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SCARCITIES OF MODERN OFFICE EQUIPMENT IN VOCATIONAL EDUCATION LABORATORIES IN SOUTH EASTERN NIGERIA

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ABSTRACT

This study aimed at investing scarcities of modern office equipment in vocational education laboratories in south eastern Nigeria. Three purposes and three research questions guided the study. Survey research design was adopted to survey a population of 497 vocal education teachers in across the five states in South Eastern Nigeria. Purposive sample technique was used to draw the sample while stratify sampling method was used to select 12 teachers in each of the five states that make up South Eastern Nigeria. This gave a total sample of 60 vocational education teachers. Questionnaire titled "scarcities of modern office equipment in vocational education laboratories" (SMOEVEL) was used to collect data from the respondents. The collected data were analyzed using mean rating. T-test statistics was conducted to test the hypotheses at 0.05 level of significance. The findings of this study indicated that modern office equipment were scarce in vocation education laboratories particularly in South Eastern Nigeria. Also, there is no significant difference in the mean rating of male and female teachers on the modern office equipment available in vocational education laboratories in South Eastern Nigeria. Also, there is no significant different on mean response of male and female teachers on the extent scarcity of modern office equipment affect teaching and learning of vocational education in South Eastern Nigeria. Thus, these scarcities posed challenges in the realization of the goals and objectives of establishing vocational education by the national policy on education. The study concluded that it is necessary to improve the current state of vocational education pragrammes in Nigeria more especially in South East through proper planning and financing for acquisition of appropriate modern office equipment that will expose the youths in acquiring the 21st century skills in vocational education centers for employability, trade, business ventures operation and promotion of economic development of Nigeria at large. Hence, the researcher recommended that government, communities, industries, religious organizations, labour unions, non-governmental Organizations (NGOs), wealthy individuals in the society should be encouraged in the funding of VE institutions for the smooth running of VE in terms of provision of modern office equipment such as Laptop computers, CDs, floppy disc, CDs, floppy disc, flash drives, Printers (Ink Jet and Desk jets) Photocopiers, Tele-Printer, Electric calculators, Duplicating machines, Accounting machines, Shredding machines, Franking machines, Addressing Machine, Internet, modern, scanning machines, Spiral binding machine, Perforating machine, Recording machines, Mailing machine, Stamp Affixing machined and among others.

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Keywords: Scarcities, modern, office, equipment, vocational, education, laboratory.

Introduction

The rapid increase in the level of unemployment, poverty and crimes around the globe relative to lack of skilled workforce in most countries and the changing nature of the global economy have challenged countries to include vocational education (VE) as a course at all levels its level of education. The production of an educated, skilled and motivated workforce becomes the only key to the survival of individuals and nations in the emerging world economic order. The introduction of vocational education in Nigeria is to train individuals to become craftsmen, technicians and technologists in different occupational areas. Finch and Crunkilton (1999), opined that the major goal of VE is to prepare students for successful employment in the labour market. The Federal republic of Nigeria (FRN, 2004) stipulated that the goals of VE; shall be to provide trained manpower in the applied sciences, technology and business particularly at the craft (equivalent of high schools), advanced craft and technical levels; provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; to give training and impart the necessary skills to individuals who shall be self-reliant economically. These individuals trained acquired competent skills to operate and maintain the available technical equipment and machines in their areas of employability or self-reliance (Ndomi, 2005). Thus, this goals can be achieved through adequate and well-equipped laboratory with relevant modern office equipment. The modern office equipment are the machines yintroduced in the work place to facilitate administrative processes, remove bureaucracy and unnecessary delay of the office functions (Ovbiagbale, Mgbonyebi & Olaniye, 2019). Modern office equipment consist of all equipment and products used in an office for technical purposes such as adding machines, check-writing machines, calculators, computers, and all other office apparatus. Modern office equipment is the technical devices and tools used for teaching and learning of vocational education. According to Usoro (2010), modern office equipment are those machines and equipment used in carrying out office function which include; computers, communication gadgets and word processors. Encyclopedia.com (2020) added that modern office equipment includes personal computers (PCs), slide projectors, movie projectors, overhead projectors, television monitors, videocassettes, videodisc players, multimedia systems and among others. In the same vein, Okon and Okogun (2020) defined modern office equipment as the use of computer systems and software in service delivery. Thus, modern office equipment is the use of self-regulating devices to handle office activities traditionally performed manually or by semi-mechanical methods.

The modern office equipment has thus revolutionized the office work and has greatly improved the way office managers and self-employees carry out their duties. According to Margaret and Pac (2019) modern office equipment has transformed the world of work as the work environment has changed, individual workers see how their work connects not only to their particular work place, but to the entire value chain. In the same vein, the availability of appropriate modern office facilities in vocational education laboratory enhance students learning by allowing them to be involved in demonstrations and practice which will help them to continue to build their skills. Alimi, Olatunji Sabitu, Gabriel Babatunde Ehinola and Festus Oluwole Alabi (2012) opined that the facilities for teaching vocational education may include; classrooms, libraries, recreational equipment and school structures, computer, word processing, software and among others. However, modern office equipment offer opportunities for practical training of students in skill acquisition in their technical trade areas for future development of the key sectors of the economy in order to meet the basic needs of electricity, roads and machinery, among others. Students practical projects are an important part of the curriculum in VE, but a supportive modern office equipment is a fundamental requirement for the successful implementation of VE curriculum (Bybee & Loucks-Horsely, 2000; Penny & Fox, 1997). This aspect of the curriculum can only be implemented modern office facilities, tools, equipment and machines are adequate in the VE laboratory.

Consequently, there is great controversy in the realization of the objective of VE as the programme today is characterized with scarcity of modern office equipment in TVE laboratory in various institutions in Nigeria particularly South East (Umunadi, 2011). Umar and Maaji (2010) stated that most of the TVE institution in South Eastern Nigeria have been forced to perform below standard due to purported non-availability, poor management or utter neglect of the required modern office equipment in their laboratories for effective skills acquisition. According to Puyate,Umar and Ma'aji, (2010) the present state of facilities in TVE institutions is very poor, there is no planned measures of maintenance of the already broken down equipment or means of acquiring new ones, there is hardly or no concern on the part of government, teachers and students for the development of the present state of the facilities. Audu, Rufai, Aede Hatib Mustaamal and Muhammad Aiman Sukri, 2013) affirmed that a training program where the equipment is not scarce will not only suffer in production but will also produce unskilled and unemployed personnel. An examination-driven approach to training, coupled with inadequate instructional materials, inadequate training facilities and a lack of collaboration with local industries to provide hands-on experience for trainers and trainees led to conclude that students are receiving ineffective and inefficient training (Dasmani, 2011). Thus, this study aims at investigating

scarcities of modern office equipment in vocational education laboratories in south eastern Nigeria.

Statement of the Problem

The need for new talent necessitates that educational institutions provide not only the minimum of occupational training but also the training for scientists, inventors, and high-level professionals (Marope, Priscilla Toka Mmantsetsa, Borhène Chakroun & Holmes, 2015). Inadequate modern office equipment in VE laoratoratories pose a challenge and hamper the ability of students to learn new skills. Afeti (2007) stated that, the quality of training in VE institutions in South East Nigeria is low with undue emphasis on theory and certification rather than on skills acquisition and proficiency testing. Inadequate instructor training, inadequate and obsolete training equipment and lack of instructional materials are some of the factors that combine to reduce the effectiveness of training in meeting the required knowledge and skill objectives. High quality skills training requires qualified instructors, appropriate and adequate modern office equipment such as computer, word processing, photocopy machines, projectors, plough planes, rebate planes, compass planes, tenon saws, bench vices, CDs, floppy disc, CDs, floppy disc, flash drives, Printers (Ink Jet and Desk jets) Photocopiers, Tele-Printer, Electric calculators, Duplicating machines, Accounting machines, Shredding machines, Franking machines, Addressing Machine, Internet, modern, scanning machines, Spiral binding machine, Perforating machine, Recording machines, Mailing machine, Stamp Affixing machine, Tele-conferencing devices, Dictating machines, Multimedia projectors, Audio-visual recorders, Overhead projectors with accessories, Editing/dubbing machine, Opaque projectors with accessories, Modern Filling equipment which can motivate students to learn (Ayua, 2006). Insufficient training equipment leads to trainee overcrowding during practical demonstrations, with most of the students only watching the demonstration and not having the opportunity to get some hands-on practice (NICHE, 2010). Due to the fact that the institutions are inadequately resourced, the education and training remain theoretical and the graduates are not considered more skilled than their academic counterparts by the labour market. Uzoagulu (1993) asserted that where equipment and tools are not scarce or inadequately provided, technical training programs will suffer and will lead to the production of highly unskilled personnel who are unemployable and unproductive in the society. In the same vein Dasmani (2011) observed carried out a study on the challenges facing technical institute graduates in practical skills acquisition the study revealed that inadequate instructional materials, large number of students in the class, insufficient training facilities, lack of collaboration with the local industries for hands-on-experience for both trainers and trainees lead to ineffective and inefficient training of students while undue emphasis is placed on passing examination. This inadequacy in preparation for the labour

market brought workplace challenges to the graduates. The institutions thereby acquire a bad image, and produce graduates with lower employability and self-reliance.

Research Questions

1. What are the modern office equipments needed in vocational education laboratories in South Eastern Nigeria?
2. To what extent modern office equipment are available in vocational education laboratories in South Eastern Nigeria?
3. To what extent scarcity of modern office equipment affect the teaching and learning of vocational education in South Eastern Nigeria?

Research Hypotheses

$H0_1$: There is no significant difference in the mean rating of male and female teachers on the modern office equipment available in vocational education laboratories in South Eastern Nigeria.

H_1: There is significant difference in the mean rating of male and female teachers on the modern office equipment available in vocational education laboratories in South Eastern Nigeria.

$H0_2$: There is no significant different on mean response of male and female teacher on the extent scarcity of modern office equipment affect teaching and learning of vocational education in South Eastern Nigeria.

H_2: There is significant different on mean response of male and female teacher on the extent scarcity of modern office equipment affect teaching and learning of vocational education in South Eastern Nigeria.

Concept of Vocational Education

Vocational Education is defined as that aspect of education that exposes the learner to the acquisition of demonstrable skills that could be transformed into economic benefits and sustainable livelihood (Akerele, 2007). The Federal Republic of Nigeria (FRN) in the National Policy on Education has placed a premium on VE in view of its important role in industrial development of Nigeria, described vocational education as an aspect of education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge (FRN, 2004). Oni (2007) sees VE as that type of education which fits the individual for gainful employment in recognized career as semi-skilled workers or technicians or sub-professionals. According to Audu, *et al.* (2013) defined VE as any form of education that is geared towards teaching about trade and technical skills and attitudes suitable for an individual to make a good living in the society. Tilak (2002) emphasized that quality VE if well planned and coordinated will guarantee; graduates with varied skills, because of changes in production processes resulting from technological advances, the nature of the demand for skills both in terms of quantity and quality changes. Modern technology requires fewer highly qualified middle and lower level skilled manpower. TVE can produce exactly this kind of skilled personnel.

TVE would contribute to such progress, both by reducing unemployment, through creating employment in the fields of pre — vocational specialization and self— employment. It can improve productivity and correspondingly resulting in higher graduate earnings. TVE can establish a closer relationship between school and work.

TVE is also seen as an equity measure. As an antidote to urban — biased elite education, TVE will promote equity with a rural bias and serve the needs of relatively poor people. More specifically, it is believed to be an effective answer to rural problems, "to alleviate unemployment; to reorient students" attitude towards rural society", to halt urban migration; to transmit skills and attitudes useful in employment; and as an important measure of development for disadvantaged youths in rural and urban areas.

TVE is considered helpful in developing what can be termed as skilled-culture" and attitude towards manual work, in contrast to pure academic culture and preference for white collar jobs; and to serve simultaneously the "hand and the mind", the practical and the abstract Grubb (Atsumbe, Emmanuel, Igwe & Atsumbe, 2012).

Vocational Education and Skills Acquisition

Apart from technical expertise and long-term employment, employment skills are the most in-demand abilities in the global industrial sector (Farah & Naveed, 2018). The economies of the 21st century have turned the skills into a global currency. However, as the labor market demand develops and individuals lose the skills they do not use, the currency may depreciate. Various studies have proved that TVET is the key to skill development. It is characterized by focusing on a specific occupation so that individuals can find jobs related to their skills or start their own jobs. According to the World Banks jobs and productivity skills framework, the conclusion is that cognitive abilities, social behavior skills, and technical skills (a blend of cognitive and non-cognitive skills) are three types of skills (Ismail, Sarimah & Dahiru Sale Mohammed, 2015). By instilling both cognitive and non-cognitive attributes in people, schooling, according to Heckman (Neumark, David, Yong-Seong Kim & Sang-Hyop Lee, 2021) contributes to both earnings differentials and the development of acceptable policy options for human capital construction. Higgins stressed that vocational education allows students to find and develop a wide range of talents, such as knowing what jobs are accessible and how to acquire the necessary skills. A solid transitional infrastructure for school leavers with few or no degrees is needed; yet, the respondents to this study felt they were "the Cinderella of the industry" (**Higgins, 2010**). Therefore, it is critical for improved future prospects that the need for certain skills is met. As an example, the Saudi Arabian TVET does not have issues such as LDCs; yet, it is facing a shortage of skilled manpower in quantity and quality as well because of the devastating effects of labor market distortion and a bad social perception of skilled and manual labor in Saudi Arabia

(Ryan & Robin, 2001; Mellahi & Kamel, 2006)).

A shortage of skilled workers also hinders the CPECs excellence and timely completion, (Magsi & Pac, 2016). Ahmad discovered that the quality of the labor force is reliant on training, education, physique, and health. The quality of labor is important. The countrys labor force is underperforming in terms of productivity due to the loss of human capital capacity (Personal & Archive, 2016).The number of technical institutes and training centers in Pakistan is much smaller than the number of general education institutions in terms of enrollment potential, graduations, and the development of human capital. With TVET, countries such as Nigeria can expect higher producer profitability and salary increases and job prospects for qualified employees, as well as general economic growth (Kazmi & Syeda Wadiat, 1990). In their research Mustafa, Usman, Kalbe Abbas and Amara Saeed (2005) looked at the relationship between economic growth and skill development variability and discovered a strong correlation. Human capital growth and skill development, as well as other major macroeconomic metrics, ranked Pakistan worse than other South Asian countries in terms of competitiveness and global linkage (Khan, Muhammad, Saima Akhtar, Hafiz Zahid Mehmood & Kashif Muhmood, 2013).

TVET and Employability

Scholars, such as Musyimi, Caroline, Joseph Malechwanzi and Heng Luo (2018), believe the TVET value is defined by how well students can establish their developed skills and employability, while others link the TVET value to how well institutions enable learning and the learners' growth. Quality in the TVET programs, according to Demessew, is linked to the declared goals or aims of TVET, which vary by country (Woldetsadik & Demessew Alemu, 2012). In other words, the amount of quality skills required by specific countries is dictated by their labor needs. According to a UNESCO report, TVET aims to prepare young graduates for employment by providing them with the relevant work-based learning experience, technical skills, and theoretical knowledge (Hodge & Selwyn Jhon, 1992; Zarini, Maja & Veal Karina, 2004)). In most countries, VET is towards the top of the national political agenda. New technologies are replacing jobs and changing skill needs. As a result, malleable workers are in high demand (Hodge & Selwyn Jhon, 1992). Colley asserts that the effective usage of multimedia and cooperative learning designs in education helps both students and teachers to enhance their learning skills. As a result, learning to use technology can help students prepare for a number of careers. Assisting vocational education with the integration of technology has been a popular trend (Wolf & Alsion, 2011; Colley, Helen, David James, Michael Tedder & Kim Diment, 2003).

The Leitch Review of Skills concluded that developing skills by firms, individuals, and governments has benefited and will continue to benefit them (Leitch, 2006). In order to enter the information economy, Pakistan must first escape from the low-level

skills pit that TVET institutions have created (Amjad & Rashid, 2005). Given the growing young population, the TVET sectors capacity to provide demand-driven training programs to boost the workforces technical and professional skills is inadequate. Moreover, compared to other developed countries in the region, Pakistans labor force participation rate is low (only 44 percent). As a result, the majority of the population is jobless, which affects health, education, and quality of life (Janjua, Yahya & Irfan, 2012).

Modern Office Equipment

Ayua, 2006) highlighted the modern office equipment as follow; Laptop computers, CDs, floppy disc, CDs, floppy disc, flash drives, Printers (Ink Jet and Desk jets) Photocopiers, Tele-Printer, Electric calculators, Duplicating machines, Accounting machines, Shredding machines, Franking machines, Addressing Machine, Internet, modern, scanning machines, Spiral binding machine, Perforating machine, Recording machines, Mailing machine, Stamp Affixing machine, Tele-conferencing devices, Dictating machines, Multimedia projectors, Audio-visual recorders, Overhead projectors with accessories, Editing/dubbing machine, Opaque projectors with accessories, Modern Filling equipment, Public addressing system, Electric typewriters, Audio projectors, Stencil Duplicators (Mimeograph), Punched card machines, Letter Opening Machine, Folding Machine, Envelope Sealing Machine, Mobile technologies and Uninterrupted Power Supply (UPS).

Effect of Scarcity of Modern Office Equipment in VE Laboratories

Over decades of introduction of vocational education as a subject in our secondary and tertiary educations in Nigeria, it seemed to be a regret because the graduates have not acquired requisite skills in the area of technologies. The youth's inability to gain employment in technical areas and their failure to innovatively create business opportunities and manage business ventures in South East attest to this fact. Rather our graduate youths re-sought to criminal and antisocial behaviours such as gun violence, robbery, drug addition, prostitution, kidnapping, confrontations with crude oil producing companies and so on clearly show their determination in cutting conners to earn a living. These activities of youths call for urgent inquiries into the likely causal factors of these criminal and anti-social behaviours. Studies have questioned the implementation of the well-structured National Policy on Education which has a comprehensive content in imparting students, thus the lack of basic technological infrastructures such as computers, projectors, word processing, photocopy machines, libraries, specialist personnel, electricity supply have variously been identified as causal factors for failures in meeting expected learning goals of VE. Ozoro (2007), opined that despite the fact that vocational education is a core area that could stimulate self —reliance and economic prosperity, it has continued to be inadequate, unplanned, uncoordinated and to some extent implementation made irrelevant to the needs

of individuals and development aspirations of the nation. Students hardly acquire the appropriate skills for employment, innovative thinking, creation of business opportunities and management of business ventures which could make them self—reliant and solve socio-economic problems of unemployment and poverty thereby contribute to economic development.

In this same vein, Mbata (1990) revealed that some modern office equipment were sub-standard and therefore cannot be easily maintained to bring it to life again. It is also, observed that lack of modern office equipment make it impossible for the students to receive training that meets the standards for employment in industries or related organizations. Barky (2005) reiterated that the availability of instructional resources has a major influence on the selection of teaching methods and materials. Without functional workshop tools and equipment, the technical teacher is handicapped and cannot go far in the use of demonstration method in his teaching, TVE has theory limit, if the teaching and learning exceed that limit, acquisition of skill is hampered and TVE will become "theoretical education". It is not surprising therefore, that Ibehim (1994) lamented that graduates of VE programs were being rejected by industries because they had the wrong kind of training in schools. The wrong kind of training implies that the vocational education graduates were sufficiently deficient in practicum hence were unable to satisfy the industrial demands. The major problem therefore in developing TVE in Nigeria is the problem of inadequate and non-functional training facilities which includes workshop tools and equipment. In line with the foregoing, Uzoagulu (1993) discovered that students were compelled to carry out practice exercise in groups due to lack of adequate tools and equipment. It was equally found out that the few tools and equipment available were seldom functional. Uzoagulu (1993) further pointed out that inadequate budget is widely acknowledge as a factor militating against effective implementation of VE programs in South Eastern Nigeria, as this has led to shortage of facilities and consumables with which to carry out effective practical work in the schools laboratory. Thus, VE institutions in South Eastern Nigeria are bound to produce inadequately and unprepared skilled graduates that cannot promote national and economic development.

The Way Forward

Since the key objective of vocational education is geared towards the development of skilled manpower for employment, self-reliance and economic development, it becomes imperative for teachers to be provided with all necessary material resources to be effective. VE laboratory is need to be adequately equipped with functional modern office gadgets like computers, internet, slide projectors, movie projectors, overhead projectors, television monitors, videocassettes, videodisc players, multimedia systems, Projector, Facsimile Machine, Teletype, Electronic typewriter, Telex-machine, World Processor, Internet facilities (www, e-mail, search engine, etc),

Teleconferencing, Video Conferencing, Scanner, Printers, Photocopiers and the Internet for effective teaching and learning of vocational education subject. Also competent teachers and laboratory attendants must be provided to handle those gadgets. Most of these equipment and machines are powered by electricity; therefore, electricity has to be available on continuous bases. However, the epileptic nature of electric power supply in Nigeria and therefore suggested that alternative sources of electricity in the laboratory should be provided e.g sola.

Research Method

This study employed survey research design to study scarcities of modern office equipment in vocational education laboratories in south Eastern Nigeria. The study considered survey research design due to that primary data was used in which the respondents gave their opinions on the research questions. The study was limited to South Eastern states in Nigeria which include; Anambra, Abia, Ebonyi, Imo and Enugu. The population of study consisted of 497 vocal education teachers in across the five states in South Eastern Nigeria. Purposive sample technique was used to draw the sample while stratify sampling method was used to select 12 teachers in each of the five states that make up South Eastern Nigeria. This gave a total sample of 60 vocational education teachers. Questionnaire titled "scarcities of modern office equipment in vocational education laboratories" (SMOEVEL) was designed to collect data from the respondents. The questionnaire was designed in two part A and B. Part A deals with the socio-economic variables of the respondents while part B answer the research questions of this study. The instrument was design to be answered with the following code; strongly agree (SA), agree (A), Disagree (D), strongly disagree (SD), very high extent (VHE), high extent (HE), low extent (LE) and very low extent (VLE). Two experts validated the instrument. One expert from the department of Business Education and the other expert was from and Library and Information Science, all from the faculty of education, Nnamdi Azikiwe University, Awka. The reliability of the instrument was obtained by distributing 10 copies of questionnaire to vocational education teachers in other institutions outside the study area. The data collected was tested using Coach Alpha method and the reliability of the instrument was established at 0.173. Sixty (60) copies of questionnaires was distributed by the researchers with the help of research assistants in each of the vocational education centers selected in South Eastern Nigeria. Out of 60 copies distributed 58 copies were retrieved and used for data analysis. Mean rating was used to analyzed the data collected while chi-square was used to test the t-test was used to the hypothesis at 0.05 level of significance. The rating point was set 2.5 showing that any mean above 2.5 is agreed otherwise reject the mean bellow 2.5.

Results and Discussion

Q1: What are the modern office equipment needed in vocational education laboratories in South Eastern Nigeria?

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Table 1: Mean response on the modern office equipment needed in vocational education laboratories in South Eastern Nigeria.

S/no	Items	SA 4	A 3	D 2	SD 1	$\bar{X}$	Remarks
1	Laptop computers, CDs, floppy disc, Floppy disc, Internet, Modern Filling equipment, Public addressing system,	34	23	1	0	3.6	Agreed
2	Flash drives, Printers (Ink Jet and Desk jets), Photocopiers, Tele-Printer,	30	28	0	0	3.5	Agreed
3	Electric calculators, Duplicating machines, Audio-visual recorders, Overhead projectors with accessories, Editing/dubbing machine, Opaque projectors with accessories.	28	26	3	1	3.4	Agreed
4	Accounting machines, Shredding machines, Franking machines, Addressing Machine,	29	26	2	1	3.4	Agreed
5	Letter Opening Machine, Folding Machine, Envelope Sealing Machine, Mobile technologies and Uninterrupted Power Supply (UPS).	31	25	1	1	3.5	Agreed
	Grand mean					3.5	Agreed

From table 1, the response on the modern office equipment needed in vocational education laboratories in South Eastern Nigeria was analyzed. The result indicated the computed mean from item 1 to five was 3.5 while agreed mean was 2.5. With this result in the opinion of the respondent, it was agreed that Laptop computers, CDs, floppy disc, Floppy disc, Internet, Modern Filling equipment, Public addressing system, Flash drives, Printers (Ink Jet and Desk jets), Photocopiers, Tele-Printer, Electric calculators, Duplicating machines, Audio-visual recorders, Overhead projectors with accessories, Editing/dubbing machine, Opaque projectors with accessories, Accounting machines, Shredding machines, Franking machines, Addressing Machine, Letter Opening Machine, Folding Machine, Envelope Sealing Machine, Mobile technologies and Uninterrupted Power Supply (UPS) are all kinds of modern office equipment need to be available in vocational education laboratories.

Q2: To what extent modern office equipment are available in vocational education laboratories in South Eastern Nigeria?

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Table 2: Mean response on the extent modern office equipment are available in vocational education laboratories in South Eastern Nigeria.

S/no	Items	VHE 4	HE 3	LE 2	VLE 1	$\bar{X}$	Remarks
6	Laptop computers, CDs, floppy disc, Floppy disc, Internet, Modern Filling equipment, Public addressing system,	15	10	30	3	2.6	LE
7	Flash drives, Printers (Ink Jet and Desk jets), Photocopiers, Tele-Printer,	5	2	21	17	1.5	VLE
8	Electric calculators, Duplicating machines, Audio-visual recorders, Overhead projectors with accessories, Editing/dubbing machine, Opaque projectors with accessories.	12	3	33	10	2.3	VLE
9	Accounting machines, Shredding machines, Franking machines, Addressing Machine,	0	0	20	38	1.3	VLE
10	Letter Opening Machine, Folding Machine, Envelope Sealing Machine, Mobile technologies and Uninterrupted Power Supply (UPS).	14	8	6	30	2.1	VLE
	Grand mean					1.9	VLE

In table 2 above, it was shown that the computer value of mean from item 6 to 10 was 1.9 lesser than 2.5 the agreed point. Since the computed mean was lesser than 2.5, the extent modern office equipment are available in vocational education laboratories in South Eastern Nigeria are very low. This means that in vocational education laboratories in South Eastern Nigeria, there is scarcity of modern office equipment such as Flash drives, Printers (Ink Jet and Desk jets), Photocopiers, Tele-Printer, Electric calculators, Duplicating machines, Audio-visual recorders, Overhead projectors with accessories, Editing/dubbing machine, Opaque projectors with accessories, Accounting machines, Shredding machines, Franking machines, Addressing Machine, Letter Opening Machine, Folding Machine, Envelope Sealing Machine, Mobile technologies and Uninterrupted Power Supply (UPS) are all kinds of modern office equipment need to be available in vocational education laboratories.

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Q3: To what extent scarcity of modern office equipment affect the teaching and learning of vocational education in South Eastern Nigeria?

Table 3: Mean response on the extent scarcity of modern office equipment affect the teaching and learning of vocational education in South Eastern Nigeria.

S/no	Items	VHE 4	HE 3	LE 2	VLE 1	$\bar{X}$	Remarks
11	Scarcity of modern office equipment in VE laboratory cause youths inability to gain employment in technical areas in the labour market.	37	20	1	0	3.6	VHE
12	It exposes youths to failure to innovatively create business opportunities and manage business ventures.	29	26	2	1	3.4	VHE
13	It makes VE theoretical base instead of practical oriented.	34	23	1	0	3.6	VHE
14	It leads to defeat of the goal of vocation education.	33	23	2	0	3.5	VHE
15	It causes the graduate youths to re-sought to criminal and antisocial behaviours such as gun violence, robbery, drug addition, prostitution, kidnapping, confrontations with crude oil producing companies.	30	28	0	0	3.5	VHE
	Grand mean					3.5	VHE

In table 3 above, it was discovered that that the computer value of mean from item 11 to 15 was 3.5>2.5. This indicated that the extent scarcity of modern office equipment affect the teaching and learning of vocational education in South Eastern Nigeria is very high. This scarcity of modern office equipment in VE laboratories result to youths inability to gain employment in technical areas in the labour market, exposes youths to failure to innovatively create business opportunities and manage business ventures, makes VE theoretical base instead of practical oriented, leads to defeat of the goal of vocation education and causes the graduate youths to re-sought to criminal and antisocial behaviours such as gun violence, robbery, drug addition, prostitution, kidnapping, confrontations with crude oil producing companies.

Test of Hypotheses

$H0_1$: There is no significant difference in the mean rating of male and female teachers on the modern office equipment available in vocational education laboratories in South Eastern Nigeria.

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Table 4. T-test result on the significant difference in the mean rating of male and female teachers on the modern office equipment available in vocational education laboratories in South Eastern Nigeria.

Variables	*N*	$\bar{X}$	***SD***	***DF***	*Sig*	***T.cal.***	***T-crit.***	***Decision***
Male teachers	*22*	*2.2*	*0.71*	*28*	*0.05*	*0.53*	*1.97*	*Not significant*
Female teachers	*36*	*2.4*	*1.92*					

The result of t-test conducted revealed that the t-calculated at 0.05 level of significance and 28 degree of freedom was *0.53*. Since the t-calculated is less than the t-table value of *1.97*, the null hypothesis is not significant. By implication, there is no significant difference in the mean rating of male and female teachers on the modern office equipment available in vocational education laboratories in South Eastern Nigeria.

Hypothesis 2: There is no significant different on mean response of male and female teacher on the extent scarcity of modern office equipment affect teaching and learning of vocational education in South Eastern Nigeria.

Table 5. T-test result on the significant difference in the mean response of male and female teacher on the extent scarcity of modern office equipment affect teaching and learning of vocational education in South Eastern Nigeria.

Variables	*N*	$\bar{X}$	***SD***	***DF***	*Sig*	***T.cal.***	***T-crit.***	***Decision***
Male teachers	*26*	*2.9*	*0.83*	*29*	*0.05*	*0.19*	*2.3*	*Not significant*
Female teachers	*32*	*3.4*	*1.89*					

The result of t-test conducted revealed that the t-calculated at 0.05 level of significance and 29 degree of freedom was *0.19*. Since the t-calculated is less than the t-table value of 2.*3*, the null hypothesis is not significant. By implication, there is no significant different on mean response of male and female teacher on the extent scarcity of modern office equipment affect teaching and learning of vocational education in South Eastern Nigeria.

Discussion of Findings

The findings of the study indicated vocation education in South Eastern Nigeria cannot be implement effectively without modern office equipment. Thus, the modern office equipment needed for effective teaching and learning of VE education courses include; Laptop computers, CDs, floppy disc, CDs, floppy disc, flash drives, Printers (Ink Jet and Desk jets) Photocopiers, Tele-Printer, Electric calculators, Duplicating machines, Accounting

machines, Shredding machines, Franking machines, Addressing Machine, Internet, modern, scanning machines, Spiral binding machine, Perforating machine, Recording machines, Mailing machine, Stamp Affixing machine, Tele-conferencing devices, Dictating machines, Multimedia projectors, Audio-visual recorders, Overhead projectors with accessories, Editing/dubbing machine, Opaque projectors with accessories, Modern Filling equipment, Public addressing system, Electric typewriters, Audio projectors, Stencil Duplicators (Mimeograph), Punched card machines, Letter Opening Machine, Folding Machine, Envelope Sealing Machine, Mobile technologies and Uninterrupted Power Supply (UPS). This finding is supported by Encyclopedia.com (2020) maintained that modern office equipment includes personal computers (PCs), slide projectors, movie projectors, overhead projectors, television monitors, videocassettes, videodisc players, multimedia systems and among others. In other hand this study discovered that those modern office equipment are scarce in vocation education laboratories particularly in South Eastern Nigeria.

The result of the t-test conducted indicated that there is no significant difference in the mean rating of male and female teachers on the modern office equipment available in vocational education laboratories in South Eastern Nigeria. Also, there is no significant different on mean response of male and female teacher on the extent scarcity of modern office equipment affect teaching and learning of vocational education in South Eastern Nigeria. These findings are in line with the findings of Gordon, Seigha and Akinleyvue (2017) who observed that inadequate training materials and lack of maintenance culture on the available ones has been the bane for efficient and equitable delivery of vocational education. Thus, these scarcities posed challenges in the realization of the goals and objectives of establishing vocational education by the national policy on education.

Conclusion

Vocational education is recognized as that aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge that will enable an individual to secure employment in a particular occupation or become self-reliant for sustainable livelihood. These skills cannot be acquired in a vacuum but rather in a well- established and functional equipped laboratory with modern office equipment. Based on the findings of this study, it is concluded that it is necessary to improve the current state of vocational education pragrammes in Nigeria more especially in South East through proper planning and financing for acquisition of appropriate modern office equipment that will expose the youths in acquiring the 21st century skills in vocational education centers for employability, trade, business ventures operation and promotion of economic development of Nigeria at large. Hence, government, communities, industries,

religious organizations, labour unions, non-governmental

Organizations (NGOs), wealthy individuals in the society should be encouraged in the funding of VE institutions for the smooth running of VE in terms provision of modern office equipment such as Laptop computers, CDs, floppy disc, CDs, floppy disc, flash drives, Printers (Ink Jet and Desk jets) Photocopiers, Tele-Printer, Electric calculators, Duplicating machines, Accounting machines, Shredding machines, Franking machines, Addressing Machine, Internet, modern, scanning machines, Spiral binding machine, Perforating machine, Recording machines, Mailing machine, Stamp Affixing machine and among others. Special intervention funds should be set aside by government for procurement of workshop facilities to VE institutions, such channels may include Tertiary Education Trust Fund (TETFund) as practiced in Nigeria. A specific percentage of Income tax generated annually by Government should be utilized for the provision of workshop facilities to TVE institutions. Government should provide adequate facilities to VE institutions workshops using current strategies identified to ensure acquisition of relevant skills, and knowledge and experience that are relevant to the growth of the country. Government of Federal government in Nigeria should formulate a policy on the measures to maintain the available modern office facilities in VE laboratories to prevent damages and complete breakdown.

REFERENCES

Afeti, G. (2007). *Strategy to Revitalize Technical and Vocational Education and Training (TVET) in Africa.* Meeting of the Bureau of the Conference of Ministers of Education of the African Union (COMEDAF II+). Addis Ababa Ethiopia.

Akerele, W. O. (2007). Management of Technical and Vocational Education in Nigeria: Challenges of the Country. *Journal of Educational Administration and Planning: 3*(1), 11-21.

Alimi, Olatunji Sabitu, Gabriel Babatunde Ehinola, and Festus Oluwole Alabi (2012). School Types, Facilities and Academic Performance of Students in Senior Secondary Schools in Ondo State, Nigeria. *International Education Studies* 5: 44—48. [Google Scholar] [CrossRef].

Amjad & Rashid (2005). Skills and Competitiveness: Can Pakistan Break out of the Low-Level Skills Trap? *Pakistan Development Review* 44: 387—404. [Google Scholar] [CrossRef] [Green Version].

Audu, Rufai, Aede Hatib Mustaamal, and Muhammad Aiman Sukri (2013). Provision of

Workshop Tools and Equipment: Necessity for Technical Vocational Education Graduates Skills Acquisition. Paper presented at the 2nd International Seminar on Quality and Affordable Education (ISQAE 2013), Johor, Malaysia, October 7—10; pp. 74—78. [Google Scholar] [CrossRef]

Atsumbe, B.N, Emmanuel, R. Igwe, C.O. & Atsumbe, J.A. (2012). Repositioning vocational and technical education for effective manpower production in Nigeria. *10SR Journal of Mechanical and Civil Engineering (10SRJMCE*) 1 (4). 01-06. www.iosrjournals.org

Ayua, M. T. (2006). *Consolidating and Sustaining Industrial Performance of School Product in Technology Education for National Development.* In the Proceedings of the Conference Paper Presented at the Nigerian Association of Teachers of Technology (NATT). Lagos.

Bane, N.P (2007) Teaching skill related subject. *Education Review* 5.28-3.

Barky, A. L. (2005). Selecting Teaching Methods and Materials. *Agricultural Education Magazine*. Agricultural Research Institute Umudike. *Availability of Resources in Technical and Vocational Education for Economic Development in Secondary Schools in South-South Nigeria*

Bybee, R & Loucks-Horsely, S. (2000). Standard as Catalyst for Change in Technology Education. *The Technology Teacher*, 59 (5), 14-17.

Colley, Helen, David James, Michael Tedder, and Kim Diment (2003). Learning as Becoming in Vocational Education and Training: Class, Gender and the Role of Vocational Habitus. *Journal of Vocational Education and Training* 55: 471—98. [Google Scholar] [CrossRef].

Dasmani, A (2011). Challenges Facing Technical Institute Graduates in Practical Skills Acquisition in the Upper East Region of Ghana. *Asia-Pacific Journal of Cooperative Education* 12: 67—77. [Google Scholar].

Dufourd, B. (2001). *The Learning ennvironment: Reflections on the function of facilities. PEB Exchange Programme on Educational Building.* 16, OECD Publishing.

Edobor, R.I.O. (2007). An overview of factors that militate against science and technology programmes in secondary institutions in south eastern part of Nigeria. *Journal of Research in Education* 4.45-57.

Encyclopedia (2020) International encyclopedia of economics of education. Oxford: Pergamon.

Farah & Naveed (2018). Chapter 29: Population Planning and Labor in Pakistan. In *Developing Sustainable Agriculture in Pakistan*. Boca Raton: CRC Press. [Google Scholar] [CrossRef].

Federal Republic of Nigeria (2004). *National Policy on Education*. Lagos: Federal Government Press.

Finch, C. R. & Crunkilton, J. R. (1999).*Curriculum Development in Vocational and Technical Education: Planning, Content and Implementation*, 5th Edition. Boston: Allyn and Bacon.

Gordon M. B, Seigha, G. & Akinleye A. O. (2017). Institutionalizing the maintenance function in public sector organizations for sustainable infrastructural services in Nigeria.

Hodge & Selwyn Jhon (1992). *A Study of The Technical and Vocational Education Initiative in Relation to Its Role as a*

Strategy for Change in Educational Management. Coventry: The University of Warwick. [Google Scholar].

Ibehim, C. (1994). *Need for Trade School Renaissance*, Ibadan: Macmillan Company.

Ismail, Sarimah, and Dahiru Sale Mohammed (2015). Employability Skills in TVET Curriculum in Nigeria Federal Universities of Technology. *Procedia—Social and Behavioral Sciences* 204: 73—80. [Google Scholar] [CrossRef] [Green Version].

Janjua, Yahya, and M. Irfan (2012). *Situation Analysis to Support the Programme Design Process for National Skills Strategy of the Islamic Republic of Pakistan*. Islamabad: SEBCON (Pvt) Limited Socio-Economic and Business Consultants, p. 38153. [Google Scholar].

Kazmi & Syeda Wadiat (1990). Role of Education in Globalization: A Case for Pakistan. *SAAR Journal of Human Resource Development* 1: 90—107. [Google Scholar].

Khan, Muhammad, Saima Akhtar, Hafiz Zahid Mehmood, and Kashif Muhmood (2013). Analysing Skills, Education and Wages in Faisalabad: Implications for Labour Market. *Procedia Economics and Finance* 5: 423—32. [Google Scholar] [CrossRef].

Koko, M.N. & Okogun, G.F. (2020). Perceived influence of modern office automation on administrative performance of staff of private business organizations in Port Harcourt Rivers State. *International Journal of Innovative Information Systems& Technology Research*, *8*(1), 44-53.

Leitch (2006). *Prosperity for All in the Global Economy—World Class Skills*. London: The Stationery Office. [Google Scholar]

Magsi, Habibullah (2016). China-Pakistan Economic Corridor and Challenges of Quality Labor-Force. *The Diplomatic Insight* 9: 26—27. [Google Scholar]

Margaret, A. & Pac, O. (2019). Modern office technology and the productivity in private business organizations. *African Journal of Business Management*, 3 (8), pp. 333-339 .

Marope, Priscilla Toka Mmantsetsa, Borhène Chakroun, and K. P. Holmes (2015). *Unleashing the Potential Transforming Technical and Vocational Education and Training*. Paris: United Nations Educational, Scientific and Cultural Organization. [Google Scholar]

Mbata, A. (1990). Towards a More Effective Manpower Training and Development in the Field of Technical Education. *Nigeria Journal of Technical Education Review:* 2 (1), 18-20.

Mellahi & Kamel (2006). Human Resource Development through Vocational Education in Gulf Cooperation Countries: The Case of Saudi Arabia. *Jounal of Vocational Education Ans Training* 52: 341—42. [Google Scholar] [CrossRef] [Green Version]

Musyimi, Caroline M., Joseph Malechwanzi and Heng Luo (2018). The Belt and Road Initiative and Technical and Vocational Education and Training (TVET) in Kenya: The Kenya- China TVET

Project. *Frontiers of Education in China* 13: 346—74. [Google Scholar] [CrossRef].

Mustafa, Usman, Kalbe Abbas and Amara Saeed (2005). Enhancing Vocational Training for Economic Growth in Pakistan. *Pakistan Development Review* 44: 567—82. [Google Scholar] [CrossRef] [Green Version].

Ndomi, B. M. (2005). Revisiting the Learning Experience of Technical College Farm Machinery Curriculum for Empowerment of Recipients in Nigeria. *Journal of Nigerian Association of Teachers of Technology (JONATT)*: 5 (1), 88 - 94.

Neumark, David, Yong-Seong Kim, and Sang-Hyop Lee (2021). *Chapter 1 Human Development Policy, of Human Capital Policy*. Cheltenham: Edward Elgar Publishing. [Google Scholar] [CrossRef].

NICHE (2010) Netherland Organization for International Cooperation in Higher Education. *Strategy on Technical Vocational Education and Training*. Amsterdam: Netherland Organization for International Cooperation in Higher Education. 77 *2nd International Seminar on Quality and Affordable Education (ISQAE 2013).*

Ovbiagbale, A. O., Mgbonyebi, D. C. & Olaniye, V. (2019). Electronic records management competencies required of polytechnic office technology and management graduates in South-South Nigeria. *Nigerian Journal of Business Education (NIGJBED), 6 (1),* 464- 472.

Ozoro P.A. (2007). *Vocational education in Nigeria: Issuers and analysis.* Obosi: Nigeria Pacific Publishers.

Penny, D. & Fox, B. (1997). At the Wheel or Back Seat Dinners?: The Role of Teachers in Contemporary Curriculum Reform. *Queens land Journal of Educational Research*: 13 (2), 14—27.

Personal, Munich, and Repec Archive (2016). Munich Personal RePEc Archive Pakistan s Productivity Performance and TFP Trends 1980—2015: Cause for Real Concern. *Lahore Journal of Economics* 21: 33—63. [Google Scholar]

Ryan, Robin (2001). Master Concept or Defensive Rhetoric: Evaluating Australian VET Policy against Past Practice and Current International Principles of Lifelong Learning. *International Education Journal* 2: 133—47. [Google Scholar].

Tilak, J. B. G. (2002). Vocational Education and Training in Asia. In J. P. Keeves & R. Watanabe (Eds.). *The Handbook on Educational Research in the Asia Pacific Region*. Berlin, Germany: Kluwer. Publishers.

Umar, I. Y. & Maaji, A. S. (2010). Repositioning the Facilities in Technical College Workshops for Efficiency: A Case Study of North Central Nigeria. Journal of sTEm Teacher Education: 47(3), 1-9

Umunadi, E. K. (2011). *Provision of Equipment and Facilities in Vocational and Technical Education for Improving Carrying Capacity of Nigerias Tertiary Institution.* In the Proceedings of the 1st International Technology, Education and

Environment Conference. Held at Omoku-Nigeria.

Usoro E. B, (2010). Developing human resources in tertiary business education for youth empowerment and national development in Nigeria. *Review of Higher Education in African*, 2(1); 13-23

Uzoagulu, A. E. (1993). Towards an Effective Equipment Management (EEM) in Schools for Economic and Technological Self-reliance. *Nigerian Vocational Journal*: 6(1), 27-30.

Woldetsadik & Demessew Alemu (2012). *The Implementation of an Apprenticeship Training Programme in the Addis Ababa Technical Vocational Educational Training(TVET) Colleges and Enterprises*. Pretoria: University of South Africa. [Google Scholar].

Wolf & Alsion (2011). *Review of Vocational Education*. London: DfE. [Google Scholar]

Zarini, Maja, and Veal Karina (2004). *Unesco-Unevoc in Action 2004-200, Program and Meeting Document*. Bonn: UNESO-UNEVOC International Centre for Technical and Vocational Education and Training UN Campus. [Google Scholar]