately applied

Data in Table 2 show that five out of the eight items listed have mean ratings of 3.50 to 4.24 which indicate that statements of changes in net assets/equity are highly applied in the management of tertiary educational institutions, while the remaining three items are rated as moderately applied and have mean ratings of 2.60 to 2.70. The standard deviation of 0.44 to 0.58 shows that respondents are not wide apart in their mean ratings which indicate homogeneity. The cluster mean score of 3.37 indicates the extent they apply statements of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria.

Hypotheses 1

Account officers in tertiary educational institutions do not differ significantly in their mean ratings on the extent they apply information on balance sheet in the management of tertiary educational institutions in South-East Nigeria based on the institution type (universities, polytechnics and colleges of education).

Table 3. Summary of ANOVA on the extent of application of information on balance sheet in the management of tertiary educational institutions based on the institution type (universities, polytechnics and colleges of education).

	Sum of squares	df	Mean square	F	P-value	Remarks
Between groups	23.583	2	2.282	20.263	.000	Significant
Within groups	929.417	308	2.119			
Total	952.000	310	-			

As shown in Table 3, the F-ratio (df: 2/308) is 20.263 and the P-value (.000) is less than the stipulated 0.05 level of significance (P-value < alpha level). It is reveals that there is a significant difference in the mean ratings of account officers in tertiary educational institutions on the extent information on balance sheet are applied in the management of tertiary educational institutions in South-East Nigeria based on the institution type. Therefore, the null hypothesis is rejected.

Table 4. Scheffe post hoc test on the extent of application of information on balance sheet in the management of tertiary educational institutions based on the institution type (universities, polytechnics and colleges of education).

Institution type	Institution type	Mean difference	P-value	Remarks
Universities	Polytechnics	-.10926*	.002	Significant
	College of Education	-.22757*	.000	
Polytechnics	Universities	.10926	.002	
	College of Education	-.22757*	.000	
College of Education	Universities	.10927	.000	
	Polytechnics	.10926	.000	

As indicated by the post hoc test (Scheffe test) in Table 4, there is a significant difference on the extent information on balance sheet are applied in the management of tertiary educational institutions in South-East Nigeria by account officers who work in the universities and those who work in polytechnics and colleges of education. There is also a significant difference between account officers who work in the universities and those who work in polytechnics.

Hypotheses 2

Account officers in tertiary educational institutions do not differ significantly in their mean ratings on the extent they apply statements of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria based on the institution type (universities, polytechnics and colleges of education).

Table 5. Summary of ANOVA on the extent of application of statements of changes in net assets/equity in the management of tertiary educational institutions based on the institution type (universities, polytechnics and colleges of education).

	Sum of squares	df	Mean square	F	P-value	Remarks
Between groups	11.043	2	2.423	21.183	.078	Not significant
Within groups	231.515	308	2.109			
Total	242.558	310	-			

As shown in Table 5, the F-ratio (df: 2/308) is 21.183 and the P-value (.078) is greater than the stipulated 0.05 level of significance (P-value > alpha level). It is reveals that there is no significant difference in the mean ratings of account officers in tertiary educational institutions on the extent statements of changes in net assets/equity are applied in the management of tertiary educational institutions in South-East Nigeria based on the institution type. Therefore, the null hypothesis is not rejected.

Discussion of Findings

Findings of the study revealed that account officers moderately applied information on balance sheet in the management of tertiary educational institutions in South-East Nigeria. This implies that moderate application of information on balance sheet reveals that accounting departments could not create a balance sheet which provides the financial position of the institution at a given time. This finding agrees with Ibrahim *et al.*, (2016) who noted that accounting guidelines and policies have impact on preparation of financial statement and maintained effective internal control system put in operation in tertiary institution. The findings of the study further revealed that there was a significant difference in the mean ratings of account officers in tertiary educational institutions on the extent they applied information on balance sheet in the management of tertiary educational institutions in South-East Nigeria based on the institution type. The post hoc test of comparisons showed that the difference was between account officers who worked in the universities and those who worked in polytechnics and colleges of education. This disagrees with the findings of Ibrahim *et al.*, (2016) that accounting systems operated by tertiary institutions did not provide the nature of financial statement to be compiled based on type of institutions. The reason for the dissimilarities in test of hypotheses is because account officers in universities, polytechnics and colleges of education could not indicate the operational efficiency of their institutions, to analyse the working capital requirement in management of tertiary education institutions.

Findings of the study revealed that account officers moderately applied statements of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria. This implies that moderate application of statements of changes in net assets/equity revealed that a negative value could be interpreted as a net source that may be used in the management of tertiary educational institutions. This finding agrees with Ibrahim *et al.*, (2015) who noted that profit margin was greatly affected by current asset to total asset ratio, inventory turnover ratio, quick ratio and current ratio in tertiary institution.

The findings of the study further revealed that there was no significant difference in the mean ratings of account officers in tertiary educational institutions on the extent they applied statements of changes in net assets/equity in the management of tertiary educational institutions in South-East Nigeria based on the institution type. This disagrees with the findings of Ibrahim *et al.*, (2016) who stated that accounting systems operated by tertiary institutions did not provide the nature of financial statement to be compiled based on type of institutions. The reason for the dissimilarities in test of hypotheses is because account officers in universities, polytechnics and colleges of education significantly revealed less financial information recorded during the accounting process.

Conclusion

Based on the findings of the study, it is concluded that the application of information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions are not widely applied in South-East Nigeria. The issues of fund mismanagement, misappropriation, corruption and fraud in the management of tertiary institutions were not properly managed. Thus, the application of information on balance sheet and statement of changes in net assets/equity was not widely applied because most universities, polytechnics and colleges of education financial accounting statements lack transparency, proper accounting and forensic investigation which make room for fraud. However, the high application of information on balance sheet and statement of changes in net assets/equity in the management of tertiary educational institutions could be seen as an attempt to reduce problems associated with any kind of fraud being committed in Nigerian tertiary institutions.

Recommendations

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

- ✓ Tertiary educational institutions in Nigeria and South-East in particular should be aware of the high rate of financial fraud in the environment and review their curriculum to reflect courses that would provide solution to this problem. All tertiary educational institutions regulatory agencies such as the National Universities Commission (NUC), National Board for Technical Education (NBTE) and National Commission for College of Education (NCCE) should ensure that possible remedies to the causes of fraud are included in their accounting curricula for the training of business education (account educators/students) in tertiary educational institutions.
- ✓ Government and regulatory authorities should ensure the provision of standards and guidelines to regulate financial accounting information in the management of tertiary educational institutions. This will enable accounting officers to embrace integrity, objectivity, fairness and accountability in their day-to-day activities.

Declarations

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