

Assessment of Resource Provision for Implementation of Vocational and Technical Education Programmes in Bayelsa State

Akosubo-Ogori Ebimiere

Department of Educational Foundations, Niger Delta University, Bayelsa State, Nigeria.

Abstract

The study examined assessment of resource provision for implementation of vocational and technical education programmes in public secondary schools in Bayelsa State. The study adopted the expo-facto research design in which resource checklist was used. The population of the study comprised of all seven (7) vocational and technical training centres in Bayelsa State, consisting of one hundred & twenty (120) vocational/technical coordinators and teachers in Bayelsa State. The purposive sampling technique was used in the research. The instrument for this study was a checklist for instructional resources with regards to vocational education programmes. The checklist was completed through a direct observation conducted by the researcher in the seven vocational education learning centres in Bayelsa State. The checklist instrument was validated by a colleague expert in Measurement and Evaluation from Niger Delta University, Bayelsa, State, Nigeria. The frequency and percentage statistics table was used in answering the research questions. A 50% criterion was used to ascertain the adequacy and inadequacy of the resource provision for the implementation of vocational and technical education. The findings of the study showed that there are inadequacies in the provisions of teachers, laboratories and workshops in technical and vocational education centres in Bayelsa State. The study concluded that there is need for the provision the necessary staff and facilities in the different technical and vocation institutions in Bayelsa State for improved technical skill of the students. The provision of facilities would stimulate the interest of students in the study of vocational and technical education subjects and improve the carrying capacity of the vocational school. The study concluded among others that the government and non-governmental agencies should encourage vocational and technical education to assist in human resource and capacity building by funding the programme to improve carrying capacity of the institutions.

Keywords: Assessment, Technical and Vocational Education, Facilities, Teachers, Bayelsa State.

Introduction

Vocational learning was originally an on-the-job phenomenon – as early humans struggled for survival as hunters and gatherers, the younger family and clan members were doubtless inducted into what were literally 'life skills' by their elders. It is likely that some were more adept at the mentoring of novices than others, so it was natural for them to assume roles as mentors/tutors. If so, this was an early example of work segmentation and specialization. With the rise of agricultural practices, people could live successfully in one place, hence the growth of villages and towns. Thus, viable farming practices accelerated the segmentation of the labour force into diverse occupations. Thus, the institution of apprenticeship was

born. The coming of the industrial revolution further enhanced these trends as towns grew into cities, and villages into towns. Throughout all of these developments, vocational learning remained an on-the-job phenomenon. Certainly, with the rise of apprenticeship, such learning was made more formal in various ways, but it was still essentially something that occurred on-the-job. It was well into the nineteenth century before the first moves occurred to shift vocational learning decisively towards off-the-job delivery. This was ultimately to lead to the rise of formal vocational education and training (VET). A main theme in this rise of VET was the centrality of morally uplifting knowledge in off-the-job vocational learning. In this there was no conception that workers were learning skills that would directly enable them to do their job better. Rather the aim was for workers to become better persons by acquiring the scientific disciplinary knowledge connected to their occupation.

Vocational Education is a comprehensive term i.e. it prepares individuals for occupational fields and for effective participation in the world of work. Furthermore, Technical Education is that aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge. UNESCO in Ekpenyong, (2011), defines Vocational Education as 'the education designed to prepare skilled personnel at lower levels of qualification for one or a group of occupations, trades or jobs. Okoh, (2000), also views Vocational Education as part of the total experience of the individual whereby he/she learns successfully how to carry on a gainful occupation which involves the development of skills, knowledge and attitudes required for success in the occupation. Nigerian Educational Research and Development Council (2008), defined Vocational Education as those aspects of education which involves general education; the study of technologies and related science; and the acquisition of practical knowledge, understanding, attitudes and skills relating to occupations in various sections of economic and social life. Therefore, Vocational Education is a comprehensive term i.e. it prepares individuals for occupational fields and for effective participation in the world of work. Furthermore, Technical Education is that aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge.

The overriding aims of TVE in Nigeria according Federal Republic of Nigeria (FRN) in the National Policy on Education (NPE) (FRN, 2004) are to: i. Provide trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technical levels; ii. Provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; iii. Give training and impart necessary skills to individual who shall be self-reliant economically. The development of TVE is vital to economic development for two important reasons. First, TVE is needed for enterprise productivity and profitability, as well as for national productivity and wealth creation. Without the necessary technical skills, enterprise and national growth can be seriously affected. Technological innovation and economic growth increase the demand for skilled workers. The need for TVE is increasing as a result of so many factors: technological advancement, globalization process, knowledge economy, changes in modes of production

in the workplace, growing economic openness and competitiveness. The second reason for the development of TVE is because it is essential for individual prosperity. Acquisition of skills in TVE enables the individual to increase productivity and income. This is especially important for those who are seeking out a living in the informal sector of the economy.

However, there have been poor organization and slow pace of implementation of vocational education centres across Bayelsa State. Perhaps who formulated the National Policy on Education had a clear vision of an intended mission that is the vocationalising the school system particularly at the secondary school level. Unfortunately, the programme is bedeviled by organizational and implementation problems and also, the low level of funding Vocational and Technical Education has been a problem in the implementation of quality teaching and learning of Vocational and Technical Education in Nigerian schools and Colleges. The strict implementation of this type of education will remain elusive without competent vocational and technical teachers, many of the institutions of higher learning producing vocational teachers due to low funding, lack equipment, accommodation, workshops, training materials and money for maintenance of equipment have been producing limited number of graduates.

Shortage of qualified manpower have also been a very serious problem in Vocational and Technical Education in general. The quest for technical personnel in the present stage of development is very important as one strive towards being a self-reliant nation, meaning that, no meaningful development can take place without a conscious effort to develop manpower. Most of the graduates from our numerous vocational and technical institutions do not like to teach, they prefer to work in the industry, and those who are ready to teach are most of the time not employed and so they become unemployed. The effect of this is that most vocational subjects are not offered in schools, while some are offered and taught by unqualified teachers. For instance, teaching of crafts by Business Administration graduates, this can greatly affect the quality of teaching and examination of students. Given all of the above, there is a need to investigate the challenges facing the implementation of vocational and technical education programmes in terms of resource provision in Bayelsa State and make recommendations for improvement. Such research will help to redirect these programmes towards achieving their objectives for a sustainable development in society.

Statement of the Problem

Vocational education in Nigeria has suffered from years of neglect, mismanagement and inadequacy of resources commensurate with the needs, population growth and demands of the Nigerian society. As a result, vocational education as a strategic priority for national growth and development has not been effective in providing the desired socio-economic empowerment of the people and the nation at large.

Most vocational schools in Nigeria record poor state of equipment, facilities and materials e.g. text books, journals, e-resources, etc that are very important for research and teaching/learning processes. It could be that, the lack of learning equipment and facilities

which is another challenge faced by the program has led to the decline in the implementation of technical and vocational education in Nigeria which has resulted in the lack of skilled manpower in the productive sector of the Nation. In the face of this problems, it is not clearly certain the extent to which resources for the implementation of vocational education are provided. The researcher is therefore bothered about the extent of provision of qualified teachers, workshops, laboratories, equipment and classrooms for the implementation of vocational education in Bayelsa State.

Aim and Objectives of the Study

The aim of the study assessed the resource provision for implementation of vocational and technical education programmes in public secondary schools in Bayelsa State; with the following specific objectives:

1. Ascertain whether qualified teachers are adequately provided for the implementation of technical/vocational education in Bayelsa State.
2. Examine whether workshops are adequately provided for the implementation of vocational and technical education in Bayelsa State.
3. Investigate whether laboratory are adequately provided for the implementation of vocational and technical education in Bayelsa State.

Research Questions

The following research questions guided the study:

1. To what extent are qualified teachers provided for, in the implementation of vocational and technical education Bayelsa State.
2. How adequate are workshops provided for, in the implementation of vocational and technical education in Bayelsa State.
3. To what extent are laboratories provided for, in the implementation of vocational and technical education in Bayelsa State.

Literature Review

Vocational and Technical Education

Vocational and technical education have evolved over time, largely keeping pace with the changing employment needs of different nations as they pass through various stages in their social, economic and political development. Consequently, vocational and technical education have, like many other concepts in academia, been described and defined by in various ways based on purpose and function. In other words, vocational and technical education has assumed numerous definitions that vary in authority, place, and time. Roberts, in Akele (2004), notes in a review of vocational education literature, variations in the meanings of the terms as commonly used and as applied in different settings. In the simplest sense, a number of authors have deemed vocational education to be the education, or training of workers. This implies that any type of education or training in which a worker participates is vocational education. In other words, that vocational

education is education for manual work and is not concerned with work involving purely intellectual activities. Others argue that vocational education is education in certain subjects and tends to be more frequently subjects confined to the secondary schools.

The American Vocational Association, in Egwuola (1995), defines vocational education as education designed to develop the skills, abilities, understanding, attitudes, work habits and appreciation needed by workers to make progress in employment on a useful and productive basis. Yusuf (2006), citing Makuda, sees vocational education as a type of education deliberately designed for the development of skills and knowledge that are useful to both the individual and society. According to Ojo and Edem (1998) the three main goals of vocational education are (i) meeting society's need for workers, (ii) increasing individuals' options related to work, and (iii) conveying knowledge and/or the relevance of general education in work.

The Federal Republic of Nigeria (2004) has defined technical education as that aspect of education that leads to the acquisition of practical and applied skills as well as basic specific knowledge. The Republic has identified five types of technical education institutions outside of the university. These include: the pre-vocational and vocational educational programmes of technical schools at the post-primary level, including Technical Colleges, Polytechnics and Colleges of Education (Technical). According to the Federal Republic of Nigeria (2004), the goals of vocational and technical education are:

- i. To provide manpower in applied science, technology and commerce, particularly at the sub-professional level.
- ii. To provide the technical knowledge and vocational skills necessary for the agricultural industry, and commercial and economic development.
- iii. To provide people who can apply scientific knowledge towards solutions for environmental problems.
- iv. To offer an introduction to professional studies in engineering and other technologies.
- v. To offer training and necessary skills that will lead to the production of craftsman, technicians and
- vi. other skilled personnel who will be enterprising and self-reliant.
- vii. To enable our young men and women to have an intelligent understanding of the necessary complexities of technology.

Banjo, in Ojo (2008), opined that the most important characteristics of a system of technical education are that it must be relevant in functional terms and the content must be selected and designed to cover the spectrum of engineering needs of the community (in terms of skill and manpower development). Banjo also contended that technical education is vocational education in its provision of skills and manpower for industrial and other engineering and social services that a society requires for its socio-economic advancement. Similarly, Aghenta (2009) sees technical education as stressing the engineering aspect of vocational education, including the Electronics/Electrical and Mechanical/Automobile

components. This type of education requires the understanding and practical application of the basic principles of mathematics and science.

Provision of Teachers for the Implementation of Vocational and Technical Education

Clement and Raihan (2015) observed developing countries in general suffer from the shortage of qualified teachers. The problem of retaining teachers particularly TVE teachers in educational institutions dated back to 1960s. The constant movement of teachers from teaching to better paying jobs in other sectors of the economy is apparently responsible for the shortfall of teachers of TVE. Unfortunately, shortage of TVE teachers seems to be a global issue. For instance, Wilkin and Nwoke (2011) reported a significant shortage of TVE teachers in the United States (U.S) especially in states like Michigan, Virginia, South Dakota, Iowa and New York. According to International Labour Organisation (ILO) (2010), report from some high-income countries indicates actual or potential shortages of TVET teachers and trainers, notably due to the aging of this workforce. For example, a 2007 report from Sweden indicated that more than half of such teachers were over 50 years of age. Observably, the problem has been compounded until very recently by difficulties of competing with often more lucrative private enterprises and in rapidly expanding professions. In spite of the recent economic recession that affected the economy of many nations negatively, which could have paved way for teaching of TVET to be more lucrative, shortage of teachers exists in low-income countries, especially to meet the Education for all (EFA) goals by 2015 (UNESCO, 2010). Reasons such as low financial incentives and general conditions of service in the education sector in comparison with the industrial, commercial and service enterprises have been identified as some of the underlying factors for teachers' preference for working in industries. As Simons, Harris, Pudney and Clayton (2009) put it, one of the challenges facing the recruitment of TVET professionals (particularly for public providers) is the salary gap between what can be earned as workers in industries and the income of the teachers in TVET sector. According to Wilkin and Nwoke (2011), shortage of skilled vocational workers is so serious to the extent that career and technical education as well as economic growth have been affected negatively.

Undoubtedly, issues on TVE have negative implications for youth employment, job creation, industrial development and the development of a nation's economy. It might not be possible to think of the advancement of the technology of a nation, let alone its economic development without the provision of the necessary resources for TVE institutions. This assertion has been established by previous studies. For instance, Puyate (2008) investigated constraints to effective implementation of vocational education programme in private secondary school in Port-Harcourt local government area and reported that dearth of professional and qualified teachers for the teaching of vocational and technical subjects, inadequacy of infrastructure and equipment in schools, insufficient instructional materials and books in schools and poorly funding of schools constitute hindrances for the promotion of TVE.

Many vocational institutions across the country are inadequately staffed both qualitatively and quantitatively. In most departments especially in vocational education programmes, the number of qualified VTE teachers for each specialized area is in short supply. It is an indisputable fact that without quality VTE teachers, practical works which is an essential component of VTE programme will be difficult to implement. Acquisition of skills requires that strict attention and supervision should be given to every student.

In other words, individualized instructions become very difficult during practicals' due to shortage of qualified VTE teachers and this affects performance of both the teachers and students as teachers were made to teach many VTE courses. Many people who are qualified to teach VTE courses have always abandon teaching for other better jobs that have prestige and better remuneration. According to Adeyinka (n.d), teaching is gradually becoming a profession for fresh graduates of universities and colleges of education who are ready to call it quit, without provocation, as soon as they find better job opportunity. Oluwale, Jegede and Olamide (2013) stated that attracting qualified staff into teaching and teacher training in technical and vocational education was a problem for most countries including Nigeria. In order to spur locally needed vocational and technology teachers, it is imperative that Nigerian government should seriously consider proper retention schemes for their best talents by providing special working conditions such as; adequate research supports and other incentives to stem this problem of brain drain.

Provision of Workshops and Implementation of Vocational Education

School workshops 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. Student's practical projects are an important part of the curriculum in TVE, but a supportive school environment is a fundamental requirement for the successful implementation of curriculum (Bybee&Loucks-Horsely, 2000; Penney & Fox, 1997). This aspect of the curriculum can only be implemented where workshop facilities, tools, equipment and machines are adequate and relevant. Availability of appropriate workshop facilities enhances student learning by allowing them to be involved in demonstrations, and practice which will help them to continue to build their skills. However, one of the issues of great controversy among TVE educators today is the issue of the poor state of workshop tools and equipment in TVE institutions in Nigeria (Umunadi, 2011). Umar & Ma'aji (2010) stated that most of the TVE institutions in Nigeria have been forced to perform below standard due to purported non - availability, poor management or utter neglect of the required facilities in the workshops for effective skills acquisition. Therefore, there is the need to provide adequate workshop tools, equipment and machines for effective implementation of TVE programs in Nigeria. 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. This pathetic condition needs to be reverted in order to meet the goals of TVE as stipulated by the Federal republic of Nigeria (FRN) in the National Policy on Education of Nigeria (FRN, 2004).

According to the policy, the goals of TVE; 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. This laudable objectives can only be achieved through a curriculum that is relevant and comprehensive and a well-equipped workshop with relevant tools, equipment and other training facilities. Afeti (2007) stated that, the quality of training in TVE institutions in Nigeria is low with undue emphasis on theory and certification rather than on skills acquisition and proficiency testing. Inadequate instructor training, 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 workshop equipment, adequate supply of training materials and practice by the learners.

The acquisition of practical skills relating to occupations as part of the 2008 National Commission for Colleges of Education's objectives require that technical teachers should be provided with intellectual and professional background adequate for teaching technical trades in technical colleges. In order to achieve this, technical institutions are expected to focus on workshop practices in addition to their classroom lectures with adequate practical demonstration which is generally considered to be the key for concrete learning. Hallack (1990) stressed that the availability, relevance and adequacy of these facilities promote academic achievement in the school system; which of course results in the production of quality graduates. According to Muthamia (2009), teachers can only be effective and productive in their work if they have adequate and relevant teaching and learning facilities. There are several problems facing vocational and technical education and these include: inadequate quantities of equipment, machines, tools and instructional materials (Osuala, 2004). Ike, Nwamuo, and Ojukwu, (2011) pointed out that there is the need for adequate facilities in school workshops. They suggested that the only way of determining the level of facilities in the workshop is to check the tools, machines and materials available in the workshop. They also emphasized that sustainable technological development cannot be achieved if school workshops are in the mist of inadequate facilities.

Provision of Laboratory and Implementation of Vocational Education

The laboratory in the school has been defined by several authors in different ways. Maduabum (1992) sees a laboratory as a place where scientific exercises are conducted by the science teachers for the benefit of the students (learners). The laboratory exercises include; experiments, and other activities which help the students in acquiring scientific

skills. Ezeliara (2001) defined science laboratory as a workshop where science is done or where scientific activities are carried out under conducive environment. She also sees the laboratory as a place where science equipment, materials or instruments are housed for security and safety. Igwe (2003) observed that a laboratory can be indoor such as the sufficiently designed and equipped room found in most schools or outdoor involving such places as riverside, workshop, field and even market for carrying out scientific studies. He further stated that whatever the type of laboratory employed in science teaching, the same laboratory experience should be attained, that is a participation in the series of experimental, observational and demonstrating activities which provide opportunity for students to develop understanding of practical and theoretical concepts through solutions of problems.

Laboratory and studio are essential to the teaching of vocational education and the success of some of its courses is much dependent on the laboratory/studio and the provisions made for them. The teacher assumes a position of dispenser of knowledge with the laboratory/studio serving the function of drill or verification and at the other extreme, the teacher assumes the position of guide to learning and laboratory/studio as a place where knowledge is discovered. Hence Yadar (2007) posited that some courses in science and vocational education cannot be considered as complete without including some practical work.

Adequacy of laboratory facilities and students' learning, and teaching experience centre on the extent of adequacy of laboratory facilities in secondary schools and the teachers' effectiveness in the use of laboratory facilities with the aim of facilitating and providing meaningful learning experiences in the learners. Hager (1974), based on the instructional theory of learning interaction, hypothesized that the laboratory had a direct effect on both learners' attitudes and academic performance. It is generally believed that constant practice leads to proficiency in what the learner learns during classroom instruction; hence, the dictum 'practice makes perfect'. This has given rise to the expectation that laboratory facilities should be adequately provided to vocational schools for effective implementation. The aim of science laboratory and adequacy of laboratory facilities in vocational schools is for effective teaching and learning to take place. Thus, to assess the status of laboratory facilities in vocational schools, the adequacy of these facilities must be emphasized by the science teachers. Hoftein and Ginetta (1992) contended that the laboratory has been a distinctive feature in science teaching and learning. For students to learn efficiently, teachers should ensure that adequate laboratory facilities are procured. The extent of adequacy of laboratory facilities for science teaching depends on the population of learners in a particular school. Eshiet (1996) holds that the adequacy of laboratory facilities makes teaching more concrete and stimulating and hence for better students' academic performance in vocational schools. Academic performance depicts the level of educational attainment of an individual. It differentiates one with high knowledge content from the other with low and less competency in academic performance. Okafor (2000) found that the adequacy of laboratory facilities had a significant effect on the students' performance.

Aburime (2004) investigated the influence of adequacy of laboratory facilities and academic performance in Chemistry and found that adequacy had significant influence on students' academic performance in vocational school teaching.

Methodology

This study adopted the ex-post facto design. According to Akuezilo and Agu (2003), Ex-post facto design seeks to find out the factors or conditions associated with certain occurrence, outcomes, situation or process by analysis of past events or of already existing conditions. This type of design will be adopted for this study because the resources to be assessed are already in place and existing.

The population of the study comprised of all seven (7) vocational and technical training centers in Bayelsa State, consisting of one hundred & twenty (120) vocational/technical coordinators and teachers in Bayelsa State. (*Source: National Board for Technical Education (NBTE), Bayelsa State. Report, updated October, 2022*). The Purposive Sampling technique was used in the research. The instrument for this study was a checklist for instructional resources with regards to vocational education programmes. The checklist was completed through a direct observation conducted by the researcher in the seven vocational education learning centres in Bayelsa State.

The checklist instrument was validated by a colleague expert in Measurement and Evaluation from Niger Delta University, Bayelsa, State, Nigeria.

The frequency and percentage statistics was used in answering the research questions. A 50% criterion was used to ascertain the adequacy and inadequacy of the resource provision for the implementation of vocational and technical education.

Results

Answer to Research Questions

Research Question One: To what extent are qualified teachers provided for the implementation of vocational and technical education Bayelsa State?

Table 4.1: Number of Vocational Subjects Teachers in Bayelsa State

	SUBJECT TEACHERS	No. of Teachers	Non Professional	NC E	B.E D	PG DE	M.E D	Ph D	Total qual. Teachers	% of qual teachers	Remark
1	Welding/Fabrication	12	9	2	0	0	1	0	3	14%	inadequate
2	Catering Craft practice	7	3	3	1	0	0	0	4	8%	Inadequate
3	Mechanical Engineering craft practice	7	4	2	1	2	1	0	2	11%	Inadequate

4	Electrical Installation and maintenance work	6	5	0	0	1	0	0	1	9%	Adequate
5	Motor vehicle-mechanic works	9	7	1	0	1	0	0	2	13%	Inadequate
6	Carpentry and joinery	5	3	1	1	0	0	0	2	8%	Inadequate
7	Computer Craft practice	7	5	0	1	1	0	0	2	11%	inadequate
8	Painting and Decoration	8	6	1	1	0	0	0	2	13%	inadequate
9	Garment making	14	12	1	1	0	0	0	2	6%	inadequate
10	Leather making	6	3	1	2	0	0	0	3	9%	inadequate
	Total	81	58	22	11	9	0	0	23		
	% of Non-professional 65%										

Data on table 4.1 shows that there are total number of qualified 23, 58 (65%) non-professional vocational and technical in teachers in Bayelsa State totaling 64, including 12 welding and fabrication teachers in all the 7 vocational schools in Bayelsa. Total of 7 (7) catering Craft Practice teacher. Fiver (7) mechanical teachers. Electrical installation and maintenance, 6. Motor vehicle and mechanic works 8. Carpentry and joinery 5, while computer craft practice 7. 8 teacher in painting and decoration. 14 in Garment making teacher, and leather craft making teacher is total of 6. The table equally confirms that there are total of 29 vocational teachers in all the vocational schools in Bayelsa State. This brings to a shortfall or deficit of 65% which is very inadequate for a state of 3,150 vocational students.

Research Question 2: How adequate are workshops provided for, in the implementation of vocational and technical education in Bayelsa State?

Table 4.2: Number of Workshops Available in vocational and technical schools in Bayelsa State

S/ N	SCHOOL	No of students	Available Workshops	Required workshops	Deficit	% Deficit	Remark
1	Gvt Crafts Devpmt Centre, Adagbiri	400	5	11	6	55%	Inadequate
2	Gvt Crafts Devpmt Centre, Sagbama	450	8	13	5	38%	Inadequate
3	Gvt Crafts Devpmt Centre, Polaku	420	6	12	6	50%	Inadequate
4	Government Crafts Development Centre Ayakoro	450	5	8	3	38%	Inadequate
5	Government Crafts Development Centre Nembe	430	5	12	7	58%	Inadequate
6	Government Crafts Development Centre Okaki	800	8	23	15	60%	Inadequate
7	Fed. Government Crafts Development Centre Tombia	200	2	6	4	67%	Inadequate
	Total	3,150	39	85	46	54%	Inadequate

Findings from table 4.2 shows above shows that Government Crafts Development Centre, Adagbiri with 400 students have total of 5 workshops and a deficit of 6 (55%). Government Crafts Development Centre, Sagbama with 450 students has a total of 8 workshops and a deficit of 5 (38%). Government Crafts Development Centre, Polaku with a total number of 420 students and 6 workshops and deficit of 6 (50%), While Government Crafts Development Centre, Ayakoro has total of 450 students, 5 with workshops showing a deficit of 3 (38%). Government Crafts Development Centre, Nembe has a total of 430 students and 5 workshops which shows a deficit of 7 or 58%. Government Crafts Development Centre, Okaki, has 800 students with 8 workshops, showing a deficit of 15 (68%), while Federal Government Crafts Development Centre, Tombia has a total of 200 students with 4 workshops showing deficit of 4 or 67%. This cumulated to workshop deficit of 54% for vocational schools in Bayelsa State. This shows that the workshops are not adequate for effective implementation of instruction or even the curriculum.

Research Question 3: To what extent are equipment provided for, in the implementation of vocational and technical education in Bayelsa State?

Table 4.4: Available Equipment in Workshops in Bayelsa State

S/N	Equipment	Available	No of Students (35*7)	Expected no. of equipment	Deficit	% deficit	Remark
1.	Metal fabricator	90	245	245	155	63%	V. inadequate
2.	Carpentry tools	88	245	245	157	64%	V. inadequate
3.	Photocopier	70	245	245	175	71%	V. inadequate
4.	Printer	85	245	245	160	65%	V. inadequate
5.	First Aid Kits	75	245	245	170	69%	V. inadequate
6.	Fire-fighting equipment	86	245	245	179	73%	V. inadequate
7.	Protective gloves	75	245	245	170	69%	V. inadequate
8.	Mechanical tool kits	63	245	245	182	74%	V. inadequate
9.	Electricity tool kits	62	245	245	183	75%	V. inadequate
10.	Safety helmet	78	245	245	167	68%	V. inadequate

Data from table 4.4 indicate that the extent to which equipment are provided for the implementation of vocational and technical education in Bayelsa State. The table above showed that all the available equipment are very inadequate. The checklist indicates that there is a gross deficit in the availability of equipment for students in the vocational schools in Bayelsa. Every student, including the teachers are expected to have an equipment during class experience or teaching. However, the equipment are inadequate and cannot go round the total students available in the workshop per time.

Discussion of Findings

Data on table 4.1 shows that there are total number of 5 welding and fabrication teachers in all the 7 vocational schools in Bayelsa. Total of One (1) catering Craft Practice teacher. Fiver (5) mechanical teachers. Electrical installation and maintenance, 5. Motor vehicle and mechanic works 4. Carpentry and joinery 2, while computer craft practice 5. No teacher at all in painting and decoration. Garment making teacher is total of 1 and leather craft making teacher is total of 1. The table equally confirms that there are total of 29 vocational teachers

in all the vocational schools in Bayelsa State. This brings to a shortfall or deficit of 68% which is very inadequate for a state of 3,150 vocational students. The outcome of the checklist of teachers affirms the position of Egwuella, (1995) stating that there are hardly enough and qualified teachers to man or teach vocational subjects in public vocational secondary schools in Nigeria.

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Data from table 4.4 indicate the extent to which equipment are provided for, in the implementation of vocational and technical education in Bayelsa State. The checklist indicate that there is a gross deficit in the availability of equipment for students in the vocational schools in Bayelsa. Every student, including the teachers are expected to have an equipment during class experience or teaching. However the equipment are inadequate and cannot go round the total students available in the workshop per time. This inadequacy affirms the position of Nwidum in UNESCO (2012) stating that sub-saharan Africa have gross educational infrastructural deficit thereby resulting to failed schooling.

Data from table 4.4 indicate that there are total deficit of 64% of classrooms in Government Crafts Development Centre, Adagbiri and Government Crafts Development Centre, Sagbama, 100%. Government Crafts Development Centre, Polaku 83% and Government Crafts Development Centre, Ayakoro 100%. Government Crafts Development Centre, Nembe 100%, Okaki, 56% and Fed. Government Crafts Development Centre, Tombia 33%. This sums that there are gross inadequacy of classrooms in the ration of 1:35 i.e one teacher to 35 students per class. Schools like Government Crafts Development Centre, Ayakoro, Government Crafts Development Centre, Sagbama, do not even have classrooms at all. This affirms the stance of with Thembinkosi and Alfred, (2014) stating that teachers are faced with the challenges of inadequate workshops thereby hampering the implementation, teaching and learning of vocational and technical education in developing countries.

Conclusion

Vocational and technical education anywhere in the world has been described as a strategic and viable programme and a sine qua non to the attainment of the eight point of United

Nation millennium development goals which require adequate provision of equipment and facilities in order to achieve set goals of the United Nations. This however is not the case in Bayelsa State situation. There is need therefore to move forward with the vocational and technical education programme of the developed countries. The government in this era of technological advancement should provide the institutions with the necessary fund to purchase the equipment, facilities and manage the initial problems associated with the use of the equipment and training of vocational and technical teachers. Nevertheless, these problems can be surmounted with time. Bayelsa State cannot afford to be left out of the great benefits in vocational and technical education. It then becomes pertinent to provide the necessary equipment and facilities in the different institutions to prepare the institutions for the improvement of carrying capacity. The provision of facilities will stimulate the interest of students in the study of vocational and technical education subjects and improve the carrying capacity of the vocational school.

Recommendations

Based on the findings, the following recommendations were made;

1. The government and non-governmental agencies should encourage vocational and technical education to assist in human resource and capacity building by funding the programme to improve carrying capacity of the institutions.
2. The government should be able to send inspectors from Ministry of Education (Technical Division) to monitor the equipment utilization in each institution and to enforce the use of equipment during the period of their visit.
3. Only qualified teachers should be employed to teach vocational and technology education courses in technical and vocational schools

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