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THE ROLE OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING IN
ADDRESSING THE ECONOMIC RECESSION IN NIGERIA FOR SUSTAINABLE
DEVELOPMENT**

By

**Asuquo John Otoy, PhD
Faculty of Education
Akwa Ibom State University**

Abstract

The study investigated the role of technical and vocational education and training in addressing the economic recession in Nigeria for sustainable development. Three research questions guided the study. The population of the study was 134 teachers and 36 school administrators (9 principals and 27 vice principals) in all the technical colleges in Akwa Ibom State. A sample size of 109 respondents (86 technical teachers and 23 school administrators) was selected using simple random sampling technique through balloting. Vocational Education Role for Sustainable Development Questionnaire (VERSDQ) was used to collect data for the study. The instrument was validated by three experts from University of Uyo, Uyo. The reliability coefficient of the instrument was established with cronbach's alpha formula which stood at 0.82. mean was used for data analysis. Findings of the study revealed that technical skills and competencies are highly needed for sustainable economic growth, poor findings and other challenges militate against the progress of vocational education and VET plays some roles in reducing poverty among Nigerian youths. It is recommended among others that government should improve funding of vocational education in Nigeria.

Keywords: Technical Education, Economic Recession, Sustainable Development, Nigeria.

1.0 Background of the study

The persistent economic recession in Nigeria has posed significant challenges to national development, particularly in terms of high unemployment, inflation, poverty, and declining productivity. Since the downturn in global oil prices and the structural weaknesses of Nigeria's mono-product economy became evident, the country has experienced recurrent recessions, notably in 2016 and again in 2020 during the COVID-19 pandemic. These recessions exposed the vulnerability of the economy, especially its over-dependence on oil revenues, weak manufacturing base, and a large unskilled labour force (World Bank, 2020; IMF, 2021). As Nigeria seeks to rebuild and move to a more resilient and diversified economy, the need to enhance human capital development through vocational education has become increasingly urgent.

Vocational education, also known as technical and vocational education and training (TVET), is a form of education designed to equip individuals with practical skills, technical know-how, and entrepreneurial competencies required for specific trades and occupations. It is strategically positioned to address the skills gap, reduce unemployment, and promote inclusive economic growth (UNESCO, 2016). Einstein (2014) emphasize the integration of environmental, social, and economic factor within their operations. The importance of these pillar is to ensure long-term viability and positive societal impact. This theory showcases how vocational education strives to create a sustainable cycle of production, manage resources responsibly, and contribute to the wellbeing of both the employees and the broader community. In a developing economy like Nigeria, where over 60% of the population comprises youth and where graduate unemployment remains alarmingly high, vocational education presents a critical pathway for empowering citizens to become self-reliant and economically productive (National Bureau of Statistics [NBS], 2021).

Sustainable development, as defined by the Brundtland Commission, refers to development that meets present needs without compromising the ability of future generations to meet theirs (WCED, 1987). Achieving this in Nigeria demands investment in sectors that foster inclusive economic participation, environmental stewardship, and social equity. Vocational education plays a pivotal role in achieving Sustainable Development Goals (SDGs), particularly Goal 4 (Quality Education), Goal 8 (Decent Work and Economic Growth), and Goal 9 (Industry, Innovation, and Infrastructure) by promoting skills development, innovation, and employment generation (United Nations, 2015).

Despite various policies and interventions, vocational education in Nigeria has been underfunded, poorly coordinated, and stigmatized as a lesser alternative to academic education. This has contributed to a mismatch between labour market demands and the competencies possessed by graduates (Okolie, Igwe, and Elom, 2019). Bridging this gap requires a paradigm shift in educational policy and planning to reposition vocational education as a catalyst for economic recovery and sustainable development.

Therefore, this study explores the strategic role of vocational education in addressing the challenges posed by economic recession in Nigeria. It aims to demonstrate how skill acquisition, entrepreneurial training, and practical workforce development through vocational education can help mitigate unemployment, stimulate economic activities, and foster long-term sustainability. By critically examining the interface between vocational training and national development efforts, this study contributes to policy formulation and educational reforms essential for economic resilience in Nigeria.

1.1 Statement of the problem

Nigeria's persistent economic recession has resulted in widespread unemployment, poverty, and economic stagnation. Despite various government interventions, youth unemployment remains high due to a mismatch between education and market-relevant skills. Vocational education, which holds promise for workforce development, remains underutilized, underfunded, and undervalued. Lack of effective integration of vocational training into national economic recovery plans hinders sustainable development.

The existing education system in Nigeria may not be providing the necessary hand-on skills and competencies required for the unemployment, exacerbating the economic challenges. Vocational education is a vital instrument for addressing Nigeria's economic recession and fostering sustainable development, by equipping youths with relevant technical and vocational hand-on skills, it enhances enterprise productivity, profitability, and national wealth creation, ultimately driving economic growth and prosperity (Yusulf and Soyemi 2012). Vocational education fosters economic growth by equipping individuals with practical, market-relevant skills that enhance employability, productivity, and entrepreneurship. It supports sustainability by promoting inclusive economic participation, reducing poverty, and encouraging innovation across industries. By aligning education with labour market needs, vocational training contributes to human capital development essential for long-term, resilient, and diversified economic advancement in developing economies like Nigeria. It is noted that the Nigerian economy lacks sufficient job opportunities and the country needs sustainable solutions to address its challenges. A positive response to the situation calls for the Vocational Education who can play a crucial role in promoting entrepreneurship and job creation to contribute in achieving this goal. This study investigates how vocational education can be repositioned to effectively address Nigeria's economic recession and contribute meaningfully to long-term sustainability.

1.2 Purpose of the study

This study aims to investigate the role of vocational education in addressing the economic recession in Nigeria, with a focus on identifying strategies for sustainable development. This study aims specifically to:

1. Identify the skills and competencies required for sustainable economic growth.
2. Determine the challenges facing vocational education in Nigeria and propose solution.
3. Ascertain the role of vocational education in reducing poverty among Nigerian youths.

1.3 Significance of the Study

This study is significant as it highlights the critical role of vocational education in mitigating unemployment, fostering entrepreneurship, and promoting economic diversification during economic recession. The findings will benefit policymakers, educators, and stakeholders in designing vocational training programs that drive sustainable development and economic resilience in Nigeria.

1.4 Research Questions

1. What technical and vocational skills and competencies are required for sustainable economic growth in Nigeria's key sector?
2. What are the major challenges facing vocational education in Nigeria?
3. What role can vocational education play in reducing poverty and promoting economic empowerment among Nigerian youth?

2.1 Literature Review

Vocational education has increasingly gained attention as a strategic tool for economic empowerment and sustainable development. According to UNESCO (2016), technical and vocational education and training (TVET) equips learners with skills necessary for employment, entrepreneurship, and lifelong learning. In the Nigerian context, scholars such as Okolie, Igwe, and Elom (2019) emphasized the potential of vocational education to bridge the skills gap, reduce youth unemployment, and stimulate informal sector growth. Practical skills acquisition and competencies are essential aspects of vocational and technical education programs at the various level of Nigerian education (Saulawa, 2023). Technical education as viewed by Okolocha and Baba (2016) is an educational pathway that encompasses knowledge skills, competencies and variety of structural activities aimed at securing employment in various economic sectors or enabling individuals to become self-dependence by creating jobs. According to Yusvana (2025), TVET plays an important role in socioeconomic development of society by equipping individuals with the practical skills and knowledge needed to thrive in the modern workforce. TVET is essential for fostering economic growth, enhancing productivity and ensuring that industries have access to a skilled manpower. Innovations in digital learning have modernized that landscape of TVET by introducing a variety of platforms and technologies designed to enhance the accessibility and quality of vocational education (Razak *et al.*, 2022).

Dama Edward (2024) emphasized that vocational education is designed for equipping individuals with practical skills and enhancing employability prospects. Endogenous Growth Theory by Romer (1986) posited that economic growth is driven by internal factors, such as human capital, innovation, and institutional factors which vocational education stand out to contribute to economic growth by providing the skills and knowledge needed to drive innovation and entrepreneurship. Lawal (2013) asserted that TVE played significant role in employment/creation of job opportunities, individual development, poverty alleviation, entrepreneurship development. Melaiye *et al.* (2019) contended that TVE has a crucial role to play in shaping the socioeconomic future of Nigeria. Technical and vocational education helps in curbing unemployment and in providing the needed skilled labour for industries. Through TVE, individuals are being equipped with vocational skills for gainful employment.

Vocational education programs often suffer from social stigma in that is often perceived as inferior to academic education, discouraging many students from pursuing vocational training. Vocational institution lacks trap partnership with industries, resulting in lack of opportunities for students to access sponsorship/scholarship, and also to gain practical experience and on-the-job training. According to Competency- Based Vocational Education Theory by Mulder (2017),

vocational education institution faces a shortage of qualified instructors and trainers with relevant industry experience and pedagogical expertise. It lacks basic amenities and resources necessary for hand-on training and practical skills development.

However, vocational education in Nigeria faces systemic challenges, including poor funding, weak infrastructure, inadequate policy implementation, and societal bias favoring academic qualifications (Ayonmike, 2014). Kennedy, Udoetuk and Ufot (2017) enumerated the challenges facing vocational education to include poor funding, non-use of approximate and approved methodology, poor/shortage of qualified vocational technical teachers, poor public perception to technical vocational education and training, lack of adequate equipment and infrastructural facilities, curriculum deficit, involvement of TVET non-professionals in VTE policy decisions and inequality in urban/rural deployment of TVET teachers. Hussaini and Jumba (2018) revealed the following factors as challenges to achieving quality TVET programs in Nigeria: Public perceptions of TVET, curriculum issues, poor funding of TVET programs, poor teaching methods employed by teachers and poor assessment of TVET students' competency. Okoye and Arimonu (2016) noted that some of the challenges of technical and vocational education included inadequate funding of technical and vocational education, inadequate facilities, brain drain, lack of staff retention, outdated curriculum, among others. These constraints undermine its effectiveness in contributing to national development. The economic recessions of 2016 and 2020 further exposed the country's dependence on oil and underscored the urgency for economic diversification through human capital development (World Bank, 2020).

Empirical evidence suggested that countries that have invested heavily in vocational training have witnessed reduced unemployment rates and increased innovation in local industries (Afeti, 2009). Nigeria's vocational education system, if properly restructured, financed, and integrated into national economic planning, can play a critical role in achieving SDGs 4 and 8—quality education and decent work. Thus, a reassessment of its strategic deployment is essential for sustainable development and post-recession recovery.

During economic downturns, vocational education interventions—such as skills acquisition programs, youth empowerment schemes, and technical training centers—offer critical pathways to self-employment and workforce reskilling. Governments and NGOs often implement such initiatives to reduce unemployment and promote informal sector growth. These interventions serve as buffers against economic shocks, enabling individuals to adapt, generate income, and contribute to economic recovery.

Despite growing research on vocational education, existing literature often lacks empirical analysis linking vocational training directly to post-recession economic recovery in Nigeria. Few studies assess the long-term sustainability outcomes of vocational education or explore its integration into national development strategies. Additionally, limited attention is given to regional disparities, gender inclusion, and institutional challenges, creating a need for comprehensive, policy-oriented research focused on systemic reforms and measurable impacts.

3.1 Research Design

This study adopted a descriptive survey research design, which is appropriate for gathering data on opinions, perceptions, and experiences related to vocational education and its role in economic recovery and sustainable development. The design helped in the collection and analysis of quantitative and qualitative data from a defined population to identify trends, relationships, and policy implications. This method is suitable considering its efficiency in studying large populations with implied diverse characteristics.

3.2 Area of the study

The area of the study was Akwa Ibom State. The study was conducted in all the technical colleges in Akwa Ibom State, Nigeria.

3.3 Population of the study

The population of the study comprised 154 teachers and 36 school administrators (9 principals and 27 vice principals) in all the technical colleges in Akwa Ibom State. The total population was 170 respondents.

3.4 Sample and sampling technique

A sample size of 86 technical teachers and 23 school administrators (6 principals and 17 vice principals) were drawn for the study. The total sample size was 109 (65% of the population). The sample for the study was selected using simple random technique through balloting. This simple random technique gave every participant equal chance of being selected.

3.5 Instrumentation

The study employed a structured questionnaire as the primary data collection instrument called “Vocational Education Role for Sustainable Development Questionnaire (VERSDQ)”. The questionnaire was a five-scale point instrument of Strongly Agree (SA), Agree (A), undecided (UD), Disagree (D), Strongly disagree (SD) and the scale were rated 5,4,3,2, and 1 respectively. This structured approach enabled the collection of quantifiable data, facilitating a comprehensive analysis of the role of vocational education in addressing economic recession and promoting sustainable development in Nigeria.

3.6 Validation of Instrument

The instrument was subjected to face and content validation by three experts, two from Industrial Technology Department, Faculty of Vocational Education, Library and Information Science, and Test and Measurement unit of Department of Education Foundations, University of Uyo. The inputs and corrections made were used in the modification of the instrument.

3.7 Reliability of the Instrument

A pilot test was conducted to ensure reliability from 30 respondents who were not part of the study and a Cronbach’s Alpha method was used to determine the reliability of the instrument. A coefficient of 0.82 was obtained, indicating a high level of internal consistency of the instrument.

3.8 Method of Data Analysis

Mean statistics was used to answer the research questions.

Results and Discussion

The results of data analysis are presented based on the research questions.

Research Question 1: What technical skills and competencies are required for sustainable economic growth in Nigeria?

**Table 1: Mean Analysis of the Technical Skills and Competencies required for Sustainable Economic growth
N = 109**

S/N	Item	\bar{X}	Remark
1	Practical/manipulative skills	4.44	Highly required
2	Digital and ICT skills	4.57	Highly required
3	Planning/organizing skills	4.32	Highly required
4	Management skills	4.28	Highly required
5	Innovation/creativity skills	4.41	Highly required
6	Problem solving skills	4.21	Highly required
7	Critical thinking skills	4.07	Highly required

Data analysis in Table 1 reveals that the selected technical skills and competencies are highly required for sustainable economic growth in Nigeria with very high mean value of 4.07 to 4.57 for the formulated items.

Research Question 2: What are the major challenges facing vocational technical education in Nigeria?

Table 2: Mean analysis of the major challenges facing vocational technical education in Nigeria (N = 109)

S/N	Item	\bar{x}	Remark
8	Poor funding of vocational education program	4.62	Agree
9	Lack of facilities	4.31	Agree
10	Outdated curriculum of vocational technical education	3.55	Agree
11	Lack of interdisciplinary skills of teachers	4.23	Agree
12	Poor public perception of vocational education	3.53	Agree
13	Shortage of qualified technical and vocational education teachers.	3.58	Agree
14	Poor teaching methods	4.02	Agree
15	Poor assessment of TVET students' competency	3.64	Agree

Data analysis in Table 2 indicates that the mean values of the respondents range from 3.53 to 4.62 which are greater than the average mean rating of 3.0. The result implies that poor funding of vocational education is the major challenges of facing vocational education, followed by lack of facilities. Others are lack of interdisciplinary skills of teachers, poor teaching methods, poor assessment of TVET students' competency, shortage of qualified technical teachers, among others.

Research Question 3: What role can vocational education play in reducing poverty and promoting economic empowerment among Nigerian youths?

Table 3: Mean analysis of the role of vocational education in reducing poverty and promoting economic empowerment (N = 109)

S/N	Item	\bar{x}	Remark
1	Acquisition of vocational skills	4.23	Agree
2	Creation of job opportunities	3.84	Agree
3	Boost entrepreneurial development	3.75	Agree
4	Provision of the needed skilled labour	3.62	Agree
5	Increased productivity	4.02	Agree
6	Enhance individual development	4.04	Agree
7	Increase in the number of workforce	3.91	Agree
8	Reduces reliance on government jobs	3.51	Agree
9	Aid technological advancement	4.08	Agree

Data analysis in Table 3 shows that the mean value for each item is greater than the average mean rating of 3.0. The result implies that the above items are the crucial role vocational and technical education play in reducing poverty and promoting economic empowerment in Nigeria. Acquisition of vocational skills has the highest mean responses while reduction of reliance on government jobs has the least mean responses.

Discussion of Findings

Findings of the study showed the technical skills and competencies required for sustainable economic growth in Nigeria. The findings revealed that practical/manipulative skills, digital and ICT skills, planning and organizing skills, management skills, innovation/creativity skills, problem solving skills and critical thinking skills, among others are the required technical skills and competencies required for sustainable economic growth in Nigeria. In support of the findings of the study, Saulawa (2023) found that practical skills acquisition and competencies are essential aspects of vocational and technical education programs at the various level of Nigeria education.

Okolocha and Baba (2016) discovered that vocational technical education is the pathway that encompasses knowledge skills, competencies and variety of structural activities aimed at securing employment in various economic sectors. Razak *et al.* (2022) modernized that landscape of TVET by introducing a variety of platforms and technologies designed to enhance the accessibility and quality of vocational education.

Findings of study also revealed the major challenges facing vocational technical education in Nigeria. These challenges include poor funding of vocational education programme, lack of facilities, outdated curriculum of vocational technical education, lack of interdisciplinary skills of teachers, poor public perception of vocational education, shortage of qualified technical and vocational education teachers, poor teaching methods and poor assessment of TVET students' competency. In support of the findings of study, Hussaini and Jumba (2018) revealed the following factors as challenges to achieving quality TVET programs in Nigeria: Public perceptions of TVET, curriculum issues, poor funding of TVET programs, poor teaching methods employed by teachers and poor assessment of TVET students' competency. Okoye and Arimonu (2016) observed that some challenges of Technical and Vocational Education included inadequate funding of technical and vocational education, inadequate facilities, brain drain, lack of staff retention, outdated curriculum, among others.

The result of data analysis revealed that the role vocational technical education can play in reducing poverty and promoting economic empowerment among Nigerian youths. These roles included acquisition of vocational skills, creation of job opportunities, boost entrepreneurial development, provision of the needed skilled labour, increased productivity, enhance individual development, increase in the number of workforce, reduces reliance on government jobs and aid technological advancements. The findings of study go in line with the work of Lawal (2013) who maintained that TVE played significant role in employment and creation of job opportunities, individual development, poverty alleviation, entrepreneurship development. Melaiye *et al.* (2019) discovered that TVE helps in curbing unemployment and in providing the needed skilled labour for industries. Through TVE, individuals are being equipped with vocational skills for gainful employment.

Conclusion

Based on the findings of the study, it is concluded that technical and vocational education play remarkable role in addressing economic recession and promoting sustainable development in Nigeria. The technical and vocational education skills and competencies required for sustainable development included practical skills, digital skills, management skills, problem solving skills, critical thinking skills, among others. Certain challenges such as poor funding, lack of facilities, poor public perception of vocational education, poor teaching methods, among others militate against the progress of vocational education in the country. In addition, vocational technical education play crucial role in job creation, gainful employment, entrepreneurial development, increased productivity, provision of skilled work force towards reducing poverty and economic development.

Recommendations

1. The federal and state governments, in collaboration with private and international development partners, should improve funding for vocational and technical institutions, ensure access to modern tools, certified trainers, and up-to-date curricula.
2. Strategic alliances with industries and NGOs should be fostered to bridge the gap between training and labor market demands. This would enhance job placement, mentorship, and real-world skills application for vocational graduates.
3. To consolidate the observed uniformity in perception across geopolitical zones, a national TVET policy framework should be developed and enforced to guarantee curriculum consistency and quality assurance nationwide.

4. Future studies should explore qualitative aspects of vocational training effectiveness, regional disparities in delivery quality, and longitudinal impacts of vocational education on economic outcomes. Gender-sensitive studies and impact assessments on marginalized populations should also be encouraged.

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