

TRANSFORMING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) FOR ENTREPRENEURIAL SKILLS DEVELOPMENT AND YOUTH EMPOWERMENT IN NIGERIA

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ARTICLE INFO

Article No.: 0591

Accepted Date: 21/08/2026

Published Date: 21/09/2026

Type: Research

ABSTRACT

Technical and vocational education and training (TVET) has emerged as a vital strategy for addressing youth unemployment and poverty reduction by equipping individuals with practical skills and entrepreneurial competencies capable of promoting self-reliance and national growth. However, the ability of TVET to address youth unemployment and promote entrepreneurship is hindered by inadequate funding, poor infrastructure, outdated curricula, inadequate qualified instructors, negative societal perception and policy inconsistencies. This paper examines TVET transformation and the role it plays in empowering youths through entrepreneurship for self-reliance in Nigeria. The study adopted an integrative literature review approach and reviewed relevant journal articles, conference papers, books, policy documents and reports on TVET, entrepreneurship, skills development and youth empowerment. The reviewed literature is analyzed using thematic content analysis. Findings of the study reveal that transforming TVET through curriculum modernization, digital and technological skill integration, qualified instructors, adequate infrastructure, promoting public-private partnership, entrepreneurship education and policy implementation improves entrepreneurial skills which promotes youth empowerment. The study concludes that a transformed TVET can significantly promote entrepreneurial skill development, enhance employability, and foster self-reliance among youths in Nigeria. The paper recommends increased investment in TVET, regular curriculum review, monitoring and supervision of TVET institutions, stronger collaboration between TVET institutions and industries and consistent policy to improve the relevance and effectiveness of TVET in Nigeria.

Keywords: Technical and vocational education and training, Entrepreneurship, Youth Empowerment, Self-Reliance, Employability

Introduction

Education is the pathway through which an individual acquires knowledge, skills, values and competences for self-development. It is a fundamental tool for individual development and societal transformation. Technical and vocational education and training (TVET) is a form of education that combines both formal and informal forms of learning. Technical and vocational education and training (TVET) is regarded as an important instrument for enhancing industrial growth, entrepreneurship development and economic development in Nigeria. UNESCO (2016) defines TVET as a form of education, training and skills development associated with various occupational fields, including production, services, and livelihood activities. TVET is therefore not limited to employment; it also includes entrepreneurship, learning and adapting to changing workplace requirements. Kanwar et al.(2019) emphasized that, technological changes and development in the world of work require TVET to be more flexible and adaptable to changing skills requirement. In Nigeria, Youth unemployment remains one of the major challenges affecting national stability, threatening economic growth, and national development. Despite the abundance of human and natural resources in the country, a significant number of youths struggle to secure meaningful employment due to inadequate skills and the mismatch between educational outcomes and the demands of the labour market. Evidence from the World Bank indicate that Nigeria faces significant skills mismatch, making Technical and vocational education and training (TVET) an important pathway for improving employability and ensuring that training aligns with labour market needs (World Bank, 2010).

TVET can contribute towards addressing these challenges by equipping learners with hand-on skills and knowledge to improve their ability to create employment opportunities for themselves and others, consequently reducing the dependence on white-collar jobs and promoting self-reliance. However, the effectiveness of TVET largely depends on the quality and relevance of training provided. The on-going global shift towards a technology-driven and innovation-oriented system has further emphasized the importance of transforming technical and vocational education and training (TVET) by promoting new technological innovations and crafts that are vital in preparing globally competitive entrepreneurs in order to address the challenges of unemployment and poverty affecting youths in Nigeria. UNESCO-UNEVOC (2021) noted that the global transition towards an innovation-driven and technology-based economy has to a great extent redefined the competence required for gainful employment and successful entrepreneurship. In this evolving landscape, skills such as AI literacy, digital problem solving, data analytics, cyber- physical systems management and creativity have become indispensable for thriving in this modern economy. Consequently, TVET needs to evolve and respond to the needs of the labour market. Numerous efforts have been made to transform TVET into a tool for economic empowerment and sustainability. However, several challenges continue to hinder its effectiveness, Including inadequate funding, outdated curriculum, inadequate infrastructure, shortage of qualified instructors, negative public perception and policy inconsistencies. These challenges have limited the ability of TVET to produce graduates with skills and knowledge required for employment and entrepreneurship in the rapidly evolving global economy.

The increasing demand for entrepreneurial skills and workforce adaptability has made TVET transformation necessary. This paper therefore examines the role of TVET transformation in advancing entrepreneurial skills and youth empowerment in Nigeria.

Literature Review

This section reviews relevant literature on Technical and vocational education and training (TVET), entrepreneurial skills, and youth empowerment. The review provides a conceptual analysis of the key variables and examines existing scholarly literature on the contribution of TVET to entrepreneurship development and youth empowerment. The review further explores the theoretical foundations guiding the study, Namely, Human Capital Theory and Empowerment Theory which explain the role of skills acquisition, education and capacity building in promoting entrepreneurship development and enhancing youth empowerment. It also highlights the importance of TVET in addressing unemployment, enhancing employability, promoting self-reliance and sustainable economic development in Nigeria.

1 Theoretical Framework

This study is based on Human Capital Theory and Empowerment Theory. These theories explain the significance of investing in education, skill acquisition and capacity building in enhancing entrepreneurial skills and promoting youth empowerment.

1 Human Capital Theory

Human Capital Theory was developed by Theodore Schultz (1961) and further advanced by Gary Becker (1964). The theory posits that investment in education (general or vocational) enhances the productivity, employability and economic value of individuals. The theory views education and training as a form of investment that generates economic and social returns for both individuals and the society. Schultz (1961) argues that investments in human capabilities contribute to productivity and economic growth, while Becker (1964) explains education and training as forms of investment that can increase an individual's productive potential.

Human capital theory is relevant to this study in its emphasis on Technical and vocational education and training (TVET) as a tool designed to develop technical, vocational and entrepreneurial competence required for employability and self-reliance. Through effective TVET programs, individuals acquire skills and knowledge that increase their chances of being gainfully employed and improve their entrepreneurial capacity and productivity. The theory suggests that investing in TVET leads to skill acquisition, productivity, and social equity which in turn contribute to economic growth and social advancement. Therefore, the transformation of

TVET can improve the quality of human capital, enhance youth employability and promote entrepreneurial success in Nigeria.

2 Empowerment Theory

Empowerment Theory was developed by Zimmerman (1995). It explains how individuals gain knowledge, skills, and confidence necessary to take control of their lives and improve their circumstances while participating actively in social and economic activities. It states that, empowerment is not an outcome but rather the process which involves enhancing individuals' capacity, self-efficacy, and the ability to make decisions. The theory is relevant to this study because, one of the primary objectives of Technical and vocational education and training (TVET) is to empower youths. Through accessible, affordable, relevant, and quality training opportunities, TVET equips young people with vocational and entrepreneurial skills required to be gainfully employed and participate productively in the society. Consequently, the transformation of TVET can empower Nigerian youths with competences required for self-reliance, effective economic participation and sustainable livelihood development.

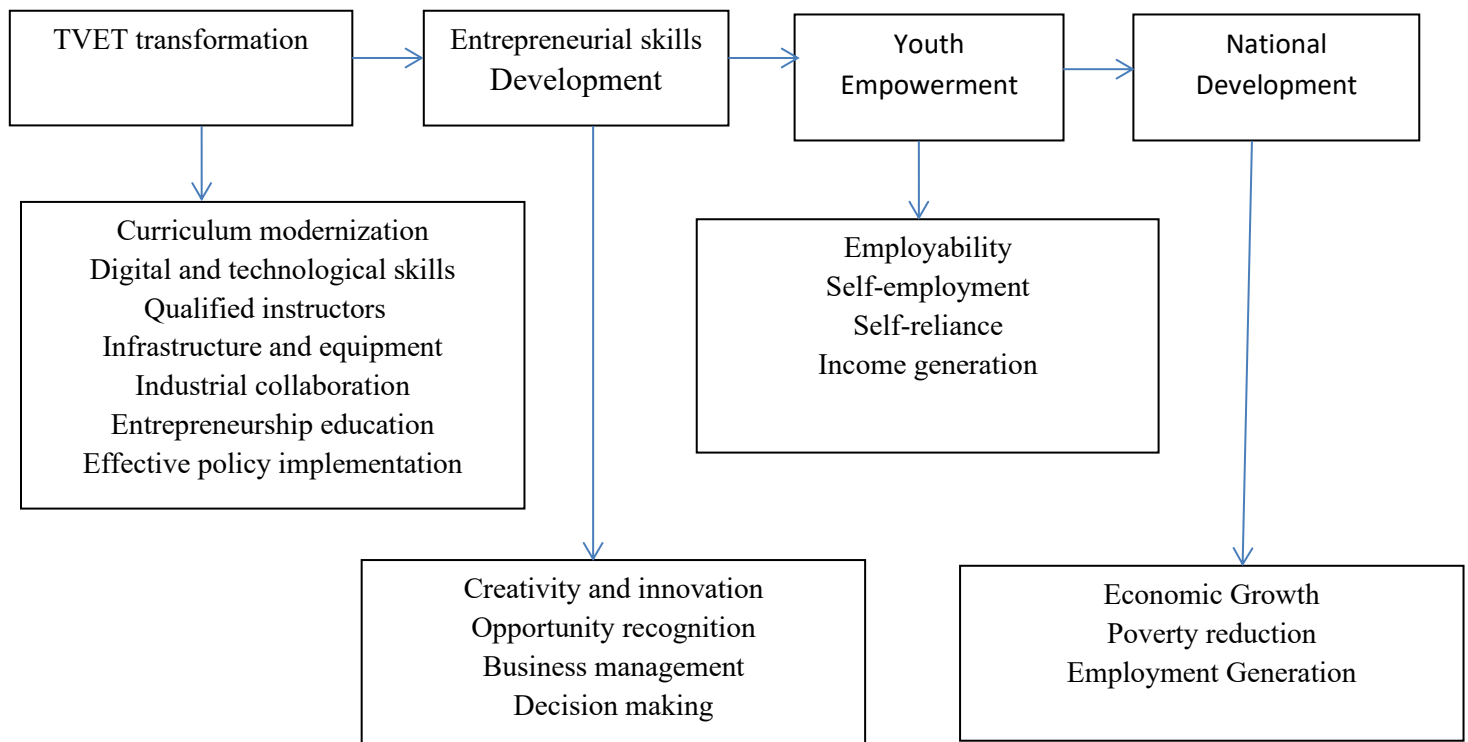
The integration of Human Capital Theory and Empowerment Theory provides a comprehensive explanation of the role of TVET transformation in promoting entrepreneurial

skills development and youth empowerment. While Human capital Theory emphasizes the economic and social benefits of investing in education and skills acquisition, empowerment theory explains how skills and participation can strengthen young people's capacity to make decisions, pursue opportunities and become self-reliant.

Conceptual framework

The conceptual framework for this study shows the relationship between TVET transformation, entrepreneurial skills development, youth empowerment and national development. The framework also identifies the main factors that influence this relationship such as curriculum modernization, creativity, innovation, digital entrepreneurship, improved productivity and Sustainable development.

Figure 1: **Conceptual framework for TVET transformation, entrepreneurial skills development, youth empowerment and national development**



Research Gap

Existing literature has examined TVET, entrepreneurship education, and youth empowerment as separate areas of study, while other studies have focused on the challenges confronting TVET in Nigeria and proposed various strategies for improving technical education, limited attention has been given to an integrated analysis of how TVET transformation can enhance the development of entrepreneurial skills and youth empowerment in response to rapid technological advancement. Furthermore, many existing studies are empirical investigations conducted within specific institutions or geographical locations, making it difficult to obtain a comprehensive understanding of the broader policy and institutional issues affecting TVET transformation in Nigeria. There is also limited literature synthesizing recent evidence on curriculum modernization, digital skills integration, industry collaboration, and entrepreneurship education within a single analytical framework. This review addresses these gaps by integrating

recent literature with Human Capital Theory and Empowerment Theory to provide a comprehensive understanding of how transforming TVET can enhance entrepreneurial skills development and youth empowerment. The study therefore contributes to existing knowledge by identifying practical strategies capable of improving the relevance and effectiveness of TVET in Nigeria.

Concept of Technical and Vocational Education and Training (TVET)

Vocational and Technical Education and Training (TVET) refers to the aspect of education designed to provide individuals with practical skills and knowledge required for employment. It is widely recognised as a critical driver for enhancing economic productivity, creating job opportunities and promoting technological innovations. According to UNESCO (2016), TVET encompasses “education, training and skills development associated with a wide range of occupational fields, as well as production, services and livelihood”. TVET therefore prepares individuals for different careers in different sectors of the workforce. It also serves as an important component of human capital development because it provides learners with the practical competences required for employment and entrepreneurship development in Nigeria.

The practical nature of TVET distinguishes it from other forms of education that are mostly theoretical. The relevance of TVET continues to increase with the changes in technology and the changes in labour- market demands. Okoye and Okwelle (2014) argue that TVET can help improve global competitiveness when it responds to changing technological and economic conditions. Similarly, Muoghalu and Ahmad (2023) emphasize the need to redesign TVET in Nigeria to address unemployment, skill gaps and the requirements of sustainable economic development. Industries increasingly demand workers who combine technical knowledge, digital competences, creativity and innovation.

Entrepreneurial skills Development

Entrepreneurial skills development involves acquiring knowledge, abilities and competencies necessary to identify opportunities, create ideas, establish and manage businesses effectively. Entrepreneurship education is essential for providing solutions to problems of unemployment especially among youths by equipping them with competences such as project management, leadership, creativity, communication and networking to prepare students to prosper in the business world. Nwoye (2011) noted that entrepreneurial studies enable beneficiaries to explore different occupational possibilities, understand the nature of the work, access the training required, rewards available, and evaluate the advantages and disadvantages associated with each option. Entrepreneurship education is often linked with Technical and Vocational Education and Training (TVET) as a means to provide youths with various employment opportunities.

The continuous rise in the rate of unemployment among youths encouraged the need to train youths in entrepreneurial education through TVET in areas such as solar installation, electrical installation, catering, tailoring, smart phone coupling and repair, and automobile technology. It not only trains youths on vocational and technical competences but also equip them with the ability to identify market opportunities, manage resources and market products.

Youth Empowerment through (TVET)

Empowerment is the process by which individuals develop skills, knowledge and self-confidence to have control over their environment. Zimmerman (1995). When individuals are empowered, it enables them to think positively, understand their situation and try to make positive changes in their lives.

Youth Empowerment, on the other hand, has to do with involving youths in socio-economic activities that will enable them to be self-reliant. Omeje et al. (2020) explain youth empowerment as the process of developing the skills, abilities, and confidence needed to participate in entrepreneurial activities, make effective decisions, and become productive and independent. When youths are empowered, it enables them to make life-changing decisions. In other words, empowering youths gives them the ability to develop skills and abilities to take part in socio-economic activities enabling them to contribute positively to society.

TVET plays a vital role in empowering youths by providing several employment opportunities. Integrating skills such as artificial intelligence, coding, and digital fabrication equips young people with competences that align with the demands of the modern labour market thereby enhancing employability and capacity for entrepreneurship. UNESCO-UNEVOC (2021)

Challenges facing TVET transformation in Nigeria

Although Technical and Vocational Education and Training (TVET) have the potential to improve entrepreneurship and employability in Nigeria, there are several challenges limiting its effectiveness. Some of the major challenges are:

1. Inadequate funding and infrastructure

Among the major problems affecting TVET in Nigeria is poor funding, which leads to poor management of TVET programmes. Technical institutions require workshops, laboratories, tools and equipment to operate, however inadequate financing has resulted in many institutions operating with inadequate and poorly maintained facilities and equipment. This affects the quality of training that learners receive, which affects the quality of graduates produced by these institutions. Okeke and Eze (2010) observed that inadequate funding is a major practical challenge hindering the implementation of the TVET sector, particularly in relation to science education. The problem extends beyond the provision and maintenance of facilities to their replacement due to technological development; these developments mean that tools and equipment need to be upgraded periodically. Where institutions are unable to upgrade facilities regularly, learners may graduate with outdated skills and competences; this creates a gap between the training received and the requirements of the labour market consequently weakening the ability of TVET to promote entrepreneurship and self-reliance

2. Inadequate qualified instructors.

The effectiveness of TVET operations largely depends on the availability of qualified instructors. However, most technical institutions are plagued with the problem of shortage of qualified instructors; most available instructors have limited exposure to current industrial

practices and new emerging technologies which limits the effectiveness of teaching and learning. The continuous emergence of new technologies requires instructors to upgrade their competence. During practical sessions, all learners require strict attention from instructors for learning outcomes to be achieved and this becomes impossible due to the shortage of qualified instructors. Recruiting qualified instructors into TVET teaching and learning programmes remains a major challenge in many countries including Nigeria. (Oluwale et al., 2013)

3. Out-dated curriculum

Most of the curricula used by technical institutions in Nigeria are outdated and do not match modern industrial needs. Emerging technologies such as renewable energy, artificial intelligence, robotics, etc. are barely integrated into training programs in technical institutions Okoye & Okwelle (2014) observed that, the mismatch between the content of curriculum and industrial demand is due to inadequate institutional research, inflexible accreditation systems and weak mechanisms for continuous curriculum review. Outdated curriculum in TVET institutions hinders the ability of instructors to deliver effective training thereby producing incompetent graduates.

4. Negative Public perception of TVET

Negative societal perceptions on Technical and vocational education and training (TVET) in Nigeria continues to be one of the major challenges affecting its growth and progress. Many Nigerians view TVET as inferior and unimportant compared to university courses, therefore, most parents do not encourage their children or wards to make a career in TVET. When students enrol in TVET, they do, for lack of other options and they are not motivated or encouraged because the society has no regard for the programme. This negative attitude has weakened enrolment of students and limits government commitment towards supporting technical and vocational education and training (TVET). Bello and Muhammad (2021) emphasized that the poor societal perception of TVET continues to affect enrolment and the overall development of the sector in Nigeria.

5. Policy Inconsistency and weak implementation

Policy inconsistency is a major challenge affecting TVET in Nigeria and these inconsistencies disrupt the long-term plans of TVET thereby disrupting the effectiveness of TVET operations in Nigeria. Policy inconsistency is mostly caused by change in government which usually introduces new educational reforms instead of sustaining and improving previous policies. The lack of continuity distorts the implementation of TVET programmes and the lack of consistency in the implementation of TVET programmes affect every aspect of TVET including funding monitoring of TVET programs, curriculum review, provision of infrastructure and unqualified instructors. Okoye and Arimonu (2016) noted that, lack of consistent and well-coordinated policies has hindered the attainment of TVET objectives in Nigeria, thereby affecting skills acquisition and economic growth.

Strategies for TVET Transformation in Nigeria

The following are some strategies that would effectively transform TVET operations in Nigeria.

1. Updating TVET Curricula

Technical and Vocational Education and Training (TVET) curricula should be reviewed and updated regularly to align with current social challenges and labor-market demands, emerging technologies and the demand of the labour market. This, according to Kanwar et al. (2019), provides learners with relevant skills required for employment. This will enable the nation to catch up and benefit from the continuously evolving technological environment.

2. Integrating Digital and Technological Skills into TVET

The integration of digital and technological skills into TVET is very important in order to equip learners with relevant digital skills and technological knowledge necessary for employment in the modern labour market. According to the United Nations Educational, Scientific and cultural organisation (UNESCO, 2021), Digital transformation improves learners' adaptability, creativity and employability in the evolving global economy. In addition, integrating digital skills into TVET facilitates online learning, and technology-based teaching which improves access to quality technical education in TVET institutions.

3. Promote Public-Private Partnership

Public-private partnership involves collaboration between TVET institutions and industries, where these industries provide assistance to TVET in terms of donation of equipment, staff exchange programmes, internship opportunities and apprenticeship. These collaborations provide TVET graduates with skills that improve their practical exposure and knowledge to prepare them for employment. Edokpolor and Abusomwan (2019) found that creativity, innovation, ICT literacy, communication, collaboration, critical thinking, and problem-solving skills are significantly related to TVET students' intentions to pursue self-employment.

4. Provision and Maintenance of Infrastructural Facilities.

Many TVET institutions suffer from inadequate infrastructure. This inadvertently affects the quality of graduates produced; therefore, adequate provision of modern workshops, laboratories, tools and equipment is crucial for effective practical instruction and skill acquisition. (Muoghalu & Ahmad, 2023) These facilities need to be adequately maintained. Ensuring that adequate infrastructural facilities are provided and maintained is vital to the effective transformation of Technical and Vocational Education and Training (TVET) institutions.

5. Encouraging Entrepreneurship Education

The integration of entrepreneurship education into Technical and Vocational Education and Training (TVET) programs can empower students to be self-reliant by fostering an entrepreneurial mindset. Onweh et al. (2013) emphasized the importance of integrating entrepreneurship education into TVET programs to develop entrepreneurial competencies and promote self-employment among young people. By incorporating entrepreneurship education

into TVET programs, TVET will be able to produce not only graduates ready for the labour market but individuals who are able to create job opportunities for themselves and others.

6. Effective Policy implementation for TVET

Technical and Vocational Education and Training (TVET) programs play a crucial role in developing a workforce capable of responding effectively to the demands and challenges of socio-economic development at both national and global levels UNESCO (2001) Therefore, policy reforms and ensuring effective implementation of such policies is essential for TVET transformation in Nigeria as this ensures that TVET institutions are equipped with all the necessary requirements such as adequate funds, trained personnel, adequate infrastructure and improved quality of training through accreditation, monitoring, and supervision of TVET institutions and centers.

Methodology

This study adopted an integrative literature review design. This design was considered appropriate because the study sought to synthesize and interpret various existing knowledge from diverse scholarly sources on TVET transformation, entrepreneurship, skills development and youth empowerment.

Relevant literature was obtained from Google Scholar, ResearchGate, ERIC, UNESCO-UNEVOC publications and other relevant organizations. Search terms included Technical and Vocational Education and Training (TVET), TVET transformation, entrepreneurial skills, youth empowerment, self-reliance and skills development. Priority was given to publications that focused on TVET, entrepreneurship, workforce development, and youth empowerment within the Nigerian context and comparable developing economies.

The inclusion criteria covered peer-reviewed journal articles, books, conference papers, policy documents, and reports published between 2001 and 2025 that were directly related to the objectives of the study. Publications that were not relevant to TVET, entrepreneurship, or youth empowerment were excluded.

The selected literature was analysed using thematic content analysis.

4. Discussion of Findings

Findings from this study highlighted that the effectiveness of technical and vocational education and training (TVET) in addressing youth unemployment and promoting entrepreneurial development in Nigeria largely depends on its relevance to the changing labour-market. TVET training that is disconnected from technological advancement may provide graduates with certificates without productive capability. This aligns with Human Capital Theory, which holds that investment in education generates economic value by equipping individuals with useful and productive skills (Schultz, 1961). The review suggests that TVET should move beyond preparing learners solely for wage employment by developing competencies such as creativity, innovation, financial literacy, and business management to encourage learners to be self-employed.

The findings further reveal that curriculum modernization is central to TVET transformation, and outdated curricula can produce graduates whose skills do not align with labor market requirements. Therefore, TVET curricula should be reviewed regularly to incorporate emerging technologies and competences. The review also establishes that digital

skills and industry collaboration are vital for improving the relevance of TVET. Digital and technological competences can expand employment and entrepreneurial opportunities for young people, while partnerships with industries can provide practical exposure through apprenticeships, internships, workplace learning, and joint training programs.

Another important finding is that adequate infrastructure and instructor competence are essential conditions for effective TVET transformation. Modern curricula cannot achieve their intended outcomes when institutions lack appropriate equipment, workshops, laboratories, and qualified instructors. Continuous professional development is therefore necessary to enable instructors to keep pace with technological and industrial changes.

Findings from the review also demonstrate that entrepreneurship education provides an important link between technical training and youth empowerment. Technical competence can enable graduates to be employable, while entrepreneurial competencies can help them be self-employed. This is particularly important in Nigeria, where limited employment opportunities are available.

These findings suggest that TVET transformation should be approached as an integrated process involving curriculum modernization, digital skills, entrepreneurship education, competent instructors, adequate infrastructure, industry collaboration, and consistent policy implementation. These elements reinforce one another and, when effectively coordinated, can improve entrepreneurship, employability, self-reliance, and contribute to sustainable economic development in Nigeria.

Conclusion

Transforming TVET is vital for improving entrepreneurial skill development and youth empowerment in Nigeria. An improved TVET system can provide youths with practical competencies required for employment, self-employment and also enable them to train other individuals thereby contributing to economic sustainability. However, challenges such as insufficient funding, outdated curricula, inadequate skilled instructors and negative public perception hinders the effectiveness of TVET operations. The findings suggest that strategies such as updating TVET curricula, integrating digital and technological skills into TVET, entrepreneurship education, promoting public-private partnership, adequate infrastructure and consistent policy implementation, must work together for TVET to operate effectively. Therefore, sustained investment by the government and other stakeholders are necessary for the repositioning of TVET as a pathway to improve entrepreneurial readiness among youths and promote sustainable growth in Nigeria

Recommendations

Based on the findings from the study, the following recommendations are made.

1. The government should increase and sustain funding for TVET programs and ensure strict accountability in order to avoid mismanagement of funds.
2. The curriculum used in TVET institutions should be reviewed regularly to incorporate emerging technologies, digital skills and entrepreneurial competencies in line with the current demands of the labour market.

3. Adequate qualified instructors should be recruited into TVET institutions and provided with regular professional development training to upgrade their skills to keep them updated with technological changes.
4. Strong partnerships should be established between TVET institutions and industries to facilitate internships and apprenticeships.
5. Entrepreneurship education should be integrated into TVET programs to promote self-employment among graduates.
6. The public should be enlightened through awareness campaigns to improve their perception of Technical and Vocational Education and Training (TVET).
7. The government should ensure consistent implementation, monitoring and evaluation of policies to ensure accountability and progress of TVET programs.

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