

## INNOVATIVE APPROACHES TO CURRICULUM DESIGN AND DELIVERY IN J.S.S. THREE PRE-VOCATIONAL STUDIES FOR RELEVANCE AND EMPLOYABILITY IN THE 21<sup>ST</sup> CENTURY

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### **Abstract**

*The study examined the need for innovative approaches to curriculum design and delivery in Nigerian vocational education to enhance the relevance and employability of graduates within the labour market. Despite the crucial role of vocational education in supporting economic development, significant gaps exist between the skills imparted by vocational institutions and the competencies demanded by employers. Among these challenges are skills mismatch and limited synergy between educational institutions and industry. Consequently, the study carried out an evaluation of the pre-vocational curriculum of JSS Three (3), developed by the Nigerian Educational Research and Development Council (NERDC). The study adopted a qualitative research design with a descriptive approach. The research questions were formulated to guide the study in line with the stated objectives. The research found that Nigeria's vocational education curriculum is fraught with some limitations, making it inadequate in addressing the current demands of the contemporary labour environment. As such, students and graduates alike become ill-prepared as they are only armed with theoretical knowledge. The study recommended the need for a revamp of the vocational curriculum and active engagement of policymakers, educators, and industry stakeholders in creating an ecosystem where vocational education is responsive to contemporary labour needs.*

Curriculum design, Misalignment, skills mismatch, Vocational education, Employability, Economic development.

### **Introduction**

Vocational education plays a primary role in shaping and equipping individuals with the skills and knowledge needed for gainful employment. In Nigeria, vocational education has long been recognized as a crucial component of the educational system, fostering economic growth and sustainable development (George et al., 2017; Akanbi, 2017). Imoke et al. (2023) note that successful infusion of vocational skills into secondary school curricula can significantly enhance employability by equipping youths with practical competencies. However, recent years have been marked by a growing misalignment between vocational education curriculum and the demands of the labour market, hindering the employability of graduates and limiting the sector's effectiveness (Ayonmike & Okeke, 2016; Okoye & Chijioke, 2014).

Formal vocational education in Nigeria has its roots in the colonial era, serving as a means of providing practical training for skilled workers (Fafunwa, 1974; Oloruntegbe et al., 2010). Post-independence, vocational education expanded to meet the growing demand for skilled labour in various sectors, including agriculture, industry, and services. The National Policy on Education (2004) emphasizes the importance of vocational education in equipping individuals with practical and functional skills (Federal Republic of Nigeria, 2004).

## **Statement of the Problem**

In spite of the importance of vocational education in Nigeria, a major challenge has been the overt misalignment between the education curriculum and the dynamic needs of the labour market (Oviawe et al., 2017; Akinola et al., 2020). This misalignment stems from several factors, including rapid technological advancements, which lead to new and evolving job roles amidst outdated curricula that often fail to reflect current industry practices both nationally and globally. Expectedly, this situation yields far-reaching consequences – graduates are often ill-equipped with the skills required by employers, hindering their employability and worsening the unemployment situation in the country.

## **Research Objectives**

In view of the foregoing, the research objectives are:

1. To identify the factors contributing to the misalignment between vocational education curricula and labour market needs.
2. To assess the importance of policies in ensuring the effectiveness of innovative approaches to improve the skills and employability of vocational education graduates.

## **Research Questions**

1. What are the key factors contributing to the misalignment between vocational education curricula and the demands of the Nigerian labour market?
2. What innovative approaches can be applied to curriculum design and delivery to enhance the relevance and employability of students of vocational education?
3. What measures can be undertaken in terms of policy and practice to improve and enhance the employability of students of vocational education based on the research findings?

## **Literature Review**

In the contemporary labour market, the alignment of vocational education curricula with industry more crucial than ever. To ensure that graduates possess the necessary skills and knowledge to thrive in their chosen fields, it is paramount that the curricula be updated frequently and should reflect real-world practices (Eze & Okorafor, 2012). This relevance not only enhances the employability of students and graduates but also fosters a sense of confidence and readiness as they transit from education to employment. Incontrovertibly, industries do face skill shortages, and this can be addressed through partnerships between educational institutions and employers. Thus, the significance of curriculum relevance in vocational education cannot be understated as it directly impacts individual career trajectories and broader economic development in Nigeria (Ogunsola, 2023).

To this end, implementing innovative pedagogical methods in vocational education is essential for enhancing curriculum delivery and making learning more applicable to real-world contexts (Ihenacho, 2018). One effective method is project-based learning (PBL), as it empowers students to engage in complex, student-driven projects that engender teamwork, critical thinking, and problem-solving skills (Ogunsola, 2023; Oloruntegbe et al., 2010). Given that this approach immerses learners in practical tasks that mirror industry practices, PBL not only enhances their technical abilities but also increases their employability. Additionally, the integration of technology in the classroom, such as virtual simulations and online collaborative tools, further enriches the learning experience, allowing students to gain hands-on experience in a safe and controlled environment (Ogunsola, 2023; Oloruntegbe et al., 2010). As a consequence, these innovative strategies not only facilitate a deeper understanding of the

curriculum but also align educational outcomes with the evolving demands of the job market, thereby bridging the gap between education and employment opportunities in Nigeria.

The benefits of strategic collaborations between educational institutions and industry stakeholders are immense. First, these collaborations bridge the gap between theoretical knowledge and practical skills (Nwosu & John, 2018). This gives students invaluable insights into labour market demands of every industry. Also, active engagement with industry stakeholders gives room for the curriculum to be in tune with current market demands (Salihu et al., 2024; Francis et al., 2021). This dynamic adaptation enhances the competitiveness of vocational education students in the Nigerian job market and even in the global labour market.

### **Methodology**

This research utilized the qualitative research design, which allows for an in-depth exploration of complex phenomena, such as educational relevance and employability, and the gathering of detailed perspectives and experiences on the vocational education sector in Nigeria. Since the study is basically descriptive, data was collected from the pre-vocational Studies curriculum for JSS Three, developed by the Nigerian Educational Research and Development Council (NERDC)

and four selected peer reviewed studies. The qualitative analysis of the curriculum and the selected studies involved the identification and discussion of several themes which bother on enhancing the relevance and employability of students and graduates in the Nigerian labour market. The screening and selection of the peer-reviewed studies adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) method, a comprehensive research selection procedure.

### **Results and Analysis**

**Research Question One:** What are the key factors contributing to the misalignment between vocational education curricula and the demands of the Nigerian labour market?

A number of current challenges in Nigeria's vocational education system account for the unemployability of Nigerian students and graduates in the labour market. These factors are categorized under various themes, as illustrated below.

**Table 1:** Causes of misalignment between vocational education and the labour market

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#### **Themes**

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- Skill Mismatch and Employability Concerns – the gap between vocational education and the labour market
  - Lack of Industry Collaboration
  - Resource Constraints and Infrastructure Deficit – inadequate funding and infrastructure constraints.
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**Theme 1: Skill Mismatch and Employability Concerns**

**PRE-VOCATIONAL STUDIES CURRICULUM**

Theme: Agriculture

Sub-Theme: Produce Packaging and Marketing

Level: JSS Three

Topic	Performance Objectives	Content	Activities	Teaching and Learning Resources	Evaluation Guide
1. Packaging Criteria	Students should be able to: 1. Identify what influences the choice of materials to use in packaging farm produce for sale. 2. Give examples of some types of packaging materials in agriculture.	1. Packaging Criteria: - Nature of the produce (liquid or solid and shape) - Bulkiness (size) - Live or frozen or dry stock - Distance to market. 2. Examples of Packaging Items: - Boxes - Drums/Barrels - Cages - Polythene - Trays, etc.	Teacher: Guides class discussion on the variety of packaging materials in use in agriculture. Guides discussion on what influences the choice of materials for packaging farm produce. Gives a board summary. Students: 1. Provide information on packaging items they have seen before. 2. Copy board summary.	Samples of locally available packaging items, e.g., egg trays, perforated boxes, palm-frond cages, etc.	1. State why some packaging items cannot be used for all farm produce. 2. List four examples of local packaging items.
2. Pricing and Advertising	Students should be able to: 1. Define pricing. 2. Mention factors that determine the price of agricultural produce.	1. Definition of Pricing 2. Price Determinants: - Cost of production - Quality of produce - Quantity of produce - Forces of demand and supply - Market price - Seasonal produce	Teacher: Facilitates class discussion on the composition of produce prices. Students: Describe what the price is composed of.	Charts of sellers and buyers in the marketplace.	1. Explain what pricing is all about. 2. List five factors that influence the price of farm produce.

Fig. 1. J.S.S. Three Pre-Vocational Studies Curriculum (NERDC)

In reference to Fig. 1 above, the vocational training revolves around equipping students with technical skills in the areas of Agriculture and Home Economics. Interestingly, current realities show that in-demand vocational skills for children within the age 10-15 years should include digital skills (machine learning, coding, phone and computer repairs), artistic and creative skills (photography, musical skills), fashion design and tailoring, graphic design, hairdressing and grooming (Okoye & Chijioke, 2014). These skills are smart skills needed to survive in the 21<sup>st</sup> century. However, the Nigerian pre-vocational curriculum for J.S.S Three students who basically fall within the aforementioned age range does not reflect these critical in-demand skills. Also, given the current trend of globalization which has made the world a global village, the skills mismatch which stems from the curriculum illustrated above significantly hinders the students to tap into the global market (Okoye & Chijioke, 2014). Such misalignment stems from various factors, including outdated course content and pedagogical approaches that prioritize theoretical knowledge over practical application (Okoye & Chijioke, 2014). Essentially, this skill mismatch notably hinders employability, as students become ill-prepared to meet industry demands upon graduation.

**Theme 2: Absence of Industry Collaboration**

**Table 2: Pricing and Advertising**

Topic	Performance Objectives	Content	Activities	Teaching and Learning Resources	Evaluation Guide
2. Pricing and Advertising	Students should be able to: 1. Define pricing. 2. Mention factors that determine the price of agricultural produce.	1. <b>Definition of Pricing</b> 2. <b>Price Determinants:</b> - Cost of production - Quality of produce - Quantity of produce - Forces of demand and supply - Market price - Seasonal produce	<b>Teacher:</b> Facilitates class discussion on the composition of produce prices. <b>Students:</b> Describe what the price is composed of.	Charts of sellers and buyers in the marketplace.	1. Explain what pricing is all about. 2. List five factors that influence the price of farm produce.

Fig. 2. J.S.S. Three Pre-Vocational Studies Curriculum (NERDC)

As illustrated in Fig. 2, there is no provision for students to interface with companies or business which are into agriculture or Fast-Moving Consumer Goods (FMCG) companies. In other words, students are basically confined to theoretical knowledge or trainings with hands-on experience. Given that the curriculum does not give room for students to have real engagement with companies, it causes a disconnect between educational outcomes and labour market expectations (Okoye & Chijioke, 2014; Akanbi, 2017). Furthermore, the absence of students’ engagement with the relevant industries stifles opportunities for internships, apprenticeships, and on-the-job training, which are essential for practical skill acquisition and professional readiness. Without the active participation of industry experts in curriculum development and training processes, educational programmes risk becoming stagnant and irrelevant, ultimately undermining their purpose of fostering employability among graduates.

**Theme 3: Resource Constraints and Infrastructure Deficit**

In addition, the interplay of resource constraints and infrastructure deficiencies curtails the effectiveness of training programmes (Akanbi, 2017). Inadequate funding does not only affect the procurement of essential learning materials and advanced equipment, but it also affects the maintenance of educational facilities (Akanbi, 2017; Akinola et al., 2020). Many vocational schools operate in dilapidated conditions that lack basic amenities, making the learning environment and experience uninteresting and unmotivating to students (Francis et al., 2021; Akinola et al., 2020). Moreover, the absence of good and reliable transport networks and technology access worsen these problems because they restrict practical exposure for learners and limit the reach of vocational training. Evidently, sound infrastructure is crucial to fostering an environment conducive to skill acquisition, yet governmental and relevant institutions in Nigeria often neglect this vital piece of vocational education development.

**Research Question Two:** What innovative approaches can be applied to curriculum design and delivery to enhance the relevance and employability of students of vocational education? To address the urgent need for better alignment between vocational education and labour market demands, innovative delivery approaches are important.

Table 2: Innovative approaches for curriculum delivery and design

**Themes**

- Work-Based Learning
- Competency-Based Education (CBE)
- Modular and Flexible Curriculum Design

**Theme 1: Work-Based Learning (WBL)**

This form of experiential learning bridges the gap between theoretical knowledge and practical application and immerses students in real-world settings where they can develop essential competencies demanded by employers before graduation (Akanbi, 2017; Akinola et al., 2020). Also, integrating feedback from WBL experiences allows teachers and trainers to effect improvements in course content and pedagogical approaches, thereby fostering a culture of continuous enhancement within vocational programmes. A good example of the implementation of the WBL and Internships approach is seen in Germany. To put things in perspective, the system in Germany combines classroom instruction with paid on-the-job training. Thus, students spend two to three days per week in school and the rest of the week working in a company. The system has been credited with Germany's low youth unemployment rate and high levels of vocational skills.

**Theme 2: Competency-Based Education**

**Table 3: Advertising Strategies**

Topic	Performance Objectives	Content	Activities	Teaching and Learning Resources	Evaluation Guide
<b>3. Advertising Strategies</b>	Students should be able to: 1. Define advertising. 2. Identify	1. <b>Definition of Advertising</b> 2. <b>Types of Advertising</b>	<b>Teacher:</b> Leads a discussion on different advertising methods and	Samples of advertisements from newspapers, magazines, and posters. Audio	1. Define advertising in their own words. 2. List three

	different types of advertising methods used in agriculture.	<b>Methods:</b> - Print media (newspapers, magazines, posters) - Broadcast media (radio, television) - Online advertising (social media, websites) - Word of mouth - Trade fairs and exhibitions	their effectiveness in marketing farm produce. <b>Students:</b> Share examples of advertisements they have seen for agricultural products.	or video clips of agricultural advertisements .	types of advertising methods used in marketing farm produce.
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Competency-based curriculum model represents a transformative shift in vocational education, aiming to explicitly align educational outcomes with industry requirements. This approach promotes skill acquisition anchored in real-world applications. This approach not only aligns learning outcomes with employer expectations but also fosters adaptability among graduates, addressing the existing skills gap highlighted by numerous studies.

**Theme 3: Modular and Flexible Curriculum Design**

This allows for tailoring programmes to suit technological advancements, and sector demands by giving room for the infusion of diverse learners’ needs and industry demands (Francis et al., 2021; Akinola et al., 2020). Modular and flexible curriculum design facilitates this by allowing the fragmentation of courses into smaller, manageable units that can be tailored to specific competencies. The result is a more agile educational system that not only prepares students for immediate employment but also fosters lifelong learning and adaptability in an ever-evolving job landscape.

**Discussion of Findings**

Based on the data analyzed, vocational education is bedeviled by gap between what is being taught at schools and what is actually required for the students to thrive in the labour market when they graduate. This is consistent with the findings of Imoke et al. (2023) that outdated curricula that do not account for evolving technological and industrial needs are a major cause of problems for graduates in terms of employability. Again, limited exposure to industry-standard tools and methodologies limits the students' readiness for actual work environments. Also, the analysis shows that vocational education in Nigeria often takes place in isolation, primarily within the school environment, without input from employers in relevant sectors. Oviawe et al., (2017) note that the downside of this is that it stifles the students’ ability to become efficient during real-world application. So, without robust industry partnerships and internships, hands-on learning and experience becomes almost non-existent. This outcome is that students and graduates only have theoretical knowledge which is grossly inadequate. Lastly, vocational education is capital and resource intensive. Interestingly, Francis et al (2021)

echo this concern that vocational education in Nigeria barely receives adequate financing and this has led to the demise of sound vocational training across the nation. Therefore, outdated facilities and a lack of resources continues to undermine the effectiveness of vocational education.

### **Conclusion**

The findings reveal the need to address gaps in vocational education in Nigeria, as they are basically systemic. Nigeria has a huge population and given the need to reduce poverty and improve standard of living, vocational educational must occupy the front burner. Also, given the breakneck speed of advancements in the 21<sup>st</sup> century, borderless economies and globalization is the norm. Interestingly, sound vocational education is one of the primary means by which Nigeria's teeming population can tap into this sweeping globalization. This solidifies the need to revamp curriculum design and delivery in Nigeria's vocational education.

### **Recommendations**

Based on the results of the findings the following recommendations were made:

1. The Nigerian Educational Research and Development Council (NERDC) would need to be more proactive in terms of regular curriculum reviews in vocational education, focusing on incorporating skills relevant to evolving industry demands, such as digital skills, modern manufacturing techniques, and green technologies. Also, this should be carried out in collaboration with industry experts, employers, and professional bodies.
2. The government should roll out comprehensive incentives for industries to engage in vocational training programs by offering tax exemptions or funding support. These would promote apprenticeships, internships, and hands-on learning opportunities for students and graduates.
3. Funding to vocational institutions must be increased and this can be achieved through a multi-faceted approach which involves government allocation, industry contributions, and international grants. This would improve the infrastructure for vocational
4. Education, and more opportunities for teachers to undergo extensive trainings.

### **References**

- Akanbi, G.O. (2017). Prospects for technical and vocational education and training (TVET) in Nigeria: Bridging the gap between policy document and implementation. *The International Education Journal: Comparative Perspectives*, 16(2), 1-15. <https://samwell-prod.s3.amazonaws.com/essay-resource/2fd6cb23f9-10668-169-32382-1-10-20170627.pdf>
- Akinola, A.S., Eze, E., Ali, C., Afred, O.F., & Attah, B. I. (2020). Challenges Facing TVET Institution-Industry Collaboration in Skills Acquisition for Sustainable Growth in Nigeria. *Vocational and Technical Education Journal*, 2 (2). <file:///C:/Users/USER/Downloads/809-Article%20Text-2738-2-10-20210126.pdf>
- Ayonmike C.S., & Okeke B.C. (2016). Bridging the Skills Gap and Tackling Unemployment of Vocational Graduates Through Partnerships in Nigeria. 8(2). *Journal of Technical Education and Training (JTET)*. <https://samwell-prod.s3.amazonaws.com/essay-resource/39d174c0c1-maizam1Ayonmike1254-4937-1-pg1-11.pdf>

- Eze, T.I., & Okorafor, A.O. (2012). Trends in technical, vocational education and training for improving the Nigerian workforce. *Ebonyi Vocational and Technology Education Journal*, 1 (1), 107-115. <https://samwell-prod.s3.amazonaws.com/essay-resource/92573a7a86-trendsinTVETforimproveworkforce.pdf>
- Fafunwa, A. B. (1974). *History of education in Nigeria*. Ikeja: Longman Nigeria.
- Federal Republic of Nigeria. (2004). *National policy on education* (4th Ed.). Abuja: Federal Ministry of Education.
- Francis, S.Y., Saidu, S.G., & Giroh, D.Y. (2021). Prospects and Challenges of Vocational and Technical Education in Nigeria under a Distressed Economy. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*. <file:///C:/Users/USER/Downloads/39-Article%20Text-116-1-10-20210712.pdf>
- George W. K., Udemé S. U., & Ufot, I.S. (2017). Challenges of Technical Vocational Teacher Education and Teaching in Nigeria: The Need for Intervention. *International Journal of Education and Evaluation*, 3(7), 71-74. <https://samwell-prod.s3.amazonaws.com/essay-resource/684ff68c06-CHALLENGES-OF-TECHNICAL.pdf>
- Ihenacho, E. C. (2018). *Advancement of Social Service Delivery Through Cross-Sector Partnerships in Nigeria* [Doctoral Dissertation, Walden University]. Walden University Repository. <https://core.ac.uk/download/217232196.pdf>
- Imoke, J., Etta, E., Agbor, I., & Kuko, C. (2023). Infusing Vocational Skills in Secondary School Curriculum Towards Promoting Youths' Employability in Calabar Cross River State. *Inter-Disciplinary Journal of Science Education*, 4 (2). <http://www.ij-sed.com/INFUSING%20VOCATIONAL%20SKILLS%20IN%20SECONDARY%20SCHOOL%20CURRICULUM%20TOWARDS%20PROMOTING%20YOUTHS.pdf>
- Nwosu, J.C. & John, H.C. (2018). Entrepreneurship Education and the Challenges of Graduate Employability in Nigeria. *International Journal of Innovation, Management and Technology*, 9(5). <https://samwell-prod.s3.amazonaws.com/essay-resource/3f61ae493f-812-M773.pdf>
- Ogunsola, O. (2023). *Employers' Strategies Adopting Support for Nigerian Higher Education Institutions Enhancing College Graduates Employability* [Doctoral Dissertation, Walden University]. Walden University Research Repository. <https://core.ac.uk/download/588596316.pdf>
- Okoye, K., & Chijioke, P. (2014). Technical Vocational Education and Training (TVET) as Intervention Mechanism for Global Competitiveness: Perspectives from Nigeria. *Developing Country Studies*, 4(4). <https://samwell-prod.s3.amazonaws.com/essay-resource/0b67fb1dae-DevelopingCountryStudiesTechnicalVoc.pdf>
- Oviawe, I.J., Uwameiye, R., & Uddin, P. (2017). Bridging skill gap to meet Technical, Vocational Education and Training school-workplace collaboration in the 21st century. *International Journal for Research in Vocational Education and Training*, 3(1):7-14. [https://www.researchgate.net/publication/317694069\\_Bridging\\_skill\\_gap\\_to\\_meet\\_Technical\\_Vocational\\_Education\\_and\\_Training\\_school-workplace\\_collaboration\\_in\\_the\\_21st\\_century](https://www.researchgate.net/publication/317694069_Bridging_skill_gap_to_meet_Technical_Vocational_Education_and_Training_school-workplace_collaboration_in_the_21st_century)
- Salihu K., Muhammad El-Gambo, Muhammad, & Mansur, M. U. (2024). Curriculum Reform in the Adult and Non-Formal Educational Sector for the Attainment of Educational Goals in Nigeria. *International Journal of Studies in Education*, 20(2), 199-208. <https://samwell-prod.s3.amazonaws.com/essay-resource/3caef6ed15-Paper-20220.pdf>