EXPLORING THE ENABLERS AND BARRIERS TO LIFELONG SKILLS-LEARNING IN WOODWORK TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

B. M. Mohammed[*1], *H. Abdulkadir*[2], *F.C. Nwankwo*[3] *& W. B. Kareem*[4]
[1,3&4] *Industrial and Technology Education Department, Federal University of Technology, Minna, Nigeria*
[2]*Hassan Usman Katsina Polytechnic, Katsina, Nigeria.*
Email: *balamohammed@futminna.edu.ng (Tel +234)

Abstract: *The significance of lifelong skills-learning within the context of woodwork technology is fundamental to Nigeria's sustainable development. Lifelong skills-learning facilitates the acquisition of advanced knowledge and skills allowing students to keep pace with latest industry trends and technologies essential for sustainable development. Therefore, it is not an overstatement to assert that lifelong skills-learning is an indispensable component for achieving sustainability in Nigeria, specifically within the field of woodwork technology. This paper considered the changing nature of work as well as economic imperative to uncover numerous factors that encourages as well as those causing hindrances towards acquiring lifelong skill-learning in order to provide stepping stones to stakeholders to undo those hindrances for the attainment of the goals of lifelong skill-learning within the woodwork technology sector. The paper recommended among others that big data and predictive analytics be utilized to anticipate emerging skills gaps and trends that can enable government to design agile policies that responds swiftly to emerging skill requirements in real time.*
Keywords: *Enablers, Barriers, Lifelong Skills-Learning, Woodwork Technology, Sustainable Development*.

Introduction

In Nigeria, sustainable development is heavily reliant on lifelong learning, particularly in the field of woodwork technology. Students of woodwork technology must acquire employability skills that are crucial for maintaining sustainable employment (Isa et al., 2020). Technical education plays a pivotal role in providing practical and applied skills, as well as scientific knowledge, to empower Nigerian youth sustainably (Ogbuanya & Arimonu, 2015).

Lifelong learning fosters deep learning by allowing learners to develop essential skills such as problem-solving, logical thinking, creative thinking, and effective communication. These critical factors are necessary for sustainable development, as highlighted by Barineka et al (2022). The significance of lifelong learning within the context of woodwork technology is fundamental to Nigeria's sustainable development. Yusuff & Soyemi (2012) noted that technical and vocational skills are vital for enterprise productivity and profitability as well as national productivity and wealth creation.

Woodwork technology students must acquire industry-relevant skills applicable in real-world scenarios. Lifelong learning facilitates the acquisition of advanced knowledge and skills allowing students to keep pace with latest industry trends and technologies essential for sustainable development (Livingston et al., 2020).

Therefore, lifelong learning is an indispensable component for achieving sustainability in Nigeria, specifically within the field of woodwork technology; it helps students acquire practical skills together with scientific knowledge whilst developing critical thinking abilities alongside communication proficiency enabling them keep up with emerging industrial developments which all contribute towards achieving sustainability.

The woodworking sector forms a crucial component of Technical Vocational Education and Training (TVET); there exist multiple enablers/encouragers alongside barriers/hindrances towards acquiring lifelong skill-learning within this sector. One driver is promoting good practices concerning circular economy which has become increasingly important within both woodworking/furniture sectors (Lova et.al.,2023); another driver being continuous evolution occurring at high speed across tech industries necessitating workers engage consistently through upskilling/lifelong learnings (Institute of Entrepreneurship Development ,2023); Education/innovation also form core drivers impacting on skill-development illustrated via success achieved by India's Information Technology (IT) industry.

However, several obstacles hinder attainment lifelong skill-learnings within woodworking sector including various complex ranges of technical expertise required which, can prove challenging

when attempting acquisition /maintenance; another obstacle lies integrating technological innovations into teaching/learning requiring significant investment/training (International Labour Organisation, 2021). Furthermore, it remains imperative trainings relevance extends beyond formal settings considering most workers employed operate informally (UNESCO Institute for Lifelong Learning, 2022).

Despite these challenges, the benefits derived from attaining lifelong-skills learnt remain numerous especially when applying it towards woodworking: it stimulates confident creativity among children whilst fostering passion amongst them thus encouraging continual life-long learnings (Moorhouse ,2018); woodworking additionally incorporates mathematical/scientific investigation coupled together with technological know-how thereby other numerous relevant competencies acquired (Moorhouse, 2018).

By advocating/promoting consistent/sustained acquisition/perfection/updating of skills amongst those operating/workers involved across entire supply chain network associated with Woodworking Industry enables individuals obtain requisite proficiencies they require ensuring they excel amidst rapidly evolving Industrial landscape contributing meaningfully toward realizing more economically viable future making Nigeria great. Enablers of life-long skills learning sciences alongside technological education play vital roles facilitating innovative acquisitions.

Enablers/Drivers of Lifelong Skills Learning

Science and technology education are crucial in acquiring innovative and entrepreneurial skills to eradicate poverty and promote sustainable development. Here are some ways in which science and technology education can contribute to this goal:

- Science and technology education can help individuals acquire the knowledge and skills required to develop innovative solutions to social and economic challenges. By teaching students about the scientific method, problem-solving, and critical thinking, science, and technology education can foster a culture of innovation and entrepreneurship (Ajayi & Audu, 2022).
- Technology can enhance the quality and accessibility of education, particularly in low-income and remote areas. For example, online learning platforms and mobile apps can provide students with access to high-quality educational resources and support, regardless of their location or socioeconomic background.
- Entrepreneurship education can be integrated into science and technology curricula to help students develop the skills and mindset needed to start and grow successful businesses. This can include teaching students about market research, product development, financial management, and other key aspects of entrepreneurship.
- Science and technology education can also promote sustainable development by teaching students about environmental science, renewable energy, and other topics related to sustainability. By equipping students with the knowledge and skills needed to address environmental challenges, science and technology education can help promote a more sustainable and equitable future (Ajayi & Audu, 2022).

Science and Technology Education plays a critical role in acquiring innovative and entrepreneurial skills for poverty eradication and sustainable development. By providing individuals with the knowledge and skills needed to develop innovative solutions to social and economic challenges, technology-enhanced education, entrepreneurship education, and sustainability education can help promote a more equitable and sustainable future for all.

The world of work is undergoing a seismic transformation driven by technological advancements, globalization, and changing demographics. As we enter the third decade of the 21st century, the importance of skills development cannot be overstated. The future of work is an intricate tapestry where automation, artificial intelligence, and the gig economy intersect with human ingenuity and adaptability. To navigate this evolving landscape successfully, strategic understanding and consensus among social partners are imperative.

The Changing Nature of Work

The landscape of employment is changing, with a shift away from the familiar model of long-term job security and predictable career paths. As automation and AI become more prevalent, routine tasks are being automated, creating a need for workers with strong skills in creativity, problem-solving, and emotional intelligence. Meanwhile, the gig economy is growing, providing individuals with independence and flexibility, but also requiring them to stay up-to-date on evolving demands.

The World Economic Forum's "Future of Jobs Report 2022" forecasts that 50% of employees will require retraining by 2025. This emphasizes the critical role of skills development in ensuring future employability.

The Economic Imperative

Developing skills is essential for personal and societal growth, as well as economic prosperity. A skilled workforce can drive innovation, boost productivity, and promote economic resilience. The Organization for Economic Co-operation and Development (OECD) found that a 1% increase in skilled workers could potentially result in a 0.6% increase in a country's GDP per capita (International Labour Organization, 2010).

Industry 4.0 is driving a technological revolution, transforming industries at an unprecedented pace. Reports suggest that digital technologies could add $1.2 trillion to the global economy by 2025. However, realizing this potential requires a workforce with not only technical proficiency but also essential soft skills like collaboration, adaptability, and resilience (McKinsey & Company, 2022).

Strategic Understanding: The Role of Governments

Governments need to prioritize skills development for the future of work. They can do so by establishing supportive policy environments, promoting access to education and training, and encouraging investments in human capital. To achieve these goals effectively, governments must have a strategic understanding of the evolving skills landscape and allocate resources efficiently. To tackle this challenge creatively, big data and predictive analytics can be utilized to anticipate emerging skills gaps and trends. This approach enables governments to design agile policies that respond swiftly to emerging skill requirements in real time.

Consensus Among Social Partners

Strategic understanding involves collaboration not only among governments but also among various social partners, including employers, trade unions, and educational institutions. It is essential to bridge the gap between skills supply and demand. Creative partnerships can include co-designing curricula with industry input and providing apprenticeships and upskilling programs for existing workers. Innovative public-private partnerships are emerging worldwide to address this issue. For example, Singapore's Skills Future initiative partners with industry players to develop relevant training programs, ensuring that the workforce remains adaptable and competitive (Fung et al., 2021).

Skills development is the key factor that will decide the fate of individuals, societies, and economies in the new era of work. Governments, employers, educators, and workers must all play their parts in fostering a strategic understanding of evolving skills needs and building a consensus to address them.

To quote the World Economic Forum, "The only way to ensure that we do not leave people behind in the Fourth Industrial Revolution is to transform education and skills systems. A major part of that will be a clear, comprehensive strategy to learn, earn, and grow throughout one’s lifetime" (World Economic Forum, 2023). The time to act is now, and the future belongs to those who can skillfully adapt to its ever-evolving demands.

Competency-Based Training (CBT) is a mode of delivery for Technical and Vocational Education and Training (TVET), emphasizing the acquisition of practical skills and knowledge needed to perform work activities to a specified standard (TVETipedia Glossary, n.d.). CBT is a demand-driven approach that focuses on the skills and competencies that a learner can demonstrate practically for a given job or task. CBT is a practical, flexible, and effective mode of delivery for TVET in Nigeria and here are some reasons why:

• CBT emphasizes hands-on learning and practical experience, which is particularly well-suited for TVET in Nigeria. There is a need for workers with practical skills in areas such as agriculture, construction, and manufacturing.

• CBT offers a flexible approach to skills development that can be tailored to the needs of individual learners and employers. It allows learners to acquire the skills and knowledge necessary to perform specific job tasks, which can help them secure employment and progress in their careers.

• CBT is an effective approach to skills development that has been shown to improve the quality of TVET programs and increase the employability of graduates. By focusing on practical skills and competencies, CBT can help bridge the gap between education and the world of work.

• CBT is a demand-driven approach to skills development that is aligned with the needs of employers and the labour market. This approach can help ensure that TVET programs are relevant and responsive to the needs of the modern economy, promoting economic growth and reducing poverty.

The National Board for Technical Education (NBTE) recognizes CBT's importance in improving the quality and relevance of TVET in Nigeria. NBTE has developed a competency-based curriculum for TVET programs, emphasizing practical skills and competencies that align with the labour market's needs. The curriculum is flexible and adaptable to individual learners' and employers' requirements, ensuring TVET programs' relevance and responsiveness to the modern economy. CBT is, therefore, a veritable mode of delivery for TVET in Nigeria, emphasizing practical skills and competencies, bridging the gap between education and work, increasing graduates' employability, promoting economic growth, and sustainable development (Ayonmike et al., 2015).

Barriers to Lifelong Skills Learning

Technical and vocational education and training (TVET) in Nigeria face several issues and challenges, which include:

1. Inadequate funding: TVET programs in Nigeria suffer from inadequate funding, which affects the quality and relevance of the programs (Okoye & Arimonu, 2016 (Onwusa, 2021). This has led to a decline in the quality of instruction and the ability of learners to acquire the skills and knowledge needed to succeed in the modern economy.
2. Outdated curricula: The curricula used in TVET programs in Nigeria are often outdated and do not align with the needs of the labour market (Ayonmike et al., 2015 Onwusa, 2021). This means that learners may not acquire the skills and knowledge needed to succeed in the modern economy, which can lead to a mismatch between the skills of graduates and the needs of the labour market.
3. Lack of qualified teachers: There is a shortage of qualified teachers in TVET programs in Nigeria, which affects the quality of instruction and the ability of learners to acquire the skills and knowledge needed to succeed in the modern economy (Ayonmike et al., 2015 and Onwusa, 2021). This can lead to a decline in the quality of instruction and the ability of learners to acquire the skills and knowledge needed to succeed in the modern economy.
4. Poor infrastructure: TVET programs in Nigeria suffer from poor infrastructure, including inadequate facilities and instructional materials (Bello, 2021). This affects the quality of instruction and the ability of learners to acquire the skills and knowledge needed to succeed in the modern economy.

5. Negative stereotyping: TVET programs in Nigeria are often viewed as inferior to academic programs, which can lead to negative stereotyping and a lack of interest in TVET among learners (Opoko et al., 2018).
6. Inadequacies in infrastructural facilities: TVET programs in Nigeria suffer from inadequacies in infrastructural facilities, including poor power supply and a lack of equipment and tools (Okoye & Arimonu, 2016).
7. Corruption and poor governance: Corruption and poor governance in the TVET sector have led to a lack of investment in education and a decline in the quality of instruction (Bello, 2021).

The effectiveness of Technical Vocational Education and Training (TVET) in Nigeria is being hindered by a multitude of obstacles and difficulties. These challenges range from insufficient funding, outmoded curricula, a dearth of qualified instructors, inadequate infrastructure, detrimental stereotypes, and corrupt governance. As a result, TVET programs in Nigeria have witnessed a decline in quality and relevance, resulting in a disparity between the abilities of graduates and the demands of the job market. Access to quality education and lifelong learning opportunities is a significant challenge in Nigeria, especially for marginalized groups. Recent research has found that this challenge is due to a lack of investment in education, inadequate infrastructure, and a shortage of qualified teachers. Studies by Barrett et al. (2018), Hillman & Jenkner (2004), Musau (2018), and "Equity and Quality in Education" (2012) have all highlighted the impact of these factors on the education system in Nigeria. According to a report by the International Monetary Fund (IMF), many developing countries lack the financial resources or political will to meet their citizens' educational needs, which has led to a lack of access to quality education (Hillman & Jenkner, 2004). This has particularly affected marginalized groups, who may not have the resources or opportunities to access quality education.

In the realm of education, the African Union (AU) has identified several inequalities and inefficiencies. The subsectors of pre-primary, technical, vocational, and informal education are underdeveloped, leading to limited access to quality education and lifelong learning opportunities, particularly for marginalized groups. The Organisation for Economic Co-operation and Development (OECD) emphasizes the significance of extending access to exceptional learning opportunities, particularly for disadvantaged students and schools, to promote fairness and diminish school failure. This can bolster the capacities of individuals and societies to respond to social and economic challenges. The United Nations Educational, Scientific and Cultural Organization (UNESCO) is dedicated to promoting quality lifelong learning opportunities for all, in every context and at every level of education. Their objective is to achieve equal and amplified access to education and training, particularly for marginalized groups.

Limited access to quality education and lifelong learning opportunities is a significant challenge in Nigeria, particularly for marginalized groups. Addressing this challenge requires increased investment in education, the development of inclusive policies and programs, and the recruitment and training of qualified teachers. Additionally, promoting equity and reducing school failure can help to ensure that all learners have access to quality education and lifelong learning opportunities, regardless of their background or circumstances.

Conclusion

Lifelong skills-learning is essential for sustainable development, particularly in the field of woodwork technology. It equips students with the necessary skills for long-term employability and success. Technical education is at the core of this process, imparting not only practical and applied skills but also scientific knowledge that empowers the country's youth. Furthermore, it fosters deep learning, promoting problem-solving abilities, logical and creative thinking, and effective communication skills that serve as the foundation for sustainable development. In the rapidly evolving world of woodwork technology, staying abreast of market trends and technological

advancements is critical for driving national productivity, generating wealth, and achieving business success.

However, there are both enablers and obstacles to lifelong learning. The circular economy, technological advancements, educational innovation, and sustainability awareness are all enablers that propel skills development. Nonetheless, challenges such as the complexity of technical skills acquisition, integrating technology-driven innovations into education, and the relevance of the informal sector must be addressed. Moreover, science and technology education are significant catalysts for innovative and entrepreneurial skills, serving as powerful tools in eradicating poverty and achieving sustainable development. This approach involves promoting problem-solving abilities, leveraging technology for accessible education, integrating entrepreneurship education, and instilling environmental consciousness. In the constantly changing world of work, where automation, artificial intelligence, and the gig economy intersect with human adaptability, skill development takes centre stage. As the World Economic Forum highlights, transforming education and skills systems is critical in enabling individuals to "learn, earn, and grow throughout one's lifetime." The time is ripe to act, as lifelong learning and competency-based training are potent means of bridging the gap between education and the dynamic demands of the modern world.

Recommendations

Based on the above discussions, the following recommendations were drawn:

1. **Addressing Funding Shortages:** To overcome the funding challenges in Technical Vocational Education and Training (TVET), Nigerian authorities must allocate more resources to this critical sector. Governments should consider increasing budgetary allocations and exploring innovative financing mechanisms. Engaging private sector partnerships and international organizations can also provide much-needed financial support to enhance the quality and accessibility of TVET programs.
2. **Curricula Modernization:** To ensure that TVET programs remain relevant to the dynamic woodwork technology industry, curricula must be regularly updated. Collaboration between educational institutions, industry experts, and regulatory bodies is essential for this process. Continuous industry input can help identify emerging trends and skill requirements, ensuring that students are equipped with the most up-to-date knowledge and competencies.
3. **Teacher Professional Development:** Developing a skilled and motivated teaching workforce is crucial. Professional development opportunities for TVET teachers should be prioritized. Training programs should not only focus on pedagogical skills but also on keeping teachers informed about industry advancements and best practices. This investment in teacher development will directly benefit students by providing them with high-quality instruction.
4. **Promoting Entrepreneurship:** Entrepreneurship education should be integrated into the woodwork technology curriculum. This includes teaching students about market research, business planning, financial management, and fostering an entrepreneurial mindset. Encouraging students to develop their entrepreneurial skills can lead to job creation and the establishment of small businesses, contributing to economic growth and sustainability.
5. **Partnerships for Sustainable Development:** Collaboration between government, industry, and educational institutions is pivotal for promoting lifelong skills learning. Such partnerships can facilitate the alignment of educational offerings with industry needs and ensure that graduates are well-prepared for the workforce. Industry engagement in curriculum development, internships, apprenticeships, and job placement programs can bridge the gap between education and employment.
6. **Promote Public Awareness:** Advocacy efforts should be aimed at raising public awareness about the value of TVET and lifelong skills learning. Highlighting success stories of TVET graduates who have made significant contributions to society and the economy can help combat negative stereotypes and encourage more students to pursue technical and vocational education.

7. **Incorporate Technology:** Leveraging technology can enhance the quality and accessibility of TVET. Online platforms and digital resources can extend educational opportunities to remote and underserved areas, making lifelong learning more inclusive. Additionally, incorporating digital skills into the woodwork technology curriculum prepares students for the technology-driven aspects of modern industry.
8. **Quality Assurance:** Establishing rigorous quality assurance mechanisms for TVET programs is essential. Regular evaluations and accreditation processes can ensure that programs maintain high standards and continue to meet industry requirements.

By implementing these recommendations, Nigeria can overcome barriers to lifelong skills learning, foster entrepreneurship, and strengthen partnerships among key stakeholders. This holistic approach will not only empower individuals with the skills needed for sustainable development but also contribute to the overall growth and prosperity of the nation.

References

Ajayi, V. O., & Audu, C. T. (2022). Science and Technology Education as Tools for Acquisition of Innovative and Entrepreneurial Skills for Poverty Eradication Towards Sustainable Development. *Creativity Research Journal*, 9(1), 1–15. Retrieved from https://www.researchgate.net/publication/362931888_Science_and_Technology_Education_as_Tools_for_Acquisition_of_Innovative_and_Entrepreneurial_Skills_for_Poverty_Eradication_Towards_Sustainable_Development

Ayonmike, C. S., Okwelle, P. C., & Okeke, B. C. (2015). Towards Quality Technical Vocational Education and Training (TVET) Programmes in Nigeria: Challenges and improvement Strategies. *Journal of Education and Learning*, 4(1), doi.org/10.5539/jel.v4n1p25

Barineka, E., Ayodele, N. E., & Kolbari, K. (2022). Development Of Lifelong Learning Skills for Sustainable Development in Rivers State, Nigeria. *International Journal of Innovative Development and Policy Studies*, 10(3), ISSN: 2467-8465. Retrieved from https://www.seahipaj.org

Barrett, P., Treves, A., Shmis, T., Ambasz, D., & Ustinova, M. (2018). The impact of school infrastructure on Learning: A synthesis of the evidence. In *Washington, DC: World Bank eBooks*. doi.org/10.1596/978-1-4648-1378-8

Bello, O. (2021). Technical and Vocational Education and Training (TVET) Sector in Nigeria: Structure, Challenges and Repositioning Strategies. *International Journal of Research (IJR)*, 2(4), 127–151. Retrieved from https://www.academia.edu/59502757/Technical_and_Vocational_Education_and_Training_TVET_Sector_in_Nigeria_Structure_Challenges_and_Repositioning_Strategies?auto=download

Equity and quality in education. (2012). In *OECD eBooks*. https://doi.org/10.1787/9789264130852-en

Fung, M., Taal William Sim, R., & Sim, W. (2021). *SkillsFuture: The Roles of Public and Private Sectors in Developing a Learning Society in Singapore* (Vol. 58). Retrieved from https://link.springer.com/chapter/10.1007/978-981-16-0983-1_

Hillman, A. L., & Jenkner, E. (2004). *Educating children in poor countries*. Retrieved from https://doi.org/10.5089/9781589063464.051

Institute of Entrepreneurship Development [iED]. (2023, June 21). Upskilling and Continuous Learning: Staying Ahead in the Rapidly Evolving Tech Industry. *Technology*. Retrieved

September 23, 2023, from https://ied.eu/blog/technology-blog/upskilling-continuous-learning-tech-industry/

International Labour Organisation [ILO]. (2021). Shaping skills and lifelong learning for the future of work. In *International Labour Organisation* (ILC.109/Report VI). International Labour Organisation.

International Labour Organization. (2010). *A Skilled Workforce for Strong, Sustainable and Balanced Growth*. Retrieved from https://www.oecd.org/g20/summits/toronto/G20-Skills-Strategy.pdf

Isa, M. U., Kamin, Y., Salihu, Y. I., Shuaibu, H., & Cledumas, A. M. (2020). Enhancing Employability Skills of Woodwork Technology Education Students through Project Based Learning at Colleges of Education (Technical) in Nigeria. *Universal Journal of Educational Research*, 2(3), 56–71, doi.org/10.13189/ujer.2020.082005

Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S., Brayne, C., Burns, A., Cohen-Mansfield, J., Cooper, C., Costafreda, S. G., Dias, A., Fox, N. C., Gitlin, L. N., Howard, R., Kales, H. C., Kivimäki, M., Larson, E. B., Ogunniyi, A., . . . Mukadam, N. (2020). Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *The Lancet*, 396(10248), 413–446, doi.org/10.1016/s0140-6736(20)30367-6

Lova, J. G., Gómez-Gómez, M. M., Bueno-Delgado, M. V., Garrido-Lova, J., & Cañavate-Cruzado, G. (2023). Designing a Technological Pathway to Empower Vocational Education and Training in the Circular Wood and Furniture Sector through Extended Reality. *Electronics*, 12(10), 2328, doi.org/10.3390/electronics12102328

McKinsey & Company. (2022, August 17). *What are Industry 4.0, the Fourth Industrial Revolution, and 4IR?* https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-are-industry-4-0-the-fourth-industrial-revolution-and-4ir

Michael, O., & Isaac, O. (2015). Enhancing Technical and Vocational Education and Training (TVET) in Nigeria for Sustainable Development: Competency- Based Training (CBT) Approach. *Journal of Education and Practice*, 6(29), 66–69. Retrieved from http://files.eric.ed.gov/fulltext/EJ1081283.pdf

Moorhouse, P. (2018). *Irresistible Learning: Woodwork in Early Childhood Education*. Community Playthings. Retrieved September 23, 2023, from https://www.communityplaythings.com/resources/articles/woodworking-with-kids

Musau, Z. (2018). Africa grapples with huge disparities in education. *Africa Renewal*, 31(3), 10–11, doi.org/10.18356/1a71d0ef-en

Ogbuanya, T., & Arimonu, M. O. (2015). Regenerating technical and vocational education for sustainable youth empowerment in Nigeria. *Journal of Education and Practice*, 6(36), 61–64. Retrieved from http://files.eric.ed.gov/fulltext/EJ1086473.pdf

Okoye, R., & Arimonu, M. O. (2016). Technical and vocational education in Nigeria: issues, challenges, and a way forward. *Journal of Education and Practice*, 7(3), 113–118. Retrieved from http://files.eric.ed.gov/fulltext/EJ1089786.pdf

Onwusa, S. C. (2021). The Issues, challenges, and Strategies to Strengthen Technical, Vocational Education and Training in Nigeria. *International Journal of Research and Innovation in Social Science*, 05(05), 48–59, doi.org/10.47772/ijriss.2021.5502

Opoko, A. P., Badmus, F. O., Abiola, I. T., Odizia, C. I., Oluwole, O. O., Pamilerin, D. E., Rotimi, D. O., Chima, N. O., Mabadeje, J., & Otusemade, T. O. (2018). The Role of Technical and Vocational Education and Training (TVET) in Nation Building: A Review of the Nigerian Case. *International Journal of Mechanical Engineering and Technology (IJMET)*, 9(13), ISSN Online: 0976-6359. Retrieved from https://iaeme.com/MasterAdmin/Journal_uploads/IJMET/VOLUME_9_ISSUE_13/IJMET_09_13_158.pdf

TVETipedia Glossary. (n.d.). Retrieved from https://unevoc.unesco.org/home/TVETipedia+Glossary/show=term/term=Competency-based+training

UNESCO Institute for Lifelong Learning. (2022). *Making lifelong learning a reality: a handbook* [Ebook]. UNESCO Digital Library. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000381857

World Economic Forum. (2023). *Reskilling Revolution*. Retrieved September 25, 2023, from https://initiatives.weforum.org/reskilling-revolution/home

Yusuff, M., & Soyemi, J. (2012). Achieving Sustainable Economic Development in Nigeria through Technical and Vocational Education and Training: The Missing Link. *International Journal of Academic Research in Business and Social Sciences*, 2(2), ISSN: 2222-6990. http://www.hrmars.com/admin/pics/621.pdf