

Management of Educational Resources for the Implementation of Vocational Subjects in Technical Colleges in South East, Nigeria

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ABSTRACT

This study investigated the management of educational resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. Four research questions and three hypotheses guided the study. The research design adopted was descriptive survey. The population comprised all the eight (8) government-owned Technical Colleges involved in developing and providing vocational education in South East, Nigeria. They have 241 academic staff comprising sixteen (16) principals (eight in Senior and eight in Junior sections) and 225 technical and science teachers, male and female inclusive. The sample of Sixty (60) respondents including (16) principals and (44) vocational subjects' teachers across the eight (8) Technical Colleges was drawn using stratified random sampling technique representing 25% of the population. On the sample, 35 respondents were experienced while 25 were inexperienced, 40 respondents were drawn from rural areas while 20 from urban areas. Also, 36 respondents were male and 24 were female staff. The questionnaire used was titled "Management of educational resources for the implementation of vocational subjects in Technical Colleges Questionnaire" (MERIVSTCQ) designed by the researchers and, it contained both the demographic and content variables. Document data were equally used to obtain information on the availability, quality, experience and teaching relevance of academic staff in the technical colleges. The instruments were validated and the reliability was carried out using test-retest method. The responses (results) of the first and second instrument were collated and subjected to a reliability test using the Pearson's Product Moment Correlation Coefficient, which provided a reliability index of 0.87. The research questions were answered using the mean scores and standard deviation, while the null hypotheses were tested at 0.05 level of significance, using the z-test. The findings revealed among others that, the management strategies that can be employed to ensure the availability of human resources for the implementation of vocational subjects in Technical Colleges include: employing sufficient/qualified vocational subject teachers in Technical Colleges, enhancing the quality of available teachers through their involvement in continuous professional development programmes, good monetary remuneration for vocational subjects' teachers, adequate reinforcement of vocational subjects' teachers for enhanced performance of duties, and availability of vocational subjects' teachers with technical know-how makes it easier for them to be accommodated in schools. Based on the findings, recommendations were made.

INTRODUCTION

Education can be seen as the most vital instrument needed for socio-economic development of any nation. Nwabueze (2011) defined education as the industry that produces manpower for socio-economic, political and cultural development of any given society.

Nwabueze and Nwokedi (2016) saw education as a system for teaching, learning, administration, research processes and community service through efficient and effective management of educational resources for individual growth and national development. It is responsible for social, economic and scientific development. It transforms an individual for societal development and nation building. The Federal Republic of Nigeria in its National policy on education (2014) stressed that, education is functionally relevant, practical and geared towards the acquisition of appropriate skills and the development of competencies. It helps the individual live and contribute to the development of the society. It is important to note that, one of the national educational goals is acquisition of appropriate skills and development of mental, physical and social abilities and competencies as equipment for the individual to live and contribute to the development of society. The grooming of these skill-oriented and competent individuals in our educational sector has raised concerns on the availability of resources for their training and the level of preparedness as future pillars for national development. However, it is necessary to note that, successful socioeconomic livelihood among the people depends on their ability to provide skilled and experienced growing youth population for societal growth and development. Vocational and entrepreneurship education therefore, constitute an essential tool in developing a country's entrepreneurial culture.

There are broad objectives of vocational education, but one of its major objectives in Nigeria should be to make secondary school students aware of other possibilities to help them thrive in new ventures, create a possible career option and to nurture a positive and favourable attitude towards entrepreneurship in them. No doubt, entrepreneurship is a global concern and Nigeria has already made policy pronouncements by making pre-vocational subjects compulsory for Junior Secondary School Students in Nigeria. However, the concern of vocational education is not the formulation of the policy, but its utilization and implementation. This concern is borne out of the plethora of failed policies in Nigeria. The vocational education policy in the Nigeria Secondary School Education Curriculum is of paramount importance, particularly considering its introduction at this time when the world is undergoing 'economic recession' and workers are losing their jobs with soaring crime rate.

Vocation is arguably one of the ways out of the present harsh economic conditions. Provision of vocational education across global communities has helped to mobilize under-employed people in the areas of labour and knowledge (Oragwu & Nwabueze, 2018). It hopes to offer a means towards the eradication of unemployment and poverty reduction in our body politics. In other words, this policy process points to the whole effect towards positioning vocational development that could better the life of majority who are under-privileged in the society. The vocational education offered behind globalization has not only opened up modern channels of easy communication for the engagement of Nigerian youths, but has also revolutionized education, and by extension knowledge through the process of global integration and communication in the past few years, access to people, job security, global solidarity and information anywhere in this century has become practically quicker, cheaper and easier. In other words, in spite of the acclaimed global benefits of the era, the distribution of global knowledge and wealth has not been fair, the remedy to this situation in our country is the implementation of the vocational education at all levels of education.

Proper understanding of the level of quality in the implementation of vocational education makes it imperative to look at the quality of various factors that are involved in this process. Such factors include: academic staff quality, teaching/learning resources, learning environment, and funds. The availability and effective utilization of the above listed resources in

schools aid the achievement of educational goals and objectives. These resources have been observed as a potent factor to qualitative education delivery and they could equally determine the level of success or failure of an institution (Oragwu & Nwabueze, 2018). This is due to the quality of these resources which could either render the student redundant and ineffective or functional and effective. Implementation of vocational education at the Secondary School level will help to prepare the student for gainful employment as semi-skilled or skilled worker in a recognized occupation. Through vocational education, the three domains of learning are taken care of, that is affective, psychomotor and cognitive domain of the individual in readiness for entry into the world of work. It has become imperative that effective implementation of vocational education could help curb the menace of unemployment in society. Where skills are properly acquired, the graduates will not only seek for employment but will also become employers of labour (Oragwu & Nwabueze, 2018). This will invariably make the youth attain economic or financial freedom and also, pave way for national development.

Despite the important contribution of vocational education to national development, it is plagued with problems which have brought about its present low esteem. Adekunle (2014) identified many of the problems facing vocational education at secondary school level as follows: derogatory government policies, gross inadequacy of available resources such as training materials, tools and poor equipment, poor input which will yield poor output, poor teacher preparation and welfare scheme, inappropriate circular delivery i.e. poor preparation and implementation of vocational education programmes, poor funding of vocational education at Senior Secondary Schools level, and low public esteem of vocational education trainees and graduates, the societal attitude towards vocational education is negative.

Vocational education may not get due attention, in a general list due to bias. It will also suffer in terms of admission, staffing, curriculum, facilities and evaluation, however, teaching of vocational subjects in Technical Colleges, in most areas is devoid of skill acquisition, because of lack of qualified teachers and equipment for practicals. This means that, for students in Technical Colleges to be productive and self reliant, they have to acquire basic skills that will enable them to function effectively in the society. This method will minimize certificate forgery and examination malpractices that have become common phenomena in the society.

Previous study by Ajayi (2014) revealed that, facilities like classroom, workshops, laboratories, textbooks, equipment and materials are grossly inadequate in our Technical Colleges in Nigeria. Similarly, the reason why the facilities are not there is partly due to high cost of vocational education equipment and also, high inflation rate in Nigerian economy. Inadequate educational facilities impede effective training of students from acquiring skills needed for them to contribute their own quota in building the society for national development (Nwabueze, 2011). Since entrepreneurship directly involves the pooling of resources, both human and material to harness and get much satisfaction and value, there is an urgent need for massive investment of resources in the form of funds to cater for the myriads of problems challenging proper and adequate teaching of vocational subjects in Technical Colleges. This process will enable changes to be introduced leading to several improvements in the school climate, because vocational education is about developing attitudes, behaviours and capacities at the individual level. It is also, about the application of those skills and attitudes that can take many forms during an individual career thereby creating a range of long term benefits to the society and economy (Oragwu & Nwabueze, 2018). It is therefore, very necessary that both material and human resources should be made available in schools and these resources should be effectively utilized and maintained to achieve functional and effective implementation of

vocational education in Technical Colleges in Nigeria. The researcher is of the opinion that, if human and material resources made available to schools are prudently utilized, the students could acquire the skills needed to enhance their academic performance in vocational subjects.

The success of any literacy programme depends on a resourceful facilitator, who plans resources to be used, while the usefulness of these resources depends on what the facilitator makes out of them. Sadly to observe however, that these resources are not readily available in most schools and so, no effective usage and the resultant effect is like that of the andragogical process, which is grossly compromised. Federal Republic in Nigeria (2014) in National Policy on Education provided that, facilitators are to improvise and utilize resources in the process of delivery. It is very doubtful if resources are adequately and effectively put into use at the various Technical Colleges where vocational subjects are being offered for the benefit of the students. Anam (1995) posited that, the Introductory Technology equipment installed at various schools is not being used, because there are no personnel to use them. According to Nwabueze, Nwokedi & Edikpa (2018), these technology equipment help the teaching staff in building their capacities for individual development and nation building. Consequently, since no empirical study seems to have established this, this present study fills a gap in knowledge as it seeks to find out the extent of availability and utilization of resources for the effective implementation of vocational subjects in Technical Colleges in South East, Nigeria.

CONCEPT OF EDUCATIONAL RESOURCES

In economics, resources refer to the human effort in production of goods and rendering of services. Resources include human, material, or capital which can be used to accomplish a goal. Educational resource may include the teachers, non-teaching staff, physical facilities, instructional materials, fund and time. They may equally include energy, services, knowledge or other assets that are transformed to produce educational benefits in the society. However, educational resources include human, material and time resources, which help to ascertain the quality of education through appropriate provision, utilization and maintenance in the school system.

According to Nwabueze (2016), educational resource is a source from which institutional benefits are produced; and they include: instructional materials, energy, services, academic and non-academic staff, knowledge and ideas/skills that are transformed to produce educational benefits in the society. However, Nwabueze classified resources as physical (buildings, space, etc), human (academic and non-academic staff), material (all equipment or teaching aids, etc), time and finance along with programmes offered in the institutions of learning. They are very necessary for the support and improvement of education at all levels.

OVERVIEW OF VOCATIONAL EDUCATION

Vocational education is seen as any form of education which sufficiently prepares an individual to perform in his chosen occupation for personal growth and societal development. It teaches skill, develops attitudes, aptitudes and competencies that are requisite to success in any given occupation. In technical colleges, the following subjects are summed up as vocational and trade subjects: electrical electronics, fishery, animal husbandry, computer education, fine and applied arts, building technology and interior decoration, marketing, salesmanship, home economics, woodwork, carpentry, catering and hotel management, food and nutrition, etc. The study of these subjects in technical college is geared towards the achievement of the following objectives as indicated by the Federal Republic of Nigeria (2014) in the National Policy on Education:

- a. Provision of trained manpower in the applied sciences, technology and business particularly at craft, advance craft and technical levels;
- b. provision the technical knowledge and vocational skills necessary for agricultural, commercial and economic development;
- c. giving training and imparting the necessary skills to students who shall be self-reliant economically.

Vocational education at this level of education is aimed at reducing unemployment, and it focuses on making one to be resourceful in his field so that, by the time he graduates from the college, he will be able to work and be useful to himself and the society. Most technical college graduates in Nigeria remain unemployed because they lack the prerequisite and required skills needed to contribute towards societal growth and national development (Akerele, 2007). Okorie (2001) reports that, researchers have also shown about 60% of unemployed graduates due to lack of skills in the kind of education they received and low performance function among them. Vocational education enables the country to produce and increase required workforce that will promote the economic growth of the nation. Alademerin (2004) points out that, the real need of vocational education in Nigerian formal school system is as a result of the desire to help the regular school system become practically oriented and functional to train graduates that could fit easily into the competitive world of work and contribute meaningfully to their immediate environment.

Vocational education is the aspect of education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge. Udoeye (2005) defined vocational education as that, which prepares students mainly for occupations requiring manipulative skills designed to develop their skills, abilities, understanding, attitudes and work habits needed for useful and productive practices. According to the Federal Republic of Nigeria (2014), vocational education refers to those aspects of the educational process involving the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Vocational education is seen as an integral part of general education; a means of preparing for occupational fields and effective participation in the world of work; an aspect of lifelong learning and a preparation for responsible citizenship; an instrument for promoting environmentally sound sustainable development, as well as a method of alleviating poverty.

TECHNICAL EDUCATION

Technical Education in Nigeria began with the visual era; that is, the use of simple teaching aids like apparatus and prepared of lesson notes for knowledge building and skill transfer. Emphasis was placed on the preparation of simple (low Cost) teaching aids in schools, particularly in teacher training colleges. It was in 1932, under colonial Britain, that the first form of communication media appeared in Nigeria. A Radio Receiving Station was constructed in Lagos. Since then, the development of media has been rapid following the technological development in various parts of the world which have contracts and relationship with Nigeria.

The visual era is followed by the Era of Radio media in Education which occurred between the early 1940s and 1950s (Ogunranti, 1982). The first educational radio programs were for English language and were broadcasted by the Radio Distribution Service under the Post and Telegraphs Department. The Nigerian Broadcasting Service (NBS) was established in 1951 and it took over educational programme of the station.

In 1957, the NBS was instituted into the Nigerian Broadcasting Corporation (NBC). Another landmark for Educational Technology in Nigeria was on January 1st, 1958, when the

Western Nigerian Ministry of Education's Audio Visual/Centre at Ibadan, and NBC broadcast their first educational programme. Other regional ministries of education took the clue and opened audio-visual centres in which broadcasting to schools was established. In 1960, the educational radio broadcasting quickly developed into NBC'S School Broadcasting unit, and later in 1982 the Federal Radio Corporation of Nigeria (FRCN) Education Service was established with the headquarter in Ibadan.

Apart from Ibadan where Educational Technology began, other universities like UNN Nsukka, ABU Zaria, Benin, Ife, Ilorin, etc. now have Departments of Educational Technology or/and Centre for Educational Technology. The National Educational Technology Centre (NETC), Kaduna was also established in 1977. Technical schools are generally referred to schools mandated for or offered to all children without charge, funded in whole or in part by taxation. Technical education is inclusive, both in its treatment of students and enfranchisement for the government generally. It is often organized and operated to be a deliberate model of the civil community in which it functions; although, typically provided to groups of students in classrooms in the school setting (Oragwu & Nwabueze, 2018).

Technical Education, as the name implies is an aspect of education designed to prepare students for industry, agriculture, commerce, home economics, etc. which is usually provided at the senior secondary or lower tertiary level. The Federal Republic of Nigeria (2014) defined technical education as the education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge. In this sense, it forms a practical segment of education that involves skill acquisition. Therefore, technical education is a subset of vocational education.

Technical education is concerned with the training on vocation, which is related to productivity. It prepares individuals for jobs since it has adequate employment potentialities. It is helpful in the maximum utilization of the material resources of the country. When Technical education is mixed with general education, it is called 'vocationization of education'. Vocationalization of education is designed to introduce manual skills in general education. It means training in some vocations at the secondary, higher secondary level with general education. The National objectives of Technical Colleges as stated in the Federal Republic of Nigeria (2014) include to:

- a. develop a healthy attitude among students towards work and life;
- b. enhance individual employability;
- c. reduce the mismatch between demand and supply of skilled manpower;
- d. provide an alternative for those intending to pursue higher education without particular interest or purpose;
- e. prepare students for identified vocations spanning several area of activity;
- f. an emphasis in technical education will also be on development of attitudes, knowledge, and skills for entrepreneurship and self-employment;
- g. provide opportunities to fulfill the needs of women, rural and tribal students as well as the deprived sections of society; and
- h. give opportunities for professional growth, career improvement and lateral entry into courses of general, technical and professional education through appropriate bridge courses.

EDUCATIONAL RESOURCES

Educational resource is a source from which institutional benefits are enhanced and established; and they may include instructional materials, energy, services, staff, knowledge, time or other assets that are transformed to promote educational benefits in the lives of people

and society at large. The human resources are the teachers and laboratory scientists. The management of vocational education in this highly competitive global economic environment lies in the hands of the human resources available. This is because, the sustenance of any organization depends on the human resources that operate it. Therefore, the development of human resources in vocational education is in consonance with productivity and efficiency. Human resource as a concept is of the belief that technological progress is borne out of enriched human endeavour. This is based on the assumption that, the application of appropriate technology from higher and imported productivity depends on the availability of individuals who are able to utilize the technology to the fullest. In a similar tone, Harbinson and Mayers in Eneasator (1997) pointed out that, human resources development and the Gross National Production (GNP) have a high positive correlation per capital. All humans are endowed with some natural abilities needed in production. These abilities can collectively yield a wide range of services that are needed over a long period of time for both the individual and the nation.

Material resources include school facilities, instructional materials/aides and environment. A material resource refers to the totality of non-human resources that are available for the attainment of organizational goals (Adeyanju, 2010). Olele and Nwabueze (2015) see material resource as a potent factor in quantitative education delivery, and they include: instructional materials (such as textbooks, audio-visual, software and hardware devices), and facilities such as classrooms, tables, chairs, chalkboards, shelves on which instruments for practicals are properly kept, etc. A material resource refers to the totality of non-human resources that are applied in teaching, sporting activities and laboratory experiments for the attainment of organizational goals (Adeyanju, 2010). These material resources are referred to as the infrastructural facilities and finance available for use by the human resource within the organization.

Finance involves the allocation of assets and liabilities over time, under conditions of certainty and uncertainty. It is the science of money management for organizational development. It is a broad term that describes the study of how the available fund is utilized in an institution and the actual process of acquiring needed funds for the growth of such institution.

Time shapes all events happening around the globe. Every activity that takes place in life involves time planning and its management. Some activities in educational institutions are not properly taken care of due to improper time planning and management. Ebong (2011) defined time as an economic phenomenon that cuts across all disciplines and occurs in every sphere of life. Ekundayo, Konwea and Yusuf (2010) defined time as the quality of nature, which keeps events from happening all at once. Time is an educational resource that is naturally scarce, limited in supply, but limitless in demand (Nwabueze & Nwokedi, 2016). This implies that time is constant and should be adequately planned and managed to achieve educational set goals at a given period (Nwabueze, Edikpa & Chukwuma, 2018).

Resource utilization simply means putting to use materials, energy, services, staff, knowledge, or other assets that are transformed to produce benefit and in the process may be consumed or made unavailable. Benefits of resource utilization may include increased wealth or wants, proper functioning of a system, or enhanced well being.

Harbinson (1973) defined resource utilization as the process of making prudent use of available scarce resources to achieve organizational set goals. This definition highlights the need

to focus on the educational needs, values and rights of students and the use of appropriate resources in education system for institutional productivity. The utilization of educational resources has been a major source of concern to education managers.

THEORETICAL FRAMEWORK

This study is hinged on the “Educational Resource theory” propounded by Coombs in 1968 as cited in Uwameiye (2000:37). Coombs was born in kalamunda, Western Australia in Australia. His theoretical views were out of the great Depression, which hit Australia in 1929 and caused a complete economic collapse in a country totally dependent on commodity exports for its prosperity. The theory explains that, whenever there is an input, there must be an output. He sees educational resources as the major input through which educational outputs are processed and produced. He sees education as an open system that exists in a dynamic and interactive relationship with the environments. The teachers do the input (work), while the learner is determined by the effective resources. The output on the part of the learners is determined by effective teaching of vocational subjects by qualified/specialized teachers. That is to say that, quality teaching gives quality output. If the teaching is ineffective, there will be poor output. Adequate provision of educational manpower, facilities, instructional resources, funds and good learning atmosphere is an input process which is geared towards effective teaching and learning process for a qualitative output.

Education according to Coombs consists of two components. He classified these two components into inputs and outputs. According to him, inputs consist of human and material resources and outputs are the goals and outcomes of the educational process. Both the inputs and outputs form a dynamic organic whole, and if one wants to investigate and assess the educational system to improve its performance, effects of one component on the other must be examined. Instructional resources which are educational inputs are of vital importance to the teaching of vocational subjects in the school curriculum. Wales (1975) was of the opinion that, the use of instructional resources would make discovered facts glued firmly to the memory of students. Savoury (1958) also added that, a well planned and imaginable use of visual aids in lessons would do much to banish apathy, supplement inadequacy of books as well as arouse students’ interest by giving them something practical to see and do, and at the same time helping to train them to think things out themselves.

It is also very vital to have sufficient and adequate human resources in terms of teacher quality for the teaching of vocational subjects in the school curriculum. Without the teachers as implementing factors, the goals of education can never be achieved. Knezewich (1975) also stressed the importance of having appropriate personnel plan and adequate physical facilities to support educational effort. In order to achieve a just and egalitarian society as spelt out in the Nigerian National Policy on Education, schools should be properly and uniformly be equipped to promote sound and effective teaching. Suitable textbooks, qualified teachers, libraries, conducive learning environments, workshops, which are adequate and necessary tools, should be properly provided for schools. Scarcity of these tools according to Coombs (1968), will constrain educational system from responding more fully to new demands. In order to raise the quality of education, its efficiency and productivity, better learning/teaching tools as inputs are needed.

STATEMENT OF THE PROBLEM

For any nation to excel technologically, there is the need for efficient provision and effective utilization of human and material resources in schools. Nigeria as a country, in its quest to become the giant in the technology industry, needs to reposition her policy guidelines to reflect the current realities in the global world. Vocational subjects offered in schools have not

only opened up modern channels of easy communication for the engagement of the Nigerian youth, but have also revolutionized education through the process of global integration and communication in the past few years. Despite the benefits, the acquisition of vocational skills seems to have some inherent constraints in Technical Colleges due to poor provision, utilization and maintenance of resources as well as the effective implementation of the programme. Students on completion of their education still go out to enroll in open apprenticeship programmes, because they could not get enough practical vocational knowledge in their schools, due to inadequate equipments and improper teaching. Consequently, those deficient in the appropriate skills eventually become social and economic liabilities resulting in unemployment, poverty, corruption, smuggling and youth restiveness. The teaming youths are consequently compelled to be instruments of social vices including cultism and militancy. These problems could be avoided if only certain things are put in place for effective vocational teaching and learning when these youths were in school. Common observation in the school system shows that, teachers manage overcrowded classes of students. The question is that, are the resources enough to be utilized by students? Meanwhile, each time there is poor academic performance among students, the blame is usually shifted to the teachers; the teachers on their part are beset with numerous problems, which affect their job. Such problems include high student-teacher ratio, poor working conditions, inadequate physical and manpower resources, inadequate funding, among others. This present study aims to determine the management of educational resources for the implementation of Vocational subjects in Technical Colleges in South East, Nigeria.

AIM AND OBJECTIVES OF THE STUDY

The aim of this study is to investigate the availability of resources and how the available resources are being utilized for the implementation of vocational education in Technical Colleges in South East, Nigeria. Specifically, the objectives of the study include to:

1. find out the availability of qualified human resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria;
2. examine the extent to which available infrastructural resources are utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria;
3. evaluate the challenges facing the availability, utilization and maintenance of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria; and
4. explore the management strategies to be employed to ensure the availability and utilization of resources for the implementation of vocational education in Technical Colleges in South East, Nigeria.

RESEARCH QUESTIONS

Based on the aforementioned objectives, the following research questions guided the study.

1. What is the availability of qualified human resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?
2. What is the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?
3. What are the challenges facing the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?

4. What are the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?

HYPOTHESES

The following hypotheses were formulated to guide the study at 0.05 level of significance.

1. There is no significant difference between the mean scores of experienced and inexperienced vocational subject teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria.
2. There is no significant difference between the mean scores of rural and urban school vocational subject teachers on the challenges facing the availability and utilization of resources for the effective implementation of vocational subjects in Technical Colleges in South East, Nigeria.
3. There is no significant difference between the mean scores of male and female Vocational Subject Teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria.

METHODOLOGY

This study investigated the management of educational resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. Four research questions and three hypotheses guided the study. The research design adopted was descriptive survey. The population comprised all the eight (8) government-owned Technical Colleges involved in developing and providing vocational education in South East, Nigeria. They have 241 academic staff comprising sixteen (16) principals (eight in Senior and eight in Junior sections) and 225 technical and science teachers, male and female inclusive. The sample of Sixty (60) respondents including (16) principals and (44) vocational subjects' teachers across the eight (8) Technical Colleges was drawn using stratified random sampling technique representing 25% of the population. On the sample, 35 respondents were experienced while 25 were inexperienced, 40 respondents were drawn from rural areas while 20 from urban areas. Also, 36 respondents were male and 24 were female staff. The questionnaire used was titled "Management of educational resources for the implementation of vocational subjects in Technical Colleges Questionnaire" (MERIVSTCQ) designed by the researchers and, it contained both the demographic and content variables. Document data were equally used to obtain information on the availability, quality, experience and teaching relevance of academic staff in the technical colleges. The instruments were validated and the reliability was carried out using test-retest method. The responses (results) of the first and second instrument were collated and subjected to a reliability test using the Pearson's Product Moment Correlation Coefficient, which provided a reliability index of 0.87. The research questions were answered using the mean scores and standard deviation, while the null hypotheses were tested at 0.05 level of significance, using the z-test.

RESULTS

Research Question One: What is the availability of qualified human resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?

Table 1: Document analysis on the availability of qualified human resources for the implementation of vocational subjects in Technical Colleges

S/N	Vocational Subjects	Total number of Teachers required	Actual Teachers Available	% Avail.	Short fall	Staff M.Ed, B.Sc, HND	Staff with B.Ed, B.Eng.	Staff with OND, NCE	Decision
1.	Carpentry Teacher	240	17	7.10	223	10		07	Not Available
2.	Animal husbandry Teacher	240	36	15.00	204	30		06	Rarely Available
3.	Catering Teacher/ Home mgt.	240	38	15.80	202	30		08	Rarely Available
4.	Business studies Teacher	240	39	16.30	201	35		04	Rarely Available
5.	Electrical Teacher	240	25	10.40	215	24		01	Rarely available
6.	Agric Science Teacher	240	40	16.70	200	38		02	Rarely Available
7.	Tools Specialists	240	20	8.30	220	12		08	Not available
8.	Computer Studies	240	26	10.80	214	25		01	Rarely available
Sum		1920	241	100	1679	204		37	Rarely available

Source: Adapted from Department of statistics planning and research, Universal Basic Education Boards in South East, Nigeria

N/B: Very available = 200 and above; Available = 100-199; Rarely Available = 20-99; Not Available = 001-19.

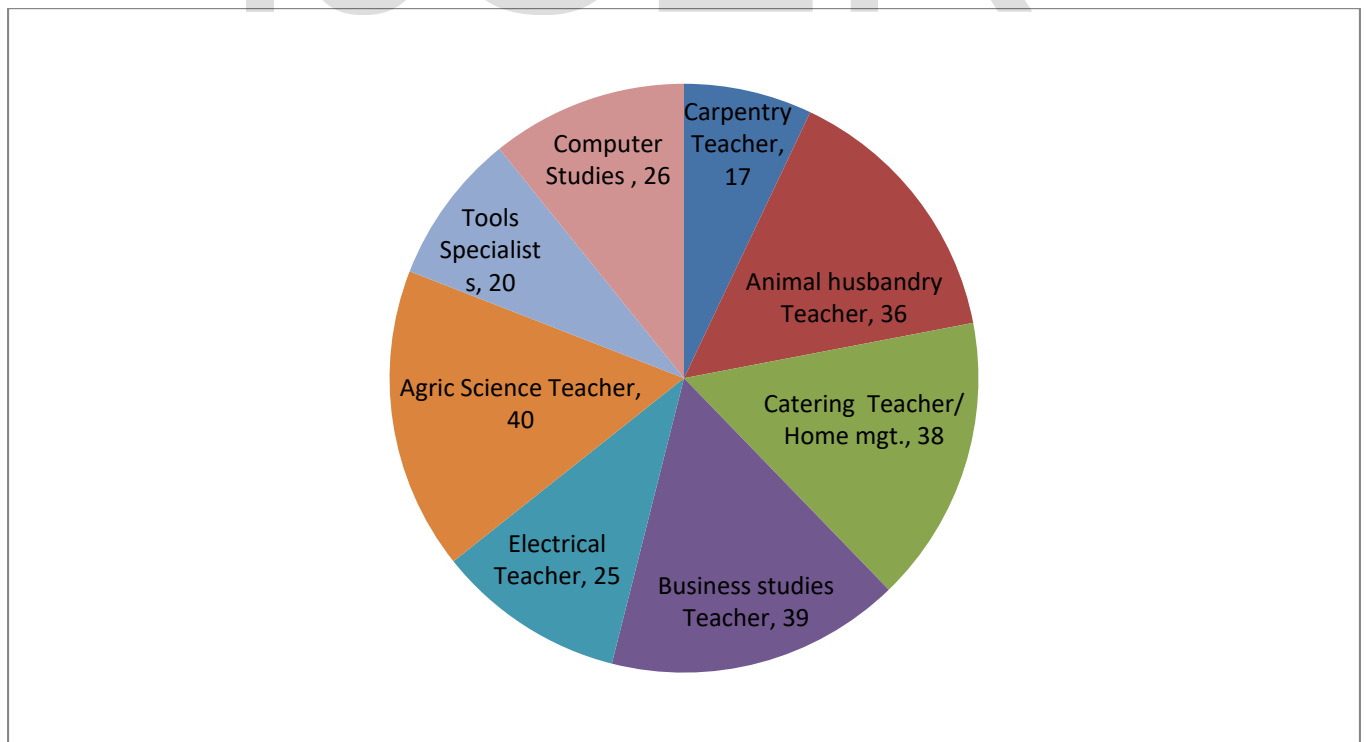


Figure 1: Pie Chart Representation of the actual number of vocational teachers available in technical colleges in South East, Nigeria.

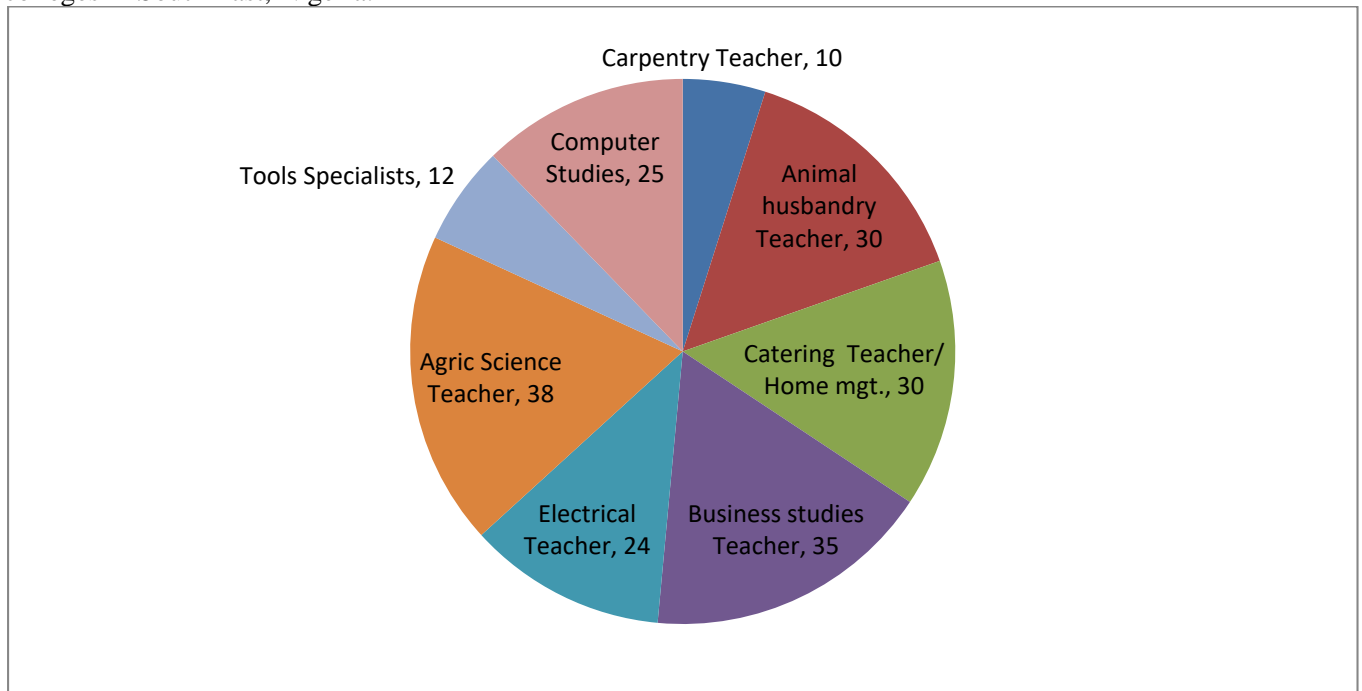


Figure 2: Pie Chart Representation of the actual number of qualified vocational subject teachers available in technical colleges in South East, Nigeria.

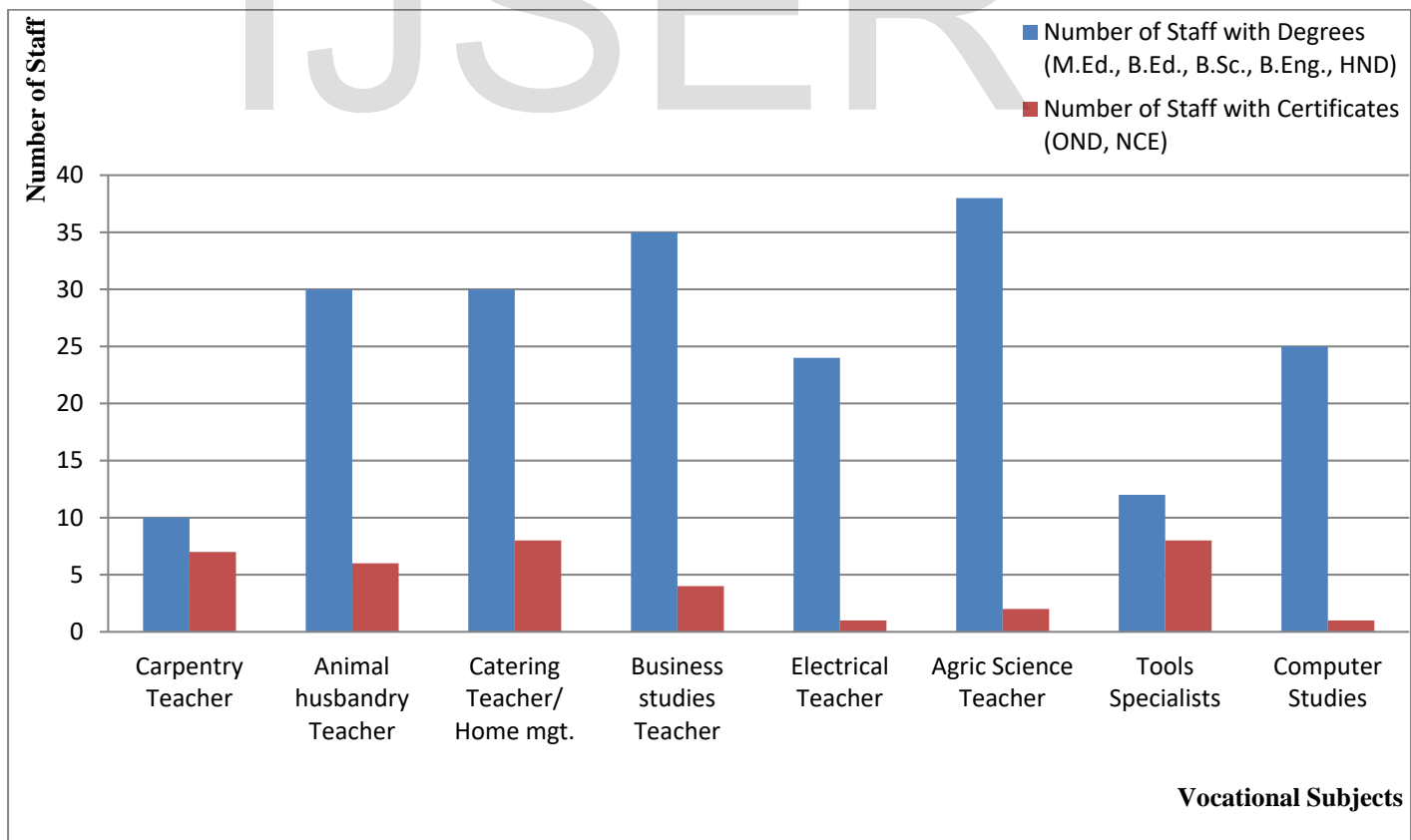


Figure 3: Bar Chart Representation of the Number of Vocational Subject Teachers with Academic Degrees and that of Academic Certificates in Vocational Colleges in South East, Nigeria

Data in Table 1 and Figure 1, 2 & 3 present the actual number of vocational subject teachers available in Technical Colleges in South East, Nigeria. The analysis showed that the vocational subject teachers are not available; rather, the teachers handling carpentry, animal husbandry, catering/home management, business studies, agricultural science and computer studies subjects are rarely available. While the teachers handling electrical subjects, and tools specialists are not available in technical colleges in the state. Also, Figure 2 indicates that, the number of qualified vocational subject teachers in technical colleges in the state having M.Ed., B.Ed., B.Ed.Sc., B.Sc., B.Eng. and NCE qualifications include: 10 for carpentry, 30 for animal husbandry, 30 for catering/home management, 35 for business studies, 38 for agricultural science, 24 for electrical subjects, 12 for tools specialists and 25 for computer studies. Figure 4.3 indicated the Bar Chart Representation of the Number of Vocational Teachers with Academic Degrees and that of Academic Certificates in Vocational Colleges in South East, Nigeria.

Research Question Two: What is the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?

Table 2: Mean scores of experienced and inexperienced teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges

S/N	The extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges include:	Experienced (35)		Inexperience d (25)		Mean Set	Decision
		Mean	St.D	Mean	St.D		
9	There are workshops/laboratories available for the teaching of vocational subjects in your school	3.04	1.18	2.96	1.41	3.00	Moderate Extent
10	The workshops/laboratories available are functional and operating always	2.88	1.20	2.92	1.42	2.90	Moderate Extent
11	The workshops/laboratories/studios available are well equipped	2.35	1.29	2.33	1.53	2.34	Low Extent
12	Equipment, tools, materials for carrying out practicals are always available	2.26	1.31	2.31	1.54	2.29	Low Extent
13	The School has constant electricity supported by the school's generating set for learning	2.45	1.28	2.38	1.52	2.42	Low Extent
14	Obsolete and damaged Facilities are always replaced as fast as possible	1.06	1.51	1.14	1.77	1.10	Very Low Extent
15	The classes and laboratories are conducive enough for learning	2.67	1.24	2.72	1.46	2.70	Moderate Extent
16	The school receives technical assistance and infrastructural facilities from non-governmental organizations and individuals to help in the teaching of vocational subjects in your school.	2.32	1.30	2.39	1.51	2.36	Low Extent
17	There is a sickbay and school clinic to treat students when injury occurs.	1.19	1.49	1.27	1.75	1.23	Very Low Extent
18	The school sends students on industrial attachment because of lack of materials in the school.	2.08	1.34	2.12	1.58	2.10	Low Extent
19	The School library is well equipped with relevant textbooks for reading.	2.87	1.21	2.92	1.42	2.90	Moderate Extent
20	The School/students makes use of examination syllabus from NABTEB on vocational subjects.	3.45	1.11	3.37	1.33	3.41	Great Extent
Aggregate Mean Scores & St.D		2.39	1.29	2.40	1.52	2.40	Low Extent

N/B: Great Extent = 3.0-4.0; Moderate Extent = 2.5-2.99; Low Extent = 1.5-2.49; Very Low Extent = 0.0-1.49

Data on Table 2 presents the mean scores and standard deviation of experienced and inexperienced teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. The respondents are of the opinion that the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges is low. This could be seen from the low aggregate mean scores of 2.39 and 2.40 for experienced and inexperience staff. Therefore, the respondents accepted to a great extent that, the School/students makes use of examination syllabus from NABTEB on vocational subjects. To a moderate extent, they agreed that, there are workshops/laboratories available for the teaching of vocational subjects in your school, the workshops/laboratories available are functional and operating always, the classes and laboratories are conducive enough for learning, and the school library is well equipped with relevant textbooks for reading. The respondents agreed to a low and very low extent on the remaining items implying that the workshops/laboratories/studios available are not well equipped; equipment, tools, materials for carrying out practicals are not readily available; the schools has no constant electricity supply and generating set for learning; obsolete and damaged facilities are not always replaced as fast as possible; the schools do not receive technical assistance and infrastructural facilities from non-governmental organizations and individuals for the teaching of vocational subjects in your school; no sickbay and school clinic to treat students when injury occurs; and the schools do not send their students on industrial attachment for students' growth and development.

Research Question Three: What are the challenges facing the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?

Table 3: Mean scores of vocational teachers in rural and urban areas on the challenges facing the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges

S/N	The challenges facing the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges include:	Rural (40)		Urban (20)		Mean Set	Decision
		Mean	St.D	Mean	St.D		
Challenges of Availability of Human Resources							
21	Lack of sufficient qualified vocational subject teachers ready for employment	3.18	1.08	3.22	1.52	3.20	Agreed
22	The quality of teachers available in the school is generally poor	2.38	1.21	2.44	1.69	2.41	Disagreed
23	Teachers are poorly remunerated monetarily	3.35	1.05	3.39	1.48	3.37	Agreed
24	The teachers are not properly reinforced for enhanced performance of duties	3.22	1.07	3.28	1.50	3.25	Agreed
25	Lack of technical know-how among vocational subjects teachers makes it difficult for them to be employed	3.05	1.10	3.03	1.56	3.04	Agreed
Challenges of Utilization of Human Resources							
26	The available teachers in schools are not sufficient which makes them to be overloaded with too much work load	3.06	1.10	3.14	1.54	3.10	Agreed
27	The available teachers do not possess good instructional skills to handle the subjects	2.67	1.16	2.71	1.63	2.69	Agreed
28	Proper implementation of the teaching recommendations made by the National Board for Technical Education (NBTE)	2.12	1.25	2.08	1.77	2.10	Disagreed
29	Teachers do not receive motivation from individuals, corporate bodies and non-governmental organization	3.17	1.08	3.11	1.54	3.14	Agreed
30	Low enrollment of students in vocational subjects discourages teachers from performing their duties	3.13	1.09	3.17	1.53	3.15	Agreed
Challenges of Maintenance of Infrastructural Facilities							
31	Low disbursement of money for the provision and maintenance	3.57	1.02	3.53	1.45	3.55	Agreed

	of infrastructural facilities needed for the teaching of vocational subjects						
32	Poor physical condition of instructional materials for the teaching of vocational subjects	3.35	1.05	3.27	1.50	3.31	Agreed
33	Obsolete and damaged machineries	3.25	1.07	3.31	1.50	3.28	Agreed
34	Lack of electricity and erratic power supply	3.34	1.05	3.36	1.49	3.35	Agreed
35	High cost of machineries/tools/equipment	3.42	1.04	3.38	1.48	3.40	Agreed
36	Poor management of libraries/laboratories/workshops for the teaching of vocational subjects	3.07	1.10	3.03	1.56	3.05	Agreed
37	Poorly equipped laboratories/workshops/libraries	3.23	1.07	3.25	1.51	3.24	Agreed
38	Congested classrooms and hostels	3.33	1.05	3.29	1.50	3.31	Agreed
39	Unconducive environment for learning/teaching of vocational subjects	3.06	1.10	3.02	1.56	3.04	Agreed
40	Lack of space for new materials to be installed	3.14	1.09	3.20	1.52	3.17	Agreed
Aggregate Mean Scores & St.D		3.11	1.09	3.12	1.54	3.12	Agreed

Data on Table 3 present the mean scores and standard deviation of teachers in rural and urban areas on the challenges facing the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. The respondents agreed on items 21, 23-27, and 29-40 with high mean scores above the mean criterion of 2.50. They equally disagreed on items 22 and 28 with low mean scores below the mean criterion. This could be seen from the aggregate mean scores of 3.11 and 3.12 for teachers in rural and urban areas. Therefore, the challenges facing the availability of human resources for the implementation of vocational subjects in Technical Colleges include: lack of sufficient qualified vocational subject teachers ready for employment, poor monetary remuneration for the available vocational subject teachers, non-reinforcement of teachers for enhanced performance of duties, and lack of technical know-how among vocational subjects teachers which makes it difficult for them to be employed.

Also, the challenges facing the utilization of human resources for the implementation of vocational subjects in Technical Colleges include: insufficient availability of teachers in schools which makes them to be overloaded with too much work-load, low possession of good instructional skills to handle the vocational subjects among teachers, poor implementation of the teaching recommendations made by the National Board for Technical Education (NBTE), low motivational standard from individuals, corporate bodies and non-governmental organization to vocational teachers, and low enrollment of students in vocational subjects which discourages teachers from performing their duties. Equally, the challenges facing the maintenance of infrastructural facilities needed for the implementation of vocational subjects in Technical Colleges include: low disbursement of money for the provision and maintenance of infrastructural facilities needed for the teaching of vocational subjects, poor physical condition of instructional materials for the teaching of vocational subjects, obsolete and damaged machineries, lack of electricity and erratic power supply, high cost of machineries/tools/equipment, poor management of libraries/laboratories/ workshops for the teaching of vocational subjects, poorly equipped laboratories/workshops/libraries, congested classrooms and hostels, unconducive environment for learning/teaching of vocational subjects, and lack of space for new materials to be installed.

Research Question Four: What are the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria?

Table 4: Mean scores of male and female vocational teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges

S/N	Management strategies that can be employed to ensure the availability/utilization of resources for the implementation of vocational subjects in Technical Colleges include:	Male (36)		Female (24)		Mean Set	Decision
		Mean	St.D	Mean	St.D		
Management Strategies to Ensure the Availability of Human Resources							
41	Employing sufficient/qualified vocational subject teachers in Technical Colleges	3.38	1.10	3.32	1.36	3.35	Agreed
42	Enhancing the quality of available teachers through their involvement in continuous professional development programmes	3.34	1.11	3.42	1.34	3.38	Agreed
43	Good monetary remuneration for vocational subjects' teachers	3.55	1.08	3.57	1.29	3.56	Agreed
44	Adequate reinforcement of vocational subjects' teachers for enhanced performance of duties	3.42	1.10	3.36	1.36	3.39	Agreed
45	Availability of vocational subjects' teachers with technical know-how makes it easier for them to be accommodated in schools	3.64	1.06	3.56	1.29	3.60	Agreed
Management Strategies to Ensure the Utilization of Human Resources							
46	Making the available vocational subject teachers sufficient enough to normalize staff workload	3.48	1.09	3.44	1.34	3.46	Agreed
47	Ensuring that available vocational subject teachers possess good instructional skills to handle the subjects	3.62	1.06	3.72	1.28	3.67	Agreed
48	Maintaining proper implementation of the teaching recommendations made by the National Board for Technical Education (NBTE)	3.46	1.09	3.38	1.36	3.42	Agreed
49	Enhancing proper motivation of vocational subject teachers by individuals, corporate bodies and non-governmental agencies	3.47	1.09	3.51	1.30	3.49	Agreed
50	Enhancing the enrollment of students in vocational subjects to promote staff functional performance	3.23	1.13	3.15	1.40	3.19	Agreed
Management Strategies to Ensure the Availability and Utilization of Infrastructural Facilities							
51	Proper disbursement of money for the provision and maintenance of infrastructural facilities needed for the teaching of vocational subjects by government	3.43	1.10	3.39	1.36	3.41	Agreed
52	Maintaining good physical condition of instructional materials needed for teaching vocational subjects	3.55	1.08	3.47	1.33	3.51	Agreed
53	Provision of vocational subjects' machineries in schools	3.30	1.12	3.28	1.37	3.29	Agreed
54	Maintaining good electricity/power supply in vocational schools	3.74	1.04	3.66	1.29	3.70	Agreed
55	Government interventions in reducing the cost of machineries/tools/equipment needed for the delivery of vocational subjects	3.51	1.08	3.57	1.29	3.54	Agreed
56	Ensuring proper management of libraries/ laboratories/ workshops for the teaching of vocational subjects	3.33	1.12	3.27	1.37	3.30	Agreed
57	Maintaining maximum provision of equipment in the laboratories/ workshops/libraries in vocational colleges	3.47	1.09	3.45	1.34	3.46	Agreed
58	Making the classrooms and hostels conducive enough to accommodate academic practices	3.52	1.08	3.58	1.29	3.55	Agreed
59	Ensuring that the school environment is very peaceful for enhanced teaching/learning of vocational subjects	3.66	1.06	3.62	1.29	3.64	Agreed
60	Creating enough space for new vocational subject materials to be installed	3.24	1.13	3.30	1.37	3.27	Agreed
Aggregate Mean Scores & St.D		3.47	1.09	3.45	1.33	3.46	Agreed

Data on Table 4 present the mean scores and standard deviation of male and female vocational teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. The respondents agreed on all items in the Table with high mean scores above the mean criterion of 2.50. From the analysis, the higher the mean scores, the lower the standard deviation; and the lower the mean score, the higher the standard deviation. The aggregate mean scores of 3.47 for male staff and 3.45 for female staff showed that, the respondents agreed on the items in the table as the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. Therefore, the management strategies that can be employed to ensure the availability of human resources for the implementation of vocational subjects in Technical Colleges include: employing sufficient/qualified vocational subject teachers in Technical Colleges, enhancing the quality of available teachers through their involvement in continuous professional development programmes, good monetary remuneration for vocational subjects' teachers, adequate reinforcement of vocational subjects' teachers for enhanced performance of duties, and availability of vocational subjects' teachers with technical know-how makes it easier for them to be accommodated in schools.

Also, the management strategies that can be employed to ensure the utilization of human resources for the implementation of vocational subjects in Technical Colleges include: making the available vocational subject teachers sufficient enough to normalize staff workload, ensuring that available vocational subject teachers possess good instructional skills to handle the subjects, maintaining proper implementation of the teaching recommendations made by the National Board for Technical Education (NBTE), enhancing proper motivation of vocational subject teachers by individuals/corporate bodies/non-governmental agencies, and enhancing the enrollment of students in vocational subjects to promote staff functional performance. Equally, the management strategies that can be employed to ensure the availability and utilization of infrastructural facilities for the implementation of vocational subjects in Technical Colleges include: proper disbursement of money for the provision and maintenance of infrastructural facilities needed for the teaching of vocational subjects by government, maintaining good physical condition of instructional materials needed for teaching vocational subjects, provision of vocational subjects' machineries in schools, maintaining good electricity/power supply in vocational schools, government interventions in reducing the cost of machineries/tools/equipment needed for the delivery of vocational subjects, ensuring proper management of libraries/ laboratories/ workshops for the teaching of vocational subjects, maintaining maximum provision of equipment in the laboratories/ workshops/libraries in vocational colleges, making the classrooms and hostels conducive enough to accommodate academic practices, ensuring that the school environment is very peaceful for enhanced teaching/learning of vocational subjects, and creating enough space for new vocational subject materials to be installed.

TEST OF HYPOTHESES

Hypothesis One: There is no significant difference between the mean scores of experienced and inexperienced vocational subject teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria.

Table 5: Summary of z-test on the difference between the mean scores of experienced and inexperienced vocational subject teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges

Status of Staff	N	Mean	St.D	df	z-calculated Value	z-critical Value	Decision
Experienced	35	2.39	1.29	58	- 0.027	±1.960	Accepted
Less Experienced	25	2.40	1.52				

Data on Table 5 showed the summary of z-test on the difference between the mean scores of experienced and inexperienced vocational subject teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. From the analysis, the z-calculated value of - 0.027 is far lesser than the z-critical value of ±1.960 indicating that the null hypothesis was accepted. Therefore, there is no significant difference between the mean scores of experienced and inexperienced vocational subject teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria.

Hypothesis Two: There is no significant difference between the mean scores of vocational subject teachers in rural and urban areas on the challenges facing the availability and utilization of resources for the effective implementation of vocational subjects in Technical Colleges in South East, Nigeria.

Table 6: Summary of z-test on the difference between the mean scores of vocational subject teachers in rural and urban areas on the challenges facing the availability and utilization of resources for the effective implementation of vocational subjects in Technical Colleges

Location of Schools	N	Mean	St.D	df	z-calculated Value	z-critical Value	Decision
Rural	40	3.11	1.09	58	- 0.056	±1.960	Accepted
Urban	20	3.12	1.54				

Data on Table 6 showed the summary of z-test on the difference between the mean scores of vocational subject teachers in rural and urban areas on the challenges facing the availability and utilization of resources for the effective implementation of vocational subjects in Technical Colleges in South East, Nigeria. From the analysis, the z-calculated value of - 0.056 is far lesser than the z-critical value of ±1.960 indicating that the null hypothesis was accepted. Therefore, there is no significant difference between the mean scores of vocational subject teachers in rural and urban areas on the challenges facing the availability and utilization of resources for the effective implementation of vocational subjects in Technical Colleges in South East, Nigeria.

Hypothesis Three: There is no significant difference between the mean scores of male and female Vocational Subject Teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria.

Table 7: Summary of z-test on the difference between the mean scores of male and female Vocational Subject Teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges

Gender of Staff	N	Mean	St.D	df	z-calculated Value	z-critical Value	Decision
Male	36	3.47	1.09	58	0.061	±1.960	Accepted
Female	24	3.45	1.33				

Data on Table 7 showed the Summary of z-test analysis on the difference between the mean scores of male and female Vocational Subject Teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. From the analysis, the z-calculated value of 0.061 is far lesser than the z-critical value of ± 1.960 indicating that the null hypothesis was accepted. Therefore, there is no significant difference between the mean scores of male and female Vocational Subject Teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria.

DISCUSSION OF FINDINGS

Availability of qualified human resources for the implementation of vocational subjects:

The findings of this study revealed that, the vocational subject teachers are not available in technical colleges in South East, Nigeria; rather, the teachers handling carpentry, animal husbandry, catering/home management, business studies, agricultural science and computer studies subjects are rarely available. While the teachers handling electrical subjects, and tools specialists are not available in technical colleges in South East, Nigeria. This was illustrated in Figure 2 indicating that, the number of qualified vocational subject teachers in technical colleges having M.Ed., B.Ed., B.Ed.Sc., B.Sc., B.Eng. and NCE qualifications include: 10 for carpentry, 30 for animal husbandry, 30 for catering/home management, 35 for business studies, 38 for agricultural science, 24 for electrical subjects, 12 for tools specialists and 25 for computer studies. Figure 3 indicated the bar chart representation of the number of vocational teachers with academic degrees and that of academic certificates in Vocational Colleges in South East, Nigeria. From the analysis, the unavailability of vocational subject teachers in technical colleges seriously affects the involvement of students in choosing vocational subjects for internal and external examinations. Therefore, sufficient and qualified staff need to be employed in Technical Colleges to handle the vocational subjects. This would help students to enroll in vocational subjects in schools for internal and external examinations. Oragwu and Nwabueze (2018) are of the opinion that, good and quality teachers impact knowledge and skills into the students for satisfactory performances in internal and external examinations. McCormick, John and James (1995) are of the opinion that, quality teachers are the ones who inspire students to compete against themselves, take a task that seems to exceed their grasp, as well as discover and develop their real mettle as thinkers. The author equally stated that, high quality teachers have passion in their lives and a deep regard for their students; they lead challenging and demanding lives that set high standards as well as inspire their students; and they are always fully engaged to learning new things and understanding new realities. Aghenta (1982, 2009) points out that, vocational subjects lack experienced teachers who should know the advantages of practical skills training, and use of adequate facilities in which students would be exposed to appropriate experiences. Uwameiye (2000) emphasizes that, lack of vocational teachers have seriously affected the teaching of vocational subjects in Technical Colleges.

Extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects:

The findings revealed that, the respondents agreed to a great extent on the use of examination syllabus from NABTEB on vocational subjects by schools and students. To a moderate extent, they agreed that, there are workshops/laboratories available for the teaching of vocational subjects in your school, the workshops/laboratories available are functional and

operating always, the classes and laboratories are conducive enough for learning, and the school library is well equipped with relevant textbooks for reading. The respondents agreed to a low and very low extent on the remaining items implying that the workshops/laboratories/ studios available are not well equipped; equipment, tools, materials for carrying out practicals are not readily available; the schools have no constant electricity supply and generating set for learning; obsolete and damaged facilities are not always replaced as fast as possible; the schools do not receive technical assistance and infrastructural facilities from non-governmental organizations and individuals for the teaching of vocational subjects in your school; no sickbay and school clinic to treat students when injury occurs; and the schools do not send their students on industrial attachment for students' growth and development. The test of hypothesis one showed that, there is no significant difference between the mean scores of experienced and inexperienced vocational subject teachers on the extent to which the available infrastructural facilities are being utilized and maintained for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. They all accepted that, availability, utilization and maintenance of infrastructural facilities enhance the facilitation of vocational subjects in technical colleges in the state. But due to inadequate provision of these infrastructural facilities in Technical Colleges in the State, the utilization and maintenance become non-functional in the system.

The purpose of providing infrastructural facilities in schools is to promote efficiency of education by improving the quality of teaching, learning, research and community service. Incorporating these facilities supports and reinforces teaching. In line with the findings, Aduwa-Oragwu and Nwabueze (2018) state that infrastructural facilities offer a variety of learning experiences individually or in combination to meet different teaching and learning experiences. According to Nwabueze (2011), infrastructural facilities in education enable a skillful teacher to achieve a level of instructional effectiveness that far exceeds what is possible when they are not provided in the system. He further points out that the value of facilities in education becomes attainable when viewed in terms of their adequacy to programmes they were designed for. This means that facilities must satisfy both qualitative and quantitative educational programmes, which will aid the school to function appropriately and effectively.

Challenges facing the availability and utilization of resources for the implementation of vocational subjects:

The findings of this study equally revealed that, the challenges facing the availability of human resources for the implementation of vocational subjects in Technical Colleges include: lack of sufficient qualified vocational subject teachers ready for employment, poor monetary remuneration for the available vocational subject teachers, non-reinforcement of teachers for enhanced performance of duties, and lack of technical know-how among vocational subjects teachers which makes it difficult for them to be employed. Also, the challenges facing the utilization of human resources for the implementation of vocational subjects in Technical Colleges include: insufficient availability of teachers in schools which makes them to be overloaded with too much work-load, low possession of good instructional skills to handle the vocational subjects among teachers, poor implementation of the teaching recommendations made by the National Board for Technical Education (NBTE), low motivational standard from individuals, corporate bodies and non-governmental organization to vocational teachers, and low enrollment of students in vocational subjects which discourages teachers from performing their duties. Equally, the challenges facing the management of infrastructural facilities needed for the implementation of vocational subjects in Technical Colleges include: low disbursement of

money for the provision and maintenance of infrastructural facilities needed for the teaching of vocational subjects, poor physical condition of instructional materials for the teaching of vocational subjects, obsolete and damaged machineries, lack of electricity and erratic power supply, high cost of machineries/tools/equipment, poor management of libraries/laboratories/workshops for the teaching of vocational subjects, poorly equipped laboratories/workshops/libraries, congested classrooms and hostels, unconducive environment for learning/teaching of vocational subjects, and lack of space for new materials to be installed. The test of hypothesis two showed that, there is no significant difference between the mean scores of vocational subject teachers in rural and urban areas on the challenges facing the availability and utilization of resources for the effective implementation of vocational subjects in Technical Colleges in South East, Nigeria. They are of the opinion that the above mentioned challenges affect the teaching and learning of vocational subjects negatively in technical colleges.

Human resources and facilities such as technical equipment, information and communication equipment, electricity, studio and laboratories are essential for effective teaching and learning of vocational subjects in schools. In line with the findings, McGowen (2007) is of the opinion that physical condition of a school can influence students' achievement; stating that in a situation where there are not enough classrooms, the students are crammed up in the available space. According to Nwabueze (2016), inadequate funding is one of the obstacles to effective provision, utilization and maintenance of educational facilities and instructional materials in our school system. The author further states that, inadequate funding of school system in the country has hindered the accomplishment of some of the aims and objectives of education as contained in the National Policy on Education. Also, inadequate support from government hinders the proper provision and maintenance of human and material resource in our educational institutions.

Management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects:

The findings of this study finally revealed that, the management strategies that can be employed to ensure the availability of human resources for the implementation of vocational subjects in Technical Colleges include: employing sufficient/qualified vocational subject teachers in the Colleges, enhancing the quality of available teachers through their involvement in continuous professional development programmes, good monetary remuneration for vocational subjects' teachers, adequate reinforcement of vocational subjects' teachers for enhanced performance of duties, and availability of vocational subjects' teachers with technical know-how makes it easier for them to be accommodated in schools. Also, the management strategies that can be employed to ensure the utilization of human resources for the implementation of vocational subjects in Technical Colleges include: making the available vocational subject teachers sufficient enough to normalize staff workload, ensuring that available vocational subject teachers possess good instructional skills to handle the subjects, maintaining proper implementation of the teaching recommendations made by the National Board for Technical Education (NBTE), enhancing proper motivation of vocational subject teachers by individuals/corporate bodies/non-governmental agencies, and enhancing the enrollment of students in vocational subjects to promote staff functional performance.

Finally, the management strategies that can be employed to ensure the availability and utilization of infrastructural facilities for the implementation of vocational subjects in Technical Colleges include: proper disbursement of money for the provision and maintenance of infrastructural facilities needed for the teaching of vocational subjects by government,

maintaining good physical condition of instructional materials needed for teaching vocational subjects, provision of vocational subjects' machineries in schools, maintaining good electricity/power supply in vocational schools, government interventions in reducing the cost of machineries/tools/equipment needed for the delivery of vocational subjects, ensuring proper management of libraries/ laboratories/ workshops for the teaching of vocational subjects, maintaining maximum provision of equipment in the laboratories/workshops/libraries in vocational colleges, making the classrooms and hostels conducive enough to accommodate academic practices, ensuring that the school environment is very peaceful for enhanced teaching/learning of vocational subjects, and creating enough space for new vocational subject materials to be installed. The test of hypothesis three showed that, there is no significant difference between the mean scores of male and female Vocational Subject Teachers on the management strategies that can be employed to ensure the availability and utilization of resources for the implementation of vocational subjects in Technical Colleges in South East, Nigeria. This implies that, adequate management strategies must be employed in technical colleges to ensure proper provision, utilization and maintenance resources for the implementation of vocational subjects in the zone.

In order to arrive at the effective implementation of these programmes in the zone, it is important to realize that successful management of any policy depends to a large extent on the support it receives both from the formulators (government) and those expected to implement and consume it. In line with the findings, Oragwu and Nwabueze (2018) states that, the availability of teachers in sufficient numbers with relevant qualifications and motivation has been among the score points of education in Nigeria; for any nation to succeed in its educational plan depends on the Nation's ability to provide well qualified and reasonable number of teachers necessarily needed in the school instructional enhancements. Therefore, for a successful achievement of national development through vocational education, managers must be the brain behind this achievement, as the manager is a major contributor to the success of educational goals and must be able to plan and project ahead of time, in order to sustain and maintain a favourable educational system. Also, Ichoku (2017) revealed that, the extent to which adequate manpower availability for technical subjects enhance students' productivity in secondary schools include: increasing the chance of students' success in external examinations; enhancing the pre-requisite knowledge/needed competency for employment after school; giving students the confidence in starting their own business after school; promoting hard-work/competition among students; creating greater chance of continuing success in students' achievement; promoting clear communication ability among students; and helping to promote skills, knowledge, understanding/ good working relationships among students.

CONCLUSION

The findings of this study had shown that, the vocational subject teachers are not readily available in South East, Nigeria as well as the infrastructural facilities needed to transfer knowledge and skills to the students. Due to these problems, the enrollment of students in vocational subjects is abysmally low in technical colleges in the zone. Therefore, there is need to ensure the availability and utilization of vocational subject teachers and optimum management of educational facilities that would aid the teaching and learning of vocational subjects in technical colleges in South East, Nigeria.

RECOMMENDATIONS

Based on the findings, the following recommendations were made.

1. Government should employ sufficient and qualified vocational subject teachers in technical colleges in the zone to motivate students enroll in vocational subjects during internal and external examinations.
2. Government should equip the available workshops and laboratories for the teaching of vocational subjects in technical colleges in the state with relevant and modern practical instruments, tools, machines and apparatus. This would help to make available workshops and laboratories functional and operating always.
3. School administrative heads should make the classes and laboratories functional and very conducive enough to enhance qualitative teaching and learning situations.
4. School administrative heads should ensure that, the school library is well equipped with relevant vocational studies' textbooks for teaching, reading and practical consultations.
5. School administrative heads should ensure that there is constant electricity supply and generating set for teaching, learning and practical activities both in classes, laboratories and workshops.
6. Vocational subject teachers should regularly improve on their qualities through proper involvement in continuous professional development programmes within the school and outside the school.
7. Government and administrative heads of technical colleges should make good provision of monetary remuneration/salary packages for vocational subjects' teachers, as well as adequate reinforcement of vocational subject teachers for enhanced performance of duties. This would make it easier for vocational subject teachers with technical know-how to be motivated to apply these special skills in technical colleges.
8. Proper implementation of the teaching recommendations made by the National Board for Technical Education (NBTE) by school managers would make available vocational subject teachers to acquire and possess good instructional skills/knowledge of handling the subjects.
9. Government should often make provisions for funds needed to purchase new educational facilities and maintenance of the available ones. This would help to make teaching and learning very interesting and more effective.
10. Private sectors should try to come in and assist technical colleges with technical assistance and infrastructural facilities needed for the teaching of vocational subjects in the schools.
11. Government and private sectors should help in providing technical colleges with sickbay and school clinic well equipped with medical apparatus needed to treat students when injury occurs.
12. School managements should endeavour to send their students on industrial attachment/training for students' growth and future development.

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