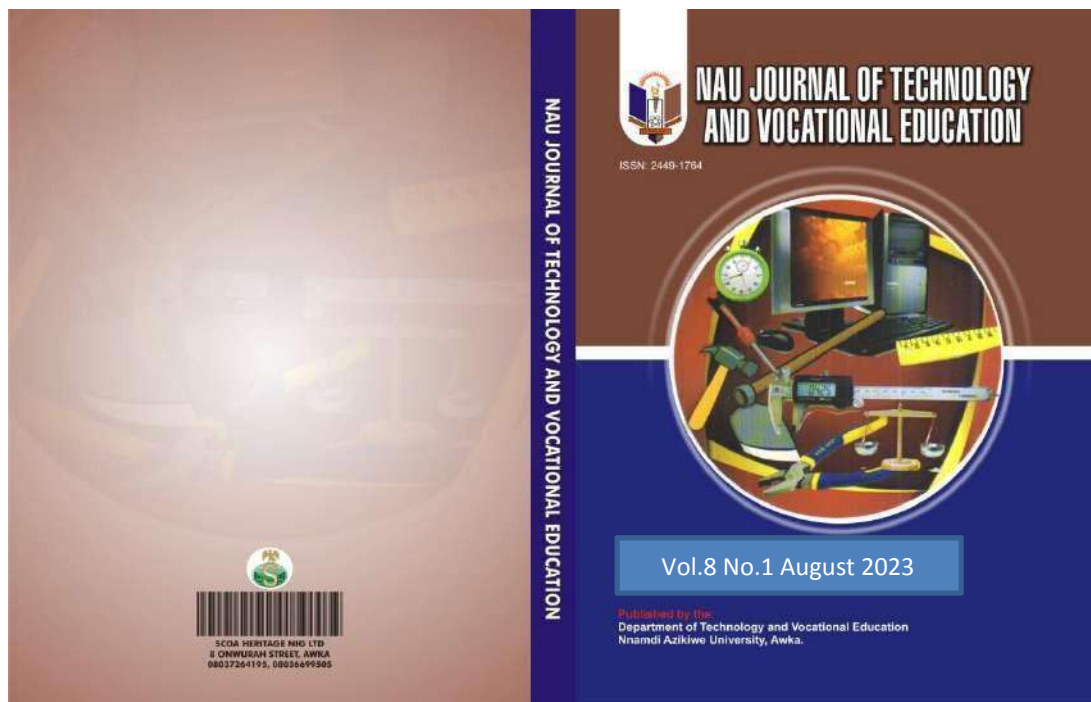


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CAREER ASPIRATION OF VOCATIONAL AND TECHNICAL EDUCATION STUDENTS: THE IMPORTANCE OF MOTIVATION, SENSE-OF-SELF AND INTEREST

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Abstract

This study explored the relationship between three independent variables (interest, motivation, and sense of self) and career aspiration of Vocational and Technical Education Students. Three hypotheses were formulated to guide the study. Correlational survey design was adopted for the study. Students from all the eight technical colleges in Ogun State constituted the population for the study. A total of 100 technical college students, selected through simple random sampling, eventually participated in the study. Sense of self scale, Jackson Vocational interest inventory, Motivation for occupational preference scale, and Career Aspiration Scale - Revised were used for data collection. Cronbach Alpha was used to estimate the reliability of the instruments, the four instruments yielded reliability coefficients of 0.73, 0.81, 0.83 and 0.79 respectively. The questionnaires were collected immediately after administration. Mean, standard deviation, and Pearson Product Moment Correlation (PPMC) was used to analyse the data. The study showed that there is a significant relationship between sense of self and career aspiration of vocational and technical education students. There is a significant relationship between motivation and career aspiration of Vocational and technical education students. Furthermore, there is a significant relationship between interest and career aspiration of Vocational and technical education students. Based on these findings, it was recommended that measures should be taken to improve sense of self of students in vocational and technical colleges to enable them understand their strengths, weaknesses, values, and beliefs. Also, efforts should be made towards increasing students' motivation to excel in their vocational and technical education program and set high career aspirations. Furthermore, vocational counselling and guidance services should be provided and strengthened in all schools to ascertain students' vocational interest and also improve their sense of self.

Keywords. Career aspiration, vocational and technical education, motivation, sense-of-self, interest.

Introduction

Vocational and technical education as a field of study is aimed at equipping the individuals with requisite skills which will enhance their relevance and functionality in the society. It is aimed at developing not only practical skills but also attitudes and habits that makes the recipient a creative, innovative and resourceful person. According to Ntegwung and Iyagbaye (2022), vocational and technical education is geared towards the production of the educated man who can effectively work with his head, heart and hands. Vocational and technical education enables an individual earn a living.

According to the Federal Republic of Nigeria (2004), the objective of vocational and technical education includes acquisition of vocational and technical skills, and stimulating creativity and exposing students to career awareness by exploring usable options in the world of work.

Vocational and technical education students aspire to pursue careers in skilled trades. This includes occupations such as electrical installation and maintenance works, plumbing, carpentry, welding, and automotive technicians (Agbongiasede, 2012). These students often develop practical skills and knowledge in their respective trades and aim to work in industries that require hands-on expertise. Vocational and technical education students with a passion for culinary arts and hospitality may aspire to work in the foodservice industry, hotels, resorts, or event management. Some vocational and technical education students have aspirations to start their own businesses. They may aspire to become entrepreneurs or small business owners.

Career aspiration refers to an individual's desired career goals, ambitions, and objectives for their professional life (Arhin, 2018). It reflects the specific positions, roles, or achievements that individuals strive to attain in their chosen field or industry. Career aspirations can encompass various aspects, including job titles, levels of responsibility, salary expectations, professional development, and personal fulfillment (Akosah-Twumasi, Emeto, Lindsay, Tsey, and Malau-Aduli, 2018). Career aspiration provide individuals with a sense of direction and purpose in an individual's career journeys, guiding their decisions and actions as they work towards their desired outcomes. Career aspirations involve setting goals that include milestones and targets that individuals aim to achieve at different stages of their career, such as securing a certain job position, obtaining a specific certification, or reaching a leadership role. Various factors may shape career aspirations, including societal expectations, family influences, educational experiences, cultural norms, Peer networks, role models, mentors, availability of resources and opportunities, motivation, interest, and sense of self (Tang, Pan, & Newmeyer, 2018).

The concept of sense of self encompasses an individual's perception, beliefs, and understanding of themselves. It involves how individuals define and understand their own unique characteristics, qualities, values, and roles in relation to others and the world around them (Ylvisaker, 2006). Sense of self plays a fundamental role in shaping one's thoughts, emotions, behaviors, and interactions with others. Sense of self involves being aware of one's own thoughts, feelings, and behaviors. It encompasses understanding one's strengths, weaknesses, values, and beliefs. Sense of self influences an individual's self-esteem and self-worth (Raypole, 2020). A student's sense of self may influence his/her career aspirations. Students who have a strong sense of self and believe in their abilities are more likely to set ambitious career goals. Conversely, those with low sense of self may limit their aspirations or choose careers that they perceive as safer or easier.

Moreover, interest is another factor that can shape career aspiration. The concept of interest refers to a person's curiosity, attraction, or enjoyment in a particular subject, activity, or topic (Donnellan, Aslan, & Fastrich, 2022) It involves a positive emotional or cognitive inclination towards something, which drives individuals to engage, explore, and invest their time and effort in that specific area (McIntyre, Gundlach, & Graziano, 2021). Interests can influence choices, preferences, and engagement in various aspects of life. Interests reflect an individual's personal preferences and inclinations. Interest can play a crucial role in shaping career aspirations. When vocational and technical education students have a genuine interest in a particular field or industry, they are more likely to aspire to pursue a career in that area. For example, a student with a strong interest in automotive technology may aspire to become an automotive engineer.

Motivation is another factor that can be a driving force behind career aspirations. Motivation refers to the psychological and physiological processes that activate, guide, and sustain behavior towards achieving a desired goal or outcome (Deci & Ryan, 2000). It involves the internal and external factors that drive individuals to take action, expend effort, and persevere in their pursuits (Fishbach, & Touré-Tillery, 2023). Motivation provides the energy, direction, and focus necessary to initiate and maintain behavior (Cherry, 2023). Motivation can stem from various sources, such as the desire for personal growth, financial stability, or the opportunity to make a positive impact in their chosen field (Mitchell, 1982). Students who are motivated to excel in their vocational and technical education program are more likely to set high career aspirations and be willing to put in the necessary effort and perseverance to achieve them.

Considering the present situation in the Nigeria society, many students no longer aspire to learn vocational subjects or even consider building a meaningful career in vocational and technical education (Okoye & Udodo, 2015). Dwindling enrolment in vocational schools and programmes (Onwumere & Modebelu, 2020) attest to the fact that few students aspire to build careers along occupations like electrical installation and maintenance works, plumbing, carpentry, culinary arts and hospitality. These, in spite of the place of vocational and technical education in facilitating self-reliance and self-sustainability of individuals and economic development of the nation. In an effort geared at addressing students' poor aspiration towards careers in vocational and technical education, this study attempted to establish the relationship that exists between career aspiration and plausible factors that shape it. Therefore this study focused on establishing the relationship that exist between three independent variables (interest, motivation, and sense of self) and career aspiration of Vocational and Technical Education Students. The following hypotheses were formulated to guide the study:

1. There is no significant relationship between sense of self and career aspiration of Vocational and technical education students.
2. There is no significant relationship between motivation and career aspiration of Vocational and technical education students.
3. There is no significant relationship between interest and career aspiration of Vocational and technical education students.

Methods

Correlational survey design was adopted for the study. Students from all the eight technical colleges in Ogun State constituted the population for the study. Simple random sampling was used to select five (5) technical colleges among the eight (8) technical colleges in Ogun State. Also, twenty (20) technical college students were selected from each of the technical colleges using random sampling technique, making a total of 100 technical college students that participated in the study. Sense of self scale (Asai et al., 2016), Jackson Vocational interest inventory (Sigma Assessment Systems, 2000), Motivation for occupational preference scale (Bakare, 1971), and Career Aspiration Scale - Revised (Gregor & O'Brien, 2015) were used for data collection. The instruments were validated by three experts in the field of vocational and technical education. Cronbach Alpha was used to estimate the reliability of the instruments, the four instruments yielded reliability coefficients of 0.73, 0.81, 0.83 and 0.79 respectively. Permission was requested from the school management of all concerned technical colleges in order to administer the questionnaires to the sampled students. The questionnaires were collected immediately after administration. Mean, standard deviation, and Pearson Product Moment Correlation (PPMC) was used to analyse the data. The decision rule for

establishing correlation analyses was based on strength of correlation coefficients (*r*) ranging between ±0.00 to 0.19 for very weak relationship; ±0.20 to 0.39 for weak relationship; ±0.40 to 0.59 for moderate relationship; ±0.60 to 0.79 for strong relationship; and ±0.80 to 1.00 for very strong relationship. The positive or negative signs explain the direction of relationship.

Results

The results are presented in the order of the research questions.

Research Question 1: What is the relationship between sense of self and career aspiration of vocational and technical education students?

Table 1

Bivariate correlation of sense of self and career aspiration of vocational and technical education students

Variables	M	SD	1	2
1. Sense of self	2.79	0.38	1	
2. Career aspiration	3.04	0.39	.263**	1

Note. *M*= Mean, *SD*= Standard Deviation

Vocational and technical education students were surveyed about their sense of self (*M* = 2.79, *SD* = 0.38) and career aspiration (*M* = 3.04, *SD* = 0.39). A bivariate correlation analysis presented in Table 1 revealed a significant weak positive correlation, *r* =.263. This means that, in general, vocational and technical education students who have a positive sense of self will tend to have high career aspiration. Also, there is a significant relationship between sense of self and career aspiration of vocational and technical education students.

Research Question 2: What is the relationship between motivation and career aspiration of vocational and technical education students?

Table 2

Bivariate correlation of motivation and career aspiration of vocational and technical education students

Variables	M	SD	1	2
1. Motivation	3.13	0.47	1	
2. Career aspiration	3.04	0.39	.514**	1

Note. *M*= Mean, *SD*= Standard Deviation

To investigate the relationship between motivation (*M* = 3.13, *SD* = 0.47) and career aspiration (*M* = 3.04, *SD* = 0.39) of vocational and technical education students, a bivariate correlation was computed. As shown in Table 2, the direction of the correlation was positive and significant, *r* =.514. This means that, in general, vocational and technical education students who are highly motivated to study vocational and technical education tend to show high career aspiration, while on the other hand, students who are not motivated tend to show low career aspiration. Also, there is a significant relationship between motivation and career aspiration of vocational and technical education students.

Research Question 3: What is the relationship between interest and career aspiration of vocational and technical education students?

Table 3

Bivariate correlation of interest and career aspiration of vocational and technical education students

Variables	<i>M</i>	<i>SD</i>	1	2
1. Interest	3.57	0.13	1	
2. Career aspiration	3.04	0.39	.530**	1

Note. *M* = Mean, *SD* = Standard Deviation

Vocational and technical education students were surveyed about their interest ($M = 3.57$, $SD = 0.13$) and career aspiration ($M = 3.04$, $SD = 0.39$). A bivariate correlation analysis presented in Table 3 revealed a significant moderate positive correlation, $r = .530$. The positive correlation means that, in general, vocational and technical education students who have high interest in vocational and technical education tend to have high career aspiration. Also, there is a significant relationship between interest and career aspiration of vocational and technical education students.

Findings of the Study

1. Vocational and technical education students who have a positive sense of self will tend to have high career aspiration.
2. Vocational and technical education students who are highly motivated to study vocational and technical education tend to show high career aspiration, while on the other hand, students who are not motivated tend to show low career aspiration.
3. Vocational and technical education students who have high interest in vocational and technical education tend to have high career aspiration.
4. There is a significant relationship between sense of self and career aspiration of vocational and technical education students.
5. There is a significant relationship between motivation and career aspiration of vocational and technical education students.
6. There is a significant relationship between interest and career aspiration of vocational and technical education students.

Discussion of Findings

Findings on hypothesis one revealed that there is a significant relationship between sense of self and career aspiration of vocational and technical education students. Thus, agreeing with Shumba and Naong (2012) who stated that the sense of self of students can influence career aspiration of students. They added that sense of self of many secondary schools students which include their abilities, belief systems and other personality traits have huge influence on the learning interest and their career decision in certain careers especially vocational and technical education. Additionally, Issa and Nwalo (2008) concurred that the sense of self of students has impact on career aspiration of students. Furthermore, the scholar added that sense of self which include sense of their ability in vocational or technical related activities influences their interest in having a career. Also, the belief system of students in certain careers has tremendous influence on the learning interest as well as career decision in vocational and technical education.

Findings on hypothesis two stated that there is a significant relationship between motivation and career aspiration of vocational and technical education students. The result revealed a correlation

coefficient, $r=0.514$ and this denotes that students who are highly motivated to study vocational and technical education tend to show positive career aspiration. This is in line with Akcakanat and Uzunbacak (2019) who concurs that the motivation of students has significant impact on career aspiration of students. The result was also supported by the report of Okwong (2014) who submitted that the motivation of students has significant impact on career aspiration of students. Still, the scholars added that the students are not only motivated by teachers and the school environment but are also motivated by parents, role models and people living around; as their motivation is easily stimulated positively or affected negatively based on the circumstances surrounding them which in turn influence their career decision.

Findings on hypothesis three revealed that there is a significant relationship between interest and career aspiration of vocational and technical education students. The table reveals a correlation coefficient, $r=0.609$ and this denotes that students who have high interest in vocational and technical education tend to have positive career aspiration. This is in consonance with Nwamadi, (2014) who submitted that the interest of senior secondary school students has significant impact on their career aspirations. The author further pointed out that students' interest being another factor that affects students' career decision is very significant in the successful learning of vocational subjects which in turn affects their career decision on vocational and technical education. The finding is also aligned with Kochung (2012) who pointed out that the interest of students has significant impact on their career aspirations. Additionally, Adetola and Ohwofasa (2023) admitted that interest has significant impact on career aspiration of Vocational and technical education students. Furthermore, the scholar added that students' interest in understanding the concepts of some technical subjects can significantly stimulate the interest of students in those subjects and possibly building a career in vocational and technical education. On the other hand, students' lack of interest in technical or vocational activities in schools significantly influence their interest in learning these vocational subjects as well as having making a career decision in vocational and technical education.

Conclusion

Based on the findings, it was concluded that vocational and technical education students who have a positive sense of self will tend to have high career aspiration. Also, vocational and technical education students who are highly motivated to study vocational and technical education tend to show high career aspiration, while on the other hand, students who are not motivated tend to show low career aspiration. Additionally, vocational and technical education students who have high interest in vocational and technical education tend to have high career aspiration. Moreso, there is a significant relationship between sense of self and career aspiration of vocational and technical education students. There is a significant relationship between motivation and career aspiration of Vocational and technical education students. Furthermore, there is a significant relationship between interest and career aspiration of Vocational and technical education students.

Recommendations

The following recommendations were made from the study:

1. Sense of self is critical in career decision making among vocational and technical education students in Nigeria. Therefore, measure should be taken to improve sense of self of students in vocational and technical colleges to enable them understand their strengths, weaknesses, values, and beliefs.

2. There is need to pay attention to the increasing students' motivation to excel in their vocational and technical education program and set high career aspirations.
3. Vocational counselling should be strengthened at the vocational and technical college to ascertain students' vocational interest and also improve their sense of self. Furthermore, Guidance services should be provided in all secondary schools in the state.
4. Facilities for counselling especially for vocational counselling should be provided in vocational and technical colleges in the country.

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EXTENT OF ADOPTION OF FINANCIAL REPORTING AND ANALYSIS PRACTICES BY OWNERS OF SMALL-SCALE BUSINESSES FOR BUSINESS GROWTH IN ANAMBRA STATE

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Abstract

To carry out this study, one research question was raised and two null hypotheses were tested at a 0.05 level of significance. The study adopted a descriptive survey research design. The sample consisted of 500 small-scale business owners out of 1504 small-scale businesses in Anambra State which were selected using purposive and convenience sampling techniques. The instrument for data collection was a validated self-administered questionnaire. Cronbach's alpha formula was used to determine the internal consistency of the questionnaire which yielded a reliability coefficient of 0.84. The researchers administered the instrument with the help of five research assistants to the respondents. Mean and standard deviation were used to answer the research question and determine the homogeneity or otherwise of the respondents while a t-test was used for testing the null hypotheses. The findings of the study revealed that financial reporting and analysis practices were lowly adopted by small-scale business owners for business growth in Anambra State. Irrespective of their gender and period of existence in the marketplace, small-scale business owners do not differ significantly in their mean ratings on the extent they adopt financial reporting and analysis practices for business growth. The study concluded that small-scale business owners in Anambra State will not have detailed information about the financial strengths and weaknesses of their business empires as a result of their under-utilization of financial reporting and analysis practices in the day-to-day running of their business operations. It was recommended among others that small-scale business owners should undertake technical seminars and workshops to improve their awareness and knowledge of financial reporting and analysis practices. This would encourage them to make use of financial reporting and analysis practices in their business to have a better view of the profitability of their business in Anambra State.

Keywords. Colleges of Education, Curriculum, Accounting Education, Needs Assessment.

Introduction

Small-scale businesses are start-up enterprises responsible for the industrialization of a nation's economy because of their innovative business practices and technologies that fuel the emergence of new markets and entrepreneurs in the business world. Etebefia and Akinkumi (2013) described a small-scale enterprise as a business outlet in which its owner influences the entire decision-making process and the business has a relatively small market share and low capital requirement for its operation. According to a former Minister of Trade and Investment, Mr. Olusegun Aganga, Anambra State has the highest number of small-scale businesses in the country because of the increasing numbers of market outlets and commercial activities in Onitsha, Nnewi, Awka, Ogidi, and other areas in the State (Vincent, 2012). Therefore, it will not be out of place to expect Anambra

State to record the proliferation of small-scale businesses with consequential business growth. Business growth is the ability of a firm to conceive a business idea at the pre-start-up stage; implement the business idea for profits in the start-up era and stay relevant with the trends of the marketplace with innovative business ideas at the post-start-up.

In this study, business growth is a process of overcoming resource deficiencies that lead to the achievement of financial and non-financial goals that are crucial to the longevity of small-scale enterprises. Business growth may be considered by some entrepreneurs as the increase in the firm's physical assets, profits, and sales (Fadahunsi, 2012). Gupta, Guha, and Krishnaswami (2013) viewed business growth in the light of increased financial resources, productive staff, expansion of business operations, management capabilities, the existence of debit, cash, equity investments, and reliable business networks, whereas in the view of others, business growth is centered around increased organizational performance, increased competitive advantage, proactive and visionary attitude to detect opportunities and threats for their business (Rodrigues, Franco, Silva & Oliveira, 2021). Business growth involves business expansion through an increase in production quota, employment capacity, turnover volume, and financial power in the marketplace (Yeboah, 2015).

One would expect Anambra State to enjoy great economic benefits from the proliferation of small-scale businesses. Unfortunately, this expectation is far-fetched due to the high rate of collapse of small-scale businesses. Generally, there is a high failure rate of small-scale businesses worldwide. Alsaaty and Makhlof (2020) reported that 20 percent of small businesses fail in their first year, 30 percent fail in their second year, and 50 percent fail after five years in business while 70 percent fail in their 10th year in business. This situation is not better in Nigeria because the Lagos Business School (LBS) (2021) noted that about 80 percent of small-scale businesses in Nigeria fail within the first five years of their existence due to a lack of professional training and experience and other wrong business practices. Statistically, the business growth or failure of small-scale businesses can only, numerically and reliably, be determined from their accounting records and practices. Accounting practices are decisions making tools of management that provide an orderly method of gathering and organizing financial information about the various business transactions of a business enterprise. According to Tunji, Salome, Ifeanyi, and Abiodun (2019), accounting practices are systems of procedures and controls that a business firm uses to create and record business transactions.

Without proper accounting practices, it would be very difficult for owners of small-scale businesses to determine the actual growth of their enterprises and forecast the future growth of their business operations in the marketplace. Adnan Qubbaja and Talahmeh (2020) submitted that accounting practices of small-scale businesses are organized in terms of financial record keeping, financial reporting, and analysis, auditing, cost accounting, and management accounting. They also include computerized accounting practices, and working capital accounting practices (Ali, Berhe & Mihret, 2014). Also, accounting practices include credit and cash flow management, business advisory as well as budgeting practices (Vohra & Dhillon, 2014). Since accounting practices are varied and wide, this study will focus on financial reporting and analysis practices.

In simple terms, financial reporting and analysis highlight the important relationships in the financial statements of a business entity. Financial reporting and analysis is a method of reviewing and analyzing the accounting books of a business firm to gauge its past, present, or projected future performance (Rathnasiri, 2014). In business literature, financial reporting and analysis are used by external parties for at least two reasons: to evaluate investment opportunities and to monitor management (Soyinka, Fagbayimu, Adegroye & Ogunmola, 2017). Financial reporting involves the disclosure of financial information to various stakeholders about the financial performance and

financial position of the organization over a specific period (Brigham & Ehrhardt, 2013). These stakeholders include – investors, creditors, the public, debt providers, governments, and government agencies.

As outlined in Rathnasiri (2014) and Abusomwan, Atu, and Omimi-Ejor (2016) the common financial reporting and analysis practices used in business firms are but not limited to the following;

Income statement: The income statement essentially shows how much the business earned or lost during a period of time and ultimately determines a firm's net income or loss. The income statement shows the operating results of a business by matching the revenue earned during a given period with the expenses incurred in obtaining that revenue. The income statement is normally divided into two parts - the first part is called trading account. The aim of preparing trading account is to find out gross profit or gross loss while the second section is the profit and loss account, which is opened by recording the gross profit (on the credit side) or gross loss (debit side). The profit and loss account aims to find out the net profit or net loss of a firm.

Statement of financial position: The balance sheet is also known as the statement of financial position. A balance sheet delivers a snapshot of a firm's assets, liabilities, and owner's equity at a single point in time. The Assets are economic resources that are owned by a business and are expected to benefit future operations. The liabilities are the persons or organizations to which the debt is owed called creditors. All businesses have liabilities; even the largest companies often purchase merchandise, supplies, and service on accounts. Owner's equity represents the owners' claims to the assets of the business. Because creditors' claims have legal priority over those of the owners, the owner's equity is a residual amount. Owners are entitled to what is left after the claims of creditors have been satisfied in full. Therefore, owners' equity is always equal to total assets minus total liabilities.

Cash flow statement: A cash flow statement shows the amount of cash coming in and out of a firm. The cash flow statement gives stakeholders an idea of how a business operates and manages cash to pay off debt and fund current expenses and future investments. Although the balance sheet helps figure out solvency and the income statement helps determine profitability, users of this information also need to assess a business's ability to remain solvent. The basic purpose of the statement of cash flows is to provide information on the origin and amount of cash receipts and the destination and amounts of cash payments.

According to Akumfi, Yeboah, Otoo, and Mensah (2019), bank reconciliation statements, efficiency ratios, leverage ratios, and profitability ratios among others are used in financial reporting and analysis practices. To this end, financial reporting and analysis practices facilitate business growth of small-scale businesses through the following means as outlined in Amoako, Marfo, Gyabaah, and Gyamfi (2014) and Kutsaru (2014) as follows; to evaluate how the business enterprise is performing, to manage cash flow and collect money due from debtors, to find out possible financing needs of the firm, to propose to the owners the portion of profits to retain and distribute, to propose to the owner a change in the range of products or business activities and to provide a financial base for tax assessments.

To this end, the extent to which owners of small-scale businesses apply and maintain accurate financial reporting and analysis practices goes a long way in ensuring the business growth or failure of their business in the competitive market environment. As owners are at the helm of the management of small-scale businesses, their decisions to adopt financial reporting and analysis practices may be affected by gender and period of existence among others. The inability of female-

owned small scale business enterprises to reach the levels of business growth seen in male-owned small-scale businesses with regard to sales turnover and market size may spark gender-related debates regarding the extent of adoption of financial reporting and analysis practices by small-scale businesses in the marketplace (Nganda, Wanyonyi & Kitili, 2014). This assumption fuels the image of women as deficient in adopting appropriate financial reporting and analysis practices in ascertaining the actual growth of their small-scale businesses. However, this assertion needs to be supported by empirical evidence in Anambra State.

Another critical variable suspected to determine the extent of adoption of financial reporting and analysis practices is the period of existence of small-scale businesses. Period of existence refers to the number of years that a small-scale business has been operational in the marketplace. In this study, the period of existence is categorized within two brackets; 0-9 years and 10 years and above). This categorization was established because most small-scale businesses fall within the first nine years of existence and it takes 10 years and more to build sustainable business growth in Nigeria (Ifekwem & Adedamola, 2016); Lagos Business School, 2021). It is assumed that owners of small-scale businesses with less than 10 years of business operations do not know what it takes to adopt appropriate financial reporting and analysis practices that can reduce the likelihood of business failure than owners of small-scale businesses with 10 years and more of business operations in the marketplace. Incidentally, this assumption needs to be supported by empirical investigation in Anambra State. This premise necessitated the need to explore the opinions of small-scale business owners from the position of their gender and period of existence on the extent of adoption of financial reporting and analysis practices for business growth in Anambra State.

Statement of the Problem

One of the solutions to the eradication of poverty in many developing nations of the world and agents of economic growth in developed economies is the establishment of small-scale businesses. Despite, the laudable attributes of small-scale businesses, their frequent collapse is worrisome, because they are closer to the final consumers than the large firms in the business environment. From the researcher's interactions with some small-scale business owners in Anambra State, the majority of them do not engage professional accountants to examine the status of their accounting records and practices.

Business failure does not just happen; when accounting practices such as that can provide credible information about the business growth of a business are not kept, small-scale owners will have a false position on the sustainability of their enterprises. Thus, the problem of the study is that small-scale business owners will not be able to ascertain the real value of capital invested, total expenditure, and income generated in their businesses if they failed to adopt relevant financial reporting and analysis practices in running their business enterprises in the marketplace. Notwithstanding, little attention has been paid by researchers to the extent of the adoption of financial reporting and analysis practices by owners of small-scale businesses in Anambra State. This is the gap, this study sought to fill.

Purpose of the Study

Specifically, the study sought to find out the extent financial record keeping practices are adopted by owners of small-scale businesses for business growth in Anambra State.

Research Questions

The following research question guided the study:

1. To what extent do owners of small-scale businesses adopt financial reporting and analysis practices for business growth in Anambra State?

Research Hypotheses

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

4. There is no significant difference in the mean ratings of owners of small-scale businesses in Anambra State on the extent they adopt financial record keeping practices for business growth based on period of existence (0-9 years and 10 years and above)
5. Owners of small-scale businesses do not differ significantly in their mean ratings on the extent they adopt financial reporting and analysis practices for business growth in Anambra State based on their gender.

Methods

This study adopts the descriptive research design. It is a design that is aimed at collecting data about a phenomenon from a representative of a given population, and then describe the outcome of the data after analysis so that it can be generalized among the population. Consequently, the population of this study was made up of 1504 small business owners in Anambra State. The sample consisted of 500 small business owners in the state, which were selected using multi-stage sampling technique. In this technique, the purposive sampling method was employed to study only small business owners in Anambra State. Further, the convenience sampling technique was adopted to reach out to the 500 small business owners; hence the participants were selected at the convenience of the researchers meeting the participants in their offices or business units.

Questionnaire was therefore used as the instrument for data collection. It had a 10 item scale developed by the researchers to measure the financial reporting and analysis adopted by the small business owners. The questionnaire had two sections A and B such that section A was used to collect demographic data such as gender (male & female) and period of business existence (0-9 years & 10 years and above); while section B contained 10 item statement with five response options ranging from very lowly adopted (VLA = 1) to very highly adopted (VHA = 5). The instrument was then validated by three experts whose suggestions were used to improve the items of the scale in order to produce the final draft of the scale. The Cronbach's alpha method was adopted to estimate the reliability of the scale, which yielded a coefficient of 0.84 which indicates a satisfactory reliability of the scale for the study.

For effective data collection, five research assistants were used. The assistants were briefed on how to collect the data. Mean, standard deviation and t-test were applied to analyse the data. While the mean was used to answer the research question, standard deviation was applied to establish level of homogeneity of responses among the respondents. The real limit of mean was used to take decisions about the research question in relation to items of the scale. The t-test was therefore used to test the hypotheses at 0.05 level of significance such that null hypothesis was accepted if the probability (p) value is less than the alpha value (0.05); otherwise it is rejected.

Results

Table 1

Respondents’ mean ratings on extent do owners of small-scale businesses adopt financial reporting and analysis practices for business growth in Anambra State

SN	Financial reporting and analysis practices	Mean	SD	Remarks
1	Trading account (records of the gross profit made from sales)	1.96	.54	LA
2	Profit and loss account (records the net income or loss after expenses)	4.68	.95	VHA
3	Balance sheet (records all the assets, liabilities and owner’s capital in the business)	2.27	.73	LA
4	Statement of cash flow (records all the cash coming and going out of the business)	3.73	.58	HA
5	Statement of retained earnings (records the opening balance and closing balance of owner’s capital in the business)	1.84	.91	LA
6	Bank reconciliation statement (records summary of the bank balance and book balance of the business)	3.63	.64	HA
7	Profitability ratio (records the percentage of profits remaining after taxes and all costs)	2.14	.83	LA
8	Liquidity ratio (records amount of money used to meet the short-term debt of the business)	1.21	.67	VLA
9	Efficiency ratio (records the amount of credit debts collected in the business)	1.17	.51	LA
10	Leverage ratio (records amount of money used to meet the long-term debt of the business)	1.09	.70	VLA
	Cluster mean	2.37		LA

Note. VLA = very lowly adopted, LA = lowly adopted, HA = highly adopted, VHA = very highly adopted

Data in Table 1 show that one out of the 10 listed financial reporting and analysis practices with a mean rating of 4.68 was very highly adopted by respondents while two practices were highly adopted with mean ratings of 3.63 and 3.73. Four practices were lowly adopted with mean ratings ranging from 1.84 to 2.27 while three practices were very lowly adopted with mean ratings ranging from 1.09 to 1.21. The cluster mean of 2.37 indicates that owners of small-scale businesses lowly adopted financial reporting and analysis practices for business growth in Anambra State. The standard deviations for the items are within the same range which shows that the respondents are homogeneous in their opinions.

Table 2

The t-test analysis of mean ratings of male and female small-scale business owners on the extent of adoption of financial reporting and analysis practices

Variable	N	Mean	SD	df	t-value	p-value	Decision
Male	307	50.04	8.06	424	0,09	0.21	Not Significant
Female	119	39.78	7.93				

Table 2 shows that there is no significant difference in the mean ratings of small-scale business owners on the extent they adopt financial reporting and analysis practices for business growth based on their gender in Anambra State. This is shown by the p-value of 0.21, which is greater than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted

Table 3

The t-test analysis on the extent of adoption of financial reporting and analysis practices by small-scale business owners based on period of existence

Variable	N	Mean	SD	df	t-value	p-value	Decision
0-9 years	269	49.68	3.72	424	0.11	0.17	Not Significant
10 years & above	157	36.21	2.95				

Table 3 shows that small-scale business owners do not differ significantly in their mean ratings on the extent they adopt financial reporting and analysis practices for business growth based on period of operation in Anambra State. This is shown by the p-value of 0.17, which is greater than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted.

Discussion of Findings

The findings of the study revealed that owners of small-scale businesses lowly adopted financial reporting and analysis practices for business growth in Anambra State. This study reported that financial reporting and analysis practices such as liquidity ratio, efficiency ratio, leverage ratio, profitability ratio, statement of retained earnings, trading account, and balance sheet were not highly adopted by owners of small-scale businesses in Anambra State. This means that there is no proper accounting standard for measuring the business growth of small-scale businesses because owners of these enterprises do not have the procedures, policies, and actions targeted at tracking, capturing, and recording all transactions of monetary nature resulting in either generating cash flows or expending cash flows. The finding of this study corresponds with Abanis, Sunday, Burani, and Eliabu (2013) who discovered that small business owners utilized financial reporting and analysis to a low extent. The poor adoption of financial reporting and analysis practices by small-scale business owners in Anambra State implies that these owners do not have in-depth educational knowledge of accounting to determine the liquidity ratio, efficiency ratio, leverage ratio, and profitability ratio of their business firms. This finding aligns with the study of Uddin, Biswas, Ali, and Khatun (2017) which found that income statements, cash flow statements, balance sheets, owner’s equity statements, and notes and disclosure are adopted at a very low extent by small-scale business owners.

In addition, the study revealed that small-scale business owners do not differ significantly in their mean ratings on the extent they adopt financial reporting and analysis practices for business growth based on gender and period of operation in Anambra State. This means that gender and period of operation have no inverse influence on the small-scale business owners’ responses to the extent financial reporting and analysis practices are adopted in Anambra State. This is in agreement with Okoli and Okeke (2018) who revealed that small-scale entrepreneurs, irrespective of their gender and years of business operations did not significantly differ in their mean ratings on the extent they adopted suitable financial reporting and analysis practices in their businesses. The researcher believed

that owners of small-scale businesses' inability to engage professional accountants to examine their financial transactions could be responsible for their low extent of adoption of financial reporting and analysis practices for business growth in Anambra State. This assertion is validated by the findings of Obeki and Bila (2018) which revealed that the majority of small business owners do not fully prepare income statements and employ qualified accountants to manage their financial records.

Conclusion

Financial reporting and analysis practices are financial instruments that show the firm's level of financial strength in terms of its liquidity and profitability ratio. Based on the study, the researchers argued that small-scale business owners in Anambra State are not familiar with leverage ratio, efficiency ratio, profitability ratio, balance sheet, and statement of retained earnings. Upon this foundation, the study concluded that small-scale business owners in Anambra State will not have detailed information about the financial strengths and weaknesses of their business empires as a result of their under-utilization of financial reporting and analysis practices in the day-to-day running of their business operations.

Recommendations

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

1. Small scale business owners should undertake technical seminars and workshops to improve their awareness and knowledge of financial reporting and analysis practices. This would encourage them to make use of financial reporting and analysis practices in their business to have a better view of the profitability of their business in Anambra State.
2. Small scale business owners should engage professional accountants and auditors on contractual basis to help them examine the financial health of their business enterprises with financial reporting and analysis so as to enable quickly identify financial distress that may affect the growth of their business enterprise in the marketplace.
3. Accounting training institutions should do well to incorporate the study of financial reporting and analysis practices and computerized accounting systems as part of their courses to ensure that accountants and future small scale business owners are equipped with both accounting knowledge and the required information technology skills to operate a paperless accounting system.

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PESTS PROTECTED CABLES: A STRATEGY FOR EFFECTIVE PREVENTION OF FIRE OUTBREAK FROM ELECTRICAL INSTALLATIONS IN WORKSHOPS IN TECHNICAL COLLEGES IN RIVERS STATE

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Abstract

This study on pests protected cables as a strategy for effective prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State was necessitated by the frequent fire outbreak from electrical installation in workshops in technical colleges. A research question and two null hypotheses guided the study. A descriptive survey research design was employed for the study. The population for this study comprised of 45 electrical teachers in four technical colleges in Rivers State. The entire population was studied without sampling since the size was not too large and was manageable. The instrument for data collection was a structured questionnaire titled 'Pest Protected Cables for Effective Prevention of Fire Outbreak from Electrical Installation in Workshops'. The instrument was validated by two experts from the Departments of Industrial Technical Education and Educational Foundations in Ignatius Ajuru University of Education, Port Harcourt. Using the Cronbach alpha method to determine the reliability of the instrument, the reliability co-efficient of 0.78 was obtained. The data collected for the study were analyzed using mean and standard deviation to answer the research questions and to determine the closeness of the respondents' mean ratings. The t-test was used to test the null hypotheses at 0.05 level of significance. The findings of study revealed that pests protected cables will be very effective strategy for prevention of fire outbreak from electrical installations in workshops in technical colleges. The findings also showed that year of experience and location had no significant influence on the opinion of respondents on the effective of peste protected cables as a strategy for prevention of fire outbreak from electrical installations in workshops in technical colleges. Based on the findings of this study, it was recommended that pests protected cables should be used during construction and renovation of workshops among others.

Keywords. Pest protected cables, technical colleges, workshop, fire outbreak.

Introduction

Technical colleges are concerned with production of technicians who are skilled in different fields of human endeavour. The type of technicians produced at technical college level includes electronic/electrical technicians, automobile/metalwork technicians and building/woodwork technicians among others. Training of technicians at technical college involves imparting both theoretical and practical knowledge to students under the guidance of the teacher within the school environment. Students at technical colleges are exposed to different skilled areas, through which one can be trained to be self-reliant. The type of education recurved at technical college level is known as vocational and technical education. Technical colleges according to Akpan (2015)

provide technical and vocational education and training to students for a particular career and occupation. Vocational and Technical education is an aspect of that leads to acquisition of practical skills as well as basic scientific knowledge (Abel, 2019). At technical college, vocational and technical education is provided to impart technical/occupational skills in the areas of metalwork, woodwork, automobile, electrical, radio, television and electronic works. In the context of this study, technical colleges are government established educational institutions that prepare individuals to acquire practical skills, basic and scientific knowledge and attitude required by craftsmen and technicians at sub-professional levels. Teachers and students in those skill areas carryout practical works at designated workshops.

A workshop is a building where practical training on skill acquisition is carried out. Danga (2022) states that workshop is a workplace where machining, automobile, electrical/electronics, woodwork, fabrication, foundry, forging or welding operations, construction, maintenance or repairs is carried out. Technical colleges' workshop is a unique learning situation in which the learners may experiment, test, construct, disassemble, repair, design, create, imagine and study (Ezeji, 2014). This explains the fact that technical education and its related workshop practices is a programme whereby students acquire industrial-technical knowledge and skills through creative and problem-solving learning experience involving activities such as experimenting, planning, designing, constructing, evaluating and using tools, machines, materials and processes. Every vocational and technical trade or craft has its own workshop for teachers and students' practical works. The major components of workshops are tools, machine, materials and consumables. Some of these tools and machines operates or are energized through electric power. In the context of this study, workshop is a place where mechanical, electrical, electronics, automobile and woodwork practical, training, repair and maintenance is carried out in technical colleges. The functionality and usability of these workshops largely depends on availability of power supply. This account for the electrification of school workshops using effective strategies for prevention fire outbreak from electrical installations.

Fire outbreak is a sudden and unexpected emergence of fire which if not stopped or brought under control could lead to loss of live or property. There are four stages of fire development: ignition, growth, fully developed, and decay. The ignition stage is when all four elements of the fire tetrahedron coalesce, the fuels reach their ignition temperature, and the fire begins. During the growth stage, the fire increases fuel consumption and creates more heat and smoke. The fully developed stage occurs when the maximum amount of fuel and oxidizers are consumed, and the highest heat release rate is produced. The temperature decreases and intensity is reduced during the decay stage, which happens when the available fuel has been consumed (Ethan, 2015). One of fuel that in any electrical installation is the cable especially when they become naked as a result of attack by rodents and pests.

The exposure of cables by pests has intermittently led to fire outbreak occasioned by short circuit. This situation could be prevented when effective fire outbreak preventive strategies are implemented during electric power installations. One of such strategies among others is the use of pest protected cables in electrical installations. Most of the electric fire outbreak according to James (2016) are as a result of degradation of cables due to pest attack. Squirrels, rats, and other rodents may gnaw on unprotected wiring, causing fire and shock hazards (University of Illinois, 2013). The use of pests protected cables repel these pests from damaging cables used for electrical installation; thereby preventing fire outbreak.

According to Keystone (2020), electrical cables are installed in almost all types of environments, and some are in areas more conducive for exposure to pests, rodents or termites. This is especially so for cables that are buried direct or for underground use cables. Cable materials are attractive to rodents due to the presence of plasticizers and aromatic odours. The colour and texture of the cable sheath material are also attractive to them. Termites live in underground nests deep in the soil. While their basic diet is cellulose, such as organic wastes and roots of plants, once they have consumed natural sources of cellulose, they would look for other manmade sources such as cables. When cables insulation layer is chewed through, there is possibility short circuits occurrence hence becoming a potential source of electrical fire. Therefore, where there is risk of pests, rodents or termites, there is need to consider protective measures or additives to be added to the cables to prevent damage. There are two general methods to protect cables from rodents, pests and termites, which are the use of physical barriers and chemical additives.

For rodent and pest issues, physical barriers that can help to protect the cables against them include the use of conduits and armoring tapes. These barriers are designed to prevent pests and rodents from gnawing on the cables. For fibre optic cables the use of fibre glass yarns is popular where it becomes broken when bitten into and is unpleasant for the rodent (Keystone, 2020). For termites, an effective long-term physical barrier would be Nylon-12, which is a tough material that termites are unable to bite through. In general, these physical methods may last longer, but tend to be costly as well.

Another effective alternative is the use of chemical additives labelled pest resistance (PR), anti-rodent (AR), and anti-termite (AT). Additives are added to the outer sheath of the cable when it is being extruded to provide long lasting effectiveness due to the controlled release of the active ingredients (Keystone, 2020). Example of anti-rodent ingredients include capsaicin (think chilli), which are added and cause the sheath to have a spicy or bitter taste which discourages animals from gnawing on the cables. Since the olfactory sense of animals is superior to humans, the additives give off an unattractive scent to animals but is non-toxic and not detectable to humans. Anti-termite cables on the other hand are treated with insect growth regulators which serves to repel and disrupt their growth and reproduction rather than to exterminate them.

It is obvious that this type of cables were not used during the construction of workshops in technical colleges in Rivers State (Hugh, 2014). This could be of the causes of fire outbreak from electrical installations in workshops technical colleges. However, opinions differ among people on the use of this type of cable. Akin (2016) stated some experts are of the view that the use of pest protected cable will not be a strategy for prevention of fire outbreak from electrical installations based on their location and years of experience. This is contrary to the view of Eaton (2016), who observed that expert's due year of experience are of the opinion that pest protected cables could be among the effective strategies for prevention of fire outbreak from electrical installations. Therefore, the study will examine the views of experts in this direction in terms of years of experience and location.

Statement of the Problem

Workshops play a pivotal and crucial role in the acquisition of practical skills among students in technical colleges. The skills so acquired through workshop practice shapes the future careers and aspiration of these students in terms occupational specialty. However, the utilization of workshops for practical training in technical colleges in Rivers State sometimes is short lived by incessant fire outbreak result from electrical installations (Dan, 2017). This is usual caused by many factors. Among them is the exposure of cables by pests and rodents. This situation if left unresolved could hamper the objectives and goal of technical colleges; which is the provision of skilled or vocational and technical training to her students.

Undoubtedly, the situation could be avoided if effective strategy for prevention fire outbreak such as pest protected cables may have been used. The researchers therefore sought to investigate the use of pest protected cable as a strategy for effective prevention of fire outbreak in electrical installations in workshops in technical colleges in Rivers State.

Purpose of the Study

The purpose of this study was to examine pest protected cable as a strategy for effective prevention of fire outbreak from electrical installations in workshops in technical colleges tertiary in Rivers State.

Research Question

The following research questions guided the study.

How effective will the use of pests protected cables prevent fire outbreak from electrical installations in workshops.

Hypotheses

The following null hypotheses were tested at .05 level of significance:

- 1 there is no significant difference in the mean ratings of respondents on the use of fire retardant and resistant cables as strategy for effective prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State on the basis of location (rural and urban).
- 2 there is no significant difference in the mean ratings of respondents on the use of pests protected cables as strategy for effective prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State based on years of experience (0 – 10 years and 11year – above).

Methods

A descriptive survey research design was adopted for the study. The population of the study comprised 45 electrical teachers in four technical colleges in Rivers State which are, Government Technical College, Port Harcourt, Ahuoda, Tombia and Ele-Ogu. The entire population was studied since the population is not too large and is manageable. The instrument for data collection was a structured questionnaire with the title: *Pest Protected Cables for Effective Prevention of Fire Outbreak in Electrical Installations in Workshops*. There ratings were as follows; Very Effective (VE), Effective (E), Ineffective (I) and Very Ineffective (VI). The validation of the instrument was done by two experts from the Department of Technical Education; Ignatius Ajuru University of Education. The reliability of the instrument was established using a pilot test involving 20 teachers of technical colleges in Bayelsa State; Data collected for the pilot study were analyzed with Cronbach

alpha. The reliability coefficient of 0.78 was obtained. The researcher through the support of research assistants sent and retrieved 45 copies of questionnaire for analysis. The data collected for the study were analyzed using the arithmetic mean and standard deviation to answer the research questions and determine the closeness of the responses to the means respectively. The z-test statistical tool was used to test the null hypotheses at 0.05 level of significance. A null hypothesis was rejected where the calculated p-value was less than the 0.05 level of significance which implies that there was a significant difference between mean scores. Conversely, where the calculated p-value was greater than or equal to the level of significance (0.05), it meant that there was no significant difference and the hypothesis was accepted.

Results

Research Question 1: How effective is the use of pests protected cables for prevention of fire outbreak from electrical installations in workshops?

Table 1

Respondents mean ratings on the effectiveness of pests protected cables for prevention of fire outbreak.

SN	Pests Protected Cables	Mean	SD	Remarks
1	Ability to repel pests in non-plasticizer state.	3.51	0.56	VE
2	Ability to repel pests due to its repugnant odour.	3.50	0.50	VE
3	Inability to attract pests due to its colours	3.59	0.49	VE
4	Inability to attract pests due to the texture of the cable sheaths.	3.51	0.54	VE
5	Inability to attract pests due to its non-cellulose content.	3.61	0.41	VE
6	Ability to repel pests due to its addictive content.	3.53	0.47	VE
7	Ability to prevent pests due to its Nylon-12 barrier.	3.50	0.53	VE
8	Ability to discourage pests attack due to its bitter taste.	3.52	0.57	VE
	Cluster Mean	3.52	0.51	VE

Table 1 shows that all the items have a cluster Mean of 3.52, which means that teachers in technical colleges agreed that the use pests protected cables will be very effective for prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State. The standard deviation of 0.51 show that the respondents are homogenous in their opinions.

Hypothesis 1. There is no significant difference in the mean ratings of respondents on the use of pests protected cables as strategy for effective prevention of fire outbreak from electrical installations in workshops technical colleges in Rivers State on the basis of location (rural and urban).

Table 2

The t-test comparison of the mean ratings on the effectiveness of pests protected cables for prevention of fire outbreak on the basis of location

Teachers' Location	N	\bar{X}	SD	df	t-cal.	p-val.	Decision
Urban	30	3.58	.51	43	0.39	.071	Not significant
Rural	15	3.54	.52				

Data in Table 2 show that the respondents do not differ significantly in their mean ratings on the use of pests protected cables as an effective strategy for prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State on the basis of location, with mean scores of 3.58 and 3.54 while the corresponding standard deviation is .51 and .52. The Table indicated a z-value of 0.39, at degree of freedom of 195 and a p-value of .071. Testing at alpha level of 0.05. The p-value is not significant since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is not rejected.

Hypothesis 2. There is no significant difference in the mean ratings of respondents on the use of pests protected cables as strategy for effective prevention of fire outbreak from electrical installations in workshops technical colleges in Rivers State based on years of experience (0 – 10 years and 11 year – above).

Table 3

The t-test comparison of the mean ratings on the effectiveness of pests protected cables for prevention of fire outbreak based on year of experience

Years of Experience	N	\bar{X}	SD	df	t-cal.	p-val.	Decision
Urban	28	2.05	.12	43	1.54	.063	Not significant
Rural	17	2.13	.14				

Data in Table 3 show that the respondents do not differ significantly in their mean ratings on the use of pest protected cables as an effective strategy for prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State based on years of experience, with mean scores of 2.05 and 2.13, while the corresponding standard deviation is .12 and .14. The Table indicated a t-value of 1.54, at degree of freedom of 195 and a p-value of .063. Testing at alpha level of 0.05, the p-value is not significant, since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is not rejected.

Discussion of Findings

The findings of this study revealed that pests protected cables is a strategy for effective prevention of fire outbreak from electrical installations in technical colleges in Rivers State. The strategy was found to repel pests, to be repugnant to pests, unattractive to pests among others. This finding is in agreement with that of Keystone (2020) who noted, where there is risk of pests, rodents or termites, there is need to consider protective barriers or additives to be added to the cables to prevent damage. There are two general methods to protect cables from rodents, pests and termites, which are the use of physical barriers and chemical additives. The analysis of the hypothesis revealed that there is no significant difference in the mean ratings of respondents on the use of pests protected

cables as a strategy for effective prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State based on location and years of experience of respondents. This finding is in agreement with that of Eaton (2016), who observed that expert's due year of experience are of the opinion that pest protected cables could be among the effective strategies for prevention of fire outbreak from electrical installations. This is contrary to the view of Akin (2016) stated some experts are of the view that the use of pest protected cable will not be a strategy for prevention of fire outbreak from electrical installations based on their location and years of experience.

Conclusion

On the basis of the findings of the study, it was concluded that, pest protected will be a strategy for effective prevention of fire outbreak from electrical installations in workshops in technical colleges in Rivers State.

Recommendations

On the basis of the findings of the study and the conclusion reached, it was recommended that:

1. pests protected cables should be used by contractors during construction and renovation of workshops.
2. the existing non-pest protected cables should be replaced with the pests protected cables by the government through the State Ministry of Education.

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TALENT MANAGEMENT AS CORRELATE OF EMPLOYEE PLACEMENT AND RETENTION IN PUBLIC UNIVERSITIES IN SOUTH EAST NIGERIA

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Abstract

This study talent as correlate of employee placement and retention in universities in South East Nigeria. Two research questions guided the study and two hypotheses were tested at 0.05 level of significance. Correlational research design was employed for the study. The population consisted of 819 senior university non-teaching staff. A sample of 249 senior non-teaching staff of public universities in South-east Nigeria was used for the study. The 249 staff were sampled using proportionate stratified sampling technique. The instrument for data collection was a structured questionnaire divided into Sections 'A' and 'B'. Section 'A' contains demographic information of respondents while Section 'B' was categorized into nine clusters to cover the seven components of talent management, Employee placement and Employee Retention. The instruments were validated using the opinions of experts and their reliability coefficients were .88 and .93, these were realized using Cronbach alpha. Data collected were analyzed using Pearson Product Moment Correlation Coefficient (PPMC) to answer the research questions and Multivariate Simple Linear Regression (MSLR) with Fisher-Z test to test the hypotheses. Data analysis revealed that talent management; compensation planning and career development correlate employee placement and retention. The result also revealed that the ownership of the universities (Federal or State) determined staff responses based on the two components discussed in this study. Based on the findings, the study recommended that the universities managements should provide adequate and appropriate compensation plans both in cash, materials and conducive atmosphere for staff; in service trainings to develop and channel the talents of staff towards the attainment of institutions' goals.

Keywords. Talent management, employee placement and employee retention.

Introduction

In recent years the concept of talent management is distinguished as fairly new and it has attracted the interest of most of the researchers, this is so because the organizations are required to distinguish between their employees according to their performances, traits, intellectual abilities etc (Kontoghiorghes, 2016). The work environment today is characterized by outsourcing, increasing mobility, looser psychological contracts between organizations and their employees, less predictable and more fluid career paths and more focus on self-directed learning. From the organization's perspective, these new workplace characteristics lead to a new challenges in securing retention of the most valuable and unique employees. Organizations are striving hard to achieve success by gaining competitive advantage, and one of the most valuable resources that can help their

cause is the human resource they employ. Attracting and retaining talented individuals are important issues in the workplace, and talent management is a top priority for many organizations. At its essence, talent management is purported to create value (Sparrow & Makram, 2015).

Talent management is defined as the methodically organized, strategic process of getting the right talent onboard and helping them grow to their optimal capabilities keeping organizational objectives in mind. It is a constant process that involves attracting and retaining high-quality employees, developing their skills, and continuously motivating them to improve their performance. Therefore, human capital is the mixture of skills, experiences, knowledge, motivation, and capabilities of the employees. Because of that, it is important to recognize how to manage and control the talented employee, to invest in their skills, experience, knowledge and to enhance productivity and performance of organization (Máté et al., 2016).

The primary purpose of talent management is to create a motivated workforce who will stay with your organization in the long run. The exact way to achieve this may differ from one organization to other (Valamis, 2021). The process of talent management involves identifying talent gaps and vacant positions, sourcing for and onboarding the suitable candidates, growing them within the system and developing needed skills, training for expertise with a future-focus and effectively engaging, retaining and motivating them to achieve long-term business goals. This definition brings to light the overarching nature of talent management how it permeates all aspects pertaining to the human resources at work while ensuring that the organization attains its objectives. It is thus the process of getting the right people onboard and enabling them to enable the business at large.

Under the umbrella of talent management, there are a string of elements and sub-processes that need to work in unison to ensure the success of the organization. For example, when a candidate is selected for a particular post and he reports to duty, the organization has to place him or her in the job for which he or she is selected which is being done through placement. Placement is the act of offering the job to a finally selected candidate. It is the act of finally assigning the rank and responsibility to an employee, identifying him with a particular job. Placement is usually followed by the orientation process. According to Pigors and Myers (2019), Placement is the determination of the job to which an accepted candidate is to be assigned and his assignment to that job. Suffice it to say that, placement exercise is as crucial as the selection aspect because a well-placed employee will be an asset to the organization.

An organization's responsibility does not just stop at recruitment, selection and placement of the required employees but also creating attractive atmospheres and opportunities to ensure that these selected workforces are retained, this is called employee retention, which is simply an organization's ability to retain its workers. According to Ulhas and Maharashtra (2019), employee retention is defined as the process in which human resources are encouraged and motivated to stay in the organization for a longer period of time for the sustainability of the organization. Employee Retention refers to the ability of the organisation to retain its employees and it's emerging as a big challenge to organisations. Organisation culture, pay and remuneration, flexibility and job satisfaction highly influence the retention rate for any company (Dutta, 2019).

Talented employees refer to the caliber of employees possessing distinguishable capacity and potential to deliver jobs in an exceptionally successful manner. Since the last two decades, such employees are now considered as the most valuable asset of the organization. Universities are expected to attract the most talented and skilled workers available and create a brand that could attract potential talents but the reverse appears to be case as empirical evidence has revealed that in recent years there has been a serious decline in the succession and retention rate of its employees and this

has led to poor institutional outcomes. The cause of these poor outcomes could be that the employees in the universities were been selected and recruited through improper approaches that might not have considered talent planning.

Hence, could talent management determine the level of staff placement and retention in universities? Therefore, the study seeks to establish the relationship between talent management dimensions and employee placement and retention in public (federal and State) in South-East Nigeria. For the purpose of this study, the researcher will adopt two (2) components out of the seven (7) key components of Talent Management proposed by Solanki (2022). These are;

1. Compensation,
2. Career development

Compensation in this context means the employee compensation and it's defined as any money or benefits paid to an employee in exchange for work. From the employee's standpoint, compensation is everything that they get for the work they put in. Compensation is one of the most important parts of an employment contract that brings in people from outside and makes them members of an organization. The pull effect of an organization's compensation system, however, varies from industry to industry and from position to position within the industry. (Nakshita, 2022). Chiekezie, Emejulu and Nwanneka (2017) observed that there is a positive weak relationship between compensation and employee retention in the country this could be as a result of the employers of labour not applying the appropriate and timely compensations needed by the employees. Thus the weak relationship could be attributed to lack of adequate compensation which will help to retain employees and reduce job turn over and mobility of labour.

Another component of talent management is career development; Careers are all jobs or positions that are handled or held during one's work-life (Handoko, 2014). Career development is the personal improvements made by someone to achieve a career plan. Career development according to Dessler (2014) is defined as a series of lifelong activities (such as workshops) that contribute to the exploration, formation, success, and fulfillment of one's career. Career development is the support an organization provides to employee professional growth, especially to employees' movement to a new position or project within the organization.

This why Merican, Monil, Rafie and Tajuddin (2022) carried out a study on the effect of career planning, talent management and training development towards employee retention. The study determines the association of career development with employee retention in Malaysian airline industry. The results indicated that career planning, training, and development with talent management were significant and positively correlated with employee retention. Merican et.al reviewed and discussed major variables like, career planning, training and development, talent management and retention.

The main purpose of this study was to determine the relationship between talent management and employee placement and retention in the Universities in South East Nigeria. Specifically, the study determined:

1. how compensation planning in talent management relates to employee placement and retention in public universities in South east, Nigeria.
how career development in talent management relates to employee placement and retention in public universities in Southeast Nigeria.

Research Questions

The following research questions were answered in this study.

1. How does compensation planning relate to employee placement and retention in public universities (Federal and State) in South-East Nigeria?
2. How does career development relate to employee placement and retention in public universities (Federal and State) in South-East Nigeria?

Research Hypotheses

The following corresponding hypotheses were also tested at .05 level of significant

1. There is no significant relationship between compensation planning and placement and retention of employees in public universities (Federal and State) in South East Nigeria.
2. There is no significant relationship between career development and placement and retention of the employees in public universities (Federal and State) in South East Nigeria.

Methods

This study adopted correlational research design. The population of the study comprised 819 senior administrative staff of universities which were made up of Assistant Registrars (ARs), Senior Assistant Registrars (SARs), Principal Assistant Registrars (PARs), Deputy Registrars (DRs), and Registrars in all public (Federal and State) universities in south-east Nigeria, this population is considered appropriate for this study because they are involved in recruitment and selection. The sample size of this study was 249 senior administrative staff of the public universities (Federal and State) in South-east Nigeria who were drawn using proportionate stratified sampling technique for the categories of the sample. The questionnaire titled “Talent Management Questionnaire (TMQ)”, “Employee Placement Questionnaire (EPQ)” and “Employee Retention (ERQ)” which was gotten through records from the Personnel department of the Universities under the study, was developed by the researcher. Talent Management Questionnaire (TMQ) was adapted from Talent Management Instrument by Yener, Gurbuz and Acar (2017). The rest of the two (EPQ and ERQ) were researcher-constructed from literature.

Face validity of the instrument was established using the opinions of experts. Cronbach’s alpha was used to determine the reliability coefficient of the various sections of the instruments which gave 0.878 for compensation planning scale, 0.926 for career development, The researcher, with the help of eight research assistants administered and recovered 249 copies of the questionnaire to the senior administrative staff of the public universities (federal and State) in South east Nigeria. It took the respondents two days to fill the questionnaires, Data on retention were got through an instrument accompanied by a letter addressed to the Personnel department.

Pearson Product Moment Correlation Coefficient (PPMC) to answer the research questions and Multivariate Simple Linear Regression (MSLR) with Fisher-Z test for testing the null hypotheses. This implies that if P is less than or equal to 0.05, a hypothesis was rejected, otherwise it was accepted.

Results

The results are presented in the order of the research questions and the corresponding hypothesis.

Research Question 1. How does compensation planning relate to employee placement and retention in public universities (Federal and State) in South-East Nigeria?

Table 1

Bivariate Correlation between Compensation Planning, Placement and Retention based on Ownership of Institution

Variables	Federal Universities			State Universities			Overall
	1	2	3	1	2	3	1
1. Compensation Planning	1			1			
2. Employee Placement	.130	1		-.020	1		.032
3. Employee Retention	-.177	.296	1	.012	.073	1	.089

Data presented in Table 1 reveal the correlation between compensation planning, employee placement and employee retention. Based on Federal universities, the Table reveals a positive low correlation between compensation planning and employee placement ($r = .130$) but a negative low correlation between compensation planning and employee retention ($r = -.177$). Conversely, for the State universities, there is a low negative correlation between compensation planning and employee placement ($r = -.020$) but a positive low correlation between compensation planning and employee retention ($r = .012$).

Research Question 2. How does career development relate to employee placement and retention in public universities (Federal and State) in South-East Nigeria?

Table 2

Bivariate Correlation between Career Development, Placement and Retention based on Ownership of Institution

Variables	Federal Universities			State Universities			Overall
	1	2	3	1	2	3	1
1. Career Development	1			1			
2. Employee Placement	.091	1		.036	1		.089
3. Employee Retention	-.035	.296	1	-.346	.073	1	-.201

Data presented in Table 2 reveal the correlation between career development, employee placement and employee retention. For the Federal universities, the Table reveals a positive low correlation between career development and employee placement ($r = .091$) but a negative low correlation between career development and employee retention ($r = -.035$). In a similar vein, for the State universities, there is a low positive correlation between career development and employee placement ($r = .036$) and a negative low correlation between compensation planning and employee retention ($r = -.346$).

Hypothesis 1. There is no significant relationship between compensation planning and placement and retention of employees in public universities (Federal and State) in South East Nigeria.

Table 3

Summary of Multivariate and Fisher-Z Test of Relationship between Compensation Planning, Employee Placement and Retention based Ownership of Universities

Ownership	Employee Placement					Employee Retention				
	R	R ²	F	Zcal	Ztab	R	R ²	F	Zcal	Ztab
Federal	.130	.677	2.514	-.39	-1.96	.020	.321	.567	.08	1.96
State	.177	.291	1.915			.012	.071	.358		

Note. df1 = 5, 6, df2 = 3, 14, N₁ = Federal = 123, N₂ = State = 119.

Table 3 shows the multivariate regression between compensation planning and employee placement for federal universities, $R^2 = .677$, $F(5, 6) = 2.514$, and state universities, $R^2 = .291$, $F(3, 14) = 1.915$. The Table also shows the multivariate regression between compensation planning and employee retention for federal universities, $R^2 = .020$, $F(5, 6) = .567$, and state universities, $R^2 = .071$, $F(3, 14) = .358$. The Fisher-Z test ($Z_{cal} = -0.39$) for employee placement is less than the critical Z-value of 1.96. Hence, federal and state universities do not differ in the relationship between compensation planning and employee placement. Similarly, the Fisher-Z test ($Z_{cal} = 0.08$) for employee retention is less than the critical Z-value of 1.96. Therefore, federal and state universities do not differ in the relationship between compensation planning and employee retention.

Hypothesis 2. There is no significant relationship between career development and placement and retention of the employees in public universities (Federal and State) in South East Nigeria.

Table 4

Summary of Multivariate and Fisher-Z Test of Relationship between Career Development, Employee Placement and Retention based Ownership of Universities

Ownership	Employee Placement					Employee Retention				
	R	R ²	F	Zcal	Ztab	R	R ²	F	Zcal	Ztab
Federal	.091	.611	4.181	.38	-1.96	.036	.031	.086	-.04	1.96
State	.035	.330	1.597			.346	.166	.647		

Note. df1 = 3, 8, df2 = 4, 13, N₁ = Federal = 123, N₂ = State = 119.

Table 4 shows the multivariate regression between career development and employee placement for federal universities, $R^2 = .611$, $F(3, 8) = 4.181$, and state universities, $R^2 = .330$, $F(4, 13) = 1.597$. The Table also shows the multivariate regression between career development and employee retention for federal universities, $R^2 = .031$, $F(3, 8) = .086$, and state universities, $R^2 = .166$, $F(4, 13) = .647$. The Fisher-Z test ($Z_{cal} = 0.38$) for employee placement is less than the critical Z-value of 1.96. Hence, federal and state universities do not differ in the relationship between career development and employee placement. Similarly, the Fisher-Z test ($Z_{cal} = -0.04$) for employee retention is less than the critical Z-value of 1.96. Thus, federal and state universities do not differ in the relationship between career development and employee retention.

Discussion of Findings

The findings of the study revealed the correlation between compensation planning, employee placement and employee retention on employees of Federal and State universities. The result shows that there was a positive correlation between compensation planning and employee placement and a negative correlation between compensation planning and employee retention. However, in the State

universities, there was a low negative correlation between compensation planning and employee placement while a positive low correlation existed between compensation planning and employee retention. The corresponding hypothesis also shows that federal and state universities do not differ in the relationship between compensation planning and employee retention. These findings are in consonance with Suri (2016) who studied the impact of employee compensation on organizational effectiveness and found the relationship between compensation and employee satisfaction, motivation and performance. It was found that compensation had great impact on organizational effectiveness. The findings of the study suggested that in order to implement their strategies, institutional/organizations must design and implement reward system to focus on employees' attention on specific behaviours that are consistent with strategic goals. This also corroborates the views of Amoo, Saka and Dangana (2020) that the management of banks should maintain a desired level of benefits, attractive salary packages, training opportunities and restructure the culture of the banking firms by implementing appropriate healthcare policies that will be beneficial to employees in the sector so as to increase loyalty and higher retention rate in the banking industry.

Supporting the views of Amoo, Saka and Dangana, is Che Omar (2019) held that employee turnover is often costly and disruptive which organizations want to avoid. This prompts organizations' focus on compensation, benefit, retention, importance of employees' satisfaction and strategies aimed at in retaining employees. Based on the foregoing, it must be emphasized that without compensation planning, employee retention will not be achieved especially in this period of global economic downturn. The findings also revealed that employees in the Federal and State universities slightly differed in their compensation planning as it relates to placement and retention. The study revealed that at the Federal universities, there was a positive effect of compensation planning on employee placement and a negative relationship between compensation planning and employee retention, whereas at the State universities, there was a negative relationship between compensation planning and employee placement and a positive relationship between compensation planning and employee retention.

The findings of the study revealed the correlation between career development and employee placement and retention in public Federal universities. The results revealed that at the Federal universities, there was a positive relationship between career development and employee placement and a negative correlation between career development and employee retention. In a similar vein, at the State universities, there was a positive relationship between career development and employee placement and a negative relationship between career development and employee retention. The corresponding hypothesis 2 also showed that federal and state universities do not differ in the relationship between career development and employee placement and retention.

This Findings is in consonance with Wane (2016) who determined the effect of career development programmes on employee retention in international non-governmental organisations in Kenya. The findings of the study revealed that career development programmes affected employee retention. It was also established that organizational career planning was a fundamental human resource policy concluded that career counseling was a fundamental human resource policy in organisations. Supporting the findings of Wane, Magaji, Akpa and Ogundiwin (2021) examined career development, job security and employee retention: An empirical study of selected private universities in Ogun State Nigeria. The study revealed that career development had a significant positive effect on employee retention. This simply means that organisations and institutions should

engage more in career development and job security to create an ambience in the work environment that will encourage employee retention.

Conclusion

The findings of this study, led to the conclusion that retention of talented workers can be achieved if these two components- compensation and career development are imbedded into management policies of universities and that appropriate placement rules and procedures exist. It is also concluded that employees in Federal and state-owned universities differ in the way they programme or strategize these components for employees.

Recommendations

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

1. Management of public universities should ensure that the right and appropriate compensations both in cash, materials, promotions as at when due and stable atmosphere devoid of toxic air are included in their programmes and activities. This will not only help to retain talented employees but will also bring out the best in them.
2. The National Universities Commission (NUC) should lay emphasizes on appropriate placement of employees as this is the unseen force behind employee career development and retention.

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STRATEGIES FOR EFFECTIVE TEACHING OF BUSINESS EDUCATION IN TERTIARY INSTITUTIONS IN ANAMBRA STATE

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Abstract

The study ascertained business educators' rating of equipment maintenance strategies for effective teaching of business education in tertiary institutions in Anambra State. Two research questions guided the study and four hypotheses were tested at 0.05 level of significance. The study adopted the descriptive research design. The population of the study comprised 122 business educators in the six tertiary institutions in Anambra State. The instrument for data collection was a 22-item questionnaire structured on a 5-point rating scale of Very High Extent (VHE), High Extent (HE), Moderate Extent (ME), Low Extent (LE) and Very Low Extent (VLE). The instrument was validated by three experts in business education in Nnamdi Azikiwe University, Awka. To determine the reliability of the instrument, a pilot test was conducted. Test on reliability of the instrument using Cronbach Alpha method which yielded the scores of 0.73, 0.76, for clusters B₁ and B₂ respectively. Descriptive statistics of mean and standard deviation was used to answer the research questions and determine the homogeneity or otherwise of the respondents' views. The hypotheses were analyzed with one way Analysis of Variance and t-test. Findings revealed that business educators rated to a high extent that preventive and corrective measures were effective equipment maintenance strategies for effective teaching of business education in tertiary institutions in Anambra State. Findings also showed that gender and institution type influenced the respondents' opinion. Based on these findings, the researchers recommended that administrators of business education programme in tertiary institutions should regularly organize training programme for business educators and technologist on preventive strategies for maintaining equipment in the business education programme.

Keywords. Equipment maintenance, strategies, teaching, Business Education.

Introduction

Education is an important instrument for the development of human capital of any nation. This is because education is the tool that is used to shape the mind of a child. According to the Federal Government of Nigeria (FGN) (2013), the goals of education includes the development of an individual into a morally sound, patriotic and effective citizen, total integration of the individual into the immediate community, the Nigerian society and the world, inculcation of national consciousness, values and national unity as well as the development of appropriate skills, mental, physical and social abilities and competences to empower the individual to live and contribute positively to the society. Okoro (2018) stated that education is the practice of teaching and learning, in a school system in particular. In Nigeria formal education is carried out at three levels; primary, secondary and tertiary.

The tertiary level of education is the highest level of education in Nigeria. The tertiary level of education is the engine room of human capital development. The world depends on her graduates

from tertiary institutions to form a core part of the human capital that stimulates economic development. In this light, the goals of tertiary education which stated that the nation's tertiary institutions shall be the cradle of national development by producing graduates who are well equipped with the prerequisite knowledge and skills to function effectively in the real world (Federal Republic of Nigeria (FRN), (2013). Okoro (2018) opined that tertiary education is the training received by students at the Colleges of Education, Polytechnics and Universities. The business education programme is an academic programme offered at the tertiary level of education in Nigeria that is geared towards empowering its recipients with business skills.

The business education programme according to Okoli (2010) is an important part of general education which emphasizes skills and competency acquisition for use in offices and business-related occupations. Business education is generally recognized as an education for and about business because it does not only provide general awareness of the business world but also prepares students for professional careers in the world of work. According to Nwazor, and Onokpauu (2015), the objectives of business education at all levels of education is to enable recipients to develop basic skills for personal use in the future; acquire basic knowledge and skills of business education; relate the knowledge and skills acquired to national development; develop basic skills in office occupation; prepare students for further training in business studies and provide orientation and basic skills with which to start a life of work for those who may not undergo further training. In order to achieve these laudable objectives, it is important that the business education programmes in tertiary institutions use the required equipments for teaching and learning.

Equipment are portable or heavy mechanical devices required for vocational and technical operations in the laboratories, workshops or field laboratories for skills acquisition (Uzoigwe, 2010). Equipment is fixed or movable items provided in the school to facilitate effective teaching and learning. Equipment is the instructional backbone for effective teaching in science, technology, engineering and vocational oriented courses. Equipment such as good and functional computers, typewriters, stop watches, tape recorder/consoles, photocopier, file trays, file cabinets, adding and listing machines, punching machine and perforators among others are used in business education programme (Onyesom, 2013). This equipment must be available, adequate and functional in order to achieve the laudable objectives of business education. However, Ubulom and Ogwunte (2017)observed that the supply of equipment such as typewriters and computers to business education departments is limited considering the increase in students' enrolment. Onyesom (2013) asserted that relevant equipment for teaching and learning of business education programmes are inadequate in educational institutions in Nigeria. Due to inadequate funding of vocational and technical education programmes, Uzoigwe (2010) posited that there is an alarming growth of non-functioning workshops and equipment in the area of business education. Amanchukwu, Stanley and Ololube (2015) opined that students offering business education are finding it difficult to acquire the needed skills and competencies of the business world as a result of inadequate equipment and other instructional resources. The present state of equipment in business education programmes could be responsible for the unemployability of business education graduates in the world of work.

One of the fundamental ways of reducing the negative effects of inadequate equipment is through maintenance. Maintenance is a systematic and continuous repair and care of item of equipment, so they remain operational for a long time. The European Federation of National Maintenance Societies in Agoha (2008) defined maintenance as all objective actions taken to retain or restore an item of equipment to a state in which it can perform the required functions. Maintenance involves inspecting, repairing and servicing of equipment for optimal functioning and effective performance. Equipment that

receives adequate maintenance is less likely to breakdown or fails before, during and after usage. Effective equipment maintenance extends the lifespan of old and new equipment respectively. Ahuja and Khamba (2008) posited that equipment maintenance strategies include breakdown maintenance, preventive maintenance, predictive maintenance, corrective maintenance, computerization management systems, reliability centred maintenance, productive maintenance and total productive maintenance.

For the purpose of this paper, preventive measure strategy, corrective measure strategy, computer management system strategy and inventory control are taken into consideration. Preventive measure strategy is a type of maintenance that involves periodic inspection, lubrication, cleaning and testing of equipment used in the teaching and learning processes to avoid breakdown. Moore (2012) defined preventive maintenance strategy as an activity performed on a certain schedule to avoid breakdowns or deterioration of equipment. Moore further maintained that preventive measure strategy is used to delay the breakdown of equipment and significantly reduce the severity of any breakdown that might occur. On the other hand, corrective maintenance strategy is another type of maintenance strategy that is employed when there is a complete breakdown of equipment. Ogbuanya (2009) averred that corrective maintenance strategy is usually more costly than preventive measures because it is performed whenever the equipment stops working or starts failing. Alihayea (2012) expressed the view that actions, such as repairs, replacements or restoration will be carried out after the occurrence of the breakdown of equipment. Business educators have a direct responsibility of ensuring that equipment used in teaching are regularly maintained and secured from damage, theft and vandalism to enhance students' learning (Okoye, 2016). However, certain factors like gender and institutional type could influence business educators' opinion on the best equipment strategies to adopt for effective teaching of business education in tertiary institutions. However, these views are theoretical and have not been empirically proven in Anambra State. This study sought to empirically determine business educators' ratings of equipment maintenance strategies for effective teaching of business education in tertiary institutions in Anambra State.

Statement of the Problem

In this era of accelerated technological and industrial advancement, the abysmal state of dysfunctional and lack of modern instructional equipment needed to effectively carry out the teaching and learning of business education courses to realize the expected learning outcome, apparently portends a grave threat to the system. Suffice it to say that close observations from tertiary institutions in Anambra State, suggested that equipment for learning of business education programme seem to be inadequate and out-dated, and this could deny most of the students the opportunity to have some hands-on exercises that would enable them to acquire relevant skills to excel in their profession.

Sadly, there is no gainsaying that where equipment is not functional or adequately provided, teaching and learning of business education programme would suffer greatly. This phenomenon could lead to the production of poorly prepared, unskilled and unproductive graduates who could end up unemployed, and eventually resort to constituting themselves into nuisance and public menace. Cognizant of the fact that, the equipment required for teaching business education courses is quite expensive and in short supply demands for appropriate maintenance of available ones, in order to prevent the programme from becoming wholly theoretical. The situation highlighted above, among the seemingly non-existent extensive empirical study on business educators' rating of equipment maintenance strategies needed for effective teaching and learning in the State seem to militate against the realization of the objectives of the programme. It is against this backdrop that this study aimed to

ascertain business educators' rating of equipment maintenance strategies needed for effective teaching and learning in tertiary institutions in Anambra State.

Purpose of the Study

The purpose of this study was to ascertain business educators' rating of equipment maintenance strategies for effective teaching of business education in tertiary institutions in Anambra State. Specifically, the study sought to determine the rating of business educators on:

1. preventive measures as a strategy for equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State
2. corrective measures as a strategy for equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State.

Research Questions

The following research questions guided the study:

What is the rating of business educators on?

1. preventive measures as a strategy for equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State?
2. corrective measures as a strategy for equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State?

Hypotheses

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

1. Male and female business educators do not differ significantly in their mean ratings on preventive measures as a strategy for equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State.
2. There is no significant difference in the mean ratings of business educators in universities, polytechnics and colleges of education on preventive measures as a strategy for equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State.
3. Male and female business educators do not differ significantly in their mean ratings on corrective measures as a strategy for equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State.
4. There is no significant difference in the mean ratings of business educators' in universities, polytechnics, and colleges of education on corrective measures as a strategy for equipment maintenance for effective teaching of business education tertiary institutions in Anambra State.

Methods

The descriptive survey research design was adopted for the study. The study was carried out in Anambra State. The State has 21 local governments. The population of the study comprised 122 business educators from public tertiary institutions in Anambra State which include Nnamdi Azikiwe University Awka, Nwafor Orizu College of Education Umunze, Chukwuemeka Odumegwu Ojukwu University Igbariam, Madonna University Okija and Federal Polytechnic Oko. The instrument for data collection was a structured questionnaire titled "Equipment Maintenance Strategies for Effective Teaching of Business Education Questionnaire" (EMSETBEQ) developed by the researcher based on information gotten from the review of related literature. The instrument has two sections: - A and B.

Section A contained two items on the demographic data of the respondents. They are gender and type of institution. While Section B is broken into two clusters: B₁ and B₂ containing 11 items on prevent strategies and 11 items on corrective strategies of equipment maintenance for effective teaching of business education in tertiary institutions in Anambra State. The instrument was structured on a five-point rating scales of Very High Extent (VHE), High Extent (HE), Moderate Extent (ME), Low Extent (LE) and Very Low Extent (VLE). The instrument was validated by three experts in business education in Nnamdi Azikiwe University, Awka.

The reliability of the instrument was established by administering 20 copies of the questionnaire to 20 business educators from tertiary institutions in Enugu State who are not part of the population of the study in a pilot test. The reliability of the instrument was determined using Cronbach alpha co-efficient which yielded the scores of 0.73, 0.76, for clusters B₁ and B₂ respectively. 122 copies of the questionnaire were administered to the respondents in their institutions with the help of research assistant in the office of the Head of Department (HOD) in each institution. The research assistants in each institution were guided by the researcher on how to direct the respondents in filling the questionnaire efficiently. The research assistants in the HOD's offices of the various institutions helped to distribute the instrument to the lecturers, followed them up and retrieved the copies. This procedure enhanced the distribution and collection of 119 questionnaires. Descriptive statistics of mean and standard deviation was used to answer the research questions and determine the homogeneity or otherwise of the respondents' views. Any items with mean rating below 2.50 was regarded as high extent while any item between 2.50 and above is considered low extent. The hypotheses were analyzed with one way Analysis of Variance and t-test. If the calculated t-value is equal to or greater than the p-value, it was accepted. If otherwise, it was rejected. Also, the hypotheses of no significant difference were accepted at 0.05 level of significance, if the calculated F-value is less than the table value. Otherwise, it was rejected.

Results

The results are presented in the order of the research questions and the corresponding hypothesis.

Research Question 1: What is the rating of business educators on preventive measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State?

Table 1

Respondents' mean ratings on preventive measures as a strategy for equipment maintenance for effective teaching

SN	Preventive Measures	Mean	SD	Remark
1	Carrying out routine maintenance activities on items of equipment	4.67	0.67	VHE
2	Inspecting equipment before use	4.19	0.45	HE
3	Inspecting equipment after use	3.97	1.00	HE
4	Adjustment of disposable parts on regular basis	4.24	0.72	HE
5	Replacement of disposable parts on regular basis	4.17	0.89	HE
6	Testing for signs of equipment overheating	3.98	0.72	HE
7	Proper storage of equipment to prevent degradation	4.18	0.87	HE
8	Cleaning all equipment with link free rags	4.04	0.76	HE
9	Lubricating equipment parts to avoid physical damages	4.25	0.78	HE
10	Reviewing performance of equipment used in teaching/learning	4.28	0.71	HE

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11	Updating records when changes are made to equipment	4.31	0.81	HE
	Cluster Mean	4.21		HE

Data in Table 1 shows that business educators rated all the items listed on preventive measures high extent except item one which is rated very high extent. The cluster mean score value of 4.21 indicates that overall, preventive measures is rated by business educator’s high extent as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra state.

Research Question 2: What is the rating of business educators on corrective measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State?

Table 2

Respondents’ mean ratings on corrective measures as a strategy for equipment maintenance for effective teaching

SN	Corrective Measures	Mean	SD	Remark
1	Rectifying causes of equipment breakdown	4.38	0.66	HE
2	Repairing damaged equipment parts	4.18	0.76	HE
3	Refurbishing damaged equipment items	3.85	0.99	HE
4	Training of equipment educators	4.13	0.81	HE
5	Greasing of equipment items on schedule	4.12	0.72	HE
6	Ensuring that moving parts of equipment are always well cleaned	4.61	0.61	VHE
7	Equipment manufacturers sending their sending their personel	3.92	0.94	HE
8	Overhauling of any equipment item functioning below capacity	3.93	0.84	HE
9	Eliminating the source of equipment failure	3.61	1.14	HE
10	Verifying specific type of equipment repair	3.69	0.93	HE
11	Proper arrangement serviced equipment after use	4.08	0.94	HE
	Cluster Mean	4.05		HE

Data in Table 2 shows that business educators rated all the items listed on corrective measures high extent except item 6 which they rated very high extent. The cluster mean score value of 4.05 indicates that overall, corrective measures is rated by business educator’s high extent as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra state.

Hypothesis 1: Male and female business educators do not differ significantly in their mean ratings on preventive measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State.

Table 3

The t-test summary of the difference between the mean ratings of male and female business educators on preventive measures as a strategy for equipment maintenance for effective teaching

Source of variation	Gender	N	Mean	SD	α	z-Cal	Df	p- value	z.Crit	Decision
Preventive measures as a strategy	Male	66	46.21	2.78	0.05	0.291	117	0.771	1.960	Sig
	Female	53	46.36	2.65						

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Data in Table 3 shows that p -value is greater than the chosen significance level $\alpha = 0.05$, p (0.771) > 0.05 , at 117 degrees of freedom. This suggests that there is significant difference in the mean ratings of male and female business educators on preventive measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra state. Therefore, the null hypothesis is rejected.

Hypothesis 2: There is no significant difference in the mean ratings of business educators in universities, polytechnics and colleges of education on preventive measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State.

Table 4

ANOVA result of the difference in the mean rating of business educators in universities, polytechnics and colleges of education on preventive measures as a strategy for equipment maintenance for effective teaching

Preventive measures	Sum of Squares	df	Mean of Square	SD	F	p-val	Decision
Between groups	27.643	2	13.813	2.69	1.908	0.153	
Within groups	840.215	116	7.243				Sig
Total	867.849	118					

Data in Table 4 show that p -value is greater than the chosen significance level $\alpha = 0.05$, p (0.153) > 0.05 . This result indicates that there was significant difference in the mean ratings of business educators in universities, polytechnics and colleges of education on preventive measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State. Therefore, the null hypothesis is rejected.

Hypothesis 3: Male and female business educators do not differ significantly in their mean ratings on corrective measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State.

Table 5

The t-test summary of the difference between the mean ratings of male and female business educators on corrective measures as a strategy for equipment maintenance for effective teaching

Source of variation	Gender	N	Mean	SD	α	z-Cal	Df	p- value	z.Crit	Decision
corrective measur es as a strategy	Male	66	44.05	3.18	0.05	1.912	117	0.058	1.960	Sig
	Female	53	45.08	2.56						

Data in Table 5 shows that p -value is greater than the chosen significance level $\alpha = 0.05$, p (0.058) > 0.05 , at 117 degrees of freedom. This suggests that there is significant difference in the mean ratings of male and female business educators on corrective measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra state. Therefore, the null hypothesis is rejected.

Hypothesis 4: There is no significant difference in the mean ratings of business educators in universities, polytechnics and colleges of education on corrective measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State.

Table 6

ANOVA result of the difference in the mean rating of business educators in universities, polytechnics and colleges of education on corrective measures as a strategy for equipment maintenance for effective

Corrective measures	Sum of Squares	df	Mean of Square	SD	F	p-val	Decision
Between groups	17.683	2	8.842	2.95	1.013	0.366	Not Sig
Within groups	1012.065	116	8.725				
Total	1029.748	118					

Data in Table 6 shows that *p*-value is greater than the chosen significance level $\alpha = 0.05$, $p(0.366) > 0.05$. This result indicates that there was significant difference in the mean ratings of business educators in universities, polytechnics and colleges of education on corrective measures as a strategy for equipment maintenance for effective teaching in tertiary institutions in Anambra State. Therefore, the null hypothesis is rejected.

Discussion of Findings

The result of the analysis of preventive measures as a strategy for equipment maintenance as shown in Table 1 indicated that business educators rate preventive measures as a strategy for equipment maintenance for effective teaching in tertiary institutions at a high extent. This is encouraging, out of the eleven items, ten of them were rated at a high extent while one (item one) was rated at a very high extent. These high extents indicate that inspecting equipment before and after use, carrying out routine maintenance activities on items of equipment, cleaning all equipment with link free rags, testing for signs of overheating etc are all effective preventive strategies for equipment maintenance. This is supported by the opinion of Uzoigwe (2010) who submitted that preventive measures strategy is the maintenance task undertaken by operational staff for the purpose of preventing the breakdown of an equipment or asset. This task involves cleaning, testing inspection, lubricating and routine checks. Similarly, Ado (2014), said preventive measures strategy helps in preventing the wear and tear or sudden failure of equipment components. Business educators on this basis need to develop the required competencies to use this strategy effectively.

Lin, Lee and Su (2015) in their study opined that if preventive strategy is effectively used for equipment maintenance, it will help in preventing the failure of equipment before it occurs thereby minimizing total maintenance costs. The findings of the study indicates that there is significant difference in the mean ratings of male and female business educators on preventive measures as a strategy for equipment maintenance for effective teaching and findings also indicated that business educators in tertiary institutions in Anambra state differ significantly in their mean ratings on preventive measures as a strategy for equipment maintenance for effective teaching as a result of type of institution disagreed with the findings of Okafor (2003) who discovered that there are careless use of school equipment as well as inadequate routine checks on equipment due to lack of school equipment maintenance and security interest and skills among male and female business educators and

that if all the strategies for equipment maintenance are been put in place there will be less wear and tear and sudden failure of equipment component resulting to effective teaching in tertiary institutions.

The result of the analysis of corrective measures as a strategy for equipment maintenance as shown in Table 2 indicated that business educators rate corrective measures as a strategy for equipment maintenance for effective teaching in tertiary institutions at a high extent. This is encouraging, out of the eleven items, ten of them were rated at a high extent while one (item 17) was rated at a very high extent. This result indicates that business educators are of the opinion that rectifying causes of equipment breakdown, repairing damaged equipment parts, refurbishing damaged equipment items, and training of equipment educators amongst others are all effective corrective strategies for equipment maintenance.

This was supported by Ado (2014) who asserted that corrective maintenance strategy involves fault detection, fault isolation, fault elimination through adjusting, aligning, calibrations, reworking, removing, replacing or renovation. Aishayea (2012) enumerated other strategies as accurate identification of incipient problems, verification of repair, proper repair procedures, a complete repair procedures and the required labour skills, specific tools, parts and equipment. All these activities when properly undertaken help to keep the equipment items in a working condition to achieve educational goals.

The findings of the study showed that there is significant difference in the mean ratings of male and female business educators on corrective measures as a strategy for equipment maintenance for effective teaching and findings also showed that business educators in tertiary institutions in Anambra state differ significantly in their mean ratings on corrective measures as a strategy for equipment maintenance for effective teaching as a result of type of institution disagreed with the findings of Uzoigwe (2010) who in his study discovered that the available equipment in tertiary institutions are not religiously maintained and properly kept because business educators may not have adequate maintenance and security skills due to the nature of training they received.

Conclusion

Based on the findings of the study, the researchers concludes that application of preventive and corrective equipment maintenance strategies will be effective for teaching of business education in tertiary institutions in Anambra State. It is therefore imperative that business educators seriously apply preventive and corrective equipment maintenance strategies in the business education programme in tertiary institutions.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Administrators of business education programme in tertiary institutions should regularly organize training programme for business educators and technologist on preventive strategies for maintaining equipment in the business education programme.
2. Administrators of business education programme should partner with partner with private equipment maintenance firms so as to ensure that faulty equipment are fixed on time so as not to affect the teaching and learning process.

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EXTENT OF IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITIES BY SELECTED BUSINESS ORGANIZATIONS IN ANAMBRA STATE

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Abstract

Businesses are expected to provide value not only to the corporate shareholders but also to the non-corporate shareholders and the society at large. These values are regarded as corporate social responsibilities. The study determined the extent of implementation of corporate social responsibilities by selected business organizations in Anambra State. Two research questions and two null hypotheses guided the study. Descriptive survey research design was adopted. The population for this study consisted of 158 managers and 3450 employees of selected organizations (banks, pharmaceutical companies, and 311 telecommunication companies). A sample size of 471 was selected. A structured questionnaire, validated by three experts was used for data collection. Cronbach alpha was used to measure the internal consistency which yielded an overall reliability coefficient of 0.79. Mean and standard deviation were used to answer the research questions and a t-test was used for testing the null hypotheses at 0.05 level of significance. The study revealed that business organizations implement environmental corporate social responsibilities at a low extent and implement philanthropic corporate social responsibilities at a high extent in Anambra State. Further, managers and employees do not significantly differ in their opinion on the extent business organizations implement philanthropic and environmental corporate social responsibilities in Anambra State. It was recommended that Business Organizations in Anambra State should intensify efforts to incorporate more vibrant forms of environmental corporate social responsibilities such as planting trees in strategic places, using alternative sources of fuel that are less pollutant, and promoting the use of recycled materials in the state.

Keywords. Corporate social responsibilities, environmental corporate social responsibilities, philanthropic corporate social responsibilities.

Introduction

The objective of a business organization is to return profit to capital owners or shareholders. However, the effects of industrialization such as pollution, health hazards, environmental degradation, and forest depletion among others have compelled business organizations to be responsible to non-corporate shareholders such as employees, customers, the local community, local and national governments, and other special interest groups in the society. This situation, according to Blowfield and Murray (2014) demands that business organizations, irrespective of their size should provide tangible and non-tangible values that can benefit both corporate and non-corporate shareholders in the long run. The creation of business values and societal responsibilities by business organizations is called corporate social responsibility (Carroll & Buchholtz, 2014)

Corporate social responsibility (CSR) is the organizational behaviour of business organizations geared towards providing programmes with social impact that can promote the development of sustainable societies. The European Commission (2016) defined corporate social responsibility as the continuing commitment by business organizations to behaving ethically and building goodwill while improving the quality of life of their workforce, their families, the local community, and society at large. One can infer that corporate social responsibility places the image and activities of business organizations in a positive light among members of the public. Corporate social responsibility is a channel through which business organizations make contributions to the society in which they operate. Holistically, Carroll (2016) describes CSR as the fulfillment of economic, legal, ethical, environmental, and philanthropic responsibilities by business organizations to improve the quality of life of the workforce, their families as well as the local business communities and society at large. In the light of the study, the corporate social responsibilities of business organizations that will be considered are environmental and philanthropic responsibilities. These aspects of CSR will be taken into consideration because they are the responsibilities that facilitate the partnerships between business organizations and members of society.

Environmental responsibilities encompass the management of critical environmental indicators such as the reduction and recycling of resources, reduction of gas emissions, and industrial waste among many others by business organizations (Sharma, 2017). A responsible business organization cannot ignore the problems of the environment in which it operates. Environmental responsibilities are a series of commitments made by business organizations as green business practices that improve the safety of the natural environment. According to Okonkwo (2014), environmental responsibilities are environmental management practices used by business organizations to create a safe environment and preserve the environment from damage. Environmental responsibilities of corporate social responsibility entail sound environmental behaviours in the handling of raw materials, the transformation process of raw materials into finished products, and procurement of by-products without posing health or safety hazards to the environment and lives of individuals (Amin-Chaudhry, 2016). The reduction of carbon emission practices and recycling of waste materials that promote a clean and pollution-free environment constitutes the implementation of environmental responsibilities by business organizations.

Ideally, environmental responsibilities focus on environmental safety but philanthropic responsibility is anchored on fostering environment friendliness with members of the community where business organizations are sited. Philanthropic responsibilities reflect the common desire to see businesses get actively involved in the betterment of society. Here, business organizations must donate financial resources and supportive gestures to the host community where they are operating. Arnold and Valentin (2013) averred that philanthropic responsibilities are externally oriented corporate social responsibilities that show how business organizations are committed to the development of the local communities. Philanthropic responsibilities are charitable initiatives designed to increase loyalty levels among employees and customers (Ahamad & Al-Amri, 2013). Philanthropic responsibility is community relationship-building programmes such as the construction of roads, hospitals, and schools as well as the provision of free education and creation of job opportunities for citizens of the host communities by business organizations to prevent the occurrence of conflicts and disputes that can interfere with the operations of the business in the local communities.

From the aforementioned descriptions, corporate social responsibility is a win-win public relations strategy that portrays business organizations as responsible organizations that are after the

long-term survival of their business interests and the health of the communities in which they are situated. Over the years, local communities in Anambra State have grown to become hubs of economic and entrepreneurial activities. From the siting of manufacturing and industrial organizations in Onitsha and Nnewi to the establishment of national and international service companies in Awka and Ogidi will allude to the fact that Anambra State is an oasis of commercialization and industrialization. It is therefore not surprising to notice that breweries and bottling organizations, food supply chain enterprises, vegetable oil processing and refining firms, feed milling plants, plastic and furniture making factories as well as banking, pharmaceutical manufacturing, and automobile industries are located in different communities in Anambra State.

In moving forward, the pharmaceutical, banking, and telecommunication industries are the focus of this study because they are highly patronized by the indigenous of Anambra State. Since they make more money for the society, the study will like to know what they are contributing to the society. The implementation of CSR in the pharmaceutical, banking, and telecommunication industries is collectively carried out by managers and employees. Managers and employees of selected pharmaceutical companies, banks, and telecommunication companies in Anambra State will be used for the study. Managers are used for the study because they are in charge of formulating the framework for corporate social responsibilities that can meet the interest of all stakeholders associated with business organizations while employees will provide a good indirect perspective on the actual extent of implementation of corporate social responsibilities at the various business organizations. Against this backdrop, the study sought to ascertain the extent of implementation of corporate social responsibilities by selected business organizations in Anambra State.

Statement of the Problem

With the increasing number of pharmaceutical and telecommunication firms as well as banks located in Anambra State, it is expected that they would naturally have some operational impact on their host communities such as fighting for human rights of disadvantaged persons in the society, environmental protection by reducing land and air pollution, fixing land degradation, providing full educational scholarships to the children of the immediate environment and constant employment of employees/staff from the immediate environment and organizing poverty eradication programme to showcase as evidence of corporate social responsibilities. So much literature has been generated in the area of CSR of multinational oil companies operating in Nigeria but literature scarcely addressed pharmaceutical companies and banks in Anambra State. The problem of this study is that the extent to which business organizations, particularly pharmaceutical and telecommunication firms as well as banks have performed its corporate social responsibility in environmental responsibilities and philanthropic responsibilities in Anambra State is not known. This is what necessitated the study to ascertain the extent to which corporate social responsibilities have been implemented by selected business organizations in Anambra State.

Research Questions

The following research question guided the study:

1. What is the extent of implementation of environmental corporate social responsibilities by business organizations in Anambra State?
2. What is the extent of implementation of philanthropic corporate social responsibilities by business organizations in Anambra State?

Hypotheses

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

1. There is no significant difference in the mean ratings of managers and employees of selected business organizations on the extent of implementation of environmental corporate social responsibilities in Anambra State.
2. There is no significant difference in the mean ratings of managers and employees of selected business organizations on the extent of implementation of philanthropic corporate social responsibilities in Anambra State.

Methods

Descriptive survey research design was employed for this study because the design makes it possible for the researchers to collect the opinions or perceptions from a sample of managers and employees on the extent of implementation of corporate social responsibilities by business organizations. The population for this study was 3608, which was made up of 158 (135 bank managers, 11 managers of pharmaceutical companies and 12 managers of telecommunication companies) and 3450 (2295 bank employees, 844 pharmaceutical companies' employees and 311 telecommunication companies' employees) of the selected banks and pharmaceutical companies operating in Anambra State. The selected banks are First Bank of Nigeria, Zenith Bank, Guaranty Trust Bank, United Bank for Africa and Access Bank, and the pharmaceutical companies are Guaze Pharmaceuticals and Laboratory, Nigeria Limited, Juhel Nigeria Limited, Nature and Nurture Industries Limited, Chazmax Pharmaceutical Industries Limited and EV Lifetime Pharmaceutical, Nigeria Limited while the telecommunication companies are MTN, Globacom, Airtel and 9mobile. A sample size of 471 (113 managers and 358 employees) of selected bank, pharmaceutical companies and telecommunication companies operating in Anambra State was selected for the study using simple random sampling technique. Simple random sampling technique was used to draw up the sample size using Taro Yamane sampling method.

A structured and validated questionnaire containing 24 items on a five-point rating scale of Very High Extent (VHE), High Extent (HE), Moderate Extent (ME), Low Extent (LE) and Very Low Extent (VLE) was used for data collection. The reliability of the instrument was determined through a pilot test. Copies of the instrument were administered to 20 managers and employees in bank and pharmaceutical companies in Enugu State who were not part of the research population. Cronbach alpha was used to measure the internal consistency which yielded reliability co-efficient of 0.81 and 0.78 for the scales that measure environmental and philanthropic responsibilities respectively. The researchers together with four research assistants used administered copies of the questionnaire to the respondents in their offices. Out of the 471 copies of the questionnaire administered, only 445 copies (representing 94 percent) were successfully retrieved and used for data analysis.

Mean and standard deviation were used to answer the research questions and determine the homogeneity or otherwise of the respondents' views. Decisions on the research questions were based on the grand mean in relations to the real limits of numbers. Therefore, items with mean ratings of 1.00 - 1.49 are rated Very Low Extent, those with 1.50 - 2.49 are Low Extent, items with mean ratings of 2.50 - 3.49 are rated Moderate Extent, those with 3.50 - 4.49 are rated High Extent and items with mean ratings of 4.50 - 5.00 are rated Very High Extent. Inferential statistics of the t-test was used to test the null hypotheses at 0.05 level of significance. A hypothesis was accepted where

the p-value is greater than the alpha level of 0.05 ($p > 0.05$), at an appropriate degree of freedom; otherwise, the null hypothesis was rejected.

Results

The results of the study are presented and analyzed in the following tables.

Research Question 1: To what extent do business organizations implement environmental corporate social responsibilities in Anambra State?

Table 1

Mean ratings on extent business organizations implement environmental corporate social responsibilities

S/N	To what extent do your business organisations?	\bar{X}	SD	Remarks
1	Participates in planting trees in strategic places in the society?	1.27	.36	Very Low Extent
2	Contributes to waste management like providing refuse disposal bins in strategic places in the society?	2.11	.53	Low Extent
3	Encourages paper-less practices in the organization?	2.27	.29	Low Extent
4	Promotes the use of recycled materials in the society?	1.36	.41	Very Low Extent
5	Participates in environmental clean-up in the society?	4.42	.58	High Extent
6	Modify their production processes to emit less waste?	2.19	.70	Low Extent
7	Employs energy efficient devices that are more environmentally friendly?	4.23	.62	High Extent
8	Uses low emission equipment in the organization?	3.08	.44	Moderate Extent
9	Uses biomass energy in their production processes?	2.15	.59	Low Extent
10	Uses alternative sources of fuel that are less pollutant?	1.22	.71	Very Low Extent

Data in Table 1 show that three out of the 10 listed environmental corporate social responsibilities with mean ratings ranging from 1.22 to 1.36 were implemented at a very low extent by respondents and four of them with mean ratings ranging from 2.15 to 2.27 were implemented at a low extent. Two of the environmental corporate social responsibilities with mean ratings of 4.23 and 4.42 were implemented at a high extent while one of them with mean rating of 3.08 was implemented at a moderate extent. The cluster mean of 2.43 indicates that business organizations implement environmental corporate social responsibilities at a low extent in Anambra State. The standard deviations for the items are within the same range which shows that the respondents are homogeneous in their opinions.

Research Question 2. What is the extent of implementation of philanthropic corporate social responsibilities by business organizations in Anambra State?

Data relating to this research question were analyzed and presented in Table 2.

Table 2

Mean ratings on extent of implementation of philanthropic corporate social responsibilities

S/N	To what extent do your business organisations?	\bar{X}	SD	Remarks
11	Allows students from the host community to do their internship in their organization?	4.29	.42	High Extent

12	Offers free medical care for employees?	4.06	.65	High Extent
13	Provides free medical care for employees' family members?	4.28	.79	High Extent
14	Supports in creating good roads network in the community?	2.20	.50	Low Extent
15	Supports in building classrooms for schools in the community?	3.14	.61	Moderate Extent
16	Supports in building markets in the community?	2.27	.76	Low Extent
17	Provides financial assistance to communities during times of natural disaster?	3.29	.41	Moderate Extent
18	Sponsors sports activities in the community?	4.40	.72	High Extent
19	Supports in providing health care facilities in the community?	3.33	.58	Moderate Extent
20	Awards scholarships to indigenes of the community?	4.46	.86	High Extent
21	Supports in providing health care drugs in the community?	3.48	.49	Moderate Extent
22	Supports in building recreational centres in the community?	2.37	.76	Low Extent
23	Contributes in the supply of clean water in the community?	4.43	.42	High Extent
24	Supports cultural events in the community?	4.79	.60	Very High Extent

Data in Table 2 show that one out of the 14 listed philanthropic corporate social responsibilities with mean rating of 4.79 was implemented at a very high extent by respondents and six of them with mean ratings ranging from 4.06 to 4.46 were implemented at a high extent. Four of the philanthropic corporate social responsibilities with mean ratings ranging from 3.14 to 3.48 were implemented at a moderate extent while three of them with mean ratings ranging from 2.20 to 2.37 were implemented at a low extent. The cluster mean of 3.61 indicates that business organizations implement philanthropic corporate social responsibilities at a high extent in Anambra State. The standard deviations for the items are within the same range which shows that the respondents are homogeneous in their opinions.

Hypothesis 1: There is no significant difference in the mean ratings of managers and employees of selected business organizations in (pharmaceutical industry, banking industry and telecommunication industry) on the extent of implementation of environmental corporate social responsibilities in Anambra State.

Table 3.

The t-test between the mean ratings of managers and employees on the extent of implementation of environmental corporate social responsibilities

Variable	N	\bar{x}	SD	df	t-value	p-value	Decision
Managers	98	59.64	4.10	443	0.09	0.42	Not Significant
Employees	347	41.68	3.93				

Table 3 shows that there is no significant difference in the mean ratings of managers and employees on the extent business organizations implement environmental corporate social responsibilities in Anambra State. This is shown by the p-value of 0.42, which is greater than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted

Hypothesis 2: There is no significant difference in the mean ratings of managers and employees of selected business organizations in (pharmaceutical industry, banking industry and telecommunication industry) on the extent of implementation of philanthropic corporate social responsibilities in Anambra State.

Table 4

The t-test between the mean ratings of managers and employees on the extent of implementation of philanthropic corporate social responsibilities

Variable	N	\bar{x}	SD	df	t-value	p-value	Decision
Managers	98	70.08	6.23	443	0.46	0.11	Not Significant
Employees	347	66.45	5.15				

Table 4 shows that there is no significant difference in the mean ratings of managers and employees on the extent business organizations implement philanthropic corporate social responsibilities in Anambra State. This is shown by the p-value of 0.11, which is greater than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted.

Discussion of Findings

The findings of the study showed that business organizations implement environmental corporate social responsibilities at a low extent in Anambra State. This means that environmental corporate social responsibilities such as participating in planting trees in strategic places in the society, using alternative sources of fuel that are less pollutant, promoting the use of recycled materials in the society, encouraging paper-less practices in the organization and contributing to waste management like providing refuse disposal bins in strategic places in the society were poorly implemented by business organizations in Anambra State. This supports the earlier findings of Idowu (2014) that business organizations in Nigeria commitment to environmental corporate social responsibilities is relatively low despite the huge profits they made in the society. The researcher is of the opinion that business organizations in Anambra State are paying lip service to environmental corporate social responsibility because members of host communities are not putting reasonable pressures on business organizations to take their environmental corporate social responsibilities very serious.

Furthermore, the study discovered that there is no significant difference in the mean ratings of managers and employees on the extent business organizations implement environmental corporate social responsibilities in Anambra State. This means that both managers and employees were in agreement to the unpleasant state of implementation of environmental corporate social responsibilities by business organizations in Anambra State. Supporting this finding, Kung'u (2021) discovered that business organizations pay little attention to environmental corporate social responsibilities because

they are not considered as major components of business strategy that can increase the value of the companies. A possible explanation for the non-significant difference among managers and employees on the low extent of implementation of environmental corporate social responsibilities by selected business organizations in Anambra State could be attributed to the absence of a uniformed environmental corporate social responsibility that must be adhere to by business organizations in the State.

The outcome of the study disclosed that business organizations implement philanthropic corporate social responsibilities at a high extent in Anambra State. This means that philanthropic corporate social responsibilities such as allowing students from the host community to do their internship in their organization, offering free medical care for employees, providing free medical care for employees' family members, contributing in the supply of clean water in the community and supporting cultural events in the community among others were highly implemented by business organizations in Anambra State. This finding is in agreement with Ogunsanwo and Ajayi (2018) which reported that business organizations are highly involved in philanthropic corporate social responsibilities in Nigeria. The researcher believed that business organizations implement philanthropic corporate social responsibilities at a high extent in Anambra State because they attract goodwill from society and sustainable long-term demand for their products. The findings also corroborate with Ukwueze and Okechukwu (2020) who reported that business organizations in Nigeria largely prioritize philanthropic corporate social responsibilities because they are considered as major components of the business competitive strategy that can influence customer's patronage. On the contrary, Ovbiagele (2019) reported that business organizations in Nigeria executed philanthropic corporate social responsibilities to a low extent. However, the difference between the findings of the current study and the recent study of Ovbiagele (2019) could be due to differences in location and population.

Also, the study discovered that there is no significant difference in the mean ratings of managers and employees on the extent business organizations implement philanthropic corporate social responsibilities in Anambra State. This means that managers and employees of business organizations did not differ on the extent of implementation of philanthropic corporate social responsibilities in Anambra State. This finding agrees with Kariuki (2021) who reported that business organizations in Nigeria executed philanthropic corporate social responsibilities in order to improve the quality of life of host communities. It is therefore not out of place to assert that philanthropic corporate social responsibilities greatly improve the image, reputation, product rating, and customer choice of products of business organization. Hence, the agreement among managers and employees on the high extent of implementation of philanthropic corporate social responsibilities by selected business organizations in Anambra State

Conclusion

The implementation of corporate social responsibility by business organizations must have constructive influences on communities, cultures, societies, and environment in which they are domiciled. From the findings of the study, the study concluded that business organizations in Anambra State implemented philanthropic corporate social responsibilities to high extent but implemented environmental corporate social responsibilities to a low extent.

Recommendation

Based on the findings of the study, the following recommendations were made.

- 1) Management should create a department within their business organizations that will be responsible for comprehensive implementation of corporate social responsibilities in order to facilitate the overall economic growth and development of host communities. This would go long a way in boosting the image of organizations by giving them an edge over other companies
- 2) Management should also intensify efforts to incorporate more vibrant forms of environmental corporate social responsibilities such as planting of trees in strategic places in the society, using alternative sources of fuel that are less pollutant and promoting the use of recycled materials in the society. This would a long way in reducing cases of environmental pollution, production and marketing of substandard products that are harmful to human health
- 3) Government should fix a minimum percentage of profit that business organizations must expend on corporate social responsibility activities in order to touch lives and improve the quality of life in host communities. This would go a long way in reducing the negative impacts of their organizational activities on the society.
- 4) It is recommended that while the volumes of philanthropic corporate social responsibilities volumes by business organizations in Anambra State is desirable, they should close ranks and forge common attention to address certain philanthropic corporate social responsibility areas, especially on building classrooms, markets and recreational centres in the community

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BUSINESS OPERATOR-BASED STRATEGIES FOR IMPROVING THE UTILIZATION OF E-MARKETING OPERATIONS IN SMALL AND MEDIUM ENTERPRISES IN SOUTH-EAST, NIGERIA

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Abstract

The purpose of this study was to determine strategies considered effective for improving the utilization of e-marketing operations in small and medium scale enterprises in South-East, Nigeria. One research question guided the study, and two null hypotheses were tested at 0.05 level of significance. Descriptive survey research design was adopted. The study was carried out in the five states in South-East, Nigeria. The population of the study was 13,035 registered small and medium scale enterprises in the South-East. A 9-item questionnaire was used for data collection. The questionnaire was tested for validity and to determine the reliability, a pilot study was carried out. Test on the data collected using Cronbach alpha reliability method yielded reliability coefficients of 0.61. The data from the study were analyzed using descriptive statistics of mean and standard deviation. The mean ratings were used to answer the one research question while standard deviation was used to determine the closeness of the respondents' mean ratings. t-Test statistics was used to test the null hypotheses at 0.05 level of significance. The findings revealed that operator-based strategies are considered effective for improving the utilization of e-marketing operations in small and medium scale enterprises in South-East, Nigeria. Based on these findings, it was concluded that SMEs can adopt operator-based strategies to improve the utilization of e-marketing operations in South-East, Nigeria. The researcher recommended that SME operators should improve their knowledge and skills of Information and Communication Technology for e-marketing operations by attending conferences and seminar where utilization of ICT in business is discussed.

Keywords. Operator-based strategies, utilization, e-marketing, SMEs.

Introduction

Globalization has brought about increase in industrialization and highly competitive business environment. The business environment has become more intensely competitive for large, medium, and small-scale enterprises that constantly seek to improve sales and expand assets and market size. As a result of increasing market competition occasioned by technological advancement, several strategies are devised to attract and retain customers with a view to raising the sales level and thereby remaining on profitable path. Improving sales however depends on marketing skills of business organizations, including small and medium enterprises (SMEs).

Small and Medium Scale Enterprises (SMEs) are the building blocks of the economy. This is because of their roles in the areas of employment generation, rural development, youth empowerment, contribution to national income and growth, spread and development of adaptable technology. SMEs are business organizations set-up by individuals or group of individuals known as business operators, owners, or entrepreneurs for the purpose of providing goods and services. The Central Bank of Nigeria (2010) defined SME as any business that has account base (excluding the cost of land) of not more than N500 million and labour force of not more than 300 workers. Similarly, the Federal Ministry of Commerce and Industry in Orokpa (2013) defined SMEs as firms with total investment (excluding cost of land but including capital) at up

to N750,000 and paid employment of up to fifty persons. The Small and Medium Enterprises Development Agency (SMEDAN, 2016), defined SMEs using dual criteria of number of employees and assets base with three classifications as micro enterprises, small enterprises, and medium enterprises. Micro enterprises are enterprises whose assets (excluding land and buildings) are less than N5 million with a workforce not exceeding 10 employees. Small enterprises include enterprises whose total assets (excluding land and building) are above N5 million but not exceeding N50 million, with a total workforce of above 10 but not exceeding 49 employees. Medium enterprises, on the other hand, are enterprises whose total assets (excluding land and building) are above N50 million, but not exceeding N500 million with a total workforce of between 50 and 199 employees (SMEDAN, 2016).

According to Aremu and Adeyemi in Agwu and Emeti (2014), most SMEs in Nigeria die within their first five years of existence, a smaller percentage goes into extinction between the sixth and tenth year while only about five to ten percent survive, thrive, and grow to maturity. Many factors as postulated by the authors contribute to this premature death of SMEs. These include insufficient capital, irregular power supply, infrastructural inadequacies (water, roads), lack of focus, inadequate market research, slow in Information and Communication Technology (ICT) adoption, over-concentration on one or two markets for finished products, lack of succession plan, inexperience, lack of proper book-keeping, lack of business strategy, cut-throat competition, among others. To tackle some of these problems especially in this 21st century, SMEs need to adopt ICT. Among the components of ICT is e-marketing, which, according to Jobber & Ellis-Chadwick (2013), aids in boosting the performance of small and medium enterprises. Faloye (2014) identified lack of awareness of the benefits of e-marketing, knowledge and understanding of e-marketing, and perceived cost of adopting e-marketing, as barriers to e-marketing utilization in Nigerian SMEs. Agwu, et al. (2015) also observed that many of the SMEs in Nigeria lack resources to purchase computers and necessary broadband internet connectivity equipment, maintenance, electricity, poor technical know-how, low business coverage and poor quality of products and services which affects SMEs' utilization of e-marketing.

E-marketing refers to electronic representation of business activities designed to plan, price, promote and distribute wants-satisfying (valuable) goods and services to potential customers. It aims at increasing sales, reducing costs, and making SMEs business more competitive. Nwachi (2012) defined e-marketing as the application of principles and techniques through electronic media and more specifically the internet. In the context of this study, e-marketing, also known as digital marketing, web marketing, online marketing, or search marketing, is the promotion of products or services over the internet. Since e-marketing can change the shape and nature of SMEs around the world, it is imperative to adopt certain strategies to improve the utilization of e-marketing operations in small and medium scale enterprises in South-East, Nigeria. Strategies are plans of action designed to achieve a specific goal or series of goals within an organizational framework. Strategy, according to Riley (2015), is the direction and scope over a long-term through its configuration of resources to meet the organisational needs and expectations.

One of the strategies for improving the utilization of e-marketing operations in SMEs is the operator-based strategy. Operator-based strategy is the readiness and level of commitment expressed by SME managers that will influence their decision towards adoption of e-marketing operations. It recognizes the significance of the owner or manager of the business in the utilization of ICTs and e-marketing in business transactions (Bharati & Chaudhury, 2006). Operator-based strategy relate to executive decisions that the SME operator must make; the financial commitments to take in relation to the overall direction of the firm; acquisition of new e-marketing infrastructure, whether the SME must consider e-marketing adoption or not, their appreciation or non-appreciation of ICT and new technological developments, and the like. Business operator-based strategy, according to Zhao (2013) is based on the education, ICT and e-marketing knowledge, social and cultural attributes of the business owner. Furthermore, gender and education could be

factors influencing the utilization of e-marketing operations by SMEs in South-East, Nigeria (Kren-Ikidi, 2017).

Gender is one of such factors also mentioned in literature to have considerable effects on the utilization of e-marketing. Gender is the range of physical, biological, mental, and behavioural characteristics pertaining to and differentiating between the feminine and masculine (female and male) population. The importance of examining e-marketing in relation to gender is based primarily on the socio-cultural differences between girls and boys. As a social construct, gender varies from society to society and can change over time. Similarly, education attained by small and medium enterprises' operators can have a significant role in the extent of utilization of e-marketing. A good level of education is critical strategy for allowing easy communication and appreciation of business terms in global business. Hence, effort towards motivating the SME operators for higher business qualification will further stimulate the utilization of e-marketing for better performance of SMEs (Kren-Ikidi, 2017).

Despite the array of existing and upcoming SMEs in the study areas, there is rather scanty literature on the utilization of e-marketing operations in SMEs in South-East, Nigeria. This reason prompted the researchers to undertake this study to determine operator-based strategies considered effective for improving the utilization of e-marketing operations in SMEs in South-East, Nigeria.

Statement of the Problem

In recent years, the utilization of e-marketing operations has gained significance as a crucial avenue for enhancing business visibility, reaching wider audiences, and driving growth for small and medium scale enterprises (SMEs) in South-East Nigeria. However, despite the potential benefits, many SMEs in the region continue to face challenges in effectively implementing and maximizing the outcomes of e-marketing strategies. These challenges encompass a range of factors, including limited digital literacy, inadequate resources, lack of strategic planning, and an absence of tailored business operator-based strategies that address the specific needs and contexts of SMEs operating in South-East Nigeria.

As such, a pressing problem arises: How can business operator-based strategies be developed and optimized to enhance the utilization of e-marketing operations by small and medium scale enterprises in the South-East region of Nigeria? Addressing this problem is essential to propel the growth and competitiveness of SMEs in the digital era and to ensure that they can effectively harness the potential of e-marketing for achieving sustainable success.

To help small and medium scale enterprises in South-East Nigeria utilize, as well as enjoy the full-scale benefits of e-marketing, operator-based strategies must be employed. To address these challenges therefore, these researchers consider it desideratum to identify effective business operator-based strategies for improving the utilization of e-marketing operations in small and medium scale enterprises in South-East, Nigeria.

Research Questions

The following research question guided the study:

1. Operator-based strategies considered effective for improving the utilization of e-marketing operations in small and medium scale enterprises

Hypotheses

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

1. There is no significant difference in the mean ratings of SME operators in South-East on the operator-based strategies considered effective for improving the utilization of e-marketing operations based on gender.
2. There is no significant difference in the mean ratings of SME operators in South-East on the operator-based strategies considered effective for improving the utilization of e-marketing operations based on level of education.

Methods

Descriptive survey research design is adopted for this study. This study was carried out in the South-East, Nigeria. The population of this study comprise all the 13,035 SME business operators drawn across the five states that registered with the State Ministry of Commerce, Industry and Technology (Anambra State); Ministry of Small and Medium Enterprises and New Business Development (Enugu State); Ministry of Small

Medium Enterprise and New Businesses Development (Abia State); Ministry of Trade and Industry (Imo State) and Ministry of Commerce and Industry (Ebonyi State). The sample size for the study is 388 obtained using the Taro Yamane formular. The 388 respondents were selected across SMEs in Anambra, Enugu, Abia, Imo and Ebonyi States. Consequently, SME operators were selected using proportionate stratified random sampling technique. Thus, convenience sampling technique was used to distribute the copies of questionnaire in favour of the SME operators willing to complete and return the instrument.

The instrument used for data collection was a structured questionnaire titled, "Strategies for Utilization of E-Marketing Operations Questionnaire (SUE-MOQ)". The instrument was subjected to face validation by three experts. Cronbach alpha method was used to test the internal consistency of the instrument, resulting in the reliability coefficient of 0.61. Copies of the instrument were administered to the respondents by the researcher with the help of five research assistants, resident in the study states. The data collected was analyzed using mean and standard deviation for the research question and t-test for the hypotheses. The data was analyzed using SPSS Version 23. Mean responses between 4.50 to 5.00 will be considered Very Effective; 3.50 to 4.49 will be considered Effective; 2.50 to 3.49 will be considered Moderately Effective; Mean score of 1.50 to 2.49 will be considered Ineffective (IE), while 1.00 to 1.49 will be considered Very Ineffective. The decision rule was to accept a null hypothesis where the p-value is greater than or equal to the alpha level of 0.05 ($p > 0.05$). The null hypothesis was rejected where the calculated p-value is less than the alpha level.

Results

The results are presented in the order of the research questions and the corresponding hypothesis.

Research Question 1: To what extent are operator-based strategies considered effective for improving the utilization of e-marketing operations in small and medium scale enterprises?

Table 1

Mean Ratings on the Operator-Based Strategies Considered Effective for Improving the Utilization of E-marketing Operations in SMEs

S/N	Items	Mean	Std. Dev/	Remarks
1.	Employing competent ICT experts	4.20	.72	Effective
2.	Organizing ICT training for SMEs operators	4.32	.60	Effective
3.	Training personnel on ICT	4.34	.64	Effective
4.	Formulating relevant ICT policies	4.08	.76	Effective
5.	Enforcing strict internet fraud sanctions	4.16	.66	Effective
6.	Subsidizing ICT charges by service providers	4.39	.60	Effective
7.	Adopting social reorientation for operators of SMEs	4.19	.72	Effective
8.	Eliminating ICT phobia among SMEs operators	4.36	.67	Effective
9.	Investing in relevant technologies	4.38	.69	Effective
	Cluster	4.27		Effective

The item-by-item analysis in Table 1 showed that all the nine items achieved mean scores ranging from 4.08 to 4.39, with all the item considered effective as operator-based strategies for improving the utilization of e-marketing operations in SMEs. The cluster mean score of 4.27 indicated that overall, SME operators consider operator-based strategies effective for improving the utilization of e-marketing operations in SMEs in South-East, Nigeria. The standard deviations score ranges from 0.60 to 0.76, showing homogeneity of their responses. This means that they do not differ much in their responses.

Hypothesis 1: There is no significant difference in the mean ratings of SME operators in South-East on the operator-based strategies considered effective for improving the utilization of e-marketing operations based on gender.

Table 2

The t-test analysis on the Operator-Based Strategies for Improving the Utilization of E-marketing in SMEs based on gender

Variable	N	Mean	SD	df	á	p-value	Decision
Male	216	38.60	2.39	386	0.05	.099	Not Significate
Female	172	38.16	2.64				

Data in Table 2 show that the p-value of 0.99 at 386 degrees of freedom is greater than 0.05 alpha level. This shows that gender did not significantly influence the opinion of respondents on operator-based strategies considered effective for improving the utilization of e-marketing in SMEs in South-East, Nigeria. The analysis also shows mean scores of 38.60 and 38.16 for males and females respectively. Therefore, the null hypothesis of no significant difference between the two groups is upheld.

Hypothesis 2: There is no significant difference in the mean ratings of SME operators in South-East on the b operator-based strategies considered effective for improving the utilization of e-marketing operations based on level of education.

Table 3

The t-test analysis on the Operator-Based Strategies for Improving the Utilization of E-marketing in SMEs based on level of education

Variable	N	Mean	SD	df	α	p-value	Decision
O'Level	90	38.77	2.13	386	0.05	.119	Not Significate
Degree	298	38.30	2.61				

The t-test in Table 3 revealed that there is no significant difference in the mean responses of SME operators with o'level and those with degree certificates on the operator-based strategies considered effective for improving the utilization of e-marketing operations in SMEs in South-East, Nigeria. The analysis shows mean scores of 38.77 and 38.30 for o'level and degree respectively. It also showed the p-value of 0.119 which is greater than 0.05 level of significance at 386 degrees of freedom. Therefore, the null hypothesis is accepted.

Discussion of Findings

Findings revealed that operator-based strategies are considered effective for improving the utilization of e-marketing operations in small and medium scale enterprises in South-East. The study revealed that employing competent ICT experts, organizing ICT training for SMEs operators, training personnel on ICT, formulating relevant ICT policies, enforcing strict internet fraud sanctions, subsidizing ICT charges by service providers, adopting social reorientation for operators of SMEs, eliminating ICT phobia among SMEs operators, and investing in relevant technologies, were effective operator-based strategies for improving the utilization of e-marketing operations in small and medium scale enterprises in South-East. This may be because SME operators are able to relate with these strategies and may perceive them as capable of improving e-marketing utilization.

This finding of this study is in line with the submissions of Caldeira and Ward in Kren-Ikidi (2017), who established that a combination of owner/manager perspectives and attitudes towards ICT adoption and use, play an important role in the development of internal ICT competencies, and provide an important contribution to the development of an environment that enables e-marketing usage in SMEs. According to the authors, where the owner or manager of the small and medium enterprise slumbers and does not appreciate the value of ICT or e-marketing innovation, there is stifled growth in the firm. This implies that the personal characteristics and behavior of owners or managers of SMEs are integral to SMEs utilization of e-marketing operations in South-East, Nigeria. The study of Meso, Musa and Mbarika in Amobi (2021) averred that an acceptable level of ICT and e-marketing knowledge of the owner or key manager, and other key decision-making personnel can assist the SME to adopt appropriate e-marketing tools in their business. Furthermore, Zhao (2013) posited that operator-based strategy is based on the education, ICT and e-marketing knowledge, social and cultural attributes of the business owner.

The t-test of the first hypothesis revealed that there is no significant difference in the mean ratings of SME operators in South-East on operator-based strategies considered effective for improving the utilization of e-marketing operations based on gender. Thus, implying that male and female SME owners do not necessarily differ in their responses. Similarly, the t-test of the second hypothesis showed that there is no significant difference in the mean ratings of SME operators in South-East on operator-based strategies considered effective for improving the utilization of e-marketing operations based on level of education. This finding contradicts the postulation of Taylor and Owusu (2012) who found that educational qualification affected the utilization of e-marketing by SMEs owners or managers. According to the authors, the educational qualification of managers of SMEs affected their appreciation and application of e-marketing services or tools in their business operations.

Conclusion

Based on the findings of this study, it was concluded that operator-based strategies are considered effective for improving the utilization of e-marketing operations in small and medium scale enterprises in South-East, Nigeria. In addition, it can be concluded that the existence of these strategies can contribute significantly to the high utilization of e-marketing operations in SMEs in South-East, Nigeria. It was also concluded that gender and level of education do not have significant influence on the operator-based strategies for improving the utilization of e-marketing operations in SMEs in South-East, Nigeria.

Recommendation

Based on the findings of this study, the researchers recommends that SME operators should improve their knowledge and skills of Information and Communication Technology for e-marketing operations by attending conferences and seminar where utilization of ICT in business is discussed. Furthermore, the government should provide legislation that will curb the activities of cyber criminals.

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GENDER DIFFERENTIAL EFFECT OF BRAINSTORMING ON SENIOR SECONDARY SCHOOL STUDENTS' CREATIVITY IN DATA PROCESSING IN ANAMBRA STATE, NIGERIA

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Abstract

This study determined the effect of gender on senior secondary school students' creativity in data processing in Anambra State, Nigeria. Two research questions guided the study and two null hypotheses were tested. Quasi-experimental research design specifically, pre-test post-test non-equivalent control group design was adopted for the study. Population was 3,182 senior secondary two (SS2) Data Processing students in 2022/2023 academic session in Anambra State. A multi-stage random sampling technique was used to select a sample size of 60 intact class SS2 students for the study. Rating Scale for Creativity Skills in Data Processing was used for data collection. The face and content validity of the instruments were established using three experts. The reliability of the instrument was established through pilot testing method and data collected calculated using Cronbach's alpha which yielded coefficient values of .91. Mean was used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significance. Findings of the study revealed that there was no significant difference in the mean creativity score of male and female students taught data processing using brainstorming teaching strategy. Furthermore, there was no significant interaction effect between the teaching methods and gender on students' creativity in data processing. The researcher therefore, recommended that, gender differences should not be introduced in brainstorming classrooms.

Keywords. Gender, Senior Secondary School, Creativity, Data Processing

Introduction

Education is a crucial instrument for sustainability as it offers the framework for development of nations. One major desire of every nation in the world is economic development. The focus has recently changed from mere development to sustainable development. This suggests that countries around the world are realizing that development alone may not be enough, particularly when it cannot stand the test of time. Therefore, there is an urgent need for sustainable development that will last from one generation to the next.

To achieve the Sustainable Development Goals by 2030, citizens must have unlimited access to not only education, but qualitative education (Uleanya & Gamede, 2017). Qualitative education according to Agommuoh and Joseph-Kalu (2020) enables senior secondary school students in Nigerian to acquire entrepreneurial skills for self-reliant and financially independent upon graduation to reduce youth unemployment. Secondary school education, according to the Federal Republic of Nigeria (FRN) (2013) is the education children receive after primary education and before the tertiary stage. The secondary education curriculum is designed to meet the national objective of preparing individuals for useful living within the society and higher education. Secondary school education is

provided in two stages - the upper basic secondary and post basic secondary. At the junior secondary level, typewriting, shorthand, book keeping, office practice and commerce are integrated as business studies. Senior Secondary School (SSS) is the higher level of secondary education. At the SSS level, business subjects such as financial accounting, keyboarding, data processing, economics, commerce, insurance, marketing, trademanship, and office practice among others are offered. It is expected that these subjects when offered, will expose the students to a plethora of business skills, as well as offer them good knowledge on how to become future entrepreneur. It is in recognition of this, that the Federal Government of Nigeria through its National Policy on Education, (FRN, 2013) adds entrepreneurship studies in the new curriculum of senior secondary schools in Nigeria.

Entrepreneurship education means a meticulously developed programme of instruction in schools intended to help students develop entrepreneurial skills needed to start, and manage business enterprises (Olaniyi, 2016). The aim of entrepreneurship education according to Omoniyi, Gamede and Olaniran (2022) is to equip students with knowledge and skills to support studies in entrepreneurship. In order to foster an entrepreneurial mindset and creativity among senior secondary school students in Nigeria, entrepreneurship subjects were broadened to 35 trade subjects, and included in the new secondary school curriculum, which was presented in 2008 and completely implemented in 2011. Out of 35 subjects, every student regardless of the field of study is expected to study five core subjects: English language, General Mathematics, Civic Education, a Science subject, and one trade/entrepreneurship subject. In addition to auto body repair and spray painting, trade/entrepreneurship subjects also cover auto electrical work; auto mechanical work; air conditioner/refrigeration; electrical installation and maintenance work; radio, TV and electrical work; block laying, brick laying and concrete work; painting and decoration; carpentry and joinery; upholstery; garment making; cosmetology; keyboarding; leather goods manufacturing and repair; animal husbandry; marketing; tourism; GSM maintenance, data processing, and others.

Data processing (DP) is the process of organizing, categorizing, and manipulating data in order to extract information (Huang, 2019). In the Nigerian Senior Secondary School curriculum, it is designed to test basic knowledge and skills in data processing (Education Research and Development Council (NERDC, 2013). The main objective of teaching data processing in the Nigerian senior secondary schools according to NERDC is to help students acquire a level of competence in ICT applications that will promote the acquisition of entrepreneurial skills for everyday living in the global world. Data processing is seen as a subject that can create employment opportunities for youths in Nigeria especially Anambra State. In view of this, Anambra State government in the year 2014 equipped all public secondary schools with computers, generators and other ICT facilities. However, a new emphasis on teaching strategies is necessary for the development of creativity in students in Anambra State secondary schools.

Creativity can be referred to as a quality held by people who create goods that are both original and adaptable. Juliana, Hui, Clement, Solomon, and Elvis (2021) defined creativity as the use of skills and imagination to create something new. It is an individual's ability to solve issues in creative ways and create works that are novel, suitable, and socially valued. Creativity can be cultivated, strengthened, or even hampered by institutional and environmental circumstances (Vejian, Kamarudin, & Kadir, 2016). Therefore, it is the responsibility of teachers to foster creativity at the classroom level. Every student has an inherent capacity for creativity, which is a fundamental ability for entrepreneurs. However, it would need to be developed before it could flourish in the student. It should be remembered that each student's rate of development is unique. While some students have a

high rate of creativity, others may have a very slow rate. This disparity in development rates may be caused by students' level of intelligence, teachers' competence, and teaching methods.

Innovative teaching strategies are necessary for creativity development. One of the most well-liked strategies for generating ideas is brainstorming, which involves teaching students how to solve problems in creative ways to prepare them for future real-world challenges. Brainstorming is a process of generating new ideas and solutions through intensive freewheeling group discussions. Hidayanti, Rochintaniawati and Agustin (2018) defined it as the use of brain to engage in active problem solving. Hidayanti, et al. noted that brainstorming involves thinking in numerous ways to dissect previous concepts, create new connections, extend the boundaries of knowledge, and come up with brilliant ideas. The authors posited that brainstorming encourages critical thinking, student interaction, and serves to inspire and stimulate students' acquisition of entrepreneurship skills. Mona (2019) asserted that brainstorming gives teachers the chance to introduce a problem and encourage students to come up with as many potential answers as they can in a short amount of time.

In view of the fact that gender of senior secondary school students may have impact on their creativity, this study used gender as moderator variable. The importance of examining instructional strategy in relation to gender is based primarily on the socio-cultural differences between males and females (Dania, 2014). Gender differences in creativity performance of students have been examined for some time resulting in inconsistent outcomes. For example, a study by Yui, Tung and Sei (2021) found out that females are more creative than males. In contrary, other researchers reported that the males are more creative than the females (Piaw, 2013). According to Wang's (2011) research, female students scored higher than male students in terms of creativity. Additionally, Kamonjo (2016) discovered that men outperformed women in terms of adaptability, relationship awareness, sensitivity, planning, and overall scientific originality. Similar to this, Steidtmann, Kleickmann and Steffensky (2022) observed in their study that female students scored lower on creativity tests than male students when brainstorming teaching strategy was used. In contrast, Obi (2018) concluded that the level of creativity between males and females is much the same.

These findings showed that studies related to gender differences in creativity have not produced clear or consistent results. It is against this background that the study determined the effect of gender on senior secondary school students' creativity in data processing when exposed to brainstorming teaching strategy Anambra State, Nigeria.

Statement of the Problem

Since independence, Nigerians have been concerned and vocal about how to improve secondary education so as to produce graduates who can contribute to society by living a meaningful life. Due to these concerns from stakeholders, entrepreneurship was introduced and included into the secondary school entrepreneurship curriculum. The New Senior Secondary School Entrepreneurship Curriculum (NSSSEC) is designed to help secondary schools produce well-rounded graduates who have the necessary creative and other skills for both further education and the workforce. The NSSSEC have been in place for almost ten years, yet secondary school graduates' ongoing lack of creativeness raises concerns about the curriculum's capacity to improve students' creative performance.

Because graduates from Nigerian secondary schools seem not to have learned or possess the requisite skills, the majority of them are unsuitable for self-employment. These students can only be innovative and independent when teachers use the proper strategy while instructing students in

entrepreneurship. Unfortunately, the teaching methods used by secondary school teachers do not seem to give students the chance they need to participate in activities that foster creativity. This indicates that entrepreneurial education in secondary schools does not foster students' capacity for creative thought. It would seem that teachers' lecture-based teaching methods discourage students' creativity. Also, there have been inconsistent results about the effect of gender on secondary school students' creativity in entrepreneurship subjects. However, in Anambra State, there are very scanty empirical researches covering this area of the study. Therefore, in order to fill this gap in knowledge, This study specifically determined the: (1) differences in the mean creativity scores of male and female students taught data processing using brainstorming teaching strategy, (2) interaction effects of teaching strategies and gender on students' creativity in data processing.

Research Questions

The following research questions guided the study:

1. What is the difference in mean creativity scores of male and female students taught data processing using brainstorming strategy?
2. What is the difference in the mean creativity scores of male and female students taught data processing using brainstorming strategy and lecture method?

Hypotheses

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

1. There is no significant difference in the mean creativity score of male and female students taught data processing using brainstorming teaching strategy.
2. There is no significant interaction effect between the teaching methods and gender on students' creativity in data processing.

Method

The design for the study was a quasi-experimental design; specifically pre-test post-test non-equivalent control group design was adopted. The study was carried out in Anambra State, Nigeria using the population of 3,182 (444 male and 1,738 female) SS2 students from 256 public secondary schools in the six (6) Education Zones in Anambra State offering data processing in 2022/2023 academic session (Source; Post Primary School Service Commission (PPSSC) Awka, Anambra State as at April 2022). The sample size of 62 SS2 data processing students from two co-educational secondary schools in two different education zones in Anambra State was drawn using multi-stage random sampling technique (simple random sampling and purposive random sampling techniques). The experimental group (E) comprised 32 students (20 females and 12 male) and control group (C) had 30 students (15 male and 25 female).

Instrument for Data collection was a self-developed questionnaire Titled "Rating Scale for Creativity Skills in Data Processing (RSCSDP)". The instrument is divided into two sections, A and B. Section A dealt with personal data of the students such as gender and name of school while Section B dealt with RSCSDP containing 30 items designed based on the SS2 data processing curriculum. The RSCSDP was structured on a five point rating scale of: Very High Extent (VHE) 5 points, High Extent (HE) = 4 points, Moderate Extent (ME) = 3 points, Low Extent (LE) = 2 points and Very Low Extent (VLE) =1 point. Face and content validity of RSCSDP was ascertained using the opinions of three experts; one expert from the Department of Educational Foundations and two experts from the Department of Technology and Vocational Education Nnamdi Azikiwe University Awka. The reliability of the instrument was established using pilot-testing method, and Cronbach Alpha was used

to establish the internal consistency of the instrument which yielded a reliability coefficient value of 0.91.

Four (4) research assistants (data processing teachers in the school) and the computer laboratory attendant rated the students on creativity skills in data processing in both experimental and control group (pre-test) and (post text) at the end of the exercise. The research questions were answered using mean while the null hypotheses were tested using the Analysis of Covariance (ANCOVA). The decision on hypotheses is that where the p-value is less than or equal to the level of significance (0.05), the null hypothesis was rejected and where the p-value is greater than the level of significance, the null hypothesis was accepted. The calculation of the mean and ANCOVA were carried out using SPSS version 23.

Result

Research Question 1. What is the difference in mean creativity scores of male and female students taught data processing using brainstorming strategy?

Table 1.
Pre-test and Post-test Mean Creativity Scores in Data Processing of Male and Female Students Taught with Brainstorming Teaching Strategy

Source of Variation	N	Pretest Mean	Post-test Mean	Mean Gain	Mean Difference
Male	14	42.93	90.43	47.50	0.75
Female	16	42.94	91.19	48.25	

Data in Table 1 shows that the male students taught data processing with brainstorming teaching strategy had pre-test mean creativity score of 42.93 and post-test mean creativity score of 90.43 with gained mean 47.50, while the female students taught data processing with brainstorming teaching strategy had pre-test mean creativity score of 42.94 and post-test mean score of 91.19 with gained mean 48.25. With gained mean difference of 0.78 (48.28 - 47.50) in favour of female students, brainstorming teaching strategy is more effective in enhancing female students' creativity in data processing.

Hypothesis 1. There will be no significant difference in the mean creativity score of male and female students taught data processing using brainstorming teaching strategy.

Table 2.
ANCOVA on the differences in the post-test mean creativity scores of male and female students taught data processing using brainstorming teaching strategy

Source	SS	df	Mean Square	F	P-value	Decision
Corrected Model	10.266 ^a	2	5.133	.084	.920	
Intercept	1918.086	1	1918.086	31.351	.000	
Pretest	5.966	1	5.966	.098	.057	
Gender	4.289	1	4.289	.070	.093	Not Significant
Error	1651.900	27	61.181			
Total	249183.000	30				
Corrected Total	1662.167	29				

Data in Table 2 show that there was no significant main effect due to gender on the achievement scores of the students, $F(1, 29) = .070$, $P(.093) > 0.05$. Since the p-value is greater than the level of significance, the null hypothesis is therefore accepted. Thus, there is no significant difference in the mean creativity score of male and female students taught data processing using brainstorming teaching strategy.

Hypothesis 2. There is no significant interaction effect between the teaching methods and gender on students' creativity in data processing.

Table 3.

ANCOVA on the interaction effect in the post-test mean creativity scores of students based on their gender and teaching methods

Source	SS	df	Mean Square	F	P-value	Decision
Corrected Model	27608.916 ^a	4	6902.229	164.518	.000	
Intercept	3352.092	1	3352.092	79.899	.000	
Pretest	17.049	1	17.049	.406	.526	
Group	5751.429	1	5751.429	137.088	.000	
Gender	2.810	1	2.810	.067	.797	
Group * Gender	21.141	1	21.141	.504	.481	Not Significant
Error	2307.484	55	41.954			
Total	318898.000	60				
Corrected Total	29916.400	59				

In table 3, it is observed that at 0.05 level of significance, 1 df numerator and 59 df denominator, the calculated F is .504 with P-value of .48 which is greater than 0.05. Therefore, the fourth null hypothesis is accepted. So, there is no significant interaction effect between the teaching methods and gender on students' creativity in data.

Discussion of Findings

Findings of this study disclosed that female students performed better than their male counterparts when taught data processing using brainstorming teaching strategy. However, this difference in creativity of male and female students is not significant. Perhaps, the difference between male and female students was a chance occurrence. The findings of the study support that of Yuin, Tung and Sei (2021) which revealed that female secondary students scored higher in mean creativity scores than the males. In contrast, Obi (2018) and Steidtmann, Kleickmann and Steffensky (2022) both revealed that male students scored high in creativity tests than females. Similarly, the finding of the study that revealed that the difference in mean creativity score due to gender was not significant supports that of Wagbara (2020) who reported no gender disparity in the use of brainstorming teaching strategy on students' creativity. Collaborating, Filgona, Sababa and Iyasco (2016) found no significant effect of gender on the creativity of students taught using brainstorming teaching strategy. The researchers suggest that the no gender difference in mean creativity scores among students could be as a result of ample opportunities created by brainstorming classroom for every student irrespective of gender to partake in classroom discussions and activities leading to findings solutions to problems in the classroom.

Findings of the study showed that there was no significant interaction effect between the teaching methods and gender on students' creativity in data processing. This indicates that while the effect of the treatment was significant, the interaction effect with gender was not significant. It then means that the treatment does not depend on gender to be effective. Hence, the observed difference in the mean creativity scores of male and female students among teaching methods was merely due to chance. The findings of this study align with that of Piaw (2013) who reported no significant interaction effect between teaching methods and gender on overall students' creative thinking ability. Rampersad and Patel (2014) asserted that the extent of success was not totally based on gender or the responsibilities laid on a particular gender but rather on the creative level of students and their ability to manage their creativity to enable them achieve academic goals. However, XiaojuanWeiping, Fengchun, Haihong, Jing, Mark and Yinghe (2017) observed a significant interactive effect between teaching methods and gender in students' creativity. The findings of this study has no doubt contributed to the on-going debate or discourse regarding the interactive effect of teaching methods and gender on students' creativity in entrepreneurship education.

Conclusion

The results in this study provide empirical evidence that students creativity in senior secondary school Data processing depend on the method of instruction adopted and are not influenced by gender. The study has shown that gender (male/female) had no significant effect on students' creativity in Data processing. It can therefore be concluded that gender of students whether male or female, does not have any influence on the effectiveness of brainstorming teaching strategy employed in this study. This is an indication that if the brainstorming teaching study is used effectively for male and female students, they are likely to produce the same result.

Recommendations

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

1. Data Processing teachers should use more of brainstorming in teaching the subject so as to enable male and female senior secondary school students to actively participate in classroom instructional processes to enhance their creativity.
2. Gender differences should not be introduced in brainstorming classrooms in order to enhance students' creativity in data processing. Data Processing teachers in secondary schools should not bring into the instructional process, learning experiences and resources that could encourage gender bias.

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FINANCIAL-RELATED FACTORS IN ADOPTION OF COMPUTERIZED ACCOUNTING SYSTEM FOR IMPROVED PERFORMANCE OF SMALL AND MEDIUM SCALE ENTERPRISES (SMEs) IN ANAMBRA STATE

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Abstract

This study assessed the financial-related factors that influence the adoption of computerized accounting system (CAS) for improved performance of small and medium scale enterprises (SMEs) in Anambra State. Two research questions and two null hypotheses guided the study. The study adopted survey research design, and 5,396 (3,137 managers and 2,259 accounting officers) of SMEs in Anambra State were used as the population of the study. The sample was 361 managers and accounting officers of SMEs. Structured and validated questionnaire containing 10 items on a five-point Likert scale was used for data collection. The reliability of the instrument was established using Cronbach Alpha formula which yielded alpha values of .88 and .78. Mean and t-test were used to analyze the data. Findings of the study showed that managers and accounting officers agreed that fund accessibility and fund management factors influenced the adoption of CAS for improved performance. It was also found that the mean ratings of managers and accounting officers do not differ regarding influence of fund accessibility and fund management factors on the adoption of CAS for improved performance of SMEs. Based on the findings of the study, the researchers conclude that fund accessibility and fund management factors influence the adoption of CAS for improved performance of SMEs. It was recommended among others that; government and financial institutions in Nigeria should ensure that loans and credit facilities provided to SMEs are easily accessible.

Keywords. Financial Factors, CAS, SMEs, Performance.

Introduction

No nation can survive without Small and Medium Enterprises (SMEs). This is why the Nigerian government encouragement the establishment and growth of SMEs in the country. SMEs are defined as business sectors involved in production, trading, and services with not more than 200 employees for medium-sized businesses, and not more than 50 employees for small-size businesses (Chuthamas, Aminue, Thiyada and Dayang, 2016). An SME is defined based on the value of assets or the number of full-time employees. In line with this, Ohachosim, Onwuchekwa and Ifeanyi (2012) defined SMEs as those enterprises with a total capital involvement not less than ₦1.5m, but not exceeding ₦200m with staff strength of not less than 10 and not more than 300 employees. SMEs are typically owned and run by people with the titles of business owners, entrepreneurs, or operators. In Nigeria, SMEs play tremendous roles in employment generation, provision of goods and services, improving the standard of living, and contributing to the gross domestic products (GDP) of the country (Paul, 2016). As such, proper accounting systems should be maintained in SMEs for effective operation.

An accounting system is the understanding of organizational setting, the flow of authority and responsibilities at different levels of management and adherence to standard accounting practices

to ensure the “going concern principle” and the profitability of the enterprise (Nkwor-Azariah and Nkwor, 2015). SMEs in Nigeria as noted by Obamuyi and Ohachosim (2018) rely heavily on the Traditional Accounting Systems (TASs) where they only accept cash discounts when it is available. TASs do not easily provide information on inventory turnover, reorder points, ordering cost, or carrying costs. They rely on calculators and book ledgers, and leaves room for errors to be inserted into the information. The risk of damage to the records by water, fire and other risks according to Amanamah, Morrison and Asiedu (2016) constrain effective performance of SMEs. As a result, Computerized Accounting Systems (CASs) were developed and introduced into SMEs to improve performance.

The Computerized Accounting Systems (CAS) is a method or scheme by which financial information on business transactions is recorded, organized, summarized, analyzed, interpreted, and communicated to stakeholders through the use of computers and computer-based systems such as accounting packages (Marivic, 2013). It is a mechanized process of facilitating financial information inflows as well as the automation of accounting tasks such as database recording and report generation. CAS has revolutionized accounting practice, and significantly improved the performance of SMEs in developing countries by instilling controls in SMEs (Negalign, 2020). CAS creates access to debt financing as well as aids SMEs to create financial plans (Terungwa, 2012).

In Nigeria and Anambra State in particular, the adoption of CAS is at a transitional stage (Nkwor-Azarich and Nkwor, 2015). Most of the accounting systems in SMEs in Nigeria are not fully computerized, and at the same time, they are not purely traditional. Personal observation of the researcher indicated that some SMEs in Anambra State have computers for processing accounting tasks and at the same time rely much on hard copies of accounting records. This indicates that there could be factors influencing the adoption of CAS among SMEs in Anambra State including financial-related factors such as fund accessibility, fund management, high-quality accounting information, and investment in current and fixed assets, among others (Ohachosim, Onwuchekwa and Ifeanyi, 2012; Yusuf (2012).

Fund accessibility refers to the convenience with which SMEs obtain financial services including credits, deposits, payment, insurance, and other risk management services (Demirgüç-Kunt, Beck and Honohan, 2013). Fund accessibility for SMEs is vital for adequate funding through short and long-term loans. SMEs can survive and grow quickly through rapid response adjustments in good and bad economic times if they have access to funds (Isamail, 2014). However, the paucity of funds represents a critical challenge for SMEs and could prevent them from implementing CAS in their firm. SMEs in Nigeria inclusive lack access to finance for the initial set up of production line, expansion, and working capital. This is partly traceable to the poor saving habit in Nigeria due to low per capita income where the majorities of the population live below the poverty line and spend most of their income on basic food items (IMF, 2019). The IMF reported that 54 percent of the Nigerian population live on less than 1 dollar per day. The high poverty level makes savings difficult and translates to the non-availability of investment funds to prospective investors including SMEs.

In like manner, fund management is very crucial. Fund management involves the activity or job of managing an amount of money or cash inflow into a business. Fund management involves issues like budgeting allocation; fund disbursement; financial auditing; financial record keeping as well as fund utilization. Each of these sub-factors has a very significant role to play in the adoption of the computerized accounting system SMEs. According to Gholami (2018), many SMEs in Nigeria failed because owners overdrew more money than the profit they made. Anyanwu (2013) noted that

prudent fund management will help SMEs to turn the economy around for good quality accounting information.

In Nigeria, SMEs in Nigeria and Anambra State are underperforming. This, according to Yusoff (2016), is due to the slow/non-adoption of CAS in their day-to-day operations. In view of this, there is urgent need to assess influencing factors to adoption of CAS by SMEs. Assessment is the systematic collection of information from individuals to make informed judgments about how to improve quality of judgment (Ikechukwu, 2021). It is the methodical process of collecting and examining data in order to generate judgments regarding financial-related factors that influence the adoption of CAS for enhanced SMEs' performance. Moreover, managers' and accountants' perspectives on the financial-related factors influencing SMEs' adoption of CAS may differ. In contrast to managers, who might not have the requisite CAS knowledge and skills, the accountants who are employed by SMEs to carry out accounting tasks may possess the electronic accounting skills, as a result, managers and accounting officers may feel that majority of these factors do not influence the adoption of CAS by SMEs. Additionally, accountants may have been taught during their school course programmes on how to employ various digital accounting technologies, as well as attend regular in-service digital accounting skills trainings to keep their electronic accounting abilities up to date. This may not be the case for SMEs' managers whose training programmes may concentrate explicitly on the managerial and administrative skills required for effective supervision. Therefore, this study assessed financial-related factors influencing the adoption of CAS for improved performance of SMEs in Anambra State.

Statement of the Problem

All over the world, SMEs are regarded as catalysts for economic growth and development. SMEs play tremendous roles in employment generation, provide goods and services, improve the standard of living, and enormously contribute to the gross domestic products (GDP). Given these roles of SMEs, there is need to ensure their survival by utilizing a Computerized Accounting System (CAS). Although, CAS is germane to the growth and development of business in developed countries, however, SMEs in Nigeria and Anambra State, in particular, seems to be slow in adopting CAS as most of them depend heavily on the Traditional Accounting Systems (TASs).

Several factors could be implicated for low adoption of CAS by SMEs, including; inadequate/lack of digital accounting skills of managers and accountants, poor technical knowhow, unavailability of digital accounting technologies, and reluctance of SMEs in embracing digitalization in their operations. However, financial-related factors could also be influencing factors on the adoption of CAS by SMEs in Nigeria, especially Anambra State. The assumption is that as a result of these factors, SMEs in Anambra State are not performing as expected. However, this assumption has not been empirically ascertained due to paucity of studies in this topic in Anambra State. This study, therefore, specifically ventured to assess the (1) fund accessibility factors that influence the adoption of CAS for improved performance of SMEs in Anambra State, and (2) fund management factors that influence the adoption of CAS for improved performance of SMEs in Anambra State.

Research Questions

The following research questions guided this study.

1. What are the fund accessibility factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State?
2. What are the fund management factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State?

Research Hypotheses

The following corresponding hypotheses were also tested at .05 level of significant

1. There is no significant difference in the mean ratings of managers and accounting officers on fund accessibility factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State.
2. Managers and Accounting officers do not differ significantly in the mean ratings on fund management factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State.

Methods

This study adopted the descriptive survey research design. It was carried out in Anambra State in South-east Nigeria. The population of the study comprised 5,396 (3,137 managers and 2,259 accounting officers) of SMEs registered with Ministry of Commerce and Industry Anambra State as at June 28th, 2022. The sample size of 361 (216 managers and 145 accounting officers) of SMEs was drawn using Krejcie and Morgan (1970) table for determining sample size. A-10 item self-developed questionnaire titled “Financial and Technical Factors Influencing Adoption of Computerized Accounting System for Improved Performance (FTFI-ACASIP)” and face validated by three experts in the field of Business Education and Measurement and Evaluation Unit was used for data collection. The instrument was structured on a five-point Likert scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD).

The reliability of the instrument was ascertained through pilot-testing and scores obtained were subjected to Cronbach Alpha formula which yielded reliability coefficient values of .88 and .78 for cluster B1 and B2 respectively with an overall reliability of .83. The researcher personally administered copies of the questionnaire to the respondents in their offices with the help of three research assistants adequately briefed on the modalities for administration and collection of copies of the questionnaire. Out of 361 copies of questionnaire administered, 352(98%) copies were correctly filled and returned which was used for data analysis. Data collected were analyzed using mean scores, standard deviation and t-test. A null hypothesis was accepted where the p-value is greater than the level of significance ($p > 0.05$) and rejected when the p-value is less than or equal to the level of significance ($p < 0.05$). All analysis was carried out with Statistical Package for Social Science (SPSS) version 23.

Results

The results are presented as follows.

Table 1.

Mean and Standard Deviation on Fund Accessibility Factors that Influence Adoption of CAS

S/N	Items on Fund Accessibility	X	SD	Remarks
1	Financial subsidy by the Government	4.83	.91	Strongly Agree
2	High interest rate by financial institutions	3.83	.79	Agree
3	Provision of grants by clubs	2.97	.89	Undecided
4	Provision of grants by financial institutions	3.87	.82	Agree
5	High personal income	3.73	.69	Agree
6	Provision of loan by financial institutions	4.50	.64	Strongly Agree

Cluster Mean	3.96	Agree
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Data in Table 1 reveal that out of 6 fund accessibility listed, respondents strongly agree that items 1 and 6 influence the adoption of CAS for improved SMEs performance with mean scores of 4.50 and 4.83. Items 2, 4 and 5 are rated agree with mean scores ranging from 3.73 to 3.83 while the respondents are undecided in item 3 with mean score of 2.97. The cluster mean score of 3.96 shows that on the whole, managers and accounting officers agree that fund accessibility are factors that influence the adoption of CAS for improved performance of SMEs in Anambra State. Standard deviations for all the items are within the same range showing that the respondents are not wide apart in their ratings.

Table 2.

Mean and Standard Deviation on Fund Management Factors that Influence Adoption of CAS

S/N	Items on Fund Management	X	SD	Remarks
7	Budgetary allocation by the company manager	4.52	.90	Strongly Agree
8	Fund disbursement and utilization by the company	3.90	.98	Agree
9	Financial record keeping in the company	4.43	.70	Agree
10	Financial auditing	3.87	.57	Agree
Cluster Mean		4.18		Agree

Data in Table 2 show that out of 4 fund management listed, respondents rated item 7 strongly agree with mean score of 4.52 while the remaining three items (items 8, 9 and 10) are rated agree with mean scores ranging from 3.80 to 4.43. The cluster mean score of 4.18 indicates that on the whole, managers and accounting officers agree that fund management are factors that influence the adoption of CAS for improved performance of SMEs in Anambra State. Standard deviations for all the items are within the same range showing that the respondents are not wide apart in their ratings.

Table 3

The t-test analysis of the mean ratings of managers and accounting officers on fund accessibility factors that influence the adoption of CAS

Position	N	\bar{x}	SD	Df	t-value	P-value	Decision
Accounting Officers	140	44.77	3.77	350	.80	.43	Not Significant
Managers	212	44.52	3.96				

Table 3 shows that t - value of .80 at 350 degrees of freedom with p-value of .43 is greater than the significant value of .05 (P-value = .43 > .05). The null hypothesis is therefore accepted. This means that there is no significant difference in the mean ratings of managers and accounting officers on fund accessibility factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State.

Table 4

The t-test analysis of in the mean ratings of managers and accounting officers on fund management factors that influence the adoption of CAS for improved performance of SMEs

Position	N	\bar{x}	SD	df	t-value	P-value	Decision
Accounting Officers	140	46.08	3.60	350	1.09	.29	Not Significant
Managers	212	45.06	3.49				

Table 4 shows that t - value of 1.09 at 350 degrees of freedom with p-value of .29 is greater than the significant value of .05 (P-value = .29 > .05). The null hypothesis is therefore accepted. This means that managers and accounting officers do not differ significantly in the mean ratings on fund management factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State.

Discussion of Findings

Findings of the study indicated that managers and accounting officers agree that fund accessibility are factors that influence the adoption of CAS for improved performance of SMEs in Anambra State. This finding underscores the importance of funds accessibility to the adoption of new innovations such as CAS by SMEs. Since adoption of CAS by SMEs requires enough investment in acquisition of ICT facilities such as computers, scanners, printers, accounting software, and generators/solar energies which are quite cost intensive. The funds accessibility potential of SMEs can make the procurement of digital accounting technologies possible which will in turn influence the adoption of CAS for improved performance. In most cases, SMEs may not have the required collateral to access financial credits from the financial institutions which could affect the procurement of accounting technologies as well as adoption of CAS. This could be the reason while some SMEs in Nigeria prefer adopting traditional accounting method in carrying out their accounting operations. In agreement, Mabula and Ping (2018) asserted that the adoption of accounting systems by SMEs is hampered by lack of access to financial credits to purchase digital accounting hardware and applications. Similarly, Ndekwa (2015) earlier reported that SMEs are slow to adopt CAS due to the fact that most digital accounting technologies available on the market are beyond the reach of many SMEs who lack access to financial services.

Findings of the study also disclosed that there was no significant difference in the mean ratings of managers and accounting officers on fund accessibility factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State. This implies that both managers and accounting officer of SMEs in the area of the study recognize that fund accessibility plays an important role in the adoption of CAS to improve performance. In support, Amanamah et al. (2016) noted that managers and accountants viewed fund accessibility as one of the influencing factors to the adoption of CAS by SMEs in Nigeria.

Findings of the study revealed that managers and accounting officers agree that fund management are factors that influence the adoption of CAS for improved performance of SMEs in Anambra State. The findings specifically showed that managers and accounting officers strongly agree that budgetary allocation by the company manager influence their adoption of CAS while they agree that fund disbursement and utilization by the company, financial record keeping in the company, and financial auditing influence the adoption of CAS for improved performance of SMEs. The

findings of the study showed that good funds management is imperative to the adoption of CAS. This is because, when the fund management in SMEs is inadequate, it will be difficult for the business to attract additional funds for increased working capital, diversification, and procurement of new accounting technologies needed to effectively transition to CAS to improve the performance of SMEs. In support of this view point, Ikem, Onwuchekwa and Titus (2021) reported that good funds management influenced the adoption of CAS for improved performance of SMEs. Rogers (2016) noted that the *managers' ability* to manage funds influence the adoption of CAS in *SMEs*. In the same vein, Sapkota (2022) found that *fund management* is an important factor that influences the adoption of CAS by SMEs owners to improve financial performance.

Findings of the study also disclosed that managers and accounting officers did not differ significantly in the mean ratings on fund management factors that influence the adoption of computerized accounting system for improved performance of SMEs in Anambra State. In other words, both managers and accounting officers agree that fund management influence the adoption of CAS for improved performance of SMEs. It could be that both managers and accounting officers in SMEs covered are knowledgeable about fund management and are adopting different fund management styles. Thus, knowledge is important to the adoption of new innovations especially CAS in an organization. Munasinghe and Munasinghe (2015) in agreement revealed that there was no significance influence from demographic variables on adoption of CASs in SMEs.

Conclusion

The Computerized Accounting System (CAS) is a new innovation in accounting field that plays an important role in helping SMEs to provide timely information management, large data storage capacity, and enhanced customer satisfaction. Undoubtedly, the adoption of CAS is influenced by a number of inherent factors which the present study sought to ascertain. Based on the findings of this study, the researchers conclude that fund accessibility and fund management factors influence the adoption of CAS for improved performance of SMEs.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Governments and financial institutions should ensure that loans and credit facilities provided to SMEs in Nigeria can be easily accessed by these organizations. This will enable the SMEs to procure accounting hardware and software needed to adopt CAS for improved performance of SMEs.
2. Managers of SMEs in Nigeria should ensure that funds accrued to the organization are judiciously managed. This will enable SMEs managers to effectively fund the cost of purchase and installation of accounting tools needed for the adoption of CAS in SMEs.

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**UTILIZATION OF AUTHENTIC ASSESSMENT STRATEGIES IN
BUSINESS EDUCATION PROGRAMME FOR ACADEMIC
IMPROVEMENT IN COLLEGES OF EDUCATION IN SOUTH-EAST
NIGERIA**

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Abstract

This study ascertained the extent authentic assessment strategies are utilized for academic improvement in business education programme in colleges of education 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 158 business educators in the seven public colleges of education in South-East, Nigeria. The entire population was studied without sampling because the size was not too large. The instrument for data collection was a 22-item structured questionnaire. The instrument was validated by three experts. Cronbach's alpha was used to determine the internal consistency of the items, which yielded alpha values of 0.91 and 0.90. Mean and standard deviation were used to answer the research questions, while t-test was used to test the null hypotheses at 0.05 alpha levels. The findings of the study revealed that colleges of education business educators lowly utilized portfolios and moderately utilized projects assessment strategies for academic improvement in South-East Nigeria. Colleges of education. It was found that business educators' years of teaching experience significantly influence the extent of utilization of portfolios and projects assessment strategies for academic improvement. It was recommended among others that business education lecturers in colleges of education should endeavor to provide regular feedback to their students as regards their achievements in various authentic assessment procedures.

Keywords. Colleges of Education, Business Education Programme, Authentic Assessment Strategies, Academic Improvement.

Introduction

College of Education system is one of the tripods of tertiary education in Nigeria. Colleges of education appear to be the bedrock of teacher training institution in Nigeria. It has the primary role of training teachers who will be awarded the minimum teaching qualification of Nigerian Certificate of Education (NCE) (FRN, 2014). Onyesom and Okolocha (2013) noted that colleges of education provide exposure and learning for prospective teachers at the level of the Nigeria Certificate of Education (NCE) in instructional methodology/pedagogy, theories of instruction and curriculum. One of the teacher's educational programme offered in the colleges of education is business education.

Business education is a programme that exposes students to the fundamentals of business practices. It is a skill-based programme that trains students for office careers or occupations and for entrepreneurship, as distributors of goods and services, or as users of information (Okolocha and Nwadiani, 2015). It equips students with the requisite knowledge and skills to find jobs after graduation across territorial boundaries or to become self-employed (Ogben and Amahi, 2018). The

National Commission for Colleges of Education in Okolocha and Nwadiani (2015) highlighted the following as the objectives of business education programme in colleges of education include: to produce well-qualified and competent NCE graduates in business subjects who will be able to teach business subjects in our secondary schools and other related educational institutions, to produce NCE business teachers who will be able to inculcate the vocational aspects of business education into the society; to produce NCE business teachers who will be involved in the much desired revolution of vocational development right from the primary and secondary schools, to equip students with necessary competencies so as to qualify them for a post-NCE degree programme in business education, and to equip graduates with the right skills that will enable them to engage in a life of work in the office as well as for self-employment. Meanwhile, the acquisition of these skills are often measured via assessment in the programme.

Assessment is the systematic collection, review and use of data about educational programmes to improve students' learning. Assessment thus, focuses on what students know, what they are able to do, and what values they have when they graduate from school. It is concerned with the collective impact of a programme on students' learning. Assessment can be defined as an ongoing process including a lot of techniques such as making an oral judgment of a student's response or writing down a phrase to comment on a student's essay (Al-Zoubi, 2019). Thus, the assessment of student learning is one of the most important stages of the learning process and it is related to educational development which many educational systems seek. It also brings to mind marks, marking and certification (Macpherson and Diseph, 2020). This form of assessment is the traditional modes of assessment. Traditional assessments focusing on the written or oral examination of knowledge can be effective in assessing the student's ability to memorize and redefine the knowledge-based components of the task. However, they are insufficient to measure learning and skills unless traditional assessments are integrated with performance-based assessments, such as authentic assessment, to reflect the achievement of expected standards. In the constructivist learning approach, assessment is part of the teaching process and is carried out not only in the beginning and in the end of learning but also throughout the learning process. Because the constructivist approach focuses on the process, it requires more and various measurement tools or methods than the traditional approach.

Traditional examinations cannot capture the actual changes in students' knowledge. On the contrary, assessment methods that emphasize the learning process and encourage students to participate in meta-cognitive and reflective activities are compatible with the constructivist perspective. Ohaka and Nnokam (2018) lamented that traditional assessment has led to educational institutions churning out graduates who are highly unemployable. The inadequacies of traditional assessment calls for a shift in paradigm to make assessment of teacher trainees in business education not only more inclusive but also democratic and learner-centered. Thus, the question of authentic assessment is central to the understanding of the competencies of students undertaking business education programmes.

Authentic assessment or performance assessment represents such an alternative assessment methodology. Authentic assessment refers to the idea of using creative learning experiences to test students' skills and knowledge in realistic situations. Authentic assessment is a form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills (Mueller, 2018). Assessment is authentic when we directly examine student performance on worthy intellectual tasks. (Ozan and Kincal, 2018) opined that authentic tasks not only assess students' authentic performances or studies, but also evaluate their ability such as

persistence in solving complex problems, positive habits of mind, growth mindset, resilience and grit, and self-directed learning. The use of analytical or holistic rubrics, which is an important component of authentic assessment, provides criteria and standards for descriptive feedback, self- and peer assessment. It is important that students receive timely and formative feedback from teachers and/or peers to improve their performance and work (Koh, 2016). The assessment is based on authentic learning tasks instead of examinations only, and focuses on the learning process as much as (or more) the final outputs (Ozan, 2019). In this manner, Al-Zoubi (2019) pointed out that the quality of the assessment should be measured according to the students' real abilities. Al-Zoubi also stated that the real assessment objective was about achieving learning and not limited to assessing learning. Students must be included in the assessment process in order to obtain the true meaning of authentic assessment.

Consequently, authentic assessment is the actual assessment of students' performance to decide whether the students can apply what they have learned in real-life situations or not as well as having the ability to be creative and enabling the students to deal with rapid changes in the learning process. The educational assessment in its new trend includes strategies of alternative assessment based on the scientific, methodological basis, and on the authenticity of what the students have learned, in a way that ensures the quality of the educational process and its outputs in terms of the learner's reach for learning purposes and outcomes (Ukashatu, Muhammad and Mahmoud, 2021). The goal of authentic assessments is to evaluate a student's ability to demonstrate understanding of core learning objectives in a real-world context (Ozan and Kincal, 2018). Unlike traditional assessments, authentic assessment does not seek to measure rote learning and then require students to recall and restate the information.

Undoubtedly, the use of authentic assessment strategies can help in producing well-grounded and competent business education graduates capable of propagating the goals of business education especially at the colleges of education level. Authentic assessment strategies refer to measures students' success in a way that's relevant to the skills required of them once they have finished their course or degree programme. Authentic assessment strategies can be done in both formative and summative ways to assess business education trainees in a more holistic manner. This paradigm shift from the "One-off" assessment to multiple assessment strategies could make the more teaching and learning authentic, fairer, humane, democratic and inclusive. Kankam, Bordoh, Eshun, Bassaw and Korang (2014) noted authentic assessment strategies to include portfolios, open questions, exhibits, demonstrations, hands-on execution of experiments, self-assessment and computer simulations. Others includes performance, projects, anecdotal records, peer review, group evaluation, concept map, self-assessment, peer assessment and observation (Tay-Koay and June, 2017). The most two common authentic assessment strategies are used in this study which is portfolios and projects assessment. These are discussed below.

Portfolio assessment is a collection of a student's work, which provides a representation of their achievements. Portfolio assessment includes evidence of the student's work, which the student has compiled, for evaluation or assessment. The portfolio collection tells a story about the student's progress over time, or about the students' achievements in one or more learning areas (Stanley and Sri, 2014). Portfolio assessment is a practical approach that assembles students work, interpreting evidence of the students' performance and assessing students' performance relative to instructional objectives. Portfolio assessment is designed in order to present students' performance and development in any time period in detail. Bello (2017) reported that both lecturers and students did not understand the concept of portfolio assessment which comprises rubric, guidelines; self-reflection

and portfolio model sheets. Ugodulunwa and Wakjissa (2015) who revealed that a significant mean difference existed between the extent of utilization of portfolios assessment strategies which resulted to the great impact based on years of teaching experience.

Projects assessment in a teacher training programme is a student teacher's own initiative and activity designed to give the student a practical training in specific skills in any project that relates to teaching and learning. The teacher trainee can be guided to undertake a learning project without regards to the course contents on how to deal with a disruptive learner in class (Macpherson and Diseph, 2020). The teacher trainee could also undertake a project on how to utilize a particular instructional strategy or facilities in instructional delivery. Project assessment involve the assessment which monitors individual students' progress toward achieving their goals, give feedback and involve students in the learning process in order to achieve the objectives of a programme in the educational institutions. Project assessment is useful to the teachers and students as it encourage skill development lessons in order to determine the way forward. Ohaka and Nnokam (2018) stated that there are changes in administrative policies, change of educational policy, organism in teaching strategy, student-teacher-class-ratio, teacher effective communication skills and availability of teaching aids are the trends in the educational process that have influenced the academic performance of students in business education programme. The above mentioned authentic assessment strategies are not only seen to be appropriate, but in line with the thrust of the study.

The influencing factors in the context of extent of utilisation of authentic assessment strategies in business education programme in colleges of education could be years of teaching experience. Years of teaching experience in the context of this study refers to the number of years of professional practice of business teacher educators. Ezenwafor, Aduhuekwe and Akamobi (2021) reported that respondents did not differ significantly in their mean ratings on the extent of utilisation of authentic assessment strategies in business education in colleges of education, irrespective of their years of teaching experience. Business education, being skill-oriented, needs to be taught using authentic assessment strategies that will require teachers and learners involvement in the assessment process in order to obtain the true meaning of authentic assessment. The variable may influence their views on the extent of utilisation of authentic assessment strategies in business education programme in colleges of education in teaching business education courses. For instance, Ezenwafor and Akpobome (2017) reported that teachers' years of experiences are significantly related to their teaching effectiveness. This implies that teachers' competence is affected by the number of years spent in the profession. It is obvious that the success of colleges of education in South-East Nigeria in producing business education graduates with requisite knowledge, skills and competencies to effectively propagate the objectives of business education programme depends on the effective utilization of authentic assessment strategies by the lecturers. It is against this background; the study seeks to determine the extent authentic assessment strategies are utilize for academic improvement in business education programme in colleges of education in South-East Nigeria.

Statement of the Problem

Business education programme at the colleges of education is aimed at producing well-qualified and competent NCE graduates in business subjects who will be able to teach business subjects in our secondary schools and other related educational institutions. To effectively ascertain the extent to which the objective of the programme is being achieved in the colleges of education requires holistic assessment of students' learning. One of the challenges facing business teacher education programme seem to be the insufficient use of authentic assessment strategies by business

educators. Therefore, if this ugly situation is not corrected, business teacher education programme could be churning out graduates who will be highly unemployable.

Thus, the implication of this is that authentic assessment strategies now place different demands on education in general and business education in particular. Therefore, the concern on how business education curriculum is delivered in Nigerian colleges of education in contemporary times becomes important if our educational system is to be relevant to serve the societal needs in the present learned-centred instructions. This can be done by adequately applying authentic assessment strategies in teaching and learning situation to improve and enhance business education students learning, academic proficiency, effectiveness and efficiency in the modern day world of work. The challenges for the educators in the colleges of education is no longer centred on covering the course content or adopting appropriate teaching or pedagogical aids but on extent they applied authentic assessment strategies in their teaching and learning. There is therefore the need for the business educators to be up-to-date in their knowledge and skills especially in the use of authentic assessment strategies in teaching and learning situations. The problem of this study is that, the extent authentic assessment strategies are utilized for academic improvement in business education programme in colleges of education in South-East Nigeria is not clearly known. If the status is not determined through an empirical study such as this, relevant stakeholders may not take objective measures to ensure that the graduates are empowered to effectively propagate the objectives of business education programme in the society upon graduation.

Purpose of the Study

The main purpose of this study was to ascertain the extent authentic assessment strategies are utilize for academic improvement in business education programme in colleges of education in South-East Nigeria. Specifically, the study sought to determine the extent:

1. portfolios assessment strategies are utilized for academic improvement in business education programme in colleges of education in South-East Nigeria.
2. projects assessment strategies for academic improvement in business education programme in colleges of education in South-East Nigeria.

Research Questions

The following research questions guides the study:

1. To what extent is portfolios assessment strategies utilized for academic improvement in business education programme in colleges of education in South-East Nigeria?
2. To what extent is projects assessment strategies utilized for academic improvement in business education programme in colleges of education in South-East Nigeria?

Hypotheses

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

1. There is no significant difference in the mean ratings of colleges of education business educators on the extent of utilization of portfolios assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience.
2. There is no significant difference in the mean ratings of colleges of education business educators on the extent of utilization of projects assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience.

Method

The study adopted descriptive survey design. The population of the study comprised 158 business educators in the seven public colleges of education in South-East, Nigeria that offered business education programme. No sample size and technique was taken. Data were collected using a 22-items structured questionnaire. The structured questionnaire was validated by three experts-two in business education and one in measurement and evaluation all from Nnamdi Azikiwe University, Awka. To establish the internal consistency of the instrument, a trial-tested was conducted. Data collected in the trial-tested were analyzed using Cronbach Alpha to determine the internal consistency. Reliability coefficients values of 0.91 and 0.90 for clusters B1 and B2 respectively with an overall coefficient value of 0.91. Out of the 158 copies of the questionnaire distributed to the respondents in their organizations through direct approach which facilitated a response rate, 153 copies (representing 97 percent) with an attrition rate of five copies (representing 3 percent) and used for data analysis.

Data collected regarding the research questions were analyzed using mean and standard deviation while, Analysis of Variance was used to test the null hypotheses at 0.05 level of significance. In order to determine the extent authentic assessment strategies are utilize for academic improvement in business education programme in colleges of education 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 Utilised, items with mean ratings of 3.50-4.49 were considered as Highly Utilised; items with mean ratings of 2.50-3.49 were considered as moderately Utilised. Furthermore, items with mean ratings of 1.50-2.49 and 1.00-1.49 were considered as lowly Utilised and not Utilised respectively. In testing the null hypotheses, a null hypothesis was rejected where the calculated p-value is less than the 0.05 level of significance. Conversely, where the calculated p-value was greater than or equal to the level of significance (0.05), it meant that there was no significant difference and the null hypothesis is not rejected.

Results

Research Question 1. To what extent is portfolios assessment strategies utilized for academic improvement in business education programme in colleges of education in South-East Nigeria?

Table 1

Mean ratings on the extent of utilization of portfolios assessment strategies for academic improvement in business education programme in colleges of education in South-East Nigeria

SN	Portfolio Assessment Strategies	Mean	SD	Remarks
1	Encouraging business education students to develop abilities needed to become independent/ self-directed learners	2.30	0.65	Lowly Utilized
2	Encouraging business education students to think of creative ways to share what they are learning	1.52	0.74	Lowly Utilized
3	Providing visual and dynamic proofs about business education students' interests	1.70	0.69	Lowly Utilized
4	Providing business education teachers with new perspectives in education	2.69	0.49	Lowly Utilized
5	Providing a summary of business education students' failures on certain tasks	2.44	0.55	Lowly Utilized
6	Providing opportunity for business education	2.34	0.68	Lowly Utilized

7	students to demonstrate their strengths weaknesses Reinforcing idea that the curriculum is the center of the educational process	3.20	0.45	Moderately Utilized
8	Providing multiple ways of assessing business education students' learning over time	2.50	0.52	Moderately Utilized
9	Providing more realistic evaluation of business education academic content than pencil-and paper tests	2.38	0.62	Lowly Utilized
10	Allowing business education students, parent, teacher and staff to evaluate the students' strength and weakness	2.46	0.54	Lowly Utilized
	Cluster Mean	2.35		Lowly Utilized

Data in Table 1 shows the cluster mean score of 2.35 which indicate that portfolios assessment strategies are lowly utilized for academic improvement in business education programme in colleges of education in South-East Nigeria. The analysis of the items further indicates that three items out of the ten listed items were moderately utilized. The mean rating for the three items ranging from 2.50 to 3.20 while the remaining seven items were lowly utilized with mean ratings ranging from 1.52 to 2.46. The standard deviation of 0.45 to 0.74 showed that respondents are not wide apart in their mean ratings which indicate homogeneity.

Research Question 2. To what extent is projects assessment strategies utilized for academic improvement in business education programme in colleges of education in South-East Nigeria?

Table 2.

Mean ratings on the extent of utilization of projects assessment strategies

SN	Portfolio Assessment Strategies	Mean	SD	Remarks
1	Monitoring business education students' progress	2.60	0.51	Moderately Utilized
2	Giving feedback to business education students	2.50	0.54	Moderately Utilized
3	Involving business education students in learning processes	2.70	0.42	Moderately Utilized
4	Improving the performance of business education programme	2.69	0.43	Moderately Utilized
5	Identifying business education students' learning needs	2.44	0.56	Lowly Utilized
6	Providing for external validity of business education programme	2.64	0.49	Moderately Utilized
7	Assessing multiple perspectives in business education programme	2.20	0.63	
8	Using student-centered design to promote business education students' motivation	2.50	0.54	Moderately Utilized
9	Engaging business education students in active learning	2.66	0.45	Moderately Utilized
10	Responding to business education students' learning	2.56	0.53	Moderately Utilized

	needs			
11	Promoting business education students' creativity	2.50	0.54	Moderately Utilized
12	Providing reference group measures to business education programme	2.41	0.58	Lowly Utilized
	Cluster Mean	2.53		Moderately Utilized

Data in Table 2 shows the cluster mean score of 2.53 which indicate that projects assessment strategies are moderately utilized for academic improvement in business education programme in colleges of education in South-East Nigeria. The analysis of the items further indicates that nine items out of the 12 listed items were moderately utilized. The mean rating for the nine items ranging from 2.50 to 2.70, while the remaining three items were lowly utilized with mean ratings ranging from 2.20 to 2.44. The standard deviation of 0.42 to 0.63 showed that respondents are not wide apart in their mean ratings which indicate homogeneity.

Hypothesis 1. There is no significant difference in the mean ratings of colleges of education business educators on the extent of utilization of portfolios assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience.

Table 3.

The t-test analysis on the extent of utilization of portfolios assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience

Years of Teaching Experience	N	Mean	SD	df	t-cal	p-value	Decision
Below 10 Years	51	3.19	0.12	151	2.425	.002	Significant
10 Years and above	102	3.12	0.13				

Table 3 shows that colleges of education business educators differ in their mean ratings on the extent of utilization of portfolios assessment strategies for academic improvement in South-East Nigeria with mean scores of 3.19 and 3.12, while the corresponding standard deviation is .12 and .13. Table 2 indicated t-value of 2.425, at degree of freedom of 151 and the p-value of .002. Testing at alpha level of 0.05, the p-value is significant, since the p-value is less than the alpha value (0.05). This implies that colleges of education business educators significantly differ in their mean ratings on the extent of utilization of portfolios assessment strategies for academic improvement in South-East Nigeria. Therefore, the null hypothesis is rejected.

Hypothesis 2. There is no significant difference in the mean ratings of colleges of education business educators on the extent of utilization of projects assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience.

Table 4.

The t-test analysis on the extent of utilization of project assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience

Years of Teaching Experience	N	Mean	SD	df	t-cal	p-value	Decision
Below 10 Years	51	3.13	0.24	151	3.111	.000	Significant
10 Years and above	102	3.08	0.20				

Table 4 shows that colleges of education business educators differ in their mean ratings on the extent of utilization of project assessment strategies for academic improvement in South-East Nigeria with mean scores of 3.13 and 3.08, while the corresponding standard deviation is .24 and .20. Table 6 indicated t-value of -3.111, at degree of freedom of 151 and the p-value of .000. Testing at alpha level of 0.05, the p-value is significant, since the p-value is less than the alpha value (0.05). This implies that colleges of education business educators significantly differ in their mean ratings on the extent of utilization of project assessment strategies for academic improvement in South-East Nigeria. Therefore, the null hypothesis is rejected.

Discussion of Findings

Findings of the study revealed that colleges of education business educators lowly utilized portfolios assessment strategies for academic improvement in business education programme in South-East Nigeria. This signifies a low utilization on application of portfolios assessment strategies for academic improvement in business education programme which is unremarkable. This indicate that colleges of education business educators in South-East Nigeria do not give adequate attention on student's progress over time, or about the students' achievements in one or more learning areas. This finding is in line with Bello (2017) who revealed that both lecturers and students did not understand the concept of portfolio assessment which comprises rubric, guidelines; self-reflection and portfolio model sheets.

The findings of the study further revealed that there is a significant difference in the mean ratings of colleges of education business educators on the extent of utilization of portfolios assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience. These finding agrees with Ugodulunwa and Wakjissa (2015) who revealed that a significant mean difference existed between the extent of utilization of portfolios assessment strategies which resulted to the great impact based on years of teaching experience. The reason for the similarities in test of hypotheses is because most of the colleges of education business educators who supposed to utilize the portfolios assessment strategies for academic improvement were not doing the needful as required to present students' performance and development in any time period in detail.

Findings of the study revealed that colleges of education business educators moderately utilized projects assessment strategies for academic improvement in business education programme in South-East Nigeria. This signifies a moderate utilization on application of projects assessment strategies for academic improvement in business education programme which is unremarkable. This indicate that colleges of education business educators in South-East Nigeria do not give encouragement on skill development lessons in order to determine the way forward of student's progress. This finding is in line with Ohaka and Nnokam (2018) who stated that there are changes in administrative policies, change of educational policy, organism in teaching strategy, student-teacher-class-ratio, teacher effective communication skills and availability of teaching aids are the trends in the educational process that have influenced the academic performance of students in business education programme.

The findings of the study further revealed that there is a significant difference in the mean ratings of colleges of education business educators on the extent of utilization of projects assessment strategies for academic improvement in South-East Nigeria based on years of teaching experience and their different academic qualification. These finding agrees with Ezenwafor, Aduhuekwe and Akamobi (2021) who reported that respondents did not differ significantly in their mean ratings on the

extent of utilization of authentic assessment strategies in business education in colleges of education, irrespective of their years of teaching experience. The reason for the similarities in test of hypotheses is because most colleges of education business educators do not monitor individual students' progress toward achieving their goals, by giving feedback and involvement of students in the learning process in order to achieve the objectives of a programme in the educational institutions.

Conclusion

Based on the findings of this study, it was concluded that the level of utilization of authentic assessment strategies for academic improvement in business education programme in colleges of education in South-East, Nigeria is not adequate for enabling the lecturers understand students' strengths and weaknesses, effectively plan and evaluate their instructions. This study has also made it clear that only self-assessment assessment is highly utilized in business education programmes in colleges of education in South-East, Nigeria. The study concludes that for assessment to be more inclusive and holistic, colleges of education offering business education programmes need to utilize authentic assessment strategies to its fullest.

Recommendations

- Based on the findings of this study, the following recommendations are made:
1. Business education lecturers in colleges of education should endeavor to provide regular feedback to their students as regards their achievements in various authentic assessment procedures.
 2. Utilizing portfolios, projects, anecdotal records and performance assessment strategies for academic improvement will help in producing well-grounded and competent business education graduates capable of propagating the goals of business education especially at the colleges of education level.

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COMPUTERIZED SIGN OUT AND SIGN BACK ONLINE FORM: A STRATEGY FOR EFFECTIVE PREVENTION OF LOSS OF WORKSHOP TOOLS IN TECHNICAL COLLEGES IN RIVERS STATE

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Abstract

This study on computerized sign out and sign back online form as a strategy for effective prevention of loss of workshop tools in technical colleges in Rivers State was necessitated by the frequent loss of tools in workshops in technical colleges. A research question guided the study and two null hypotheses were tested at 0.05 alpha level. Descriptive survey research design was employed for the study. The population for this study consisted of 120 technical college teachers and workshop attendants (78 Technical Colleges' teachers and 48 workshop attendants) in four technical colleges in Rivers State. The entire population was studied without sampling since the size was not too large and was manageable. The instrument for data collection was a structured questionnaire titled: Computerized Sign Out and Sign Back Online Form as Strategy for Effective Prevention of loss of workshop tools. The instrument was validated by three experts from the Departments of Industrial Technical Education and Educational Foundations in Ignatius Ajuru University of Education, Port Harcourt. Using the Cronbach alpha method to determine the reliability of the instrument, the reliability co-efficient of 0.76 was obtained. The data collected for the study were analyzed using mean and standard deviation to answer the research questions and to determine the closeness of the respondents' mean ratings. The t-test was used to test the null hypotheses at 0.05 alpha level. The findings of study revealed that, the use of computerized sign out and sign back online form will be very effective strategy for prevention of loss tools in workshops in technical colleges. The findings also showed that there was no significant difference in the opinions of teachers and workshop attendants on the use of computerized sign out and sign back online form as effective strategy for prevention of loss tools in workshops in technical colleges. Based on the findings of this study, it was recommended that computerized sign out and sign back online form should be adopted and implement in workshops in technical colleges in Rivers State.

Keywords. Technical colleges, workshop tools, computerized sign-out and sign-back online form, loss of tools.

Introduction

Technical colleges are concerned with production of technicians who are skilled in different fields of human endeavour. The type of technicians produced at technical college level include electronic/electrical technicians, automobile/metalwork technicians, building/woodwork technicians among others. Training of technicians at technical colleges involve imparting both

theoretical and practical knowledge to students under the guidance of the teacher within the school environment. Students in technical colleges are exposed to different skilled areas, through which one can be trained to be self-reliant. The type of education that take place in technical college level is known as vocational and technical education.

Technical colleges according to Akpan (2015) provide technical and vocational education and training to students for different careers and occupations. Vocational and Technical education is an aspect of education that leads to acquisition of practical skills as well as basic scientific knowledge (Abel, 2019). At technical college, vocational and technical education is provided to impart technical/occupational skills in the areas of metalwork, woodwork, automobile, electrical, radio, television and electronic works. In the context of this study, technical colleges are government established educational institutions that prepare individuals to acquire practical skills, basic and scientific knowledge and attitude required by craftsmen and technicians at sub-professional levels. Teachers and students in those skill areas carryout practical works at designated workshops.

A workshop is a building were practical training on skill acquisition is carried out. Denga (2013) states that workshop is a workplace where machining, automobile, electrical/electronics, woodwork, fabrication, foundry, forging or welding operations, construction, maintenance or repairs are carried out. Technical colleges' workshop is a unique learning situation in which the learners may experiment, test, construct, disassemble, repair, design, create, imagine and study (Ezeji, 2014). This explains the fact that technical education and its related workshop practices is a programme whereby students acquire industrial-technical knowledge and skills through creative and problem-solving learning experience involving activities such as experimenting, planning, designing, constructing, evaluating and using tools, machines, materials and processes. Every vocational and technical trade or craft has its own workshop for teachers and students' practical works. The major components of workshops are tools, machine, materials and consumables. Some of these tools and machines operates or are energized through electric power. In the context of this study, workshop is a place where mechanical, electrical, electronics, automobile and woodwork practical, training, repair and maintenance are carried out in technical colleges. The functionality and usability of these workshops largely depends on availability, adequacy and utilization of workshop tools.

Workshop tool is any instrument of operation for performing and assisting the work or facilitating mechanical operations in the workshop (Golden, 2022). According to Yash-Shah (2012), tools play important role everywhere and affect almost every person, in any part of the world. Today tools are utilized for numerous purposes. They help to mechanize various manual tasks and also make the related process simple. It enables one to complete the particular work faster and reduce the manual efforts and thereby increase productivity. Nowadays, various types of workshop tools are manufactured in many countries across the globe. These tool room are commonly used for different purposes in a wide range of industrial segments such as woodworking, automobile, electrical, construction among others. Good quality workshop tools are very important in obtaining high quality output with better accuracy.

Tools are particularly important in workshop practice. They are primarily used to put things together as in the case of hammers and nail guns; or to take things apart as in the case of jackhammers and saws. Tools are often classified as hand tools and power tools. Hand tools include all non-powered tools, such as hammers and pliers. Power tools are divided into classes, depending on the power source: electrical tools (powered by electricity), pneumatic tools

(powered by compressed air), liquid-fuel tools (usually powered by gasoline), powder-actuated tools (usually powered by an explosive and operated like a gun) and hydraulic tools (powered by pressure from a liquid).

Availability of workshop tools is the key to get job done; which is essential for successful acquisition of skills. The availability and adequacy of workshop tools also increases efficiency. When teachers and students do not have the tools they need, it forces them to get creative and use what they have to the best of their ability. This can greatly hurt productivity among students and teachers and institution's bottom line. On the other hand, when the workshops are equipped with tools, teachers and students alike are focused on getting the job done as efficiently as possible rather than on how to get the job done with improvised or wrong tool. These tools appear in various shapes and sizes.

One can classify workshop tools according to Adams (2021) based on their basic functions. They are classified as follows:

1. Cutting and edge tools: this type of tools include knife, sickle, scythe, hatchet, axe, gouges and drill bits.
2. Moving tools: these tools move large and tiny items. Many are levers which give the user a mechanical advantage. Examples of force-concentrating tools include the hammer which moves a nail or the maul which moves a stake. These operate by applying physical compression to a surface. In the case of the screwdriver, the force is rotational and called torque. By contrast, an anvil concentrates force on an object being hammered by preventing it from moving away when struck. Writing implements deliver a fluid to a surface via compression to activate the ink cartridge. Grabbing and twisting nuts and bolts with pliers, a glove, a wrench, etc. likewise move items by applying torque (rotational force).
3. Tools that enact chemical changes, including temperature and ignition, such as lighters and blowtorches.
4. Guiding, measuring and perception tools include the ruler, glasses, square, sensors, straightedge, theodolite, microscope, monitor, clock, phone, printer
5. Shaping tools, such as molds, jigs, trowels.
6. Fastening tools, such as welders, soldering irons, rivet guns, nail guns, or glue guns.
7. Personal protective equipment such as gloves, safety glasses, ear defenders and biohazard suits.
8. hand tools such as wrenches, pliers, cutters, files, striking tools, struck or hammered tools, screwdrivers, vises, clamps, snips, hacksaws, drills, and knives.

In the context of this study, workshops tools are all hand and power tools that required in technical college workshops for teaching, learning and skill acquisition. The availability of those workshop tool according Dan (2015) poses real challenge in most technical colleges due to losses. Consequently, effective strategies need to be developed and implemented to forestall in occurrence. This impresses on the need for the prevention of loss of workshop tools through effective preventive strategies. One of such strategies is the of computerized sign out and sign back online form.

A computerized sign out and sign back form is soft copy document that ensures that tool collected for use in the workplace or workshop is registered and documented in the name and identity of the person collecting it. The information needed during the registration and documentation (sign out) process include time of collection, day, year, type and description of tool, finger print and instant photograph of the collector. The same procedure is repeated during the sign back; which is during the returning or retrieving of the tool. Thereafter the document is saved online for future reference.

According to James (2017), computerized sign out and back online form provide and secures information concerning the movement of tools on daily basis. It helps tools attendants or workshop attendants to ascertain the true position and whereabouts of tools under their custody.

In the opinion of Dan (2015), computerized sign out and sign back online form assist tools and workshop attendants to know the person or persons in possession of tools at any given time and day. The form has a menu where all tools that have returned and the ones that have been returned at the end the day's job will be displayed against the collector's name(s) and photograph. The provision makes it easier to trace missing, lost or stolen tools. The computerized sign out and sign back online form as opined by Okoro (2016) is an online registration of tools on the point of collection and retrieval. It is an online record indicating when someone take something away, usually by signing his or her name.

Computerized Sign out and sign back forms are online web pages or electronic documents designed to capture, validate, and submit data in forms processing. It provide a series of fields where data is collected, often using a Web browser. They take the place of paper forms and are designed to capture, validate, and submit data to a recipient for forms processing in a more efficient manner. E-forms allow data to be captured electronically which can speed back-end processing of form-based information. Data can also be exchanged with back-end systems.

The functions of Sign out and sign back online form according to Natah (2017) include the following:

1. Typically, with web-based forms, users are directed to a URL from an email or a portal hyperlink. They navigate through the form, complete the necessary information fields, and submit the form for processing.
2. The form submission process then transfers all the data associated with that submission to the form server including all completed form field values, file attachments, and identifier information on who completed the form.
3. Once received, the form server initiates downstream processing. This may include any number of actions, for instance review and approval processes that are dynamically calculated based on data contained on the form or data about the form submitter like their manager or geographic region. Other actions can be triggered as well, such as scheduling an appointment for a customer, or processing a sales order.
4. After an approval process, it is not uncommon for form data to be written to an additional system such as a CRM system (for vendor or customer information changes), or maybe the HR system (if an employee changed a job position). In addition, a printable PDF version of the form can be saved as a transaction receipt.
5. The entire transaction, receipt, plus any submitted form attachments may be considered "Records". The type of form and the data populated on the form can lead to an electronic record policy being applied to start the record policy actions.
6. Finally, all of the information captured through the form can be leveraged by business intelligence reports to provide management feedback on the effectiveness of the form, along with capturing metrics from the data submitted to understand overall trends of the data collected.

With document management software and e-Forms technology, one can automate form processing for all forms and eliminate the hassles of manually processing, routing, and filing forms. The usefulness of computerized sign out and sign back online form according to Evans (2016) can be seen in the following fields of endeavours:

- Accounting: Use for Purchase Orders, Expense Reports, Capital Expenditure Requests, Mileage Reimbursement.
- Human Resources: Use for Position Changes, Vacation Requests, Time Sheets, Employee Reviews.
- Engineering: Use for Defect Tracking, Engineering Change Orders, Product Enhancement, Tools and Equipment management and Requests.
- Manufacturing: Use for Employee Training Certification, Safety Inspections, Document Change Requests, Quality Assurance Variances.
- Customer Service: Use for Survey forms, Customer Warranty Requests, Requests for customer service, incident reports.

The advantages of computerized sign out and sign back online form on tools management are as follows:

- It provides security to tools
- It promotes efficient tools inventory
- It prevents the stealing of tools
- It helps in tracing the whereabouts of missing tools
- It makes the job of workshop attendants easy
- It places a heavy responsibility on any person in possession of tools.

In the context of this study, computerized sign out and sign back online form is a document that provide useful information about the whereabouts of workshop tools. The inability of technical colleges in Nigeria and Rivers State in particular to implement and utilize computerized sign out and sign back online form may account for the increase in the loss of workshop tools.

Statement of the Problem

The beauty and functionality of vocational and technical education under the auspices of technical college is the availability, adequacy, and utilization of workshop tools. The existence of such tools not only promote the acquisition of practical skills among students but also facilitate teaching and learning. Unfortunately, it has been clearly observed that loss of workshop tools through misplacement, displacement, and theft is on the increase in technical colleges especially in Rivers State. According to Adams (2021), twenty percent (20%) of workshop tools are lost yearly in technical colleges in Rivers State, thereby affecting the quality of teaching and learning and acquisition of practical skills.

Undoubtedly, this situation could have been avoided if strategies for effective prevention of loss of workshop tools such as computerized sign out and sign back online form were used. The present researcher is worried about this ugly condition and sought to investigate the use of computerized out and sign back online form as a strategy for effective prevention of loss of workshop tools in technical colleges in Rivers State.

Purpose of the Study

The purpose of this study was to examine the use of computerized sign out and sign back form as a strategy for effective prevention of loss of workshop tools in technical colleges.

Research Question

How effective will the use of computerized sign out and sign back form prevent loss of workshop tools in technical colleges.

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance.

1. Teachers and workshop attendants did not differ in their mean ratings on the effectiveness of the use of computerized sign out and sign back form as a strategy for prevention of loss of workshop tools in technical colleges.
2. Workshop attendants did not differ in their mean ratings on the effectiveness of the use of computerized sign out and sign back form as a strategy for prevention of loss of workshop tools in technical colleges based on years of employment (0 – 10 years and 11 years – above).

Methods

The study adopted a descriptive survey research design. The population for this study comprised 120 technical college teachers and workshop attendants (72 teachers and 48 workshop attendants) in four technical colleges in Rivers State namely; Technical College Port Harcourt, Government Technical College Ahoada, Government Technical College Tombia and Government Technical College Ele-Ogu. The entire population was used as a sample size since the population is not too large and is manageable. The instrument for data collection was a structured questionnaire developed by the researcher with the title: *Computerized Sign out and Sign Back Online Form As a Strategy for Effective Prevention of Loss of Workshop Tools*. It contains 10 items on a four-point rating scales of Very Effective (VE), Effective (E), Ineffective (I) and Very Ineffective (VI). Two experts in the department of technical education, Ignatius Ajuru University of Education, Rivers State validated the instrument. The reliability of the instrument was established using a pilot test involving 10 teachers and 10 workshop attendants of technical colleges in Bayelsa State. Data collected for the pilot study were analyzed with Cronbach alpha which yielded reliability coefficient of 0.76. The researcher through the help of research assistants distributed 120 questionnaire and also retrieved the same after two weeks; which was used for analysis. The data collected for the study were analyzed using the arithmetic mean and standard deviation to answer the research questions and determine the closeness of the responses to the means respectively. The z-test was used to test the null hypotheses at 0.05 level of significance. A null hypothesis was rejected where the p-value was less than the 0.05 level of significance; it meant that there was a significant difference between mean rating scores. Conversely, where the p-value was equal or greater than the level of significance (0.05), it meant that there was no significant difference and the hypothesis was accepted.

Results

Answers to the research question and hypotheses were presented in tables 1 to 3.

Research Question 1: How effective will the use of computerized sign out and sign back online form prevent loss of workshop tools in technical colleges?

Table 1

Mean ratings on the effectiveness of computerized sign out and sign back online form for prevention of loss of workshop tools.

S/N	Aspect of computerized sign out and back online form	Mean	SD	Remarks
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1	Ability to indicate tools that were signed out	3.50	0.47	VE
2	Ability to indicate time of collection of tools	3.54	0.52	VE
3	Ability to indicate the date of collection	3.62	0.56	VE
4	Ability to indicate and identify the finger print and image of the collector	3.51	0.58	VE
5	Ability to indicate tools that were not returned at end the day's work	3.51	0.72	VE
6	Ability to indicate tools that were returned at the end of the day's work	3.53	0.53	VE
7	Ability to display the names and identity of those that did not return the tools they signed out	3.61	0.53	VE
8	Ability to store the above information online	3.54	0.58	VE
9	Ability to retrieve the above information online	3.51	0.51	VE
10	Ability to print hard copy of the above information	3.63	0.61	VE
	Cluster Mean	3.55	0.56	VE

Table 1 shows that all the items have a cluster mean of 3.55. This mean that teachers and workshop attendants in technical colleges are of the opinion that the use of computerized sign out and sign back online form will be very effective for prevention of loss of workshop tools in technical colleges in Rivers State. The standard deviation of 0.56 shows that the respondents are homogenous in their opinion.

Hypothesis 1: Teachers and workshop attendants did not differ in their mean ratings on the effectiveness of the use of computerized sign out and sign back form as a strategy for prevention of loss of workshop tools in technical colleges.

Table 2

The t-test on the effectiveness of computerized sign out and sign online form for prevention of loss of workshop tools by teachers and attendants

Status of Respondents	N	\bar{X}	SD	df	t-cal.	p-val.	Decision
0 – 10 years	72	3.55	.40	118	0.42	0.63	Not significant
11 years & above	48	3.51	.43				

Data in Table 2 show that the respondents do not differ significantly in their mean ratings on the use of computerized sign out and sign back online form as an effective strategy for prevention of loss of workshop tools in technical colleges in Rivers State, with mean scores of 3.53 and 3. 51 while the corresponding standard deviations are .40 and .43. The Table indicated a t-value of 0.42, at degree of freedom of 118 and a p-value of .063. Testing at alpha level of 0.05, the p-value is not significant since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is not rejected.

Hypothesis 2: Workshop attendants did not differ in their mean ratings on the effectiveness of the use of computerized sign out and sign back form as a strategy for prevention of loss of workshop tools in technical colleges based on years of employment (0 – 10 years, and 11 years – above).

Table 3

The t-test on the effectiveness of computerized sign out and sign back online form for prevention of loss of workshop tools based on gender of workshop attendants

Years of Experience	N	\bar{X}	SD	df	t-cal.	p-val.	Decision
0 – 10 years	20	3.51	.17	46	0.42	0.62	Not significant
11 years & above	28	3.53	.15				

Data in Table 3 show that the respondents do not differ significantly in their mean ratings on the use of computerized sign out and sign back online form as an effective strategy for prevention of loss of workshop tools in technical colleges in Rivers State on the basis of years of experience, with mean scores of 3.51 and 3.53 while the corresponding standard deviation is .17 and .15. The table indicated a z-value of 0.42, at degree of freedom of 46 and a p-value of .062. Testing at alpha level of 0.05, the p-value is not significant since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is not rejected.

Discussion

The findings of this study revealed that computerized sign out and sign back online form will be a strategy for effective prevention of loss of workshop tools in technical colleges in Rivers State. The study shows that computerized sign out and sign back online form can be used to indicate tools that were sign out, time of collection, date of collection, identify the finger print and image of the collector, indicate tools that were returned and the ones that were not returned, display names and identity of those that those that did not sign back tools, store the information online, retrieve such information online among others.

The finding of this study is in agreement with that of James (2017) who noted that computerized sign out and sign back online form are useful in signing out and retrieving of tools. The form provides essential information on the whereabouts of tools in workshop and factory. The findings of the study is also in agreement with of Dan (2015) who stated that computerized sign out and sign back online form used to ascertain the numbers of tools that returned at the end of the day’s job in the workshop. The form provides detailed information about the individual that collected a particular tool and the time of collection; thereby making it easy to trace the whereabouts of missing workshop tools. The findings of this study is in consonant with Okoro (2016) who observed that computerized sign out and sign back online form is important in identifying the individual responsible for the misplacement or loss of a particular tools. It helps to limit generalization of a group of persons when tools are lost or misplaced in the workshop. The findings of the study also agrees with that of Natah (2017) who opined that computerized sign out and sign back online form makes the job of workshop attendants very easy in terms issuing and retrieving tools from teachers and students during and after workshop practice. The computerized sign out and sign back online form is used to log in and log out tools.

The findings of this study are in consonant with that of Evans (2016) who stated that computerized sign out and sign back online form incorporates finger print and image capture of any individual assigned tool in the factory. Those features places heavy responsibility on individuals assigned tools in the workshop. The analysis of the hypothesis indicates that there is no significant difference in the mean ratings of respondents on the use of computerized sign out and back online

form as a strategy for effective for the prevention of loss of workshop tools in technical colleges in Rivers State.

Conclusion

On the basis of the findings of the study, it was concluded that the use of computerized sign out and sign back online form will be a strategy for effective prevention of loss of workshop tools in technical colleges in Rivers State.

Recommendations

On the basis of the findings of the study and the conclusion reached, it was recommended that computerized sign out and sign back online form should be used by workshop attendants in order to prevent loss of tools in workshops.

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**CLOUD COMPUTING COMPETENCIES REQUIRED OF OFFICE
TECHNOLOGY AND MANAGEMENT GRADUATES OF
POLYTECHNICS IN NORTH EAST, NIGERIA FOR
ELECTRONIC RECORDS MANAGEMENT**

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Abstract

The need to improve electronic records management in polytechnics necessitated this study. The study ascertained cloud computing competencies required of polytechnic OTM graduates in North East Nigeria for electronic records management. One research question and two null hypotheses guided the study. The study adopted descriptive survey research design. Three hundred and seventy-three (373) administrative supervisors were studied without sampling. Self-developed questionnaire with 12 items which was face validated by experts in Business Education and Measurement and Evaluation was used for data collection. The reliability of the instrument was determined using pilot testing and data generated analyzed using Cronbach Alpha formula which yielded a correlation value of .86. Mean, standard deviation, ANOVA and t-test were used for data analysis. Findings showed that cloud computing competencies were highly required of OTM graduates of polytechnics in North East Nigeria for electronic records management. Years of experience and educational attainment were not significant factors affecting on the extent cloud computing competencies were required of OTM graduates of polytechnics for electronic records management. Based on the findings of the study, the researcher concluded that; OTM graduates in polytechnics in North East, Nigeria highly require cloud computing competencies for effective management of records in the educational institutions. It was recommended among others that; Office Technology and Management (OTM) graduates working in polytechnics in Nigeria should be constantly retrained through in-service training, workshops, seminars and conferences to enable them up-date their cloud computing competencies for effective records management.

Keywords. *Records, electronic records management, cloud computing, OTM.*

Introduction

The introduction of new technologies into the office environment of many organizations has led to the use of modern equipment in bringing innovativeness in office tasks. In order to make the work of office workers easier and more effective, organizations in Nigeria are integrating new technologies into their operations especially in records management. Records are assets produced, saved, retrieved, and disposed of by an organization. Ovbiagele, Mgbonyebi, and Olaniye (2019) defined records as documents/information produced or received by an individual or organization in the course of business and kept in accordance with legal duties. Records can take the shape of physical objects (certificates and official documents), digital data (email), original or copies of

registers and reports that have been received and preserved. These records must be managed properly to avoid serious legal, operational and public relation risk.

Records management focuses on the preservation of an organization's records from creation until disposal. Records management is the intentional management of an organization's documents during the length of its existence (National Archives of Scotland, 2013). Records can be managed traditionally or electronically. Traditional records management involves storing a lot of large hard copies of documents in filing cabinets. This system is no longer effective due to enormous volume of records being created every day as a result of increased organizations' activities. In the light of this deficiency, Bello (2013) observed that many Nigerian organizations are increasingly adopting electronic records management systems. Types of electronic records are e-mail, voicemail, Geographic Information System (GIS), word-processed document, spread sheets, database, digital image, audio files, records stored on storage media, in-house, or in the cloud (New York State Archives, 2012, p.28; Ukatu & Wechie, 2019). These electronic records require a range of competencies to manage effectively.

Graduates of the Office Technology and Management (OTM) programme might need a variety of skills to manage electronic records in their organizations, including physical filing competencies, record life cycle competencies and Computer Assisted Retrieval (CAR) competencies. Kibe (2016) stated that most public and private organisations in Africa are adopting cloud-based records management system to cut cost, eradicate redundancies and pool resources, while Ovbiagele, Mgbonyebi, and Olaniye (2019) listed word processing competencies and database management competencies as required electronic records management competencies. Cloud computing is a form of computing resources that facilitates sharing of data or information over the internet, rather than having them on local servers or personal devices (Uzuagu, Paul-Mgbeafuluike & Joseph, 2020).

Cloud computing can be referred as the ability to access a network of computing resources that are owned and maintained by a third party via an internet connection. The use of cloud computing services is becoming more widespread in tertiary institutions (Yuvara, 2016). Polytechnics can access the cloud services in a cost efficient manner via an internet connection on demand and on a subscription basis without having to invest in their own IT infrastructure. Yuvara noted that cloud computing is the answer to modern record keeping in tertiary institutions as it makes it possible for institutions to reduce the need to manage large amounts of data on expensive, aging, energy-inefficient, on premise servers. Shum (2013) posited that the adoption of cloud computing in records management can allow polytechnics to manage, secure, and provide access to digital documents. In view of this, Berg (2011) stated that public organizations (polytechnics inclusive) should start transitioning to cloud computing in order to reap the benefits it offers.

Cloud computing is very challenging to use and records managers need special competencies to use it for records management (Yordanov, Yordanova & Yordanova, 2015). Cloud computing competencies are abilities to create data using Google docs, save data using Google docs, store data using dropBox and Google drive, mark data for destruction in the cloud. Others include ability to work with remote services in internet; co-work with different types of documents, share data and files, share screen, knowledge and skill in using digital repositories, and understand main terms and concepts of cloud computing (Yordanov et al. (2015). Records stored on cloud are secured and can be easily retrieved when needed.

Office Technology and Management (OTM) is an academic programme that was created to replace the previous secretarial studies/programme in Nigerian tertiary institutions, particularly polytechnics. The new OTM programme was created to fill competency gaps in the old secretarial

studies curriculum that prevented graduates from functioning effectively in contemporary workplaces (National Board of Technical Education, (NBTE), 2009). The programme is ICT-based and is designed to train students in in-depth knowledge of records management information systems. Employers expect OTM graduates to evolve in tandem with changes in electronic management competencies. Crowne (2019) noted that employers in Nigeria are concerned about the type of skills OTM graduates are exposed to while in school given the high unemployment rate among them. Ogungboyega (2019) posited that OTM graduates are unemployed due to their lack of employable skills.

There is a large number of polytechnics in Nigeria with the aim of training students in skills. This means that in terms of employment chances, polytechnic OTM graduates should be at a competitive edge over their colleagues from other tertiary institutions. However, Okolocha and Baba (2017) found that majority of OTM graduate employees cannot efficiently manage records using the electronic system. In Nigerian polytechnics, this scenario might also be of concern to administrators and administrative supervisors. Senior employees or higher officers who direct, manage and oversee the activities of younger staff members in order to fulfill organizational objectives are referred to as administrative supervisors (Gude, 2020). These expertise and roles make administrative supervisors qualified to evaluate electronic records management competencies required of polytechnic OTM graduates.

Work experience may be crucial in the management of electronic records in the 21st century organizations. Administrative managers may use work experience to evaluate the finest electronic records management competencies needed of OTM graduates. It is likely that administrative supervisors with above 10 years' experience will have different perspectives on electronic records management skills required of polytechnic OTM graduates than administrative supervisors with less years of experience, as a result of variations in training and other experiences that might result in the acquisition of various skills. Gude (2012) supported this idea by stating that people gain necessary competencies toward high performance when they work constantly for a long time on specific activities.

In addition to experience, level of education is also critical. Administrative supervisors may have different perspectives on the electronic records administration skills expected of OTM graduates. Administrative supervisors with PhD/M.Sc. degrees may have different perspectives on electronic records management competencies required of polytechnic OTM graduates than those with lower degrees (B.Sc./B.Ed/HND). This might be explained by the exposure to various electronic records management competencies during the learning process. In support, Amesi (2014) argued that having a degree causes successful managers and administrators to develop their competencies. According to Yordanov, Yordanova and Yordanova (2015), in this digital era, students of higher education need to possess cloud computing competencies in order to performance records management jobs upon graduation. It is against this background that this study ascertained cloud computing competencies required of polytechnic OTM graduates in North East Nigeria for electronic records management.

Statement of the Problem

Cloud computing simply refers to services in the cloud that provides computation, software, data access and storage. The current OTM programme has incorporated courses that emphasize records management and information systems in its curriculum in order to equip students with competences in records management. Every OTM graduate is consequently expected to possess necessary competencies for efficient records management. Graduates of OTM would probably be unqualified

for management and other administrative jobs in contemporary organizations if they have not acquired the necessary electronic records administration competencies. The researcher's observations show that some OTM graduates from polytechnics face prejudice in the labour market when applying for administrative positions, and some of those who succeed in finding work fall short of expectations of their employers. Employers of labour are also voicing discontent regarding the caliber of OTM graduates, who they claim struggle to maintain data efficiently utilizing the electronic management system. This situation can be caused by a discrepancy between the records management competencies the OTM graduates were exposed to and the competencies the organizations want from OTM graduates in the digital age. Because of this, it appears that the OTM programme falls short in preparing students for jobs in office technology and management after graduation. Specifically, this study ascertained the extent cloud computing competencies are required of OTM graduates of polytechnics in North East, Nigeria for electronic records management.

Research Questions

The following research questions guided this study.
To what extent are cloud computing competencies required of OTM graduates of polytechnics in North East Nigeria for electronic records management?

Research Hypotheses

The following corresponding hypotheses were also tested at .05 level of significant.

1. There is no significant difference in the mean ratings of administrative supervisors on the extent cloud computing competencies are required of OTM graduates of polytechnic in North East, Nigeria for electronic records management based on years of working experience (1-5 years, 6-10 years and above 10 years).
2. Administrative supervisors do not differ significantly in their mean ratings on the extent cloud computing competencies are required of OTM graduates of polytechnics in North East Nigeria for records management based on educational attainment (PhD/M.Sc./M.Ed. and B.Sc/B.Ed/HND).

Methods

This study adopted descriptive survey research design. The study was conducted in North-East Nigeria. The population of this study consisted of 373 administrative supervisors in the 12 public polytechnics in North East, Nigeria. (Source: Academic Planning Units of the Polytechnics as at 25th March, 2022). The reason for choosing administrative supervisors was that they are senior employees or higher officers that guide, direct and manage the job tasks of OTM graduates working under them in the work place. Therefore, they are in a better position to assess competencies required of OTM graduates for electronic records management. There was no sampling since the population was manageable. Structured questionnaire titled "Cloud Computing Competencies Required for Electronic Records Management Questionnaire (CCCRERMQ)" was used for data collection. The instrument was structured on a five-point rating scale of Very Highly Required (VHR), Highly Required (HR), Required (D), Lowly Required (LR), and Not Required.

The face validity of the instrument was established using the opinions of three experts, two experts from Business Education and one expert from Measurement and Evaluation. Reliability of the instrument was established using trial-testing method and data collected were analyzed using Cronbach Alpha formula, and Coefficient value of .86 was achieved in the analysis. The researcher

with the help of five research assistants administered copies of the questionnaire to the respondents in their offices. Out of 373 copies of the questionnaire distributed, 366 (98%) were correctly filled and returned and used for data analysis.

Mean and standard deviation were used to answer the research questions and determine how homogeneous or heterogeneous the respondents' opinions. Analysis of Variance (ANOVA) and independent t-test were used to test the hypotheses at .05 level of significance using Statistical Package for Social Sciences (SPSS) version 23.0. The decision rule was that a null hypothesis was rejected where the p-value was less than or equal to the significant value of .05; otherwise, the null hypothesis was accepted.

Results

The results are presented in the order of the research questions and the corresponding hypothesis.

Research Question 1: To what extent are cloud computing competencies required of OTM graduates of polytechnics in North East Nigeria for electronic records management?

Table 1

Respondents' mean ratings on extent cloud computing competencies are required of OTM graduates for electronic records management N = 366

S/N	Cloud Computing Competencies	X	SD	Remarks
1	Work with remote services on the Internet	3.69	.60	Highly Required
2	Co-work with different types of documents	3.51	.56	Highly Required
3	Share files using instant messaging services	3.43	.58	Required
4	Lock files for viewing only	3.64	.59	Highly Required
5	Create files using Google docs	3.88	.57	Highly Required
6	Safely and securely store files using Mimecast cloud archiving	3.62	.53	Highly Required
7	Use digital repositories	3.79	.50	Highly Required
8	Share data files and screen	3.65	.58	Highly Required
9	Use Google Docs as a cloud computing service	3.80	.55	Highly Required
10	Conduct an organizational assessment to identify which records are candidates for migration to the cloud environment	3.91	.54	Highly Required
11	Process records and data for migration to the cloud environment	4.54	.58	Very Highly Required
12	Move identified records, applications and processes to the cloud environment	4.70	.61	Very Highly Required
Cluster Mean		3.85		Highly Required

Data in Table 1 show that out of 12 cloud computing competencies listed for electronic records management, respondents indicate that items 11 and 12 are very highly required of OTM graduates with mean scores of 4.54 and 4.70. Items 1, 2, 4, 5, 6, 7, 8, 9 and 10 are highly required of OTM graduates with mean scores ranging between 3.51 to 3.91 while the remaining item (item 3) is rated required with mean score of 3.43. The cluster mean score of 3.85 shows that on the whole, cloud computing competencies are highly required of OTM graduates of polytechnics in North East Nigeria

for electronic records management. Standard deviations for all the items are within the same range showing that the respondents are not wide apart in their ratings.

Hypothesis 1: There is no significant difference in the mean ratings of administrative supervisors on the extent cloud computing competencies are required of OTM graduates of polytechnic in North East, Nigeria for electronic records management based on years of working experience (1-5 years, 6-10 years and above 10 years).

Table 2

Summary of ANOVA on the ratings of administrative supervisors on cloud computing competencies based on years of experience

Source of Variance	Sum of Squares	Df	Mean Square	F	p-value	Decision
Between Groups	31.68	2	15.84	1.19	.31	Not Significant
Within Groups	1293.16	363	13.33			
Total	1324.84	366				

Table 2 shows f-ratio of 1.19 at 2 and 363 degrees of freedom with a p-value of .31 is greater than the p-value of .05 (.31 >.05). This means that there is no significant difference in the mean ratings of administrative supervisors on the extent cloud computing competencies are required of OTM graduates of polytechnic in North East, Nigeria for electronic records management based on years of working experience. Therefore, the null hypothesis is accepted.

Hypothesis 2: Administrative supervisors do not differ significantly in their mean ratings on the extent cloud computing competencies are required of OTM graduates of polytechnics in North East Nigeria for electronic records management based on educational attainment (PhD/M.Sc./M.Ed. and B.Sc/B.Ed/HND).

Table 3

Summary of t-test analysis of administrative supervisors rating on the cloud computing competencies based on educational attainment

Educational Attainment	N	-	SD	df	t-value	P-value	Decision
PhD/M.Sc./M.Ed.	115	44.57	3.80	364	.12	.91	Not Significant
B.Sc/B.Ed/HND	251	44.48	3.49				

Table 3 shows that t - value of .12 at 364 degrees of freedom with p-value of .91 is greater than the significant value of .05 (.91 >.05). The null hypothesis of no significant difference between the two groups is therefore accepted. This means that administrative supervisors do not differ significantly in their mean ratings on the extent cloud computing competencies are required of OTM graduates of polytechnics in North East Nigeria for electronic records management based on their educational attainment.

Discussion of Findings

Findings of the study revealed that cloud computing competencies are highly required of OTM graduates of polytechnics in North East Nigeria for electronic records management.

Specifically, administrative supervisors indicated that OTM graduates of polytechnics very highly require ability to process records and data for migration to the cloud environment, and move identified records, applications and processes to the cloud environment. Additionally, the respondents found that OTM graduates highly require ability to; work with remote services on the Internet, co-work with different types of document, lock files for viewing only, create files using Google docs, Safely and securely store files using Mimecast cloud archiving, and use digital repositories among others. This could be attributed to the importance of cloud computing competencies in enhancing the efficiency of organizational or institutional records management. The findings agree with Don-Solomon and Ayawei (2020) who stated that graduates of tertiary institutions need cloud computing competencies for efficient records management in the digital office. Kibe (2016) noted that the ability to use cloud-based application by graduates increase their efficiency and effectiveness in records management. This supports the earlier report of Yordanov, Yordanova and Yordanova (2015) that university students need to be equipped with core cloud computing competencies such as ability to use Mimecast cloud archiving, use Microsoft exchange online platform to secure stored files, lock down files for viewing only and create files using Google docs for personal and office digital records keeping.

Findings of the study also indicated that there was no significant difference in the mean ratings of administrative supervisors on the extent cloud computing competencies were required of OTM graduates of polytechnic in North East, Nigeria for electronic records management based on years of working experience. It was also revealed that administrative supervisors did not differ significantly in their mean ratings on the extent cloud computing competencies were required of OTM graduates of polytechnics in North East Nigeria for electronic records management based on educational attainment. Administrative supervisors irrespective of their years of working experience and educational attainment all indicated that OTM graduates require cloud computing competencies to perform their records management electronically. In agreement, Ogundionye (2021) found that educational attainment was not a significant factor affecting cloud computing competencies OTM graduates should possess for effective records management. This finding could be due to the fact that administrative supervisors may be using cloud computing services in records management, and therefore recognize their importance to every OTM graduate that wants to succeed in records management jobs in the digital offices.

Conclusion

Based on the findings of the study the researchers conclude that office technology and management graduates in polytechnics in Nigeria highly require cloud computing competencies for effective management of the institutions' records.

Recommendations

- Based on the findings of this study, the following recommendations are made:
1. Office Technology and Management lecturers in polytechnics in Nigeria should be continuously retrained through in-service training, workshops, seminars and conferences in order to update their knowledge regarding competencies in cloud computing in line with the advent of digitalization in modern offices. This is because, the OTM lecturers cannot teach the competencies they do not possess.

2. Office Technology and Management (OTM) graduates working in polytechnics in Nigeria should be constantly retrained through in-service training, workshops, seminars and conferences to enable them up-date their cloud computing competencies for effective records management.
3. Curriculum planners of OTM programme in Nigeria should review its contents to incorporate cloud computing competencies identified in this study for a better performance.

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**TECHNICAL TEACHERS' AND INDUSTRIAL MANAGERS' RATING
OF TEACHERS' AND STUDENTS' ACTIVITIES TO IMPROVE
PRACTICAL SKILLS ACQUISITION BY TECHNICAL COLLEGE
STUDENTS IN KWARA STATE**

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Abstract

Practical skills deficiency among technical college graduates is responsible for the alarming rates of unemployment. This study aims to find out, from the rating of technical teachers and industrial managers, the strategies that could improve practical skills' acquisition in technical colleges in Kwara State. Two research questions and one hypothesis guided the study. The population comprised of 127 technical teachers and 71 industrial managers. The population were considered manageable hence; there were no need to employ any sampling. Out of the 205 copies of the instrument sent out, 198 copies were analyzed. The instrument for data collection was a structured questionnaire. The instrument was strategies for improving practical skills' acquisition by students in Technical Colleges (QERSIPSASTC) which was validated by three experts from the Department of Technology and Vocational Education, Nnamdi Azikiwe University, Awka. Reliability co-efficient value yielded 0.85. The instrument was a five-points Likert scale type with six sections. Mean statistic was used to answer the research question and t-test statistic was used to test the hypotheses at a 0.05 significance level. Results from the analysis of data showed that demonstration method impart practical skills to students. Results also revealed that government should always recruit qualified technical teachers to teach technical subjects. Result of t-test showed that there was a significance difference in the mean ratings of technical teachers and industrial managers on the teaching activities that could improve practical skills acquisition by technical students.

Keywords. Industrial Managers; Practical Skills Acquisition; Technical Colleges; Technical Teachers.

Introduction

Technical colleges according to Abdulrauf (2012) are institutions where specific knowledge and practical skills required for specific trade, employment or professional craftsmen, technicians or similar level in business and industry are imparted or taught. One of the prime objectives of vocational and technical education as stated in the National Policy on Education (Federal Republic of Nigeria, 2013) is to give training and impart the necessary skills leading to the production of craftsmen, technicians and skilled personnel who will be enterprising and self-reliant; and technical teachers are responsible for the inculcation of these requisite skills.

According to Ndomi (2008), Technical colleges are expected to produce graduates that will be both educationally and technically equipped with practical skills that will enable them stand out in the world of work without the need for pre-employment training. Ishaya and Haliru (2016), the ultimate goal of vocational technical education training is for the acquisition of knowledge, attitude and practical skills for sustainable development. Such practical skills are acquired during workshop

practice. Workshop practice is a common practical class for acquisition of practical skills in technical education programmes (Chukwuendo & Ainetor 2015).. Nwauzi, Azubuike & Kingsley 2021) defined skill acquisition as the method by which individuals are anticipated to be taught and continuously carry out a particular task till the trainees become competent in the operation and can perform them when the need arises.

However, industrial managers are complaining that the Nigerian labour market seems to be saddled with excess of unproductive technical college graduates with skill deficiency. For instance, Ehiimen and Ezeora (2018) observed that graduates of technical colleges who are supposed to be employers of labour are now job seekers due to skills deficiency. Uzoagulu (2010) opined that the bane of the Nigeria economy was lack of the needed skills and those who were certified to possess these skills were half-baked or ill-prepared.

Perhaps, the low or premature skills acquisition is due to occurrence of a defective learning environment. Obierika (2017) reported that most technical colleges in Nigeria have actually recorded low performance due to inadequate and poor maintenance of the required facilities in the workshops for effective training which has affected the acquisition of practical skills for proficiency by students of technical colleges.

In technical colleges in Kwara State for instance, the methods of teaching for long appear to be such that technical teachers are more concerned with the delivery of the theoretical contents of the subject matter thereby relegating practical learning approaches to the background. Skills acquisition requires competent and resourceful technical teachers who understand the problems of learning, the organization and functions of contemporary industries, and who have technical skills and “know how” of teaching as well as the ability to relate well with students to impart the appropriate knowledge. Based on the above discussions, it is pertinent to find out the technical teachers' and industrial managers' rating of teachers' and students' activities that could improve practical skills acquisition by students in technical colleges in Kwara State.

Statement of the Problem

Technical education as it exists today does not provide students with enough skills for entrepreneurship. For instance, technical college graduates still roam the streets in search of employment opportunities (Ehimen & Ezeora 2018). In spite of the various strategies developed to improve practical skills acquisition in technical education programme, little or no performance change was achieved. It is possible that not all the developed strategies are useful in Kwara State. This study therefore aims to find out from the ratings of technical teachers and industrial managers on the activities of teachers and students that could improve practical skills acquisition by students in technical colleges in Kwara State of Nigeria.

Purpose of the Study

The purpose of this study was to find out the technical teachers' and industrial managers' rating of technical teachers' and students' activities that could improving practical skills acquisition by students in technical colleges in Kwara State. Specifically, the study sought to determine the subjects' ratings of:

1. Teachers' activities that could improve practical skills' acquisition by students in Technical Colleges in Kwara State.
2. Students' activities that could improve practical skills' acquisition by students in Technical Colleges in Kwara State.

Research Questions

The following research questions guided the study.

1. What are the teachers' activities that could improve practical skills' acquisition by students in Technical Colleges in Kwara State?
2. What are the students' activities that could improve practical skill's acquisition by students in Technical Colleges in Kwara State?

Hypotheses

The null hypothesis below was tested at a 0.05 level of significance.

1. Technical teachers and industrial managers do not differ significantly in their mean ratings of teaching activities that could improve practical skills' acquisition by students in technical colleges in Kwara State.

Method

The design of this study was a descriptive survey. A descriptive survey research design was considered appropriate for the study because the study examined current situations affecting practical skills acquisition of students in technical colleges and it involved the use of a structured questionnaire to elicit information, which was later analyzed.

The population consisted of 127 technical teachers teaching technical subjects in the five technical colleges (Government Technical College, Pategi; Government Technical College, Esie/Iludun; Government Technical College, Ilorin; Government Technical College, Erin-Ile and Government Technical College, Amodu- Asungbolu) in Kwara State and 71 industrial managers in industries that employ technical college graduates in Kwara States, bringing the total number of subjects to 198. The entire population of technical teachers and industrial managers were used for the study; hence there was no sampling procedure.

The instrument for data collection was a structured questionnaire designed by the author and titled "Questionnaire on Expert Rating of Strategies for Improving Practical Skills' Acquisition by Technical College Students" (QERSIPSATCS). To ensure that the items in the instrument were valid, three experts in the Department of Technology and Vocational Education, Nnamdi Azikwe University, Awka conducted the face and content validity of the instrument. The reliability of the instrument was established using a Cronbach's alpha method. The author administered 24 respondents drawn from Government Technical College, Mopa and Abuja Electricity Distribution Company; Kabba both in Kogi State for the pilot study.

Results

Research Question 1. What are the teaching activities that could improve practical skills' acquisition by students in Technical Colleges in Kwara State?

Table 1.

Mean Ratings of Teachers' Activities that could Improve Practical Skills' Acquisition

SN	To what extent do teachers:	Mean	Remarks
1	Ensure proper integration of technical theory with practice	4.39	GE
2	Supervise their students during theory and practical lessons	4.49	GE

3	Use demonstration method in teaching technical subjects	4.63	VGE
4	Make lesson interesting and lively by carefully selecting and utilizing teaching aids.	4.14	GE
5	Develop a check list of practical activities to be performed by the students	3.95	GE
6	State the purpose of planned activities clearly and specifically	3.86	GE
7	Make sure that the environment is conducive for teaching and learning activities	4.47	GE
8	List references which may be of value as resource materials	3.98	GE
9	Check students' progress and understanding by asking questions	4.13	GE
10	Correct any situation that is not getting across	4.04	GE
11	Use check- list or rating scale to observe students' ability to apply knowledge	3.16	GE
12	Make the degree of the test appropriate for the level of the class.	3.94	GE
13	Ensure that assignments done are submitted for marking and corrections	4.10	GE
14	Make students evaluation to reflect cognitive, affective and psycho-motor domains	3.83	GE
15	Provide activities which evoke learners' participation in the teaching- learning process	3.83	GE

The data in Table 1 showed that items 1,2,3,4,5,6 and 7 have mean rating values that are over 3.5. Others with mean rating above 3.5 are items 8, 9,10,12,13,14 and 15, with item 3 having the highest mean rating of 4.63. The mean ratings of these items are well above 3.5, they are therefore accepted. On the other hand, item 11 has mean rating of 3.16. This is less than 3.5 and it is therefore rejected as a teaching activity that could improve practical skills' acquisition.

Research Question 2. What are the students' activities that could improve practical skill's acquisition by students in Technical Colleges in Kwara State?

Table 2.
Students' Activities that could Improve Practical Skills' Acquisition

SN	To what extent do students:	Mean	Remark
16	Total involvement of students in both theory and practices	4.41	GE
17	Students co-operating together to do group assignments.	3.94	GE
18	Students exhibiting seriousness and devotion during SIWES programme to industries	4.35	GE
19	Students obeying school rules and GE regulation and have respect for authority	4.16	GE
20	Students asking questions for clarity	4.16	GE
21	Students having patience when faced with difficulties.	3.18	GE

All the six items of students' activities were rated “Great Extent (GE)”. The highest rated was item number 55 with 4.41 mean rating. The least rated was item number 60 with 3.81 mean rating. Because all the items have mean rating values of over 3.5, they are therefore accepted as students’ activities that could improve practical skills’ acquisition.

Hypothesis 1. Technical teachers and industrial managers do not differ significantly in their mean rating of teaching activities that could improve practical skills acquisition by students in technical colleges in Kwara State.

Table 3.

The t-test of Technical Teachers' and Industrial Managers' Rating on Teaching Activities

Respondents	N	Mean	SD	Df	t-cal	t-crit	Decision
Technical teachers	127	4.20	0.32	196	3.40	1.96	Reject
Industrial managers	71	4.00	0.43				

Table 3 showed that the mean for technical teachers was 4.2 and 4.0 for industrial managers. The standard deviations were 0.32 and 0.43 for technical teachers and industrial managers respectively. The degree of freedom was 196. The t-calculated value was 3.4 while the t-critical value was 1.96 at 0.05 level of significance. Since the t-calculated is greater than the t-critical value, the null hypothesis is therefore rejected and alternative accepted. This means that there is a significant difference in the mean ratings of technical teachers and industrial managers on the teaching activities that could improve practical skills' acquisition by students in technical colleges in Kwara State.

Discussion

Based on the result obtained from the presentation and analysis of data, discussion of the major findings of the study are organized and presented to correspond with the research questions and composite hypotheses.

Respondents rated the use of demonstration method to teach technical subjects “Very Great Extent (VGE)”. This finding agreed with Nwauzi, *et al*, (2021) who stated that 'opportunities must be provided for students to perform that skill they are taught in a setting that is related to the job skill learnt'. Also, Ogbuanya *et al*, (2017), revealed that most of appropriate teaching methods for teaching vocational technical education subjects were not used to teach students in the technical colleges. It is certain that without demonstration, only the intellect of the students would be developed to the neglect of the use of their hands, hence no practical skills would be acquired.

For a meaningful transfer of skills in technical colleges, the teachers should make sure that the environment is conducive for teaching and learning activities. Alexander (2013), observed that a conducive and healthy school environment shapes the attitudes which children develop toward the school as well as promotes teaching and learning.

Students should totally be involved in both theory and practice of the content. This is in agreement with Mendenhall (2007) who revealed that classroom success is only achieved by “learning into practice and practice to learning” Prasanna, (2016) also pointed out that content expertise and active teaching and learning will provide students the opportunity to become engaged learners and dynamic thinkers. Students asking questions in class plays an important role in the teaching and learning process. The process of asking questions by students allows them to resolve puzzlement and to articulate their current understanding of a topic. This is in agreement with

Parkinson and Whitty (2022). they found out that the use of “tag questions” significantly aided student understanding of the material.

The t-calculated value was 3.4 while the t-table value was 1.960 at 0.05 (5%) level of significance. Because the t-calculated was greater than the t-table value, therefore the null hypothesis was rejected and the alternative accepted. Thus, there was a significant difference in the mean rating of technical teachers and industrial managers in the teaching activities that could improve practical skills' acquisition by students in technical colleges in Kwara State. What this ordinarily mean is that the industrial managers viewed the teaching activities as presently programmed as not enrich enough to saddle the technical college students with the necessary practical skills that are needed in the industries, hence their complaints.

Conclusions

This descriptive study is an eye opener for the technical teachers to always emphasize practical activities in imparting and acquiring practical skills. Demonstration method will help in improving practical skills of both technical teachers and students. Hence, school management should stock the technical college workshops and libraries with adequate modern facilities, materials, related text -books, journals and equipment operational manuals.

Recommendations

Based on the findings of this study, the following recommendations were made.

1. Technical college management should equip Technical College workshops and libraries with modern facilities, materials, journals and manuals.
2. Technical college administrators should emphasize to technical teachers the need to use demonstration method during practical lessons.

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THE IMPACT OF ENVIRONMENTAL COST ACCOUNTING ON PROFITABILITY OF CONSUMER GOODS COMPANIES IN NIGERIA

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Abstract

The environment provides a platform for every business enterprise to strive. Therefore, it is imperative that there should be accountability on the use of environment especially in financial terms. The impact of such financial accountability on the financial performance of enterprises is also of great concern. Hence, the study was aimed at assessing the impact of environmental cost accounting on the profitability of consumer goods companies in Nigeria. Two research questions were raised and answered while two hypotheses were tested. The study covered a period of ten years (2013-2022). The design of the study was ex-post fact research design. Sixteen consumer goods companies whose annual reports were published participated in the study. Annual reports were used as instrument for data collection. Pearson correlation and panel least square regression analysis were used to analyze the study. The findings of the study revealed that environmental cost had a positive but weak impact on returns on equity and a negative impact on returns on assets of consumer goods companies in Nigeria.

Keywords. Environmental cost accounting, return on assets, return on equity, consumer goods companies.

Introduction

Education is the key to any sustainable development in a society. Business education, as a branch of education, is a programme that equips recipients with requisite knowledge, attitude, values and skills to enable them secure and succeed in employment as office workers, school teachers or entrepreneurs. Uchenu, Okeke-Okonkwo and Ifi (2019) defined business education as an educational programme that prepares students for entry into and advancement in jobs within business as well as handle their own business affairs and function intelligently as consumers and citizens in a business economy. It provides the necessary knowledge and skills needed to establish and manage business enterprises effectively.

Business enterprises play a key role in the development of a nation because they are pivotal to the sustenance of any society which in turn provides a conducive environment for the enterprise to situate their factories and carry out their business activities. The primary objective of a business enterprise is profit making (Ayanda, 2015). In a bid to make profits, the enterprises tend to forget that their activities, sometimes, have some negative impacts on the environment leading to the popular belief that engaging in business means prospering at the expense of the society. However, the impact of business activities on the environment cannot be neglected because doing so would lead to the collapse of the environment thereby making it impossible for the business and other operations in the environment to thrive. Hence, there is need for businesses to become accountable for the use of the

environment in line with the current trend. This led to the emergence of environmental accounting and subsequently, environmental cost accounting.

Environmental cost accounting as a branch of environmental accounting deals with identification and allocation of environment costs to material flows or other physical aspects of a firm's operation (Okoroafor, 2016). Amin, Magara and Momanyi (2015) depicted environmental cost accounting as a systematic approach that seeks to quantitatively evaluate the costs and benefits accruing to an enterprise as a direct result of its eco-friendly initiatives, using either monetary or physical metrics. Environmental cost accounting is measured by environmental cost.

Environmental costs refer to expenditures incurred by corporate organizations to eradicate, minimize, or recuperate negative consequences of the entity's activities on the environment (Ezeagba, John-Akamelu & Umeoduagu, 2017). These environmental costs borne by companies could increase the operating cost of running businesses. However, with proper identification, management and control of environmental costs, the company, in the long run, will begin to enjoy the benefits in various forms such as reduction in operating costs, better company image and goodwill, higher sales turnover, higher profits and increase in market share among others. Hence, environmental cost accounting could be regarded as a type of panacea to the increasing negative environmental impacts of manufacturing companies. Therefore, environmental costs can have either a positive impact or negative impact on profitability. Shehu (2014); Falope, Ofor and Ofurum (2019) and Kaoje, Idris, Danrini, Kurfi and Abubakar (2020) found out that environmental expenditure (cost) had significant effect on profitability (ROA and ROE) but there are no studies carried out on consumer goods companies yet to determine the impact of environmental cost on profitability.

The following formed the research questions:

1. What is the impact of environmental costs on return on equity in consumer goods companies in Nigeria?
2. What is the impact of environmental costs on return on assets in consumer goods companies in Nigeria?

The hypotheses tested are below:

1. Environmental costs do not have significant impact on return on equity of consumer goods companies in Nigeria.
2. Environmental costs do not have significant impact on return on assets of consumer goods companies in Nigeria.

Literature Review

Environmental Cost Accounting

Environmental cost accounting according to Effiok, Bassey and Okon (2013) is a process that entails the identification, quantification, and allocation of environmental expenses, as well as the seamless integration of these costs into business operations and transparent communication of such information to relevant stakeholders. Environmental cost accounting takes on the role of consolidating and presenting accounting information, including the practice of natural resource accounting, at the organizational level for the purpose of natural resource management (Oluwamayowa, 2020).

Environmental cost accounting majorly aims at achieving new goals by using major indicators in measuring and evaluating potential or actual environmental impacts of projects and organizations to help in accurate assessment of costs and benefits of environmental preservation

measures of companies ((Asuquo, 2012; Egbunike & Oraka, 2016). Rakos and Antohe (2014) asserted that the objective of the environmental cost accounting is to allow the economic entities, local and governmental collectivities, to have a correct assessment of the impact exerted by the productive activity of an economic entity on the environment. Environmental cost accounting enables proper allocation or tracing of costs to the activity or production process that incurs it. Every company strives to reduce its environmental costs and this can only be achieved with proper identification and allocation of environmental costs. Therefore, environmental cost accounting is foundational and should precede all efforts to lower environmental costs.

Environmental Costs

Jing and Song-Qing (2011) defines environmental costs as those costs associated with the implementation of environmental responsibility, regulatory compliance, environmental protection law, negative environmental impact prevention activities and measures to achieve environmental goals. They include the costs of waste reduction, waste recycling, pollution treatment and management, environmental protection, environmental and social compensation.

Nwaiwu and Oluka (2018) saw environmental costs as costs incurred by companies in order to protect the environment, prevent environmental problems and minimize damages to the environment. They include costs incurred in compliance with or prevention of breach of environmental laws, regulations and company policies.

Profitability

Kwaltomma, Enemali, Duna and Ahmed (2019) averred that profitability is the ability to make profit from all business activities of an organization, firm, company or enterprise. Onipe (2018) posited that firm profitability is the extent to which financial objectives of the firm are being achieved. This involves various financial metrics that are utilized to assess or measure the outcomes of a firm's policies and operations in monetary terms (Ezeagba, John-Akamelu & Umeoduagu, 2017). Profitability is used to measure a company's financial performance as it shows how efficiently the management can make profit by using all the resources available. There are some indices for measuring profitability which include among others: return on assets and returns to equity.

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Returns on equity (ROE)

Return on Equity (ROE) is a financial metric that measures a company's profitability relative to the total amount of shareholder equity invested in the company. Kaoje, Idris, Danrimi, Kurfi and Abubakar (2020) averred that return on equity ratio indicates the margin available for the shareholders after satisfying all other obligation and taxes. It indicates the percentage of profit that shareholders earn on their investment in the company (Almira & Wiagustini, 2020). A company with a high ROE is likely to be proficient at generating internal cash flow. As a result, a higher ROE

generally signifies better profitability. To calculate ROE, the net income of a company is divided by the total shareholder equity, and then multiplied by 100 to get a percentage.

$$\text{Returns on equity} = \frac{\text{Profit before interest and tax}}{\text{Shareholders fund}}$$

Shareholder equity is the difference between a company's assets and liabilities, and represents the amount of money that would be returned to shareholders if all assets were sold and liabilities paid off. A higher ROE is generally seen as a positive sign, as it indicates that the company is generating a higher return on its equity. This could mean that the company is profitable, efficient, and able to generate internal cash flow. However, a high ROE should also be evaluated in the context of the industry and the company's peers. It is important to note that ROE can be affected by several factors, such as the amount of debt a company has, the industry it operates in, and the economic conditions. For example, a company with a high debt-to-equity ratio may have a higher ROE, but this could also mean that it is taking on more risk.

Return on assets (ROA)

ROA shows profitability on assets of a firm after meeting all expenses and taxes. It measures the profit of the firm after tax for each amount of money invested in its asset. It is an indicator of the managerial performance of a company. Nnamani, Onyekwelu and Ugwu (2017) opine that ROA indicates how profitable a firm is relative to its total asset and how well management is employing the firm's total asset to make profit. Higher ROA ratio means better managerial performance. ROA can be increased by increasing profit margin or asset turnover. $\text{ROA} = \text{Net Profit before Tax} / \text{Total Assets}$.

Methods

The study adopted an expo-facto research design. The population of the study was 21 consumer goods companies listed in the Nigeria Stock Exchange (NSE) as at January, 2023. The sample for the study was 16 consumer goods companies. The study covered a period of ten years (2013-2022). All the consumer goods companies whose annual report were published online for the period of study made up the sample. The instrument for data collection was annual reports of the companies under study hence, it was deemed reliable. Panel least square regression and Pearson correlation were used for analysis.

In this study, a positive correlation indicates that as environmental costs increase, the profitability index tends to increase as well, while a negative correlation would suggest the opposite. The p-value is used to determine the statistical significance of the correlation coefficient (Sedgwick, 2012) as it shows whether the observed correlation is statistically significant or if it could have occurred by random chance. When the correlation coefficient (r) is: ± 0.01 to 0.20 = Very weak, ± 0.21 to 0.40 = Weak, ± 0.41 to 0.60 = Moderate, ± 0.61 to 0.80 = Strong and ± 0.81 to 1.00 = Very strong. Note that positive (+) implies that an increase in one variable leads to increase in the other variable, while (-) implies that an increase in one variable leads to a decrease in the other variable; zero (0) implies that there is no relationship; unit (1) implies a perfect relationship.

Results

Research Question 1. What is the impact of environmental costs on return on equity in consumer goods companies in Nigeria?

Table 1.

Correlation of the impact of environmental cost on returns on equity

Correlation (r)	
Variable	Return On Equity
Environmental Cost	0.1903*
p-value	0.0160

Source: Stata 13 Analysis Output (2023)

Table 1 shows the correlation of the impact of environmental cost on return on equity. The correlation coefficient 0.1903 suggests a very weak positive relationship between environmental costs and return on equity. This means that, on the average, as environmental costs increase, there is a tendency for return on equity to increase slightly.

Research Question 2. What is the impact of environmental costs on return on asset in consumer goods companies in Nigeria?

Table 2.

Correlation of the impact of environmental cost on returns on assets

Variable	Returns On Assets
Environmental Cost	-0.0163
p-value	0.8383

Source: Stata 13 Analysis Output (2023)

Table 2 shows the correlation of the impact of environmental cost on return on assets. The correlation coefficient is negative (-0.0163), suggesting that environmental costs has a very weak negative effect on return on assets. This means that, increase in environmental cost leads to slight decrease on return on assets.

Hypothesis 1. Environmental costs do not have significant impact on returns on equity of consumer goods companies in Nigeria.

Table 3.

Regression Analysis of the Impact of EC on ROE

Sources	SS	Df	MS	F	Sig.	Decision
Model	16.79	3	5.598	43.19	0.000	Significant
Residual	20.22	156	.1296			
Total	37.01	159	.233			
	Coefficient	SE	Beta	T	Sig.	Decision
EC	.226	.077	.2035	2.92	0.004	Significant
FS	.069	.037	.130	1.85	0.066	Not Significant
Lev	-.068	.006	-.656	-10.91	0.000	Significant
Constant	-.343	.266		-1.28	0.201	Not Significant

Source: Stata 13 Analysis Output (2023)

Table 3 reveals the outcome of the regression analysis conducted to test the null hypothesis that environmental costs do not have a significant impact on the return on equity (ROE) of consumer goods companies in Nigeria. The F-statistic tests the overall significance of the regression model. In this analysis, the F-statistic is 43.19, and the associated probability (p) is $0.0000 < 0.05$, which indicates that the overall regression model is statistically significant. The R-squared value is 0.454, representing the proportion of the variance in return on equity that is explained by the independent variables in the model. Thus, the model explains approximately 45.37% of the variance in ROE.

The coefficient for the environmental costs variable (EC) is 0.2257499. This coefficient represents the estimated change in return on equity for a one-unit change in environmental costs, holding other variables constant. Hence, an increase in EC by a margin will lead to an increase in ROE by 0.226. The p-value associated with the environmental costs variable is 0.004, which is less than 0.05 level of significance. This indicates that the coefficient for environmental costs is statistically significant at the 0.05 significance level.

Since the p-value for EC is less than 0.05, do not accept null hypothesis and the researcher concludes that environmental costs have a positive and significant effect on return on equity of consumer goods companies in Nigeria ($\beta = .226$, p -value = 0.004). As for the control variables, while firm size has a non-significant positive effect on ROE, firm leverage has a significant negative effect on ROE at 5% level of significance.

Hypothesis 2. Environmental costs do not have significant effect on returns on assets of consumer goods companies in Nigeria.

Table 4
Regression Analysis of the Impact of EC on ROA

Sources	SS	Df	MS	F	Sig.	Decision
Model	1.531	3	.5103	1.79	0.1514	Not Significant
Residual	44.477	156	.285			
Total	46.007	159	.289			
	Coefficient	SE	Beta	T	Sig.	Decision
EC	.118	.115	.0365	1.03	0.306	Not Significant
FS	-.117	.055	.2186	-2.14	0.034	Significant
Lev	-.005	.009	-.4013	-0.58	0.561	Not Significant
Constant	.988	.395		2.50	0.014	Significant

Source: Stata 13 Analysis Output (2023)

Table 4 shows the output of the regression analysis which tested the hypothesis that environmental costs (EC) do not have a significant effect on the return on assets (ROA) of consumer goods companies in Nigeria. The F-statistic measures the overall significance of the regression model. The F-statistic is 1.79, and the probability (p) is 0.151 which is greater than the significance level of 0.05. This suggests that the regression model as a whole is not statistically significant. In other words, there is not enough evidence to conclude that the independent variable (environmental costs) has a significant effect on the dependent variable (ROA) in your model.

The R-squared value (0.033) represents the proportion of the variance in the dependent variable (ROA) that is explained by the independent variables in your model. The model explains

approximately 3.33% of the variance in ROA. This is a relatively low R-squared value, indicating that the independent variable (environmental costs) does not explain much of the variation in ROA.

The coefficient for environmental costs (EC) is 0.118. This coefficient represents the estimated change in the dependent variable (ROA) for a one-unit change in the independent variable (EC), holding all other variables constant. Hence, an increase in EC by a margin will lead to an increase in ROA by 0.118. The p-value ($P > |t|$) associated with the coefficient for EC is 0.306, which is greater than 0.05. This indicates that the coefficient for environmental costs is not statistically significant at the 0.05 significance level. In other words, there is no strong evidence to suggest that environmental costs have a significant impact on ROA in your model.

Since the p -value for EC is greater than 0.05, the null hypothesis was accepted and the researcher concludes that environmental costs have a positive but has non-significant effect on return on asset of consumer goods companies in Nigeria ($\beta = .1180132$, p -value = 0.306). As for the control variables, while firm size has a significant negative effect on ROA, firm leverage has a non significant negative effect on ROA at 5% level of significance.

Discussion of Findings

The findings of the study revealed that EC has a positive and significant effect on ROE as opposed to the finding of Norhasmimah (2016) who found out EC has a negative significant impact on ROE. The significant positive relationship between environmental costs and return on equity (ROE) for consumer goods companies in Nigeria reflects the potential for sustainable practices to create value for shareholders. Investments in sustainability not only bolster a company's financial performance but also demonstrate responsible corporate governance, which can attract investors seeking ethically sound and profitable opportunities. The resultant higher ROE signifies that these companies effectively utilize shareholders' equity to generate profits while aligning with environmental goals.

The findings of the study revealed that EC has a negative impact on ROA of consumer goods manufacturing companies in Nigeria. It also showed a non-significant effect on ROA. This means that, increase in environmental cost leads to slight decrease on return on assets. The negative but non-significant effect of environmental costs on return on assets (ROA) underscores how sustainable practices can enhance the overall efficiency of consumer goods companies in Nigeria. The finding of the study differs from Falope, Ofor and Ofurum (2019) who found out that EC has positive effect on ROA. By incorporating eco-friendly processes and resource conservation measures, these companies can maximize the productivity of their assets while minimizing waste and environmental impacts. Consequently, their ROA will improve, reflecting the effectiveness of their asset management in generating profits and supporting sustainable operations.

Recommendations

1. Consumer goods companies should establish robust environmental monitoring and reporting systems in order to attain a positive effect of environmental costs on ROA. Regularly tracking key sustainability metrics, such as energy consumption, waste generation, and carbon emissions, allows companies to identify areas for improvement and make data-driven decisions.
2. Consumer goods companies in Nigeria should optimize their supply chain operations to reduce waste, implement energy-efficient technologies, and explore partnerships for

recycling and waste reduction. Such efforts can lead to higher net profits, making it advisable to allocate resources to environmentally responsible practices.

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UTILIZATION OF ACCOUNTING PRACTICES BY OWNERS OF SMALL AND MEDIUM SCALE ENTERPRISES FOR BUSINESS SUCCESS IN ANAMBRA STATE

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Abstract

This study ascertained the extent of utilization of accounting practices by owners of small and medium-scale enterprises for business success in Anambra State, and this was necessitated by the need to ensure that SMEs keep proper books of accounts and put adequate maintenance and control measures. Two research questions guided the study and two null hypotheses were tested. Descriptive survey research design was adopted for the study. The population comprised all 2,050 registered owners of SMEs in Anambra State. Sample size of 615 was used, through proportionate stratified random sampling technique. A 22-item structured questionnaire was used. The instrument was validated by three experts. Cronbach Alpha was used to determine the internal consistency of the instrument and obtained an overall coefficient value of 0.86. Mean and standard deviation were used to answer the research questions, while Analysis of Variance (ANOVA) was used to test the null hypotheses at 0.05 level of significance. The findings of the study revealed that bookkeeping practices was greatly utilized, while the auditing practices are moderately utilized. The owners of SMEs differ significantly in their mean ratings on the extent they utilized bookkeeping accounting and auditing practices based on type of enterprises. The study concluded that auditing practices was not widely used which is as a result of SMEs owners' inability to determine its important in promoting effectiveness in recording of business transactions systematically and more accurate for financial reports. It was therefore recommended among others that, owners of SMEs in Anambra State should utilized auditing practices to a great extent because it will enable them have great influence on consumer's perception of product and services as an incentive to consumers to patronized their product.

Keywords: Utilization, Accounting Practices, Owners, Small and Medium-Scale Enterprises

Introduction

Small and medium scale enterprises (SMEs) are the building blocks of any growing economy. They contribute to improved living standards, a substantial local capital formation, and achieve high levels of productivity and capability for individuals and nations. SMEs play very important roles which include employment, rural development, youth empowerment, contribution to national growth, spread and development of adaptable technology and regional balanced growth channel (Udegbumam, Uchenu, Odimmega and Macpherson, 2018). Small and medium-scale enterprises (SMEs), according to Umanhonlen, Umanhonlen and Enofe (2023), can be defined as different kind of firms that could be found in different business activities across the country. They include artisans producing local agricultural implements, coffee shop owners, tailor shop owners, iron fabricators, road side mechanics, small transport firm, an internet café, small engineering or software firm and a medium-scaled

automotive parts manufacturer. In this study, small and medium-scale enterprises refer to enterprises with a maximum asset base between 5 to 50 million naira for small scale enterprises with staff strength of not less than ten (5) and not more than 50 workers, while for medium-scale enterprises a maximum asset base of 300 million naira excluding land, working capital and with staff strength of not less than ten (10) and not more than 200 workers in the State.

In Nigeria, SMEs accounts for 89-90 percent of all formally declared businesses in the economy, but also from their resilience to the shocks in the turbulent Nigeria economy (Agwu and Emite, 2014). Smile and Ofosu (2014) supported the argument that SMEs form the backbone of any growing economy. This is based on the premise that SMEs represent more than 99 percent of all employers, employ 51 percent of private-sector workers, provide about 75 percent of new jobs of the private sector output and represent 90 percent of all goods exported (Okafor and Oji, 2021).

Despite the economic importance of SMEs above, SME in Nigeria were faced with serious challenges during and after severe economic crises that hit the economy within the last three decades that increased their share in the economy significantly. The Nigeria government took radical steps towards improving their performance which lead to SMEs becoming one of the very elements of the macro-economic improvements in Nigeria due to their significant role in the growth of overall GDP, new job creation and exports. Okoli and Ezenwafor (2015) revealed some of the problems faced by small and medium-scale enterprises to include inadequate working capital, stiff competition from larger companies, difficulties in sourcing raw materials, low-capacity utilization, lack of management strategies, poor educational background of operators, and poor financial management practices topping most in the list. Thus, the challenges are not mainly caused by financial nature, insufficient management skills and lack of trained personnel but inadequate financial skills which is one of the most important entrepreneurial skills that can help SMEs operations to become successful. Business success, according to Kari (2020), is running a profitable firm that conducts business with honesty and integrity, makes meaningful contributions to the communities it serves, and nurtures high-quality, balanced lives for its employees.

SMEs that want to enjoy business success most are based on the use of accounting practices that are vital in making better financial and management decisions. Accounting practices help owners of MSEs prepare financial statements such as income and expenditure and annual taxes payment among others. Kaye (2019) stated that accounting practice refers to the method by which accounting policies are implemented and adhered to on a routine basis, typically by an accountant, auditor, or a team of accounting professionals. Accounting practices are important to the evaluation and monitoring of the firm's economic activities. Accounting practices, according to Kaye (2019), are bookkeeping, auditing service, tax preparation and public accounting practice. Thus, this study covered bookkeeping, auditing practices which seen as the most important areas of accounting practices needed for owners of SMEs.

Bookkeeping is the process of recording all financial transactions in a systematic and logic manner. Bookkeeping accounting practices are the heart of business activities as it serves as the basis for proper planning and management of business activities and allows managers to determine whether they are making a loss or profit (Abdul-Rahamon and Adejare, 2019). It involves the recording of the company's transactions daily. These basic records normally include accounts receivable, making bank deposits, processing payroll, cash receipt book, journal, cheque payments book, ledger and preparing month end financial statements. To Nsoke, Okolo and Ofoegbu (2021), bookkeeping is a tool for financial control enables owners to know the financial positions of their business and to take certain measures to improve corporate performance. It provides a wealth of information that is used by

owners, managers, investors and shareholders. Abdul-Rahamon and Adejare (2019) argued that the general objectives of bookkeeping include improving efficiency and productivity, to controlling creation and growth, reducing operating costs and to ensure regulatory requirements. Negou (2018) stated that the small and medium scales businesses in Kumba Municipality have an account clerk that recorded their transactions manually following the single-entry system. James (2020) revealed that Most of SMEs owners lack knowledge and no formal training in handling bookkeeping and encountered cash flow problems due to a lack of financial literacy and no adequate bookkeeping practices. Adeyemi and Akanji (2020) stated that bookkeeping practice has a significant effect on the SMEs and finally, the study found out that the problem of proper bookkeeping has a positive and significant effect on the SMEs' sustainability based on the type of enterprise.

Auditing practices focus primarily on reviewing the financial statements and supporting documents for companies to issue an opinion as to whether or not the accounting was prepared in line with generally accepted accounting principles (GAAP). An audit is all about examining the financial reports with an independent mind and giving a professional opinion on the reports of the organization in compliance with the terms of the engagement, professional and statutory requirements (Ezugwu and Negeedu, 2014). Agbaje, Bojuwon and Abidoye (2017) noted that audit of small and medium-scale enterprises needed adopted methodologies that adequately capture the accounting and reporting needs of the enterprises. Therefore, all the accounting practices mentioned above can be seen as the system/procedures and controls that owners could use to create and record business transactions.

Owners are people who invest their capital to create value and get appropriate returns on their investment. The accounting practices provide them with necessary information regarding the viability and profitability of the organization (Saoud, 2020). In the context of this study, owners of SMEs are an entrepreneur who owns a business who could also be managers of enterprises saddled with the responsibilities of managing the day-to-day affairs of an enterprise.

However, some factors (e.g types of enterprises may alter the extent of utilization of these accounting practices by owners/managers of SMEs. Type of enterprise here refers to the nature of productive enterprise engaged in by an entrepreneur and includes service, manufacturing and distributing. The three types of enterprises abound for owners of SMEs (service, manufacturing and distributing) with their varied abilities in accounting practices. Service SMEs refer to those SMEs that specialize in rendering services to customers rather than producing physical commodities. These include schools, law firms, restaurants and bars, hotels, laundry firms and so on. Manufacturing SMEs refer to those SMEs that specialize in the manufacture of physical commodities. Distributing SMEs refer to those SMEs that focus mainly on tracking of the distribution of the goods produced and/or sold in a company. They include SMEs that engage in auto parts manufacturing, large appliance manufacturing, pharmaceutical manufacturing, agricultural products, Coca-Cola, Nike, industrial machinery manufacturing, restaurant equipment manufacturing and businesses furniture manufacturing, among others. Okafor and Oji (2021) found that accounting practices for business success among owners of small and medium-scale enterprises vary based on the type of enterprises they engaged.

However, according to Muteti, Namusonge and Nzomo (2018), it is important for business operations and owners to adopt the use of accounting practices and systems because it promotes effectiveness to prepare recording business transactions systematically and more properly. This equally helps businesses prepare more accurate financial reports. This study is therefore imperative as it ascertained the extent utilization of accounting practices by owners of small and medium-scale enterprises for business success in Anambra State.

Statement of the Problem

In Nigeria, the importance of SMEs in economic development and growth cannot be over emphasized. They create wealth, generate job opportunities for the citizens, and improve people's welfare through the provision of goods and services. For instance, most record-keeping is related to tax laws, and if such enterprises do not keep records of estimated tax payments or receipts for planned deductions, they will not be able to claim these items on a business tax return and will have to pay more tax than is owed. Failing an external or internal audit can also lead to large fines or even the closure of SMEs. In cases, where an enterprise faces legal action or audit, disorganized record-keeping makes it difficult to produce records in a time when it is needed and can lead to issues with renitent tracking which are all against the law. Unfortunately, it seems that most SMEs are unable to keep proper books of accounts due to low levels of education and inadequate knowledge in accounting on the part of the owners/managers. It appears that most of the SMEs do not have enough capital to hire accounting experts and may not be practicing effective accounting measures for the success of their businesses. Consequently, these SMEs run in to shortages, breaks in production schedule, machine breakdown, low-capacity utilization and even fold up. In most cases they finally fold up and their workers are retrenched. This raises the level of unemployment and social vices in society. It is in a view to preventing the failure of these SMEs that this study has been designed to ascertain the extent of utilization of accounting practices by owners of small and medium-scale enterprises for business success in Anambra State. This is the problem that the study sought to solve.

Purpose of the Study

The purpose of this study was to determine the extent of utilization of accounting practices by owners of small and medium-scale enterprises for business success in Anambra State. Specifically, this study determined the extent of utilization of:

1. bookkeeping accounting practices by owners of SMEs for business success in Anambra State.
2. auditing practices by owners of SMEs for business success in Anambra State.

Research Questions

The following research questions guided this study:

1. To what extent are bookkeeping accounting practices utilized by owners of small and medium-scale enterprises for business success in Anambra State?
2. To what extent are auditing practices utilized by owners of small and medium-scale enterprises for business success in Anambra State?

Hypotheses

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

1. There is no significant difference in the mean ratings of SME owners on the extent of utilization of bookkeeping accounting practices for business success in Anambra State based on the type of enterprise (service, manufacturing and distributing).
2. There is no significant difference in the mean ratings of SME owners on the extent of utilization of auditing practices for business success in Anambra State based on the type of enterprise (service, manufacturing and distributing).

Method

The study adopted descriptive survey design. The population of the study comprised the 2,050 registered SMEs Owners practicing (services 681, manufacturing 960 and distributing 409) in Anambra State. A sample of 615 Registered SMEs Owners from services, construction and manufacturing businesses was used through proportionate stratified random sampling techniques. Data were collected using a 22 items structured questionnaire. The instrument was structured on a five-point rating scale on very greatly utilized (5), greatly utilized (4), moderately utilized (3), lowly utilized (2) and very lowly utilized (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 content validity of the instrument. To establish the internal consistency of the instrument, a trial-tested was conducted. Data collected in the pilot test were analyzed using Cronbach Alpha to determine the internal consistency.

Reliability coefficients values of 0.93 and 0.89 for bookkeeping and auditing practices respectively with an overall coefficient value of 0.91. Out of the 615 copies of the questionnaire distributed to the respondents in their organization through direct approach which facilitated a response rate, all the copies (representing 100 percent) were retrieved without an attrition rate and used for data analysis. Data collected regarding the research questions were analyzed using mean and standard deviation while Analysis of Variance (ANOVA) was used to test the null hypotheses at 0.05 level of significance. In order to determine the extent of utilization of accounting practices by owners of small and medium-scale enterprises, a decision rule based on real limit of numbers was used such that ratings between 4.50-5.00 were regarded as very greatly utilized, items with mean ratings of 3.50-4.49 were considered as greatly utilized; items with mean ratings of 2.50-3.49 were considered as moderately utilized. Furthermore, items with mean ratings of 1.50-2.49 and 1.00-1.49 were considered as lowly utilized and very lowly utilized 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.

Results

Research Question 1. To what extent are bookkeeping accounting practices utilized by owners of small and medium-scale enterprises for business success in Anambra State?

Table 1.

Mean ratings of Owners of SMEs on extent bookkeeping accounting practices are utilized for business success

SN	Book-keeping Accounting Practices	Mean	SD	Remarks
1	Preparing financial statement	4.60	0.43	Very Greatly Utilized
2	Maintaining sales and purchases records	4.20	0.48	Very Greatly Utilized
3	Maintaining of daily income and expenditure record	4.70	0.42	Very Greatly Utilized
4	Preparing balance sheet	3.69	0.50	Greatly Utilized
5	Properly handling all source documents (invoice, receipt etc)	3.54	0.53	Greatly Utilized

Utilization of Accounting Practices by Owners ...

6	Verifying recorded accounting figures	4.24	0.48	Greatly Utilized
7	Making projections on the expected profit or loss for a given period	3.20	0.59	Moderately Utilized
8	Keeping accurate records of sales and purchases	3.50	0.54	Greatly Utilized
9	Adopting weekly cash budgeting	3.36	0.58	Moderately Utilized
10	Preparing cash flow statements	4.56	0.44	Very Greatly Utilized
11	Establishing financial plans for specific areas for fund allocation	4.50	0.45	Very Greatly Utilized
12	Carrying out bank reconciliation	3.61	0.53	Greatly Utilized
	Cluster Mean	3.98	0.45	Greatly Utilized

Data in Table 1 shows that four items has mean ratings of 4.50 to 4.70 on aspect of bookkeeping accounting practices and were rated as very greatly utilized. Six items have mean ratings from 3.50 to 4.24 as greatly utilized, while the remaining two items were rated moderately utilized and have mean ratings from 3.20 to 3.36 each respectively. The standard deviation of 0.42 to 0.58 showed that respondents are not wide apart in their mean ratings which indicate homogeneity. The cluster mean score of 3.98 indicate that bookkeeping accounting practices were greatly utilized by owners of SMEs for business success in Anambra State.

Research Question 2. To what extent are auditing practices utilized by owners of small and medium-scale enterprises for business success in Anambra State?

Table 2.

Mean ratings of Owners of SMEs on extent auditing practices are utilized for business success

SN	Book-keeping Accounting Practices	Mean	SD	Remarks
1	Using internal audit services in operation	3.30	0.56	Moderately Utilized
2	Ensuring effective internal controls	3.20	0.59	Moderately Utilized
3	Regularly reviewing internal control pattern	3.70	0.55	Greatly Utilized
4	Using the services of external auditor for audit review	3.39	0.55	Moderately Utilized
5	Using audit as a check on accounting systems and records	3.44	0.53	Moderately Utilized
6	Relying on Auditor's advice in financial management	3.24	0.58	Moderately Utilized
7	Giving assurance of financial integrity to external providers of finance through audit reports	3.20	0.59	Moderately Utilized
8	Relying on Auditor's advice in financial management	3.50	0.52	Greatly Utilized
9	Carrying out non-statutory examination of financial books and records	3.38	0.57	Moderately Utilized
10	Using services of external auditor for proper annual report	3.46	0.51	Moderately Utilized
	Cluster Mean	3.38	0.55	Moderately Utilized

Data in Table 2 shows that two items has mean ratings of 3.50 to 3.70 on aspect of auditing practices and were rated as greatly utilized. The remaining eight items have mean ratings from 3.20 to 3.46 as moderately utilized. The standard deviation of 0.45 to 0.59 showed that respondents are not wide apart in their mean ratings which indicate homogeneity. The cluster mean score of 3.38 indicate that auditing practices were moderately utilized by owners of SMEs for business success in Anambra State.

Hypothesis 1. There is no significant difference in the mean ratings of SME owners on the extent of utilization of bookkeeping accounting practices for business success in Anambra State based on the type of enterprise (service, manufacturing or distributing).

Table 3.

Summary of ANOVA on the extent of utilization of bookkeeping accounting practices based on the type of enterprise

Sources of Variance	SS	df	MS	F	P	Decision
Between Groups	1.736	2	.671	24.45	.001	S
Within Groups	3.052	612	.034			
Total	4.788	614				

Table 3 shows that there is significant difference among the three groups (manufacturing, distributing or service) in terms of their mean ratings on the extent of utilization of bookkeeping accounting practices for business success in Anambra State. It was observed that at 0.05 level of significance, 2 is nominator and 612 of denominator the calculated F-ratio is 24.45 and *P-value* .001 which is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected.

Table 4.

Scheffe post hoc test on the extent of utilization of bookkeeping accounting practices based on the type of enterprise.

(I) types of enterprises	(J) types of enterprises	Mean Difference (I-J)	P
Manufacturing	Distributing	.07455*	.003
	Service	-.11684*	.000
Distributing	Manufacturing	-.07455*	.003
	Service	-.20139*	.000
Service	Manufacturing	.11684*	.000
	Distributing	.20139*	.000

The Scheffe post hoc test of multiple comparisons in Table 4 shows that the difference is between the SMEs owners with manufacturing and those with distributing and; the SMEs owners with distributing and those with service businesses.

Hypothesis 2. There is no significant difference in the mean ratings of SME owners on the extent of utilization of auditing practices for business success in Anambra State based on the type of enterprise

(service, manufacturing or distributing).

Table 5

Summary of ANOVA on the extent of utilization of auditing practices based on the type of enterprise

Sources of Variance	SS	Df	MS	F	P	Decision
Between Groups	1.265	2	.363	24.75	.000	S
Within Groups	2.021	612	.122			
Total	3.286	614				

Table 5 shows that there is a significant difference among the three groups (manufacturing, distributing or service) in terms of their mean ratings on the extent of utilization of auditing practices for business success in Anambra State. It was observed that at 0.05 level of significance, 2 is nominator and 612 of denominator the calculated F-ratio is 24.75 and *P-value* .000 which is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected.

Table 6.

Scheffe post hoc test on the extent of utilization of auditing practices based on the type of enterprise

(I) type of enterprise	(J) type of enterprise	Mean Difference (I-J)	P
Manufacturing	Distributing	-.27974*	.000
	Service	-.29234*	.000
Distributing	Manufacturing	.27974*	.000
	Service	-.01261	.890
Service	Manufacturing	.29234*	.000
	Distributing	.01261	.890

The Scheffe post hoc test of multiple comparisons in Table 6 shows that the difference is between the SMEs owners with distributing and those with service and; the SMEs owners with distributing and those with manufacturing.

Discussion of Findings

The findings of the study revealed that bookkeeping accounting practices were greatly utilized by owners of the SMEs for business success in Anambra State. This finding is in line with Negou (2018) who stated that the small businesses in Kumba Municipality have an account clerk that recorded their transactions manually following the single-entry system. The findings disagreed with James (2020) who revealed that Most of SMEs owners lack knowledge and no formal training in handling bookkeeping and encountered cash flow problems due to a lack of financial literacy and no adequate bookkeeping practices.

The findings of the study further revealed significant difference in respondents' mean ratings on the extent they utilized bookkeeping accounting practices for business success in Anambra State based on the type of enterprise. These findings agree with Adeyemi and Akanji (2020) who stated that bookkeeping practice has a significant effect on the SMEs and finally, the study found out that the problem of proper bookkeeping has a positive and significant effect on the SMEs' sustainability based on the type of enterprise. The reason for the similarities in test of hypotheses is because they are one who uses bookkeeping practices for business success and maximized profit. The reason for determining extent respondents utilized bookkeeping practices is because they will use as accounting records that would help small and medium-scale enterprises to calculate accurate profit, measure performance and put adequate maintenance and control measures.

Findings on auditing practices were moderately utilized by owners of the SMEs for business success in Anambra State. This finding is in line with Agbaje, Bojuwon and Abidoye (2017) noted that audit of small and medium-scale enterprises needed adopted methodologies that adequately capture the accounting and reporting needs of the enterprises. The findings agree with Ndirangu (2018) who stated that small and medium-scale enterprises (SMEs) often rely on accountants from their audit firms to assist in reconciling accounts, and preparing financial statements; they often lack the sophistication necessary to carry out these tasks.

The findings of the study further revealed significant difference in respondents' mean ratings on the extent they utilized auditing practices for business success in Anambra State based on the type of enterprise. These findings agree with Popescu, Deaconu and Popescu (2014) pointed out that most small and medium-scale enterprises under-perform because of ineffectiveness in accounting practices used and experience. In support, Okafor and Oji (2021) revealed that accounting practices for business success among owners of small and medium-scale enterprises vary based on the type of enterprises they engaged. The reason for the similarities in test of hypotheses is because they are one who uses businesses to create wealth, generate job opportunities for the citizens, and improve people's welfare through the provision of goods and services. The reason for determining extent respondents' utilized auditing practices is because most of their record-keeping is related to tax laws, and if they do not keep records of estimated tax payments or receipts for planned deductions, they will not be able to claim these items on a business tax return and will have to pay more tax than is owed.

Conclusion

Based on the findings of the study, it is concluded that most of the accounting practices listed in the study are widely used and practiced by SMEs in a highly competitive market such as Anambra State and serve as a panacea for future competitiveness and long-term sustainability. Thus, auditing practices are not widely used which is as a result of SMEs owners' inability to determine its importance in promoting effectiveness recording of business transactions systematically and more accurate for financial reports. However, owners of SMEs in Anambra State need to be trained and retrained in accounting practices to avoid issues with rentent tracking which is against the law.

Recommendations

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

1. Owners of SMEs in Anambra State should utilize auditing practices to a great extent because it will enable them have great influence on consumer's perception of product and

- services as an incentive to consumers to patronize their product. This will enhance the competitive advantage for the company and increase its market share.
2. Entrepreneurial bodies such as National Association of Small and Medium Entrepreneurs (NASME) Anambra State Chapter should organize their members coherently with a view to guiding them through dissemination of relevant and up-to-date information on the identified sustainable accounting practices needed for business success and development.

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EFFECT OF FLIPPED CLASSROOM TECHNIQUE ON SENIOR SECONDARY SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT IN FINANCIAL ACCOUNTING IN ANAMBRA STATE

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Abstract

This study determined the effect of flipped classroom technique on students' academic achievement in financial accounting in Anambra State. Two research questions were raised and three null hypotheses were tested at 0.05 level of significance. The study adopted quasi-experimental non-equivalent control group design. The population of this study comprise 1,876 SS II financial accounting students from six education zones in the 257 public secondary schools in Anambra State. The sample of the study comprised 59 (38 males and 21 females) SS II financial accounting students in four intact classes selected using multi-stage sampling procedure. Financial Accounting Achievement Test (FAAT) was validated and used as instrument for data collection. The reliability of FAAT was determined using Kuder-Richardson Formula 20 (KR-20) which yielded a reliability coefficient of 0.90. Mean and standard deviation were used to answer the research questions, while Analysis of Covariance (ANCOVA) was used to test the null hypotheses. Findings of the study revealed that flipped classroom technique has a higher effect on students' academic achievement scores in financial accounting than the lecture method and the difference was significant. The interaction effect between flipped classroom technique and lecture method and gender on students' academic achievement was not statistically significant. It was concluded that flipped classroom technique is not only gender-friendly but also an active instructional approach that positively enhance the academic achievement of students in financial accounting. It was recommended among others that financial accounting teachers should utilize flipped classroom technique in their instructional delivery more frequently than the lecture method.

Keywords: Flipped classroom technique, Academic Achievement and Financial Accounting

Introduction

Financial accounting is a social science subject offered in senior secondary schools in Nigeria. The purpose of financial accounting in senior secondary curriculum is to consolidate on the teaching of bookkeeping at the junior secondary schools (Obiwusi, 2014). Financial accounting provides background instruction which broadens the minds of students to their monetary and economic roles as intelligent consumers, business analyst and prudent citizens. Eze, Ezenwafor and Obidile (2016) stated that financial accounting is classification and recording of monetary transactions and presentation of financial results of the activities of business organizations for making informed financial decisions. Thus, financial accounting is the documentation of financial reports and information of the financial performance of business organizations. The teaching of financial accounting in secondary schools helps to lay proper foundation for further study of accounting and allied courses at higher levels and to enable the students understand basic accounting principles,

practices and their applications to modern business activities (Idowu, 2015). One quick avenue of monitoring the quality of instructional delivery of financial accounting in senior secondary schools is through students' academic achievement

Academic achievement is the level of academic success obtained by students after undertaking an evaluation exercise in the classroom or laboratory. Academic achievement indicates the extent to which students have accomplished the specific instructional objectives of a subject matter in schools. It is the scholastic ranking of students' academic expertise on financial accounting. According to Ekhasemomhe in Nwaukwa (2021), academic achievement can be both indicative and predictive. It is indicative when it pin-points a students' level of success, that is, when a student who made grade A in financial accounting is adjudged to have had a higher achievement than another student who made grade C in the same subject. The author posited that it is predictive when it is a criterion for determining the ability of a student to undertake similar task such as the case of a student who is deemed fit to study accountancy in tertiary institutions because of his or her high score in financial accounting examination in senior secondary schools.

In Nigeria, the level of a student's academic achievement is determined by grades obtained from continuous assessment, internal and external examinations. Documenting the academic achievement of Nigerian students in financial accounting, the West African Examination Council (WAEC) Chief Examiner's (2021) revealed percentage of students' academic achievement on financial accounting stood at 48 percent, 43 percent, 36 percent and 49 percent respectively from 2016 - 2019 respectively. In 2020, 41.95 percent of students had grades A1 to C6 while 58.05 percent made weak pass or fail in financial accounting. In 2021, 42.98 percent of students had grades A1 to C6 while 57.02 percent made weak pass or fail in financial accounting. In 2022, 47.85 percent of students had grades A1 to C6 while 52.15 percent made weak pass or fail in financial accounting. The WAEC Chief Examiner's (2022) report attributed the poor academic achievement on financial accounting to students' poor acquisition of basic calculation skills to handle practical financial accounting questions correctly. This submission promoted educators to look for instructional avenues to improve the academic achievement of students on financial accounting in secondary schools.

Consequently, many innovative techniques have been advocated for effective teaching of financial accounting in the secondary schools. One of such innovative techniques is the flipped classroom technique. Flipped classroom technique is a specific type of blended learning design which uses technology to move lectures outside the classroom and integrate active learning activities inside the classroom. DeLozier and Rhodes (2017) posited that flipped classroom technique is an instructional arrangement through which teachers design lectures for students via Internet outside the classroom and later use class time for variety of learning activities. On the other hand, Talan and Gulsecen (2019) averred that flipped classroom technique is an instructional process where students learn the lesson content/learning materials at home or wherever that is convenient for them at their own time and pace through technology using computer or mobile phone before coming to class.

In this light, JoRanna (2014) averred that flipped classroom technique consists of two main components; the use of technologies outside classroom, and taking part in interactive discussions in real time in the classroom. In the context of this study, flipped classroom technique refers to a teaching-learning method in which students gain first exposure to new material outside of class, usually via lecture videos or reading of assigned materials online, and then the class time is used to do the harder work of assimilating that knowledge through problem-solving and discussions. It is called the flipped classroom technique because what used to be class work (the lecture) is done at home via media such as teacher-created videos, animated lessons and what used to be homework (assigned

problems) is now done in class (Tan, Yue & Fu, 2017). However, the flipped classroom is much more than the videos because flip can be delivered via bulk SMS or any other digital media (Talbert, 2017). In this study, bulk Short Message Service (SMS) and Multimedia Messaging Service (MMS) are used as flips for instructional engagements. In situations where students do not have mobile phones with SMS and MMS, their parents' phones with such features are used for the study. Short Message Service (SMS) and Multimedia Messaging Service (MMS) are used because they are user friendly and can enable financial accounting students to express themselves without any fear or intimidations, thereby removing room for gender bias.

Gender is a biological characteristic differentiating between the feminine and masculine population. According to Owodunni and Ogunbola (2013), there are many challenges posed by gender on academic achievement of students because certain subjects are recognized as masculine and others as feminine. Eze, Ezenwafor and Obidile (2014) revealed differential academic achievement among male and female students in financial accounting but Enwere and Enwere (2014) found no gender differences in achievement and retention at the secondary school level while Ethel-Echedo (2021) found that female students outperformed males in financial accounting examinations. Perceived gender roles and ambitions may have an underline influence on students' academic achievement in financial accounting. It is important therefore to test the effect of flipped classroom technique on academic achievement of students in financial accounting, as well as gender differences in their achievement in financial accounting at the secondary school level in Anambra State.

Statement of the Problem

Financial accounting is a skill-based subject that prepares students for account clerks and book-keepers. Despite the laudable attributes of the subject, students' academic achievement in the subject has been negatively skewed consecutively in Anambra State. This is evidenced by the WAEC Chief Examiner's Report from 2016 to 2022 which showed that students performed poorly in financial accounting in Anambra State. Hence, the WAEC Chief Examiner's report (2022) suggested that financial accounting teachers should adopt creative teaching methods where students are encouraged to acquire basic calculation skills either individually or as a group for them to be well grounded on the subject matter. This suggestion questions the usefulness of the lecture method where the teacher stands by the chalkboard and delivers lessons through verbal instruction without students' active participation.

Based on the foregoing, innovative teaching and learning methods need to be applied to see if they can reverse the current poor performance among students on financial accounting in secondary schools in Anambra State. The idea that delivering instructional content to students online may improve their study habit and increase their preparation for classroom activities is the rationale behind the use of flipped classroom technique by financial accounting teachers and students in Nigerian secondary schools. Flipped classroom technique has been employed in the teaching of some subjects like Physics, Mathematics and Chemistry and has improved students' achievement with positive results. Whether the same could be replicated in financial accounting is yet to be determined. It is with this understanding, the researcher is posed to ask, if the utilization of flipped classroom technique by teachers will improve students' academic achievement in financial accounting in Anambra State? This is the crux of the study.

Purpose of the Study

The main purpose of this study was to determine the effect of flipped classroom technique on senior secondary school students' academic achievement in financial accounting in Anambra State. Specifically, the study determined the:

1. Difference between the academic achievement mean scores of students taught financial accounting with flipped classroom technique and those taught using lecture teaching method
2. Difference between the academic achievement mean scores of male and female students taught financial accounting with flipped classroom technique
3. The significant interaction effect of treatments and gender on students' academic achievement in financial accounting

Research Questions

The following research questions guided the study:

1. What is the difference between the academic achievement mean scores of students taught financial accounting with flipped classroom technique and those taught using lecture method?
2. What is the difference between the academic achievement mean scores of male and female students taught financial accounting with flipped classroom technique?

Hypotheses

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

1. There is no significant difference between the academic achievement mean scores of students taught financial accounting using flipped classroom technique and those taught using lecture method
2. There is no significant difference between the academic achievement mean scores of male and female students taught financial accounting using flipped classroom technique
3. There is no significant interaction effect of treatments and gender on students' academic achievement scores in financial accounting

Method

The study adopted a non-randomized non-equivalence post-test quasi-experimental design. Two groups (experimental and control groups) were involved in the study. The experimental groups were exposed to topics in financial accounting using flipped classroom technique and the control groups were taught the same topics using the lecture method. The population of this study comprised 1,876 SS II financial accounting students from six education zones in the 257 public secondary schools in Anambra State. The sample of the study comprised 59 (38 males and 21 females) SS II financial accounting students in four intact classes from four co-educational secondary schools in Awka and Onitsha education zones of Anambra State selected using multi-stage sampling procedure. Thus, 28 students (17 males and 11 females) were in the experimental groups while the 31 students (21 males and 10 females) formed the control groups.

Experimental Procedures

Before undertaking the experiment, one week was used for briefing and administration of the pre-test. Financial accounting teachers that handled the control groups had a discussion with the researchers individually on how to use the lecture method lesson plan prepared by the researchers. For the experimental groups, the researchers had an interactive session with financial teachers in order to

get them acquainted with the flipped classroom instructional procedure. The briefing and interactive session lasted for one week (thrice a week) of one hour each.

The following were covered during the briefing and interactive session:

1. Introduction of the research assistants
2. The purpose of the research exercise
3. Flipped classroom technique and how it will be carried out in teaching financial accounting
4. Discussion on the role of mobile phones and internet in flipped classroom technique
5. Discussion on topics to be covered within the four weeks of the experiment
6. The researchers demonstrated how the flipped classroom instruction could be implemented. Here, the researchers taught the research assistants (regular financial accounting school teachers) the outside and inside class activities embedded in flipped classroom technique. The researchers gave the research assistants study guide/hints concerning the topics to be treated through Multimedia Messaging Service and SMS messages that were delivered to students' WhatsApp.

For the inside class activities which was the real teaching of the topics, the research assistants were briefed on how to implement instructional activities such as group discussions, class discussions, demonstration, experiments, guided discovery, collaborations, and other strategies that involves active participation of the students. The researchers taught the research assistants how to arrange the students in groups of five members and asked them to discuss the topic using the study guideline given/sent to them previously. The research assistants were briefed on how to moderate/direct the discussion and encourage students to ask questions concerning the topic, as well as state the challenges they encountered during the outside class activities (on the study guide).

The duration of the experiment;

Week One: The researchers visited the experimental and control group schools for familiarization and permission before briefing of financial accounting teachers and administration of the pre-test

Week Two: The teaching of introduction of manufacturing account to control and experimental groups

Week Three: The teaching of calculation of manufacturing account to control and experimental groups

Week Four: The teaching of introduction of account of non-profit making organizations to control and experimental groups

Week Five: The teaching of calculation of account of non-profit making organizations to control and experimental groups

Week Six: Administration of post-test to the experimental and control group schools.

Financial Accounting Achievement Test (FAAT) was used for data collection. The FAAT was developed by the researcher using WAEC standardized tests of 2011 to 2022. It contained 50 objective questions. Only one option was correct while the remaining three are distracters. Each correct answer in the FAAT was scored 2 marks, while questions not answered correctly and questions not attempted was scored zero (0). The maximum score for the 50 questions was 100%, while the minimum score was 0%. This instrument served dual purposes. First, it was administered to the experimental and control groups as pre-test before the commencement of the experiment and secondly, as a post-test after the experiment to determine whether the academic achievement of the two groups was significant or not.

The face and content validity of the instrument was established by three experts. Copies of FAAT were administered on 15 SS II financial accounting students from two co-education secondary school in Ogidi education zone, Anambra State who are not part of the study population. The

reliability of FAAT was determined using Kuder-Richardson Formula 20 (KR-20) because the test items were dichotomously scored. The reliability coefficient of 0.90 was obtained. Four trained teachers were used for the experiment which lasted for six weeks.

Data related to research questions were analyzed using mean and standard deviation. ANCOVA were used to test the hypotheses at 0.05 level of significance. ANCOVA was considered appropriate because it controlled the initial differences across groups and increased the precision due to the extraneous variables. The decision on hypotheses was that where the p-value is less than or equal to the level of significance (0.05), the null hypothesis was rejected, otherwise the null hypothesis was accepted. The analysis was analyze using SPSS version 23.0.

Results

Research Question 1. What is the difference between the mean academic achievement scores of students taught financial accounting with flipped classroom technique and those taught using lecture method?

Table 1

Mean Academic achievement scores of students taught financial accounting using flipped classroom technique and those taught with the lecture method

Source of Variance	N	Pre-test Mean	Post-test Mean	Pre-test SD	Post-test SD	Mean Gain
Experimental Group	28	39.02	67.91	4.91	7.03	28.89
Control Group	31	31.16	48.72	3.56	5.28	17.56
Mean difference						11.33

Data in Table 1 show that the post-test mean academic achievement score for the experimental group was 67.91 while the pre-test mean academic achievement score was 39.02. The post-test mean academic achievement score for the control group was 48.72 while the pre-test mean academic achievement score is 31.16. The result indicates that flipped classroom technique has a higher effect on students’ academic achievement scores in financial accounting than the lecture method. The standard deviation of the experimental group for both pre-test and post-test (4.91 and 7.03) was higher than that of the control group (3.56 and 5.28). This shows that the scores in the experimental and control groups are homogenous but the scores are more homogenous in the experimental group because their scores were spread out over the control group.

Research Question 2. What is the difference between the mean academic achievement scores of male and female students taught financial accounting with flipped classroom technique?

Table 2.

Mean Academic achievement scores of students taught financial accounting using flipped classroom technique based on gender

Gender	N	Pre-test Mean	Post-test Mean	Pre-test SD	Post-test SD	Mean Gain
Male	17	22.31	37.61	2.77	3.85	15.3
Female	11	18.05	31.00	1.94	2.63	12.95
Mean Gain Difference						2.35

Data in Table 2 show that the post-test mean academic achievement score for male students taught financial accounting with flipped classroom technique is 37.61 while the pre-test mean academic achievement score was 22.31. The post-test mean score for female students taught financial accounting with flipped classroom technique is 31.00 while the pre-test mean score is 18.05. This result indicates that flipped classroom technique was more effective in enhancing the academic achievement of male students in financial accounting than female students. The standard deviation of the male financial accounting students for both pre-test and post-test (2.77 and 3.85) was higher than female financial accounting students (1.94 and 2.63). This shows that the scores of male financial accounting students are more homogenous than female financial accounting students.

Hypothesis 1. There is no significant difference between the mean academic achievement scores of students taught financial accounting using flipped classroom technique and those taught using lecture method.

Table 3.

ANCOVA result showing differences in students' academic achievement in financial accounting between the instructional approaches

Source	SS	Df	Mean Square	F	Sig.	Decision
Corrected Model	16831.588 ^a	2	9214.764	64.516	.000	
Intercept	10315.340	1	10315.340	97.103	.000	
Pre-test	4032.811	1	4032.811	28.066	.001	
Method	6130.212	1	6130.212	41.902	.000	S
Error	10344.117	56	137.922			
Total	181777.000	59				
Corrected Total	25174.115	58				

a. R Squared = .681 (Adjusted R Squared = .678) S = Significant, NS = Not Significant

Data in Table 3 show that there was a significant effect of the treatment which accounted for 68 percent of the variance in the academic achievement scores of the students, $F(1, 58) = 41.902$, $p(0.000) < 0.05$. Since the p-value is less than the level of significance, the null hypothesis was therefore rejected. Thus, there is a significant difference between the academic achievement scores of students taught financial accounting using flipped classroom technique and those taught using lecture method

Hypothesis 2. There is no significant difference between the mean academic achievement scores of male and female students taught financial accounting using flipped classroom technique.

Table 4.

ANCOVA result showing differences in mean academic achievement scores of students taught financial accounting using flipped classroom technique based on gender

Source	SS	df	Mean Square	F	Sig.	Decision
Corrected Model	1034.147 ^a	2	917.033	10.226	.022	
Intercept	13122.083	1	13122.083	81.634	.000	
Achievement	618.225	1	618.225	50.287	.072	
Gender	301.009	1	301.009	1.605	.163	NS
Error	140.855	25	91.105			
Total	149801.503	28				
Corrected Total	1170.836	27				

a. R Squared = .218 (Adjusted R Squared = .102) S= Significant, NS = Not Significant

Data in Table 4 show that there was no significant effect due to gender on the academic achievement scores of the students, $F(1, 27) = 1.605$, $p(0.163) > 0.05$. Since the p-value is greater than the level of significance, the null hypothesis was therefore accepted. Thus, there is no significant difference between the academic achievement scores of male and female students taught financial accounting using flipped classroom technique

Hypothesis 3. There is no significant interaction effect of treatments and gender on students' academic achievement scores in financial accounting

Table 5.

ANCOVA result showing the interaction effect of treatments and gender on students' academic achievement scores in financial accounting

Source	SS	df	Mean Square	F	Sig.	Decision
Corrected Model	27634.597 ^a	4	2204.080	91.401	.000	
Intercept	23135.396	1	23135.396	8.054	.000	
Pre-test	8405.214	1	8405.214	112.086	.001	S
Method	10500.110	1	10500.110	621.053	.000	S
Gender	921.196	1	921.196	1.018	.091	NS
Method*Gender	13.007	1	13.007	0.984	.261	NS
Error	29128.695	56	1084.121			
Total	319046.072	59				
Corrected Total	91702.411	58				

a. R Squared = .631 (Adjusted R Squared = .628) S = Significant, NS = Not Significant

Data in Table 5 show that the F-cal for Method* Gender is .984 with a p-value of .261 is greater than the level of significance (p-value > 0.05). Thus, the null hypothesis of no significant interaction effect between treatments and gender on students' academic achievement scores in financial accounting was accepted. Therefore, the interaction effect between flipped classroom

technique and lecture method used and gender on students' academic achievement in financial accounting was not statistically significant.

Discussion of Findings

Findings of the study revealed that flipped classroom technique has a higher effect on students' academic achievement scores in financial accounting than the lecture method. This means that flipped classroom technique was effective in improving the academic achievement of students in financial accounting when compared to those taught with lecture method. These findings agree with Sağlam and Arslan (2018) and Talan and Gulsecen (2019) that flipped classroom technique was an effective enhancer of students' academic achievement than the lecture method. The researcher is of the opinion that flipped classroom technique was an effective enhancer of students' academic achievement in financial accounting than lecture method because they had control of their own learning, felt like they learned twice (via video and in class), and students were offered more help during the class time by their teachers. In support of the researcher's position, Badmus (2021) reported that flipped classroom technique improved the understanding and comprehension of students who found it difficult to learn with traditional lecture. The fact that students are given the chance to study ahead and familiarize themselves with the lesson materials and topics to be discussed in the class may be responsible for flipped classroom technique having a higher effect on students' academic achievement scores in financial accounting than the lecture method.

In addition, the study disclosed that there was a significant difference between the academic achievement scores of students taught financial accounting using flipped classroom technique and those taught using lecture method. This finding is in agreement with Al-Zebidi (2020) who reported that the academic achievement of students taught with flipped classroom technique differed significantly from those students taught using lecture method in favour of the treatment group. With flipped classroom technique, students come to class prepared thinking and planning what they would learn in financial accounting during the day with their teachers unlike the lecture method where they do know what to expect because they are passive learners. This could be why, there was a significant difference between the academic achievement scores of students taught financial accounting using flipped classroom technique and those taught using lecture method. This study supports, Onyema, Choudhury, Sharma, Atonye, Phylistony and Edeh (2021) which reported that students in flipped classroom technique had a higher mean score in the post-test which was statistically significant than their counterparts who were taught using the lecture method.

Outcome of the research showed that flipped classroom technique was more effective in enhancing the academic achievement, retention and interest of male students in financial accounting than female students. Although, male students' academic achievement, retention and interest scores in financial accounting were more than female students when taught with flipped classroom technique, the difference are not significant. These findings are in consonance with Ugwoke, Edeh and Ezemma (2018) that there was no gender difference among students in their achievement and interest in accounting when taught with flipped classroom technique. Also, Makinde and Yusuf (2019) reported that there was no significant difference between the retention performance of male and female students taught mathematics using flipped classroom technique. This means that flipped classroom technique is not gender sensitive in relations to students' academic achievement, retention and interest. The researcher is of the opinion that flipped classroom technique has the potential of minimizing gender differences in academic achievement, retention and among secondary school students because they highly appreciate the use of technology in learning financial accounting.

The study discovered that the interaction effect between flipped classroom technique and lecture method used and gender on students' academic achievement, retention and interest in financial accounting was not statistically significant. This implies that both male and female students participated and achieved actively, hence there was no statistical interaction of flipped classroom technique and lecture method and gender on students' academic achievement, retention and interest scores in financial accounting. This finding was in support of the studies of Julie (2017) and Enwere, Ikeanyionwu and Goddy-Mkpa (2021) which reported non-significant interaction effect of treatments and gender on students' learning outcome in financial accounting. The non-significant interaction effect of treatment and gender means that the treatment conditions did not discriminate across gender in this study. This means that flipped classroom technique and lecture method and gender had no form of interaction and their combined effort meet the changing educational needs of students are technology savvy, hence students' academic achievement, retention and interest in financial accounting were not significant.

Conclusion

Based on the findings of the study, it was concluded that flipped classroom technique is not only gender-friendly but also an active instructional approach that positively enhance the academic achievement of students in financial accounting. With flipped classroom technique, students can construct their learning and become independent learners which in turn lead to improved academic achievement in financial accounting at the end of the school day.

Recommendations

- In the light of the findings of the study, the following recommendations are made:
1. Financial accounting teachers should utilize flipped classroom technique in their instructional delivery more frequently than the lecture method in order to enable students actively participates in classroom teaching and learning process of financial accounting.
 2. Financial accounting teachers should act as facilitators of knowledge in order to maintain the student-centred nature of flipped classroom technique so that students can work individually, and in pairs for improved learning academic achievement.
 3. Financial accounting teachers should be encouraged their students to use internet enabled mobile phones and computers for educational purposes in order to appreciate the implementation of flipped classroom technique for teaching and learning financial accounting within and outside the school environment.
 4. Management of secondary schools should organize workshop, seminar and symposium on flipped classroom technique in order to help financial accounting teachers learn the rudiments on how to use the technique for teaching financial accounting.

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EXTENT OF TEACHERS INVOLVEMENT IN SECONDARY SCHOOL ADMINISTRATION IN ENUGU STATE

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Abstract

The study centered on the extent to which teachers are involved in decision making in secondary school administration in Enugu State. Two research questions were raised and two null hypotheses were formulated to guide the study. The population consists of 4520 female teachers and 2410 male teachers, giving a total of 6930 secondary school teachers. The sample consist of 692 teachers, which was selected through a stratified random sampling procedure. A structure questionnaire was designed to elicit appropriate information from the respondents. The instrument was faced validated by three experts, two from educational management department and one in measurement and evaluation department all from faculty of education in Enugu State University of Science and Technology. The reliability co-efficient of the instrument was calculated using Cronbach alpha method. Alpha value was found to be 0.86 indicating high reliability of the instrument. Mean rating were used to answers the research questions, and t- test statistics was used to test the hypotheses at 0.5 level of significance. The Findings of this study indicates that teachers are involved to a great extent in decision-making in secondary schools administration in Enugu state. The authors recommended among others that School administrators should endeavour to always involve teachers in any decision-making that will affect them and make them to be part of any decision-making in the school system.

Key Words. Business administration, decision-making, Involvement, secondary schools

Introduction

Organizations in the world over, be they industry or education depend on the use of resources available to them for their effective and efficient management delivery. In fact, management involves the arrangement and utilization of human and material resources for the achievement of the objectives of any organization. Resource, be it human or material, involves the combination of those things that make up the resource in the right proportion to achieve the pre-determined output which is the goals of the organization. In other words, no educational organization can thrive above the quality of its teachers.

Involvement of teachers in secondary school administration is germane in order to achieve the broad and specific goals of secondary education as outlined in the Federal Republic of Nigeria (FRN) (2013) education policy document. According to this policy document, the broad goals of secondary education shall be to prepare the individual for:

- a. Useful living within the society; and
- b. Higher education

In specific term, secondary education shall:

- (a) Provided all primary leavers with the opportunity for education of a higher level, irrespective of sex, social status, religious or ethnic background;
- (b) Offer diversified curriculum to cater for the differences in talents, opportunities and future roles;
- (c) Provide trained manpower in the applied science, technology and commerce at sub-professional grades;
- (d) Develop and promote Nigerian language, art and culture in the context of world's cultural heritage;
- (e) Inspire students with a desire for self-improvement and achievement of excellence;
- (f) Foster National Unity with an emphasis on the common ties that unites us in our diversity;
- (g) Raise a generation of people who can think for themselves, respect the views and feelings of others, respect the dignity of labour, appreciate those values specified under our broad national goals and live as good citizens;
- (h) Provide technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development.

The above broad and specific goals of secondary education cannot be fully realized without the involvement of teachers. To ensure uniformity, government formulated some policies and guidelines to be used and followed by the principals to ensure that teachers are involved in school administration.

School administration is a specialized activity which requires the smooth running of the whole educational enterprise composed of human and material resources in an organized manner to constructive and fruitful direction. Sidhu (2014) described school administration as the process that involves comprehensive effort to achieve some specific educational objectives and it deals with policies and practice. The principal is at the head of the school. He uses teachers to achieve the school objectives. It is the extent to which he uses teachers who constitute the human resource that will determine the extent of success in educational and instructional delivery.

Whawo (2015) defined school administration as the process of mobilizing the human and material resources within a school for effective teaching and learning so that the goals of establishing the school may be efficiently realized. School administration involves prudent management of scarce and available resources as well as high degree of accountability on all organizational members. Yusuf (2013: 43), observed that:

Teachers should be involved in the running of the school, it is important that teachers know what is happening in the school, teachers should be able to identify with the policy and programmes of the school. When policies and plans are made, teachers should be involved because they are the people that implement those policies and plans.

Thus, this study was motivated by one of the above statements which stated that: when policies and plan are made, teachers should be involved because they are the people that implement those policies and plans. The implication is that teachers should be involved in major school administrative activities such as instructional planning, students' personnel administration, school business administration and decision-making which is the main focus of this study.

School business administration as defined by Ogbonnaya (2014) is concerned with that phase of school administration that has to do with procuring, expending, accounting and maintaining the financial and material resources of an educational institution efficiently to achieve educational objectives. In other words, school business administration consists of aggregate of school finances. It

involves making budget for school, securing revenue from the government and the alternative sources of income. It also includes managing of expenses and directing of accounting processes. It is the task of the school administrator to prepare the budget, secure available revenue and see that school funds are prudently managed for accountability purposes.

The human resource in Enugu state secondary school system is made up of male and female teachers, which are appointed based on their qualifications in their various areas of specialization. Observation has shown that the female gender is dominating the teaching profession in the state. Both male and female teachers are appointed principals of schools. They are appointed based on their qualifications, experience and competence.

Decision-making in a simple term is a process of choosing among alternatives. According to Ogbonnaya (2014), decision making is simply the process of choosing from among alternative ways of providing a solution to a problem. It is a process of arriving to a conclusion towards a given problem or situation. Simon (2017), describes it as a process of identifying and selecting a course of action for available alternatives to solve a specific problem or to take advantage of an opportunity. Tarpael (2018) defined decision-making as the possession of requisite skills by administrators that can facilitate choice among several alternatives. From the stand point of this work, the term decision-making is all encompassing in that no manager or administrator can effectively progress in the modern world without options of choice in the process of production. Therefore, administrators must be versed in the art of decision-taking which implies choosing the right course of action among alternatives.

However, it is the intention of this study to examine the extent to which teachers are involved in the administration of secondary schools in Enugu State. The gap that this study intends to fill is to identify the extent to which teacher's involvement in secondary school administration in Enugu State.

Statement of the Problem

Human resource utilization in secondary schools is a key component in school administration. The extent to which human resource is utilized in school determines to a large extent the extent of success of the school. Teachers are major human resource in secondary schools. They are, therefore, indispensable in educational growth and development. There is an allegation that many school principals do not involve teachers effectively in their school administration. Some have argued that some of the current problems facing secondary schools are traced to the inability of the principals to utilize effectively the human resource in the school. According to Sidhu (2014), teachers are not involved in such sensitive areas as instructional planning, students' personnel services, school business administration and decision-making. The exclusion of teachers in these areas can adversely affect both teaching and learning. This is because these are the core areas of school administration. Instructional planning cannot be effectively implemented if teachers are not effectively involved, because they are the implementers of curriculum in schools, neither will student personnel be effectively handled if teachers are relegated to the background because they are closer to the students than any other persons or groups. The thrust of this study is to examine the extent of teacher's involvement in secondary school administration in Enugu State. The question emanating from this precarious issue at this juncture is that: "What is the extent of teacher's involvement in secondary school administration in Enugu state?"

Purpose of the Study

The purpose of this study is to examine the extent to which teachers are involved in secondary school administration in Enugu State. Specifically, the study sought to examine;

1. the extent to which teachers are involved in the school business administration in secondary school administration in Enugu State.
2. the extent to which teachers are involved in decision-making in secondary school administration in Enugu State.

Research Questions

The following research questions guided the study:

1. To what extent do teachers are involved in school business administration in secondary schools in Enugu State?
2. To what extent do teachers are involved in decision-making in secondary school administration in Enugu state?

Hypotheses

The following null hypotheses were tested at a 0.05 level of significance.

1. There is no significant difference between the mean ratings of male and female teachers on their involvement in school business administration in secondary school in Enugu state.
2. There is no significant difference between the mean ratings of male and female teachers on their involvement in decision making in secondary school administration in Enugu state.

Research Method

The design of this study was descriptive survey design. Descriptive survey design, according to Ali (2016), is a study in which a group of people or items are studied by collecting and analyzing data from few people or items considered to be representative of the entire group. Hence, the researcher deems it necessary to use this design because a representative sample of the entire population was used for the study. The study was carried out in Enugu State, Nigeria. It covers all the 17 Local Government Areas (LGAs) in the state. The population comprised of all the teachers in the 314 public secondary schools in Enugu State. Available statistics showed that there are 4,520 female and 2410 male secondary school teachers in Enugu State totaling 6930 secondary school teachers from the six education zones.

The sample of 692 teachers made of 451 female and 241 male teachers was drawn using simple random sampling technique. The instrument used for data collection was a structured questionnaire. The instrument have two sections, A and B. section A dealt with the bio-data of the respondents and section B dealt with information on extent of teachers involvement in decision making in secondary school administration. The instrument was faced validated and the reliability of the instrument was calculated using Cronbach Alpha method. Which yielded a coefficient value of 0.86, indicating high reliability of and the internal consistency of the items in the instrument. Mean score were used to answer the research questions and t-test statistic was used to test the hypotheses at a 0.05 level of significance.

Results

Research Question 1. To what extent do teachers are involved in school business administration in secondary schools in Enugu state?

Table 1

Mean rating score of male and female teachers on the extent to which teachers are involved in school business administration in secondary schools in Enugu state.

S/N	Teachers' involvement in:	Male Teachers			Female Teachers		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
1.	Sourcing of school finance	3.07	0.65	GE	2.96	0.70	GE
2.	Expending school finance	2.57	0.89	GE	2.63	0.78	GE
3.	Accounting of school finance	2.64	0.78	GE	2.57	0.89	GE
4.	School budgeting	2.97	0.70	GE	2.83	0.69	GE
5.	Procuring material resources for the school	2.80	0.76	GE	2.97	0.70	GE
6.	Administration of proceeds from school activities	2.73	0.75	GE	3.02	0.65	GE
7.	Maintaining school finance	2.82	0.69	GE	2.58	0.89	GE
	Cluster Mean	2.80	0.75	GE	2.79	0.76	GE

The data on Table 1 above show that while the means for male teachers range from 2.57 to 3.07, that of female teachers range from 2.57 to 3.02. Based on the data on Table 1 above, the two groups of respondents independently rated all the items great extent. The ratings of the items of this cluster imply that the two groups of respondents share the view that teachers are involved in school business administration to a great extent. The cluster means are 2.80, for male teachers and 2.79 for female teachers in a four-point rating scale with corresponding standard deviation of 0.75 and 0.76 for male and female teachers respectively.

Research Question 2. To what extent do teachers are involved in decision making in secondary school administration in Enugu State?

Table 2.

Mean scores of male and female teachers on the extent to which teachers are involved in decision making in secondary school administration

S/N	Teachers' involvement in:	Male Teachers			Female Teachers		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
8.	Staff appraisal	3.21	0.63	G.E	2.97	0.76	GE
9.	Promotion of staff.	2.43	1.11	LE	2.48	1.04	LE
10.	Deciding staff remunerations	2.52	1.06	GE	2.64	0.95	GE
11.	Selecting the principal	3.10	0.67	GE	3.06	0.66	GE
12.	Maintaining and improving services of staff.	2.48	1.12	LE	2.33	1.14	LE
13.	Orientation of new staff.	2.57	1.02	GE	3.01	0.65	GE
14.	Recruitment and selection of new staff	2.39	1.14	LE	2.49	1.04	LE

Extent of Teachers Involvement in Secondary School ...

15.	Acquiring of items like stationary and equipment	2.62	0.97	GE	2.75	0.93	GE
16.	Recommending text books for various subjects	2.73	0.93	GE	2.94	0.75	GE
17.	Discipline of staff.	2.48	1.12	LE	2.45	1.01	LE
18.	Fund raising.	3.06	0.65	GE	2.92	0.74	GE
19.	Conflict resolution.	2.81	0.82	GE	2.73	0.93	GE
20.	Maintenance of school plant.	2.74	0.93	GE	2.99	0.76	GE
	Cluster Means	2.69	0.94	GE	2.98	0.87	GE

The data on table 2 above show that while the means for male teachers range from 2.39 to 3.21, that of female teachers range from 2.33 to 3.06. In exception of item 9, 12, 14 and 17 with a mean of 2.43, 2.48, 2.39, 2.48 for male teachers and 2.48, 2.2.33, 2.49, 2.45 for female teachers, other items have a mean above the acceptable benchmark of 2.50. In other words they share the view that teachers are involved in decision making in secondary school administration. The cluster means are 2.69, for male teachers and 2.98, for female teachers in a four point rating scale with corresponding standard deviation of 0.94 and 0.87 for male and female teachers respectively.

Hypothesis 1. There is no significant difference between the mean ratings of male and female teachers on the extent to which teachers are involved in school business administration in secondary schools in Enugu state.

Table 3.

The t-test of significant difference between the mean rating scores of male and female teachers on the extent to which teachers are involved in school business administration

Gender	N	X	SD	Df	t-cal	t-critical	Decision
Male teachers	241	2.80	0.75				Not Significant
Female Teachers	451	2.79	0.76	690	0.27	1.03	

Table 3 above shows the independent t-test analysis of the mean difference in the response opinions of male and female teachers on the extent to which teachers are involved in school business administration in secondary schools in Enugu state. The result on Table 3 shows that the calculated t-value (0.27) was less than the critical value (1.03). The null hypothesis was not rejected. Therefore, there is no significant difference in the mean rating of male and female teachers on the extent to which teachers are involved in school business administration in secondary schools in Enugu state.

Hypothesis 2. There is no significant difference between the mean ratings of male and female teachers on the extent to which teachers are involved in decision making in secondary school administration in Enugu state.

Table 4.

The t-test of significant difference between the mean rating scores of male and female teachers on the extent to which teachers are involved in decision making

Group	N	\bar{X}	SD	Df	t-cal	t-critical	Decision
Male teachers	241	2.69	0.94				Not Significant
Female Teachers	451	2.98	0.87	690	0.45	1.15	

Table 4 above shows the independent t-test analysis of the mean difference in the response opinions of male and female teachers on the extent to which teachers are involved in decision making in secondary school administration in Enugu state. The result in table 4 shows that the calculated t-value (0.45) was less than the critical value (1.15). The null hypothesis was not rejected. Therefore, there is no significant difference in the mean rating score of male and female teachers on the extent to which teachers are involved in decision-making in secondary schools' administration in Enugu state.

Discussion

The findings of the study have shown that teachers are involved to a great extent in school business administration in secondary schools in Enugu state. In other words, respondents share the view that teachers are involved in school business administration.

In the study, the respondents agreed that teachers are involved in procuring material resources for the school and also participated in school budgeting. The findings agree with Taylor (2011) who noted that teachers are one of the crucial factors in the school system and can not be neglected in school business administration. Therefore, they need to be involved in every aspect of school business administration. He further noted that utilizing teachers in school business administration will help schools to achieve the aims and objectives set out. The findings also revealed that there was no significant difference between the mean rating scores of male and female teachers on the extent to which teachers are utilized in school business administration in secondary schools in Enugu state.

From the findings of the study, evidence has shown that the respondents share the view that teachers are involved to a great extent in decision-making in secondary schools administration in Enugu state. In other words, the findings show that teachers are involved and participated in decision – making in the school. The findings show that teachers are involved in decision making relating to conflict resolution, discipline of staff and maintenance of school plant, budget review and staff welfare. The findings agree with Ogun (2010) who opined that involving teachers in decision-making of the school will always make them contribute their own quota to the school. The findings also revealed that there was no significant difference between the mean rating scores of male and female teachers on the extent to which teachers are utilized in decision making in secondary school administration in Enugu state.

Conclusion

This research study examined the extent to which teachers are involved in secondary school administration in Enugu State. Based on the findings of the study, the following conclusions were drawn that teachers are involved in procuring material resources for the school and also participated in school budgeting.

The findings also revealed that there is no significant difference in the mean ratings of male and female teachers on the extent to which teachers are involved in school business administration in

secondary schools in Enugu state. Base on the findings of the study, the researcher recommends that school management should always involve teachers when making school budget as part of school business administration.

Recommendations

- Based on the findings, the following recommendations were proffered.
1. School management should also involve teachers when making school budget as part of school business administration.
 2. School administrators should always involve teachers in any decision-making that will affect them and make them to be part of any decision-making in the school system.
 3. School management should encourage students to participate in extra-curricular activities such as debate, football, and cultural group. All these will help to increase students' personnel administration in the school

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BUSINESS EDUCATION STUDENTS' PERCEIVED INFLUENCE OF CURRICULUM INFORMATION HANDBOOK ON CHOICE OF CAREER PATHWAYS IN TERTIARY INSTITUTIONS

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Abstract

This study explored perceived influence of curriculum information handbook of business education on students' choice of career pathways as regards their course selections in tertiary institutions in Anambra State. One research question guided the study, and one null hypothesis was tested at 0.05 level of significance. Descriptive survey research design was adopted. The study was carried out in four public tertiary institutions in Anambra State. The population of the study comprised 902 business education students and a sample size of 277 was drawn from the population. An 8-item questionnaire was used for data collection, which was validated by experts in the field of education. The Cronbach's alpha method was used to test the reliability, resulting in 0.79 reliability coefficient. Data analysis was done using mean, standard deviation and t-test. The findings revealed that curriculum information handbook of business education provides enough information that helps students to understand the various career pathways inherent in business education and in their career pathway decision-making with respect to their course selections. Consequently, it was concluded that business education department should provide updated handbooks to enable the students make informed and quicker decision relating to their career.

Keywords. Business Education, Career Pathways, Curriculum information handbook

Introduction

Business education, a wide range of career opportunities, is described as an aspect of total education programme which provides the recipients with the knowledge, skills, understanding and attitudes needed to perform well in business world as a producer, entrepreneur or consumer of goods and services (Akaeze, 2014). Edokpolor and Owenvbiugie (2017) sees business education as a skill-based programme that provides opportunities for young adults to make choices among varieties of career options. Abraham-Ibe (2021) noted that business education skills play major role in equipping students with desirable office/business skills that are imperative for job opportunities and sustainability in the world economy today. Edokpolor and Oduma (2018) also acknowledged that a well-implemented business education programmes is aimed at achieving three broad goals which include: to prepare recipients for career in office occupations; to equip recipients with requisite attributes for job-creation and entrepreneurship; and to expose recipients to the knowledge about business, including a good blend of computer technology (ICT).

With specific course or subject name, business education is offered at different levels of education (e.g., primary school, secondary schools, and tertiary institutions - Ezeani & Ogundola, 2016). Amoah, Kwofie and Kwofie (2015) believed that tertiary institutions are crucial for students to become prepared for transitions from school to work. At the tertiary school level, business education

is offered viz., Accounting education, Entrepreneurial education, Marketing and Distributive education and Office management education, where students are empowered with desirable skills, knowledge and value to perform specific functions so as to become self-reliant and contribute to economic development of the nation.

Consequently, business education programmes or specialties are expected to equip the students with saleable skills for job opportunities. Oguejiofor and Onwuna (2021) noted that there are many job opportunities open for the survival of graduates of business education that include; establishment of business centers, consultancy (giving expert advice), establishment of private vocational schools, supplying and distribution, product advertising and promotion services, estate agent, petty trading, opening of stationery shop, sales of office machines and equipment, secretarial duties, office work or paid employment such as teaching, cashier, bank officer, receptionist, marketer, computer operator, account clerks, purchasing agent, telephone operator, public relation officer, sales manager, administrative managers, among others. Notwithstanding the various job opportunities in business education, students must yet decide and choose a career path for their transition from school to work (occupational activities).

The primary focus of this study is to determine the influence of curriculum information handbook on students' choice of career pathways and course selections in public tertiary institutions in Anambra State. Career pathway is often clarified in two perspectives; the educational career pathways and the workplace career pathways (career ladder progression). On the educational perspective: career pathway is seen as a coordinated programme of rigorous high-quality education and work-related training that aligns to industrial needs and advances students in their career choice (Section 3 of the United States Workforce Innovation and Opportunity Act, 2014). Amreen (2019) clarified same as ways in which education and specific occupations are connected. On the workplace career pathways; Hedge and Rineer (2017) described career pathway as workplace career progression or career ladder or sequence of work positions or roles held by an employee overtime. In this study, career pathways refer to clusters of occupation-related specialties in Business Education programme that enable students to progress in the programme.

Choosing a career pathway can be an exciting as well as daunting experience for students. Choice involves making a psychological decision, judging the outright advantage of multiple options and selecting the best or more of them (Adeoye, 2021). According to Kazi and Akhlaq (2017), the influence of career decision has a lasting impact on an individual, it serves to be a predictor and determinant of their prospective level of income, nature of work and consequently leaves a mark on the personality, demeanor and outlook of an individual. Park and Yang (2016) noted that a career path decision made by an individual may determine the individual's life style and values as well as one of the most important development tasks. Negru-Subtrica, Pop and Crocetti (2015) study revealed that adolescent's self-doubt, anxiety and uncertainty of abilities influence career decision making process. Studies have shown that the students' choice of career path generally can be influenced by numerous factors including; students' skill and abilities, personal interests and passion, values, personality type, peer influence, influence of family members, nurturing and supportive environment, influence of teachers, coaches, mentors, job security, available career opportunities, personal development needs, students' perceptions of the career path, curriculum information handbook among others (Dowd, 2021; Aboje, 2023; Shellye, 2023). All these noted factors overly influence students' choice of career pathways. The influence of gender in students' career making decisions cannot also be overlooked. When considering gender, male students are more likely to be interested and motivated by high paying jobs and status in a career path than female students (Adeoye, 2021). Similarly, Kazi and

Akhlaq (2017), reported that financial prospects influence the choice of career pathway of men as they are faced with household expenses, whereas women are more interested and concerned with social status.

On the influence of curriculum information handbook on students' choice of career pathways, Lane (2019) posits that curriculum information handbook is an important part of the career pathways programme goals which describes the career pathways and notes courses of study for core subjects and electives for each pathway. Dolphin and Littlefield (2013) believe that information handbook serves as a guide to students' life in district, providing an orientation to new and current students. Similarly, the Department of Technology and Vocational Education (Nnamdi Azikiwe University, Awka) believe that an informed student knows what to do and what not to do to avoid interruption of academic studies that may undermine career aspirations. The handbook, therefore has been designed to help students make informed choices as regards to their career aspirations.

Under the curriculum for business education programmes in tertiary institutions in Nigeria, career pathways in business education are available in four major academic areas namely; accounting education pathway, entrepreneurial education pathway, marketing and distribution education pathway and office management education pathway (NUC Core Curriculum and Minimum Academic Standards (CCMAS), 2022). Business education students in Nigeria's tertiary institutions are to choose and align their studies to any of the four provided career pathways from their 200 level of education (CCMAS, 2022). Despite these overwhelming benefits of curriculum information handbook, it is regrettably that a closer look at the existing literatures shows that scholars have paid little or no attention to exploring the influence of curriculum information handbook among business education students in tertiary institutions especially in Anambra State, leaving this area with a gap seeking to be filled with research. It is against this background that the researcher is prompted to determine the influence of curriculum information handbook on business education students' choice of career pathways and course selections in tertiary institutions in Anambra State.

Statement of the Problem

Making choice of career pathways has today become the major dilemma afflicting students and young people globally. Business education students in Nigeria, especially in Anambra State are not left out as they are also bewildered in the dilemma of deciding choice of career path from the varied options existing in the programme (Accounting education, Entrepreneurial education, Marketing and Distributive education and Office management education) that best suit them before and after school in confrontation with work activities upon graduation.

Notwithstanding the stated benefits of curriculum information handbook on students' academic activities, a look at existing literatures shows that scholars have paid little or no attention to exploring the influence curriculum information handbook has on students' choice of career pathways and course selection in tertiary institutions especially in Anambra State, consequently living a gap in the body of knowledge and thus studies need to be done to determine whether curriculum information handbook of business education has any influence on business education students' choice of career pathways and course selections.

Research Question

What is the perceived influence of curriculum information handbook of business education on students' choice of career pathways?

Hypothesis

There is no significant difference in the mean ratings of business education students on the influence of curriculum information handbook of business education on their choice of career pathways based on gender.

Methods

Descriptive survey research design was adopted for this study. This study was carried out in public tertiary institutions in Anambra State that offer business education courses (viz. Nnamdi Azikiwe University Awka (UNIZIK), Chukwuemeka Odumegwu Ojukwu University Igbariam-Awkuzu, Federal College of Education Nsugbe and Federal College of Education (Technical), Umunze). The population of this study comprised 902 business education undergraduate regular students of all the public tertiary institutions in Anambra State. The sample size for the study is 277 obtained using the Taro Yamane formula. Multi-stage sampling techniques involving two stages were adopted for this study. Thus, proportionate stratified and convenience sampling techniques were employed at the first and second stages respectively.

The instrument used for data collection was a structured questionnaire titled, “Curriculum Influence on Business Education Students’ Choice of Career Pathways and Course Selections Questionnaire”. The instrument was validated by five experts. Cronbach’s alpha method was used to test the internal consistency of the instrument, resulting in the reliability coefficient of 0.79. The data collected was analyzed using mean ratings and standard deviation for the research question and t-test for the hypothesis. The data was analyzed using SPSS Version 23. The decision rule was to accept a null hypothesis where p-value is greater than or equal to the alpha level of 0.05. The null hypothesis was rejected where the p-value is less than the alpha level; otherwise, it was accepted.

Results

Research Question 1. What are the perceived influence of curriculum information handbook of business education on students’ choice of career pathways?

Table 1.

Mean ratings on perceived influence of curriculum information handbook of business education on students’ career pathways

S/N	Items	Mean	SD	Remarks
1	Curriculum information handbook provides more courses that I was interested in	3.93	1.07	Agreed
2	The curriculum information handbook provides same numbers of the courses that I was interested in	3.68	1.08	Agreed
3	The curriculum handbook provides fewer courses that I was interested in	3.05	1.27	Agreed

4	Because of the curriculum information handbook, I have more understanding of my career interest	4.17	0.96	Agreed
5	Because of curriculum information handbook, I have thought more of my potential career	3.92	1.09	Agreed
6	Because of the curriculum information handbook, I have same understanding of my career pathway and future career plans	3.60	1.26	Agreed
7	Because of the curriculum information handbook, I have less understanding of my career interest	2.24	1.21	Disagreed
8	Because of curriculum information handbook, I have thought less of my future plans	2.21	1.31	Disagreed
Cluster mean		3.35		Agreed

Table 1 shows that respondents agreed that curriculum information handbook of business education influence their choice of career pathways and course selection as can be seen on items 1, 2, 3, 4, 5, and 6, with mean scores of 3.05 to 4.17. However, the respondents disagreed that items 7 and 8 have no influence on their choice of career pathways and course selection (2.21 to 2.24). The cluster mean score of 3.35 indicates that overall, curriculum information handbook of business education influence business education students' choice of career pathways and course selection in tertiary institutions in Anambra State. The standard deviations show homogeneity of responses as respondents' scores range from 0.96 to 1.31. This means that their responses are closely related.

Hypothesis 1. There is no significant difference in the mean ratings of business education students on the influence of curriculum information handbook of business education on their choice of career pathways based on gender.

Table 2.

The t-test analysis of the Mean Ratings on Influence of Curriculum Information Handbook of Business Education on Career Pathways based on gender

Variable	N	Mean	SD	df	α	p-value	Decision
Male	99	26.70	4.43	275	0.05	0.78	Not Significant
Female	178	26.86	4.39				

Data in Table 2 shows that the p-value of 0.78 at 275 degrees of freedom is greater than 0.05 alpha level. This shows that gender does not significantly influence the opinion of respondents on influence of curriculum information handbook of business education on their choice of career pathways and course selection. The analysis also shows mean scores of 26.70 and 26.86 for males and females respectively. Therefore, the null hypothesis of no significant difference between the two groups is upheld.

Discussion of Findings

The findings of the study indicated that curriculum information handbook of business education influenced students' choice of career pathways in business education and course selections in tertiary institutions in Anambra State. Majority of the respondents agreed that curriculum information handbook provided them with enough information that helped them in making their career pathways decisions; Because of curriculum information handbook they had more understanding of what their career pathways entail and that it had helped them to think more of their potential career. This implies that curriculum information handbook influences and plays a major role in business education students' choice of career pathways and course selections. This finding is in agreement with Salazar (2019) on the roles of information handbook wherein it was revealed that the primary duty of curriculum information handbook is to provide students with information, guidelines and policies that will enhance their adjustment in school. The finding is also in line with 2019 handbook of Department of Technology and Vocational Education, Nnamdi Azikiwe University, Awka, which argued that with information handbook, students are well-informed and feel balanced as they pursue their career with vigor and confidence. Findings from the test of the null hypothesis indicated that there was no significant difference in the mean responses of respondents on the influence of curriculum information handbook of business education on their choice of career pathways and course selections based on gender. Consequently, the null hypothesis was accepted.

Conclusion

Based on the findings of this study, it was concluded that curriculum information handbook of business education have crucial roles to play in the choice of career pathways and course selections of business education students in tertiary institutions in Anambra State. This implies that if business education department fails to provide students with updated handbooks, they would possibly be misguided.

This study recommends that business education department should provide updated handbooks to enable the students to make informed and quicker decision relating to their career.

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**STRATEGIES CONSIDERED EFFECTIVE BY BUSINESS EDUCATORS
FOR QUALITY ASSURANCE IN BUSINESS EDUCATION
PROGRAMME IN TERTIARY INSTITUTIONS IN ANAMBRA STATE**

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Abstract

This study ascertained strategies considered effective by business educators for quality assurance in business education programme in tertiary institutions in Anambra State. Two research questions guided the study and two null hypotheses were tested. Descriptive survey research design was adopted for the study. The population comprised 117 business educators in four public tertiary institutions in Anambra State. The entire population was studied without sampling because the size was not too large. The instrument used was 16-items structured questionnaire. The instrument was validated by three experts. To determine the internal consistency, Cronbach's Alpha was used to test the reliability of the instrument and an overall coefficient value of 0.87 was obtained. Mean and standard deviation were used to answer the research questions, while t-test were used to test the null hypotheses at 0.05 level of significance. The findings of the study revealed that respondents rated the administrative strategies effective for quality assurance in business education in tertiary institutions in Anambra State to a high extent while motivational to a moderate extent. The type of institutions significantly influenced respondents' mean ratings on the extent administrative and motivational strategies were considered effective for quality assurance in business education in tertiary institutions in Anambra State. Based on the findings, it was concluded that business education is not taken into cognizance in the country's quest to make college and education, and university education accessible to all; the quality of education is deteriorating as the days keep unfolding. It was therefore recommended among others that, the entire strategies put in place for assuring quality should be properly monitored and regularly appraised by managements for effective control to achieve the desired results.

Keywords. Tertiary institutions, Strategies, Quality assurance, Business education programme.

Introduction

In tertiary institutions in Nigeria, business education programme has accounting option, office technology and management option, distributive/marketing option and computer option. The teaching of business education courses in universities and colleges of education cannot be overemphasized because it is an educational programme that not only expose students to the relevant business skills but improves their professional career development and workplace specialization. In universities and colleges of education, the goals of business education are to train the necessary manpower for industry, teaching, business, and public and private business establishments (Okoli, 2010). According to Okereke (2015), the skills acquired in any area of business education programme in tertiary institutions promote entrepreneurship training and development as it energized students to establish small business on their own upon graduation. Therefore, business education is that aspect of

educational training which students receives with primary motive of enabling them acquire adequate attitudes, concepts, knowledge, understanding and skills in business activities for manager or teacher and as well as entrepreneur in the business world (Chibuike, 2013). The actualization of the noble mandate of business education in the society demands the application of quality assurance strategies in the school system.

Quality assurance is the adoption and maintenance of effective academic programmes in school systems. Quality assurance refers to planned and systematic educational activities set up to reduce lapses in the academic programmes of educational institutions (Chibuike, 2013). The concern for continuous quality improvement of various academic programme of educational institutions necessitated the advent of quality assurance in education. The essence of quality assurance in educational settings is to enhance effectiveness of teaching and learning with efficient monitoring and evaluation tools (Onyesom and Ashibogwu, 2013). The strength of business education programme in tertiary institutions depends on quality assurance strategies because they ensure that the programme equip students with accepted workplace practices, skills and knowledge. The application of quality assurance strategies thrive to ensure maximum effectiveness and efficiency of business education programme in relation to their stated objectives. Hence, Olufunwa, Waziri and Olorunmolu (2013) averred that educational institutions running business education programme can only achieved their goals, if they put in place quality assurance strategies that will ensure the production of quality graduates for national development. Akpotohwo and Ogeibin (2018) stated that quality assurance in business education include quality of syllabus and curriculum, accreditation council, quality of teachers, discipline of students and teachers, availability of infrastructure facilities, through selection of students during admission, constant supervision of instruction, training and development of teachers, constant assessment of quality of works/researches, motivation and quality administrators. This could be achieved by applying appropriate strategies.

From existing literature, Okoli, Utoware and Kaizer (2018) have explored various quality assurance strategies in business education programmes to include administrative, motivational, infrastructural facilities, leadership, demonstration lesson, teaching arrangement, research and development, teaching programmes, assessment/evaluation and instructional supervision among others. Thus, quality assurance strategies used in this study is composed of two constructs namely administrative and motivational because they appear to be exceptionally vital for accomplishment of the laudable educational objectives of business education programme. Administrative strategy refers to ability to persuade others to pursue divine goals. To accomplishment a laudable educational of business education programme hinge on qualitative administrative strategies such as planning, organizing, stimulating, coordinating, staffing, budgeting, communication and evaluating that deals with effective coordination and control of teaching and learning activities by heads of department of business education in tertiary institutions. Heads of department of business education programmes are expected to work with business educators to plan, implement, monitor, evaluate and review curriculum content, and academic activities of business education. Thus, effective administrative strategies enhance quality assurance in business education as it ensures that business educators and students comply with the laid down rules and regulations for effective teaching and learning to take place in tertiary institutions.

In addition, Steve-Beke, Akosubo-Ogori and Egemuze-Paul (2020) revealed that the administrative effectiveness helps to assure quality in the various educational levels and the entire educational system; and as such, the various roles, importance and the actual practices of quality assurance in the higher education institutions were critically analyzed. It also agrees with Jaiyeoba

and Atanda (2015) reported that the university and college of education employees comply with set goals and quality standards singled out for special commendations, rewards and other motivational persuasions. Similarly, Steve-Beke et-al. further revealed that the moderating variables such as institution type of educators and so on could influence their opinions on certain educational issues. Thus, administrative strategies used by heads of department in business education could be effective when business educators are motivated in their working environment.

Motivational is a method of finding and harnessing one's in order to achieve ones goals. Sekakubo et-al. (2014) defined motivation as anything that encourages an individual to perform their in an expected manner. The important role of motivational strategies such as regular training, sense of recognition, conditions of service, regular and attractive payment of salary and effective communication in tertiary institutions cannot be overemphasized. Heads of department and business educators are motivated when they expect that a course of action is likely to be rewarded. This means that, motivational strategies largely influence workplace commitment and job performance. Therefore, motivational strategies play an important role in maintaining quality assurance because they influence heads of department and business educators' willingness to translate the objectives of business education programmes into experiences in the classroom.

Furthermore, Cheraiisi, Kipchumba and Ayuo (2014) opined that the motivational strategies showed weak positive relationship against performance in public universities in Nakuru County. In support, Okoli and Igwegbe (2015) revealed that the cash and scholarship awards, exposing students to entrepreneurship education such as interacting with small scale business owners, display of project materials and government sponsorship, were considered as highly necessary strategies achieving quality assurance in business education. This implies that, the application of administrative and motivational strategies in business education ensure that meaningful teaching and learning takes place in business education programme.

In business education programme, the establishment of quality assurance strategies prevents instructional problems and ensures that business educators prepare the products of the programme in line with global workplace standards. Business educators are trained professional teachers of business education who are competent in teaching all the components that make tip business education programme in tertiary institutions. Nwazor and Udegbumam (2016) asserted that a business educator is deemed qualified if they has both the educational qualifications and academic background. Nwazor and Udegbumam stated that a qualified business educator is one who studies business education as an integrated discipline, not the components thereof such as accounts, economics, commerce, typewriting, shorthand, cooperative commerce, and so on. Nwazor and Udegbumam further noted that a qualified business educator should be able to teach business studies components, namely typewriting, shorthand, office practice, book keeping, economics and the jobs, but also future jobs which they wish to aspire to.

Certain variables may have influence on the opinion of business educators on their ratings of effective quality assurance strategies in business education programme. This study will take business educators' type of institution into cognizance. Type of institution in this research work means tertiary institutions that offer business education programme such as colleges of education and universities in Anambra State. According to Okoro (2015), universities and colleges of education showed that the criteria for measuring quality assurance have a significant impact on the preparation of the business education programme. This may be as a result of inability of tertiary institutions to come up with enabling statutes or ensuring proper quality assurance on the nature of business education programme to be compiled. However, the influence of type of institution on business educators rating of effective

quality assurance strategies in business education has not been given adequate attention in Anambra State. Upon this fulcrum, the study seeks to determine business educators' rating of strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State.

Statement of the Problem

The acceptable standard of business education programme is found in its effectiveness in increasing its graduates' job opportunities and their entrepreneurial tendencies to minimize the rate of unemployment in Nigeria. Unfortunately, little or no trust is exercised among graduates of business education programme by the employers of labour due to their inability to adapt to the modern requirements of the workplace (Steve-Beke et-al., 2020). The implication of this reality is that, there may be some deficits in the quality assurance of business education programme. Despite strategies of quality assurance put in place by the Federal and State Governments, as well as all the relevant educational authorities for sustainable higher education, the employers of labour exercise little or no trust on the benefits of business education programme as its appear that its products are yet to make remarkable impact in the business environment and the society at large. The problem of this study is that if this ugly mindset by the society is not taken into consideration, most of the business education students' graduate without gaining any meaningful employment in the society. Consequently, the students may not be gainfully employed after graduation or even when they get employment, the employers may be skeptical or exercise some doubt on their productivity. Therefore, there is an urgent need to pay more prominent attention to quality assurance measures used by business educators in Nigerian tertiary institutions and Anambra State particular. In order to fill this gap, the strategies considered effective by business educators for quality assurance in business education programme in tertiary institutions in Anambra State was conceived.

Purpose of the Study

The purpose of this study was to determine the strategies considered effective by business educators for quality assurance in business education programme in tertiary institutions in Anambra State. Specifically, the study determined the opinion of business educators on:

1. Administrative strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State.
2. Motivational strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State.

Research Question

The following research questions guided the study: In the views of business educators:

1. What are the administrative strategies considered effective for quality assurance in business education in tertiary institutions in Anambra State?
2. What are the motivational strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State?

Hypotheses

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

1. College of education and university business educators do not differ significantly in their mean ratings on administrative strategies considered effective for quality assurance in

- business education programme in Anambra State.
2. College of education and university business educators do not differ significantly in their mean ratings on motivational strategies considered effective for quality assurance in business education programme in Anambra State.

Method

The study adopted descriptive survey design. The population of the study comprised 117 business educators in four public tertiary institutions in Anambra State. The entire population was used for the study because of its manageable population size, hence, the study adopted census survey. A 16 items structured questionnaire was used for data collected. 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 content validity of the instrument. To establish the internal consistency of the instrument, a trial-tested was conducted. Data collected were analyzed using Cronbach Alpha to determine the internal consistency.

Reliability coefficients values of 0.89 and 0.84 for clusters B1 and B2 respectively with an overall coefficient value of 0.87. Out of the 117 copies of the questionnaire distributed to the respondents in their schools through direct approach which facilitated a response rate of 108 copies (representing 96 percent) with an attrition rate of nine copies (representing 8 percent) and used for data analysis. Data collected regarding the research questions were analyzed using mean and standard deviation while t-test was used to test the null hypotheses at 0.05 level of significance. In order to determine the strategies considered effective by business educators for quality assurance in business education programme in tertiary institutions, a decision rule based on real limit of numbers was used such that ratings between 4.50-5.00 were regarded as very high extent, items with mean ratings of 3.50-4.49 were considered as high extent; items with mean ratings of 2.50-3.49 were considered as moderate extent. Furthermore, items with mean ratings of 1.50-2.49 and 1.00-1.49 were considered as low extent and very low extent 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.

Results

Research Question 1. What are the administrative strategies considered effective for quality assurance in business education in tertiary institutions in Anambra State?

Table 1.

Mean ratings on the administrative strategies considered effective for quality assurance in business education in tertiary institutions

SN	Administrative strategies for quality assurance	Mean	SD	Remarks
1	Establishment of internal educational policies	4.60	0.43	Very High Extent
2	Encouragement of teamwork	4.20	0.48	High Extent
3	Fostering emotional intelligence	4.70	0.42	Very High Extent
4	Delegation of authority	3.69	0.50	High Extent
5	Instilling sanction on defaulters	3.54	0.53	High Extent
6	Punishment for defaulters	4.24	0.48	High Extent

7	Monitoring of employees	3.20	0.59	Moderate Extent
8	Supervision of employees	3.50	0.54	High Extent
	Aggregated	3.96		High Extent

Data in Table 1 shows that two items out of the eight items on administrative strategies for quality assurance listed have mean scores ranging from 4.60 to 4.70 and rated to very high extent. Five items have mean scores ranging from 3.50 to 4.24, rated to high extent while the remaining one item have mean ratings ranged of 3.20 and rated moderate extent. The cluster means score of 3.96 showed that, on the whole, respondents in the area of the study rated the administrative strategies considered effective for quality assurance in business education in tertiary institutions in Anambra State to high extent. The standard deviations for all the items are within 0.42 to 0.59 indicating that the respondents are not wide apart in their ratings.

Research Question 2. What are the motivational strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State?

Table 2.

Mean ratings on the motivational strategies considered effective for quality assurance in business education programme in tertiary institutions

SN	Motivation strategies for quality assurance	Mean	SD	Remarks
9	Training employees to develop career	3.30	0.56	Moderate Extent
10	Recognize employees for good work	3.20	0.59	Moderate Extent
11	Reward good work accordingly	3.70	0.45	High Extent
12	Ensure effective communication among staff	3.69	0.46	High Extent
13	Training of employees in decision making	3.54	0.51	High Extent
14	Encourage employees to pursue higher degrees	3.24	0.58	Moderate Extent
15	Sponsor employees to pursue skill acquisition training	3.20	0.59	Moderate Extent
16	Empower employees through incentives	3.50	0.52	High Extent
	Aggregated	3.42		Moderate Extent

Data in Table 2 shows that four items out of the eight items on the motivational strategies listed have mean scores ranging from 3.50 to 3.70 which mean that they are rated high extent. The remaining four items have mean ratings ranging from 3.20 to 3.30 which indicate that they are rated as moderate extent. The cluster mean score of 3.46 shows that, on the whole, respondents in the area of the study rated the motivational strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State to moderate extent. The standard deviations for all the items are within 0.45 to 0.59 indicating that the respondents are not wide apart in their ratings.

Hypothesis 1. College of education and university business educators do not differ significantly in their mean ratings on administrative strategies considered effective for quality assurance in business education programme in Anambra State.

Table 3.

The t-test analysis of college of education and university business educators' difference in their mean ratings on administrative strategies considered effective for quality assurance in business education programme.

Type of Institutions	N	Mean	SD	Df	t-cal	p-value	Decision
Colleges of Education	76	3.12	.15	106	2.93	.000	Significant
Universities	32	3.10	.10				

Table 3 shows that college of education and university business educators in Anambra State differ significantly in their mean ratings on administrative strategies considered effective for quality assurance in business education programme with 3.12 and 3.10 mean scores while the corresponding standard deviation is .15 and .10. The Table indicated t-value of 2.93, at degree of freedom of 106 and the p-value of .000. Testing at alpha level of 0.05, the p-value is significant, since the p-value is less than the alpha value (0.05). Therefore, the null hypothesis is rejected which mean that there was a significant difference.

Hypothesis 2. College of education and university business educators do not differ significantly in their mean ratings on motivational strategies considered effective for quality assurance in business education programme in Anambra State.

Table 4.

The t-test analysis of college of education and university business educators' difference in their mean ratings on motivational strategies considered effective for quality assurance in business education programme.

Type of Institutions	N	Mean	SD	Df	t-cal	p-value	Decision
Colleges of Education	76	3.19	.12	106	2.23	.001	Significant
Universities	32	3.02	.13				

Table 4 shows that college of education and university business educators in Anambra State differ significantly in their mean ratings on motivational strategies considered effective for quality assurance in business education programme with 3.19 and 3.02 mean scores while the corresponding standard deviation is .12 and .13. The Table indicated t-value of 2.43, at degree of freedom of 106 and the p-value of .001. Testing at alpha level of 0.05, the p-value is significant, since the p-value is less than the alpha value (0.05). Therefore, the null hypothesis is rejected which mean that there was a significant difference.

Discussion of Findings

The findings of the first research question revealed that the administrative strategies considered effective for quality assurance in business education in tertiary institutions in Anambra State were rated to a high extent. This implies that the administrative strategies applied by the business educators helps to assure quality programme in business education in tertiary institutions. This finding agrees with Steve-Beke, Akosubo-Ogori and Egemuze-Paul (2020) who revealed that the administrative effectiveness helps to assure quality in the various educational levels and the entire educational system; and as such, the various roles, importance and the actual practices of quality

assurance in the higher education institutions were critically analyzed. It also agrees with Jaiyeoba and Atanda (2015) who reported that the university and college of education employees comply with set goals and quality standards singled out for special commendations, rewards and other motivational persuasions. This implies that effort ought to be made in ensuring that the administrative strategies for quality assurance in business education in tertiary institutions are rated to a very high extent and to enable the programme achieved its set objectives and goals. To settle the belief by some employers of labour on lack of trust on the benefits of business education programme, the administrative strategies for quality assurance need to increase to a very high extent.

The findings also showed that the type of institutions significantly differ in their mean ratings on the administrative strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State. The finding agrees with Okoro (2015) who reported that the universities and colleges of education criteria for measuring quality assurance have a significant impact on the preparation of the business education programme. Similarly, the finding on the type of institutions with that of Steve-Beke, Akosubo-Ogori and Egemuze-Paul (2020) reported that the moderating variables such as institution type of educators and so on could influence their opinions on certain educational issues. The implication of the finding was that the type of institutions had no influence on the administrative strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State.

The findings of the second research question revealed that the motivational strategies considered effective for quality assurance in business education in tertiary institutions in Anambra State were rated to a moderate extent. This implies that the motivational strategies applied by the business educators help to assure quality programme in business education in tertiary institutions but not as expected. This finding agrees with Cherai, Kipchumba and Ayuo (2014) who reported that the motivational strategies showed weak positive relationship against performance in public universities in Nakuru County. This implies that effort ought to be made in ensuring that the motivational strategies for quality assurance in business education in tertiary institutions are rated to a very high extent and to enable the programme achieved its set objectives and goals. To settle the belief by some employers of labour on lack of trust on the benefits of business education programme, the motivational strategies for quality assurance need to increase to a very high extent.

The findings also showed that the type of institutions significantly differ in their mean ratings on the motivational strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State. The finding agrees with Okoro (2015) who reported that the universities and colleges of education criteria for measuring quality assurance have a significant impact on the preparation of the business education programme. Similarly, the finding on the type of institutions with that of Cherai, Kipchumba and Ayuo (2014) revealed that there is a significant relationship on the employee motivation and quality assurance toward organizational performance. The implication of the finding was that the type of institutions and years of teaching experience had no influence on the motivational strategies considered effective for quality assurance in business education programme in tertiary institutions in Anambra State.

Conclusion

Based on the findings of the study, it was concluded that, relatively, Nigeria in recent times has been witnessing a significant proliferation of tertiary institutions. In fact, it is saddening to note that many of the indices that can guarantee qualitative college and education, and business education are not taken into cognizance in the country's quest to make college and education, and university

education accessible to all; the quality of education is deteriorating as the days keep unfolding. However, to salvage this deplorable situation in Nigeria educational system and business education particular, strategies have been assessed and considered effective for quality assurance. Such strategies as assessed by this study are administrative and motivational for effective quality assurance. Therefore, to enthrone and maintain quality and sustainable standards in business education, these strategies must be harnessed and implemented properly.

Recommendations

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

1. The entire strategies put in place for assuring quality should be properly monitored and regularly appraised by managements for effective control to achieve the desired results.
2. There should be regular supervision of its staffs by the department, faculty, senate and of course, business educator's modality of applying motivational and instructional supervision strategies for goals attainment. Teaching methods and instructional materials should also be checked-off by HODs before administration.

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**PERPETUAL AND JUST-IN-TIME INVENTORY CONTROL
APPROACHES APPLIED BY MANAGERS FOR IMPROVING
OPERATIONS OF SMALL AND MEDIUM SCALE ENTERPRISES**

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Abstract

This study ascertained the extent managers applied perpetual and just-in-time inventory approaches for improving operations of small and medium scale enterprises in South-East Nigeria. Two research questions and two null hypotheses guided the study. Descriptive survey research design was adopted for the study. The population comprised 4745 registered SMEs managers from services, construction and manufacturing businesses operating within South-East Nigeria. Sample size of 1424 registered SMEs managers were used, through proportionate stratified random sampling technique. The instrument for data collection was a 22-item structured questionnaire. The instrument was validated by three experts. Cronbach Alpha was used to determine the internal consistency of the instrument, with an overall co-efficient value of 0.91. Mean and standard deviation were used to answer the research questions, while Analysis of Variance (ANOVA) was used to test the null hypotheses at 0.05 alpha levels. The findings of the study revealed that just-in-time inventory approaches is lowly applied by managers of SMEs in South-East, Nigeria, while perpetual inventory approaches are moderately applied to improve their business operations. Years of business experience of managers of SMEs significantly influence their mean ratings on the extent just-in-time inventory approaches are applied for improving operations in South-East Nigeria; but did not significantly influence their mean ratings on the extent perpetual inventory approaches are applied for improving operations. It was recommended among others that Management of small and medium scale enterprises should organize regular training for managers on various inventory control approaches that will empower them to adequately apply different inventory control approaches appropriately for business growth, sustainability, and development.

Keywords. Perpetual and Just-In-Time Inventory Control Approaches, Managers, SMEs.

Introduction

Small and medium scale enterprises are generally regarded as one of the engines of economic growth in developing economies and developed nations. They have been largely acknowledged as the oil required for lubricating the engine of socio-economic transformation of any nation (Abosedo, Hassan and Oko-Oza, 2017). Olaoye, Adedeji and Ayeni-Agbaj (2018) defined small and medium scale enterprises in Nigeria according to asset base and number of staff employed. Small and medium scale enterprises, according to the Olaoye, Adedeji and Ayeni-Agbaj, are enterprises with asset base between #5million to #500 million and a staff strength that is between 11 and 100. In the context of this study, small and medium scale enterprises is any enterprises that has an asset between 5 million naira to 500 million naira and a staff strength that is between 12 to 250.

Small and medium scale enterprises account for a greater percentage of all businesses in virtually all economies and generate majority of private sector employment and output. They contribute to improved standard of living, substantial local capital formation, achieve high levels of productivity, and capability for individuals and nations. Small and medium scale enterprises play very important roles in the process of employment creation, industrialization, provision of personalised services and sustainable economic growth (Mohammed, Balaraba and Salawak, 2017).

Despite the positive outlook and growth trends of the sector, small and medium scale enterprises in Nigeria, as in most developing economies, are faced with a number of challenges. These challenges include inadequate capital (finance), poor record keeping, unsuitable location, poor planning, inadequate infrastructural facilities, lack of skilled manpower, inadequate managerial and entrepreneurial skills, corruption and lack of transparency arising from government regulation and regulators (Imoisi and Ephraim, 2015). Others include break downs in production schedule, supply shortages, reduction of working capital as a result of excess procurement of raw materials and low capacity utilization which constitute a problem to their effective growth and development among others (Alabi, Awe and Musa, 2015; Mohammed, Balarabe and Salwa, 2017). Among these, finance is a core problem area for Nigeria's SMEs (Eze and Uchenu, 2021). Another challenge lays in the applied of inventory control approaches. Effective management of inventories control can increase the profit of a business and as well add to its return on total asset.

Inventory control approach refer to the various systems and means used in an enterprise to control the enterprises investment in stock which deal with recording and monitoring of stocks levels, forecasting future demands, deciding when and how many to be order. Nikita, Siphokazi, Sphelele, Siyanda, Mamorena and Juan-Pierré (2015) noted that a good inventory control approach offers a wide range of benefits to business organizations as the proper relationship between sales and inventory can better be well maintained. First, without inventory control approaches in place, the stores department can become over-stocked or under-stocked. Similarly, inventory control approaches provide a business with information needed to take markdowns by identifying slow-selling merchandise. Discovering such items early in the season will allow a business to reduce prices or make changes in marketing strategy before consumer demands completely disappear.

Marfo-Yiadom, Asante and Darkwah (2018) held that holding large quantity of inventory offers wide range of benefits to organizations and can as well be associated with certain costs. Marfo-Yiadom et-al noted among other things that, holding large inventory helps to ensure that the possibility of disruption to production from a stock-out is remote. Large stocks mean that large orders can be placed so that buyers can negotiate favourable prices and thus get trade discounts. Large stocks protect the firms against price increases for a few months as large stocks mean fewer and less frequent orders, which will cut the cost of buying inventory. Inventory control approach basically deals with two problems: When should an order be placed? (Order Level), and How much should be ordered? (Order Quantity). These questions are answered by the use of inventory models.

Inventory model is a mathematical/scientific model that helps businesses in determining the optimum level of inventories that should be maintained in a production process, managing frequency of ordering, deciding on quantity of goods or raw materials to be stored, tracking flow of supply of raw materials and goods to provide uninterrupted service to customers without any delay in delivery. The scientific model strikes the balance between the loss due to non-availability of an item and cost of carrying the stock of an item. Scientific model aims at maintaining optimum level of stock of goods required by the company at minimum cost to the company. Olowolaju (2015) revealed some benefits of inventory control approach through the practice of scientific inventory control to include

improvement in customer's relationship because of the timely delivery of goods and services, smooth and uninterrupted production resulting in no stock out; efficient utilization of working capital and minimizing loss due to deterioration, obsolescence, damage and pilferage, economy in purchasing, and eliminates the possibility of duplicate ordering.

Consequently, suitable inventory control approaches that meet the economic reality of a particular business organization must be applied. A number of systems and approaches have been developed in the field of operations control to deal with inventory problems. Such inventory control approaches include Economic Order Quantity (EOQ), Activity-Based Costing (ABC), Just In Time (JIT), Vendor Managed Inventory (VMI), Perpetual Inventory Control, Periodic Inventory, Barcode Inventory Control. Others are Two Bin Method, Three Bin Method, Fixed Order Quantity, Fixed Period Ordering, Frequency Identification (RFID), Vital Essential Desirable, Fast Normal Slow Deed, Fixed Order Quantity and Fixed Period Ordering (Kumar and Anas, 2015). This study focused on perpetual and just-in-time inventory control approaches in SMEs.

Perpetual inventory maintains a continuous record of physical quantities of inventory. It records the purchase of each item of inventory. Perpetual inventory allows for more real-time inventory tracking, making it superior to other methods. However, the system requires consistent record-keeping and monitoring. This system is essential for adequate management planning and controls over inventory maintained and stock out (Yitayew, 2014). Perpetual inventory control approach continually updates inventory records and accounts for additions and subtractions when inventory items are received, sold from stock, moved from one location to another, picked from inventory and scrapped. It controls the movement of each item of inventory as it goes in and out of stock and shows the current balance at hand. According to Wangari and Kagiri (2015), some organizations prefer perpetual inventory approach because they deliver up-to-date inventory information and better handle minimal physical inventory counts. Perpetual inventory control approach is also preferred for tracking inventory because they deliver accurate results on a continual basis when managed properly. To Chopra (2015), this type of inventory control system works best when used in conjunction with a database of inventory quantities and bin locations up-dated in real time by warehouse workers using barcode scanners. Perpetual inventory system is preferred in organizations due to the fact that it delivers inventory information that are not outdated thus handle minimal physical inventory counts.

In addition, Otchere, Adzimah and Aikens (2016) found that perpetual inventory management is relatively good and the organization checks inventory continuously and at fixed time intervals (monthly) to keep their stock always available to meet customer demands. Mbanugo and Uzoka (2021) noted that the perpetual inventory management practice was lowly applied by stores officers in public tertiary educational institutions. In support, Shava and Runjani (2016) stated that the performance of small and medium scale enterprises is strongly linked to prior business experience of the managers. While, Zbigniew and Bieniasz (2016) revealed that general in 2005-2010 the perpetual inventory cycles were significantly reduced, which points to higher effectiveness of management of those assets. Many problems associated with perpetual inventory control approach is that the approach cannot be maintained manually and require specialized equipment and software that results in a higher cost of implementation, especially for businesses with multiple locations or warehouses. Another challenge of using a perpetual inventory control approach is that recorded inventory may not reflect actual inventory as time goes by because they do not use regular inventory approach (that is, when physical inventory counts are being completed, normal business activities nearly become

suspended). As a result, workers may hurry through their physical counts because of time constraints. Thus, this brings the need for just-in-time inventory approaches.

Just-in-time inventory (JIT) control approaches are the modern concept in inventory management aimed at reducing inventory costs. With just-in-time inventory control approach, the exact amounts of good items arrive at the moment they are needed. Just-in-time control approach is a common inventory control and type of learning methodology designed to increase efficiency, cut cost and decrease waste by receiving goods only as they are needed. Olowolaju (2015) defined just in time control approach as a manufacturing system whose goal is to optimize processes by continuously pursuing waste reduction. Yazan (2017) stated that production and operations research has shown that JIT purchasing can potentially have benefits to the firms in the form of increasing product quality, improving supplier/buyer relationships and increasing sales. Akintoye (2014) stressed that the closeness of a company to the ideal JIT situation depends on the type of production process and the nature of supplier industries. The idea of JIT is to drive all queues toward zero in order to minimize inventory investment, shorten production lead time, react faster to demand changes and uncover any quality problem. In just-in-time inventory control approach, the organization keeps only as much inventory as it needs during the production process. With no excess inventory in hand, the company saves the cost of storage and insurance.

More so, Musara (2016) revealed that, on average, small and medium scale enterprises agree that lack of reliable supplier networks, lack of capital, lack of knowledge of financial gains and lack of capacity are the major challenges impeding their application of JIT principles. Yazan (2017) stated that production and operations research has shown that JIT purchasing can potentially benefits firms in the form of increasing product quality, improving supplier/buyer relationships and increasing sales. Musara stated that there is significant positive correlation between the use of JIT principles and cost efficiency, quality improvements and flexibility by managers' years of business experience. In addition, Agu, Obi-Aike and Eke (2016) added that just-in-time inventory approaches as a significant effect on the growth of the manufacturing firms to prior business experience of the managers. Therefore, all the inventory control approaches mentioned above can be seen as the system/procedures and controls that managers could use to create and improve operations of small and medium scale enterprises.

Managers are people or individuals who managed SMEs for another person or own in the business organization. To Onwuchekwa, Emele and Onwuchekwa (2017), small and medium scale enterprises managers are those who undertake innovation, finance, control and apply their business acumen in an effort to transfer innovation/inventory into goods. Small and medium scale enterprises managers are individuals heavily involved in the day-to-day running of the enterprises. Notably, Mohammed, Balaraba and Salawak (2017) defined managers of small and medium scale enterprises as business agents who play a major role in realizing the commercial and marketing objectives of the enterprises. This implies that managers of SMEs are also an entrepreneur who owns a business who could also be managers of enterprises saddled with the responsibilities of managing the day-to-day affairs of an enterprise. In the context of this study, managers of small and medium scale enterprises are owners who invest their capital to create value and get appropriate returns on their investment, and also serve as the accountants.

Certain variables may have an influence on the opinion of managers regarding the extent they applied inventory control approaches such as years of business experience. Years of business experience in this study means the number of years managers have spent in the operation of small and medium scale enterprises. Extant literature from established economies shows that performance of

small and medium scale enterprises is strongly linked to prior business experience of the managers (Shava and Runjani, 2016). Thus, it could be said that the older the managers in business, the more they are equipped to apply adequate inventory control approaches that suits their business. In the context of this study, years of business experience consists of number of years (1 to 5years, 6 to 10years and above 10years) the managers spent within organizations and are involved in effective inventory control approaches.

According to Choi (2015) effective inventory control approach is essential in the operation of any small and medium scale enterprises. Naliaka and Namusonge (2015) noted that efficient control of inventory enhances competitive advantage of small and medium scale enterprises and sustains their operations. But the inability of managers of SMEs to apply inventory control approach will result to overstocking which eventually got expired or out- dated; under stocking, lack of stock-taking, theft of materials by workers and delays in deliveries of materials among others. Ugwu and Nwakoby (2020) indicated that many SMEs are not applying inventory control approach satisfactorily, usually due to the reality that most managers are unsound, ineffective and unwell-coordinated. Notably, the growth and development of small and medium scale enterprises in South-East seem to be slow and, in some cases, even stunted, due to poor or inappropriate inventory control approaches applied in the operations by some managers. Thus, a lot have been said, written about the inventory control approaches by managers of small and medium scale enterprises in the world over. It has also formed the subject of discussion in so many seminars and workshops both locally and internationally.

In the same vein, government at various levels have in one way or the other focused on small and medium scale enterprises. While some governments had formulated policies aimed at facilitating and empowering the growth, development and performance of small and medium scale enterprises through soft loans and other fiscal incentives, none of these efforts towards improving the performance of small and medium scale enterprises was directed towards their inventory control approaches. Despite all effort make by government towards growth, development and performance of small and medium scale enterprises. In recent time, a number of firms in South-East faced numerous challenges especially in inventory control, which affected their performances. It is on the basis of this background that this study was conceived to ascertain the extent managers applied inventory control approaches for improving operations of small and medium scale enterprises in South-East, Nigeria so as to ensure their continuous existence.

Statement of the Problem

Inventory control is critically important to all organizations (SMEs) inclusive. Materials flow has to be maintained if output and distribution are to be maintained. The most common problem in inventory control in most small and medium scale enterprises includes under stocking, over stocking costs, frequent stock-outs, low rate of inventory turnover, high working capital, high cost of storage, high cost of inventory with its negative effect on profits and continuity of businesses. This results in improper valuation of stock and maintaining of accurate data on a continual basis to attain optimal inventory levels which affects (SMEs) financial reporting. This makes the study on perpetual and just-in-time inventory control approaches applied by managers in SMEs for improving operations of small and medium scale enterprises in South-East Nigeria.

Purpose of the Study

The main purpose of this study was to ascertain the extent perpetual and just-in-time inventory control approaches are applied by managers in SMEs for improving operations of small and medium scale enterprises in South-East Nigeria. Specifically, the study sought to ascertain the extent:

1. perpetual inventory approaches are applied by managers for improving operations of small and medium scale enterprises in South-East Nigeria.
2. just-in-time inventory approaches are applied by managers for improving operations of small and medium scale enterprises in South-East Nigeria.

Research Questions

The following research questions guided this study:

1. To what extent do perpetual inventory approaches apply by managers for improving operations of small and medium scale enterprises in South-East Nigeria.
2. To what extent do just-in-time inventory approaches apply by managers for improving operations of small and medium scale enterprises in South-East Nigeria.

Hypotheses

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

1. There is no significant difference in the mean ratings of the respondents on the extent they apply perpetual inventory approaches for improving operations in South-East Nigeria based on their years of business experience based on experience (1-5 years, 6-10 years and above 10 years).
2. There is no significant difference in the mean ratings of the respondents on the extent they apply just-in-time inventory approaches for improving operations in South-East Nigeria based on their years of business experience based on experience (1-5 years, 6-10 years and above 10 years).

Method

The study adopted descriptive survey design. The population of the study comprised 4745 registered SMEs managers from services, construction and manufacturing businesses operating within South-East Nigeria. A sample size of 1424 registered SMEs managers were used for the study. The sample size was derived using proportionate stratified random sampling technique. Data for this study was collected using a 19 items structured questionnaire. The respondents were requested to rate the items on a 5-point rating scale of Very Highly Applied (VHA), Highly Applied (HA), Moderately Applied (MA), Lowly Applied (LA) and Very Lowly Applied (VLA) with values 5, 4, 3, 2 and 1 respectively. The instrument was validated by two experts in business education.

Cronbach's alpha method was used to establish the reliability of the instrument. The reliability coefficients values of 0.88 and 0.93 for clusters B1 and B2 respectively with an overall coefficient value of 0.91. Out of the 1424 copies of the questionnaire distributed to the respondents in their organizations through direct approach which facilitated a response rate, 1414 copies (representing 99 percent) were dully completed, retrieved and used for data analysis. Data collected were analyzed using mean and standard deviation to answer research questions while ANOVA was used to test the null hypotheses at 0.05 level of significance. The application of Statistical Package for Social Sciences (SPSS) version 23 was used for data analysis. For the hypotheses, p-value was used for decision making. Where the calculated p-value was less than the stipulated level of significance

0.05 ($p < 0.05$), it implies that there was a significant difference between respondents' mean scores and the null hypothesis is rejected. On the other hand, if the p-value is greater than or equal to the alpha level of 0.05 ($p \geq 0.05$), it means that there was no significant difference in the respondents mean scores and is not rejected.

Results

Research Question 1. To what extent do managers applied perpetual inventory approaches for improving operation of small and medium scale enterprises in South-East Nigeria?

Table 1.

Mean ratings of Managers on the extent they applied perpetual inventory approaches for improving operation of small and medium scale enterprises

SN	Perpetual Inventory Approaches	Mean	SD	Remarks
1	Keeping a continuous track of inventory balances	3.60	0.43	Moderately Applied
2	Speeding up their financial and accounting matters	3.20	0.64	Moderately Applied
3	Creating more accurate tax and regulatory reports	3.70	0.42	Moderately Applied
4	Delivering up-to-date inventory information and better handle minimal physical inventory counts	2.49	0.68	Lowly Applied
5	Avoiding over-stocking as well as stock-outs to maintain customers patronage	3.54	0.48	Moderately Applied
6	Saving inventory and storage costs	3.24	0.56	Moderately Applied
7	Quickly identifying any discrepancies due to theft or shrinkage	2.20	0.78	Lowly Applied
8	Using technology software for real-time inventory tracking	3.50	0.50	Moderately Applied
9	Having a better understanding of consumer preferences to ensure satisfaction of their needs	3.36	0.54	Moderately Applied
10	Eliminating guesswork when it comes to setting replenishment levels	3.56	0.46	Moderately Applied
	Clustered mean	3.24		Moderately Applied

Data in Table 1 shows the cluster mean score of 3.24 indicating that Managers of SMEs in South-East, Nigeria moderately applied perpetual inventory approaches in their business operations. The analysis of the items further indicates that Managers rated eight items out of the ten listed items as moderately applied. The mean rating for the eight items ranged from 2.50 to 2.70. The remaining two items were rated by managers as lowly applied with mean ratings ranging from 2.20 to 2.49. The standard deviation of 0.42 to 0.79 showed that respondents are not wide apart in their mean ratings which indicate homogeneity.

Research Question 2. To what extent do managers applied just-in-time inventory approaches for improving operation of small and medium scale enterprises in South-East Nigeria?

Table 2.

Mean ratings of Managers on the extent they applied just-in-time inventory approaches for improving operation of small and medium scale enterprises

SN	Perpetual Inventory Approaches	Mean	SD	Remarks
1	Producing right items at the right time	2.60	0.47	Moderately Applied
2	Making available right quantity of items at the right time	2.20	0.74	Lowly Applied
3	Providing right quality of goods at right place at the right time	2.73	0.44	Moderately Applied
4	Managing material in-flow in a plant in order to reduce the levels of inventory	2.59	0.50	Moderately Applied
5	Planning and programmed activities to avoid over production	2.52	0.53	Moderately Applied
6	Improve return on investment of a business by reducing inventory and its associated carrying costs	2.35	0.48	Lowly Applied
7	Creating items that arrive when needed	2.33	0.72	Lowly Applied
8	Having quick information of the consumption of old stock, that triggers new stock to be ordered	2.36	0.58	Lowly Applied
9	Saving warehouse space and costs by reducing inventory	2.24	0.71	Lowly Applied
	Clustered mean	2.44		Lowly Applied

Data in Table 2 shows the cluster mean score of 2.44 indicating that managers of SMEs in South-East, Nigeria lowly applied just-in-time inventory approaches in their business operations. The analysis of the items further indicates that managers rated four items out of the nine listed items as moderately applied. The mean rating for the eight items ranged from 2.52 to 2.73. The remaining five items were rated by managers as lowly applied with mean ratings ranging from 2.20 to 2.36. The standard deviation of 0.44 to 0.74 showed that respondents are not wide apart in their mean ratings which indicate homogeneity.

Hypothesis 1. Managers SMEs do not differ significantly in their mean ratings on the extent they applied perpetual inventory approaches for improving operations in South-East Nigeria based on their years of business experience.

Table 3.

Summary of ANOVA on managers' ratings on the extent perpetual inventory approaches are applied for improving operations based on their years of business experience.

Sources of Variance	SS	df	MS	F	p-value	Decision
Between Groups	1.213	2	1.223	11.68	0.441	Not Significant
Within Group	1.723	141	1.131			
Total	2.936	143				

Table 3 shows that there is no significant difference among the three groups (1-5 years, 6-10 years and above 10 years) in terms of their mean ratings on the extent they applied perpetual inventory approaches for improving operations in South-East Nigeria based on their years of business experience. It was observed that at 0.05 level of significance, 2 is nominator and 1411 of denominator,

the calculated F-ratio is 11.168 and *P-value* 0.441 which is greater than the 0.05 alpha level. Therefore, the null hypothesis is not rejected.

Hypothesis 2. Managers of SMEs do not differ significantly in their mean ratings on the extent they applied just-in-time inventory approaches for improving operations in South-East Nigeria based on their years of business experience.

Table 4.

Summary of ANOVA on managers' ratings on the extent just-in-time inventory approaches are applied for improving operations based on their years of experience.

Sources of Variance	SS	df	MS	F	p-value	Decision
Between Groups	1.526	2	1.763	34.574	0.000	Significant
Within Group	4.055	1411	1.022			
Total	5.581	1413				

Table 4 shows that there is a significant difference among the three groups (1-5 years, 5-10 years and above 10 years) in terms of their mean ratings on the extent they applied just-in-time inventory approaches for improving operations in South-East Nigeria based on their years of business experience. It was observed that at 0.05 level of significance, 2 is nominator and 1411 of denominator, the calculated F-ratio is 34.574 and *P-value* .000 which is less than the 0.05 alpha level. Therefore, the null hypothesis is rejected.

Discussion of Findings

Findings of the study revealed that perpetual inventory approaches are moderately applied by managers of small and medium scale enterprises for improving operation in South-East Nigeria. This implies that managers of SMEs in South-East have not fully applied perpetual inventory approaches in updating records promptly, making sure that additions to records are referenced to supporting invoices for easy verification of the records and tracking the real time movement of materials and equipment. The application of perpetual inventory approaches in financial reporting activities of SMEs by managers will help in maintaining inventory at suitable levels and at the lowest possible cost to ensure uninterrupted supplies. This finding is in line with Wangari and Kagiri (2015) that some organizations prefer perpetual inventory approach because they deliver up-to-date inventory information and better handle minimal physical inventory counts. In line with this, Otchere, Adzimah and Aikens (2016) found that perpetual inventory management is relatively good and the organization checks inventory continuously and at fixed time intervals (monthly) to keep their stock always available to meet customer demands. The finding disagrees with Mbanugo and Uzoka (2021) that the perpetual inventory management practice was lowly applied by stores officers in public tertiary educational institutions.

The findings of the study further revealed that there is no significant difference in managers' mean ratings on the extent they applied perpetual inventory approaches for improving operation of small and medium scale enterprises in South-East Nigeria based on their years of business experience. These findings agree with Shava and Runjani (2016) stated that the performance of small and medium scale enterprises is strongly linked to prior business experience of the managers. The finding of this study disagrees with Zbigniew and Bieniasz (2016) who revealed that general in 2005-2010 the

perpetual inventory cycles were significantly reduced, which points to higher effectiveness of management of those assets.

The reason for the similarities in test of hypotheses is because most of the SMEs managers control the movement of each item of inventory as it goes in and out of stock and shows the current balance at hand. The reason for determining extent managers applied perpetual inventory approaches are they preferred using it for tracking inventory because they deliver accurate results on a continual basis when managed properly. This difference in mean ratings could be as a result of hurry in their physical counts because of time constraints.

Findings of the study revealed that just-in-time inventory approaches are lowly applied by managers of small and medium scale enterprises for improving operation in South-East Nigeria. This signifies a low level on application of just-in-time activity-based which is unremarkable. This indicate that managers of SMEs in South-East do not give adequate attention regarding improvement of their business return on investment by reducing in-process inventory and associated carrying costs. This finding is in line with Musara (2012) who revealed that, on average, small and medium scale enterprises agree that lack of reliable supplier networks, lack of capital, lack of knowledge of financial gains and lack of capacity are the major challenges impeding their application of JIT principles. The findings disagreed with Yazan (2017) which stated that production and operations research has shown that JIT purchasing can potentially benefits firms in the form of increasing product quality, improving supplier/buyer relationships and increasing sales.

The findings of the study further revealed a significant difference in managers' mean ratings on the extent they applied just-in-time inventory approaches for improving operation of small and medium scale enterprises in South-East Nigeria based on gender and their years of business experience. These findings agree with Musara (2016) that there is significant positive correlation between the use of JIT principles and cost efficiency, quality improvements and flexibility by managers' years of business experience. In addition, Agu, Obi-Aike and Eke (2016) who added that just-in-time inventory approaches as a significant effect on the growth of the manufacturing firms to prior business experience of the managers.

The reason for the similarities in test of hypotheses is because most of the SMEs managers focused on pull production concept which reduces the overall inventories in their warehouses. The reason for determining extent managers applied economic order quantity (EOQ) inventory approaches is because they are one who should employ inventory classification techniques to improve their business operations. This difference in mean ratings could be as a result of increased in transportation costs and purchasing costs of products by small and medium scale enterprises, and among others.

Conclusion

Based on the findings of this study, it was concluded that perpetual and just-in-time inventory approaches have not been fully applied by managers for improving operations of small and medium scale enterprises in South-East Nigeria. The application of perpetual and just-in-time inventory control approaches by managers in the operation of small and medium scale enterprises will help to ensure efficiency in the output of the SMEs. Thus, the perpetual and just-in-time inventory control approaches mentioned here were not widely applied which is as a result of SMEs managers' inability to determine the roles inventory control plays in the activities of organizations, and due to the reality that most managers are unsound, ineffective and unwell-coordinated in their job.

Recommendations

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

1. Management of small and medium scale enterprises should organize regular training for managers on various inventory control approaches that will empower them to adequately apply different inventory control approaches appropriately for growth, sustainability, development and smooth running of their businesses.
2. Government should offer short course on inventory management techniques to owners of small and medium scale enterprises. This will acquaint them with the rudiments and inventory control approaches for effective inventory control in their enterprises.

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